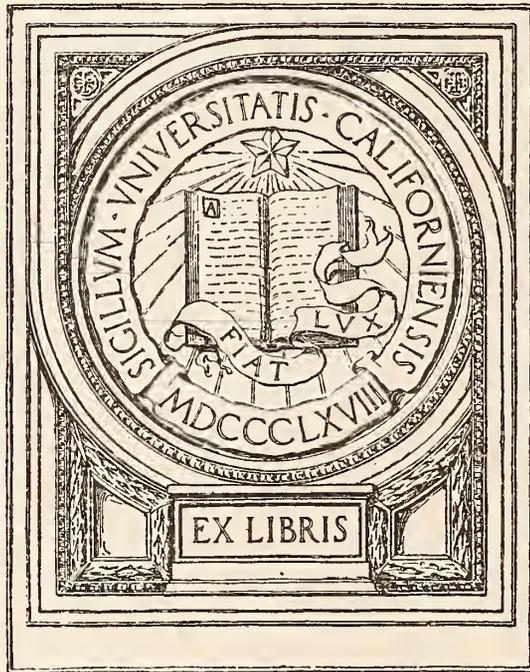
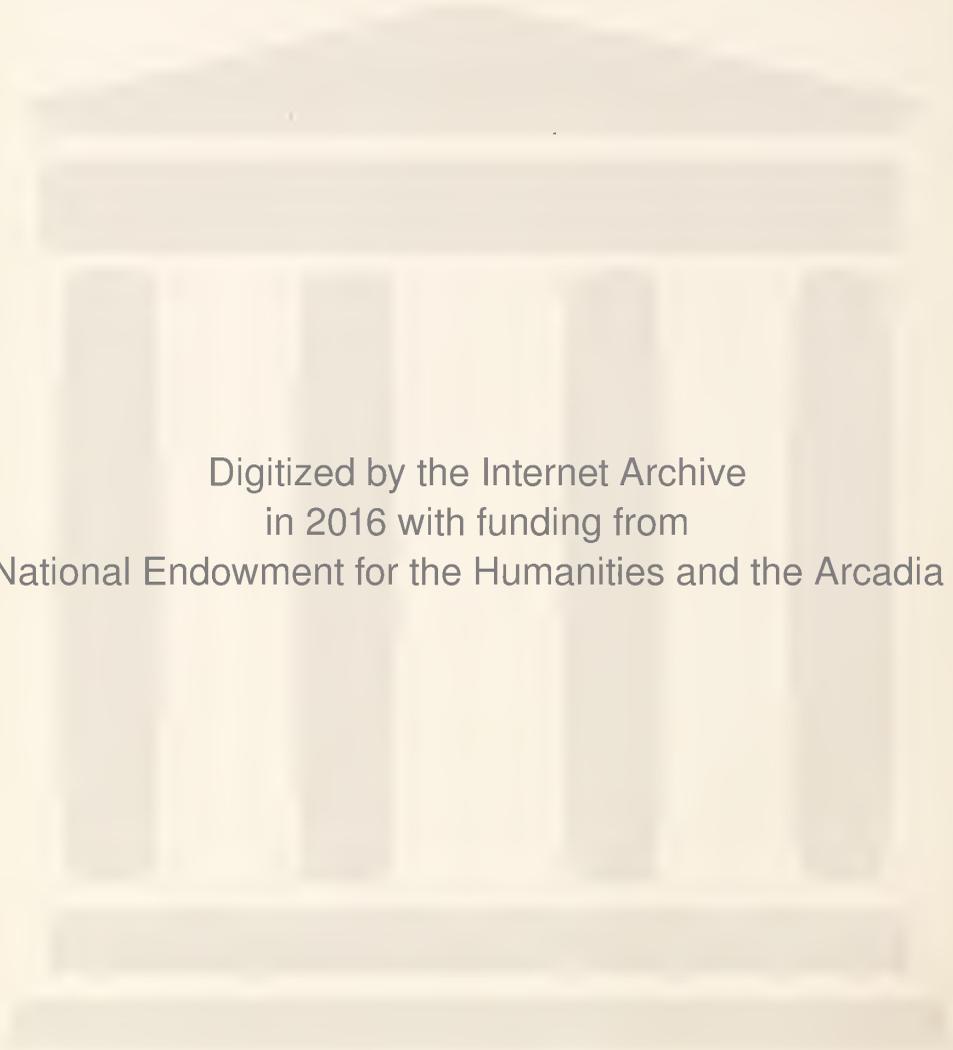


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FREDERICK C. WARNSHUIS, M. D., F. A. C. S.
EDITOR

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ORIGINAL ARTICLES

THE CARDIOVASCULAR SYSTEM IN DISEASES OF THE THYROID GLAND*

CYRUS C. STURGIS, M. D.

BOSTON, MASS.

The cardiovascular system suffers more in diseases of the thyroid gland than any other system of the body. It is essential, therefore, that physicians who encounter patients with thyroid disease should have a clear understanding of the cardiac complications and their proper management.

As the thyroid gland is affected with various pathological conditions, which vary widely in their characteristics, causation and frequency of cardiac involvement, it is necessary to classify more important abnormalities, as an introduction to a discussion of the associated cardiac complications. For our purposes the main groups of thyroid diseases may be designated as follows:

1. Diseases of the thyroid gland which are associated with an elevated basal metabolism. There are two conditions which are included in this group, exophthalmic goitre and adenoma with hyperthyroidism.

2. A disease of the thyroid gland which is characterized by a low metabolism. Myxedema or hypothyroidism is the only condition to be included in this group.

3. Diseases of the thyroid gland in which there is a normal metabolism. This group is represented by simple colloid goitre and adenoma without hyperthyroidism.

It is recognized that the most common and, therefore, the most important cardiovascular complications occur in exophthalmic goitre and toxic adenoma and it is concerning the heart in these two conditions

that I wish to devote most of my attention. Before doing so, however, I wish to consider briefly the condition of the heart in myxedema. This is a subject which is of importance but has received little attention until recently.

In 1925 Fahr¹ emphasized that definite objective signs and subjective symptoms of heart failure may occur in this type of thyroid disease and a marked improvement may follow the administration of dried thyroid gland by mouth. In our experience at the Peter Bent Brigham Hospital in a series of 34 patients with definite evidence of myxedema, two had chronic cardiac valvular disease, six had chronic myocarditis with angina pectoris as an additional complicating factor in three, three had rather marked hypertension, and three had minor cardiac disturbances. Therefore, approximately 40 per cent of the patients whom we have observed were found to have definite injury to the heart which was either incidental or due to the myxedema. This fact is of importance from at least two standpoints:

1. In some instances these patients had been treated for the cardiac condition and it had not been recognized that they were likewise suffering from myxedema. They did not, therefore, receive the appropriate treatment.

2. In other patients, the myxedema and the cardiac condition were both recognized but dried thyroid gland, even when administered in moderate dosage, produced serious symptoms, and in one instance death, as the result of a too sudden strain on the

*From the Medical Clinic of the Peter Brigham Hospital, Boston, Mass.

heart. I have a patient under my observation at present who illustrates some of the difficulties and dangers of treatment when myxedema is complicated by heart disease. This patient has never been able to take more than one-half grain of dried thyroid gland daily, which is inadequate to cure the myxedema, but larger doses can not be given as the added strain which is placed upon his heart by the medication causes him to be susceptible to severe attacks of angina pectoris which are induced by the slightest exertion. Before thyroid gland is administered in the customary dosage, the status of the cardiovascular system should be carefully appraised and if evidence exists that any degree of impairment is present, it is safer to be content with a dose as small as one-half grain daily, and await weeks or months for the more dramatic manifestations of recovery from the myxedema. A more enthusiastic desire to hasten the cure, may result in a fatal termination by a failure of the myocardium to be equal to the extra burden which is too suddenly imposed upon it.

The next group of thyroid diseases to be considered from the standpoint of the cardiovascular system is the one which is characterized by an elevation of the basal metabolism and includes exophthalmic goitre and adenoma with hyperthyroidism. The cardiac complications in these two conditions are of much greater importance than in any of the other thyroid diseases as they are commonly encountered and they may cause a long period of invalidism and the ultimate death of a patient. There is a mass of clinical observations, statistics and theories concerning the relation of the heart to these two diseases but these, in part, have a tendency to confuse rather than clarify, and various important questions are left unsettled. The most significant points about which definite information is desired are concerned with the following:

1. The relation of the heart to prognosis.
2. The management of these cardiac complications.

Different observers estimate that 25 to 50 per cent of the total number of patients with these two thyroid diseases have serious cardiac complications. The statistical determination of the frequency of cardiac involvement in thyroid disease is important but it may be misleading as it is not always permissible to apply the result of statistics to a single patient whose prognosis you have for consideration. For my

own experience I am content to say that serious heart failure may arise commonly and that this is not an unexpected complication which may result in the patient's death or in chronic invalidism, if unrelieved.

For the purpose of illustration let us consider the typical development of cardiac symptoms in a patient 35 years of age with all of the symptoms and signs of exophthalmic goitre. Practically every such patient has three symptoms which are commonly associated with heart disease. These are shortness of breath on exertion, tachycardia with a rate which is usually above 90 per minute when the patient is resting quietly, and palpitation which is almost constantly present, even when the patient is resting. Cardiac pain may also be an additional symptom in the early stages of the disease, but it is less common than the other three complaints. This pain, when present, is usually in the region of the apex of the heart or toward the anterior axillary line. It is not severe and does not radiate in any direction. All of these symptoms which are referred to the heart are usually observed early in the course of the disease, but it should be emphasized that they are not evidence of cardiac damage but are merely an indication of the added strain which has been placed upon the cardiovascular system. Similar symptoms may occur, for example, in a normal person when exercising or in a patient who develops fever of any type. If the thyroid condition continues without remission for weeks or months, the dyspnea, tachycardia and palpitation become more marked and the patient is very likely to develop attacks of irregular heart action which vary in their duration from a few hours to several days. Examination of a patient at such a time will usually disclose, (1) a pulse deficit, (2) a pulse rate at the wrist which is above 100 per minute, and (3) an irregularity of the pulse in force and rhythm. When these findings are observed, it is generally safe to conclude that auricular fibrillation is present. Other disturbances of cardiac rhythm may develop, such as auricular flutter or partial heart block but these are rare in comparison to auricular fibrillation which is relatively common. With the onset of auricular fibrillation the patient may still have a fairly efficient heart muscle. It more frequently happens, however, that with the appearance of this cardiac irregularity there are increasing signs of cardiac failure such as marked dyspnea, orthopnea, rales at the bases of the lungs, increase in

the size of the liver and edema of the extremities. An end picture such as this which results in a long period of invalidism and finally death, may occur in the course of a year or more commonly in a space of several years in untreated patients, depending a great deal on the presence or absence of spontaneous remissions in the course of the thyroid disease. It is well recognized that patients with exophthalmic goitre may spontaneously recover in as short a time as five or six months and when this occurs the heart usually suffers no permanent damage. It is common, however, to observe a series of remissions and recurrences which occur over a long period of years in patients who have not received satisfactory treatment. Each recurrence produces more injury to the heart until the complicating cardiac failure is more important to the patient than the thyroid disease which is the underlying cause. Several years ago I observed a patient who had apparently experienced five exacerbations and remissions of exophthalmic goitre over an interval of fifteen years, during which time he had received no other treatment than general medical measures. Each time the symptoms of exophthalmic goitre appeared, the cardiac complaints became more pronounced and when he first came under my care the symptoms of exophthalmic goitre had subsided. His chief difficulty then was with his heart as he had evidence of advanced cardiac failure which ultimately was the cause of his death. This patient's experience illustrates that during the course of exophthalmic goitre there may be periods of marked improvement but there is also a tendency toward a recurrence of the disease which may eventually result in serious cardiac complications.

The end result on the heart in toxic adenomatous goitre is practically the same as in exophthalmic goitre as cardiac injury occurs with equal frequency in both conditions. Apparently the toxic agent in adenoma with hyperthyroidism is of a milder nature but its action proceeds without remission for a long period of years in untreated patients. As the average age of the patients with toxic adenoma is greater, the injury to the heart is, therefore, of a more serious type. In patients with exophthalmic goitre it is likewise true that cardiac damage is usually more extensive if the patient is over 50 years of age. I believe it is an important fact to recall in this connection that as persons approach the age of 40 or 50 years they are more

prone to develop heart disease as the cardiovascular system at this time is more susceptible to injury than it is at a younger age.

THYROID DISEASE SIMULATING PRIMARY CARDIAC CONDITIONS

It is not rare to observe patients with exophthalmic goitre in whom the striking and obvious features of the disease, the exophthalmos and goitre, are lacking, and in whom the chief complaints are almost exclusively referable to the heart. Patients presenting such a clinical picture are sometimes regarded as having primary heart disease and the thyroid condition, which is the underlying cause, is unrecognized. It should be emphasized that neither the presence of exophthalmos or enlargement of the thyroid gland is essential to the diagnosis of exophthalmic goitre. Exophthalmos occurs in only a certain percentage of these patients and the thyroid gland may show no clinical evidence of enlargement and yet display the most intense hyperplasia on pathologic examination. Such patients with obscure exophthalmic goitre are sometimes erroneously classified as having chronic myocarditis of unknown etiology. In other instances, the incorrect diagnosis of mitral stenosis is made on the basis of a loud first sound at the apex and a thrill which is present over the lower precordium. This is often regarded as presystolic in time but more accurate observations usually show that it occurs during systole of the heart. Such a thrill has no pathologic significance and may be present in any individual who has a thin thoracic wall and in whom the action of the heart is forcible. In other patients with toxic thyroid disease, the diagnosis of aortic insufficiency may be made on account of the collapsing or water hammer pulse which is often associated with this type of valvular lesion. This also is not infrequently observed in patients with exophthalmic goitre for in the latter disease there is often an elevated systolic and a diminished diastolic blood pressure which results in a pulse of this character. The diagnosis of aortic insufficiency should be easily eliminated as patients with exophthalmic goitre do not have the characteristic diastolic murmur of this condition unless there is an entirely independent valvular lesion present which is due to some other cause. It is not rare to observe systolic murmurs in patients with toxic thyroid conditions but they are usually of no importance except that they are occasionally responsible for the incorrect diagnosis of mitral insufficiency.

iciency. It is not necessary to enter into the differential diagnosis between primary heart disease and exophthalmic goitre except to say that a careful study of the patient's symptoms and signs in conjunction with accurate basal metabolism determinations should disclose the correct diagnosis without difficulty. The failure to recognize the underlying cause of the cardiac condition is a serious mistake as the patient is denied the benefit of the proper therapy.

THE TREATMENT OF CARDIAC COMPLICATIONS IN TOXIC THYROID DISORDERS

The rational treatment of the cardiac complications of exophthalmic goitre and toxic adenomatous goitre must be directed toward the abnormal condition of the thyroid gland which is the underlying and fundamental cause. Here lies a great opportunity from a therapeutic standpoint, as it is one type of heart disease which can be cured or greatly relieved often with a dramatic success. While all physicians are not in accord concerning the most efficacious mode of treatment of toxic thyroid disorders, I firmly believe that in most patients surgery offers the greatest possibility of a cure in the shortest length of time. When the cardiac condition is advanced in these patients the first indication for treatment is to improve the condition of the patient to such a point that surgical procedures may be carried out with safety. Unless the patient is in the terminal stages of thyroid disease, this is usually possible although a considerable period of time may be necessary for its accomplishment. The management of a patient with congestive heart failure and a toxic disorder is, therefore, of the utmost importance and may be outlined as follows.

The first indication is to relieve the heart of all unnecessary work. This is best accomplished by complete rest in bed. As these patients are exceedingly nervous and apprehensive they will secure more rest if they have quiet surroundings with special nurses in attendance, if this is possible. The psychic aspect of patients with toxic goitre is an exceedingly interesting and important one from a therapeutic standpoint as they are characteristically emotionally unstable and often unreasonable in their complaints and demands. As in any type of patient, this aspect should be handled with tact and diplomacy in order to secure mental quiet as well as physical rest.

If the patient's condition is critical from a cardiac standpoint, sleep should be se-

cured by morphine in one-sixth to one-fourth grain doses subcutaneously as a temporary therapeutic measure. If the patient's respirations show an irregularity of the Cheyne-Stokes type or if orthopnea is distressing, it is advisable to give five to eight grain doses of caffein-sodio-benzoate intramuscularly at the same time. Very often it is possible to secure sleep by the use of veronal or luminol, but I have not had success in this type of patient with the milder sedatives such as the bromides.

The diet for patients with toxic thyroid disease in whom there are cardiac complications should be a liberal one as they are usually 20 to 30 pounds under weight. Food should not be forced if the cardiac failure is extreme but at least a moderate amount of nourishment is advisable and should be given without the limitation of any particular variety except salt, which should be permitted in only small amounts if edema is present. The presence of definite pitting edema is likewise an indication for the control of the patient's fluid intake. The consumption of liquid can not be curtailed to the same low level as it is in patients with cardiac failure due to other causes for patients with exophthalmic goitre and adenoma with hyperthyroidism require more water to counterbalance the large amount which is lost through excessive sweating and the increased excretion of moisture through the lungs. A permissible fluid intake would be approximately three pints in 24 hours even in the presence of a moderate amount of subcutaneous edema. In the absence of edema and an excess of the free fluid in the serious cavities of the body, liquids may be given up to two or three quarts in 24 hours, but no attempt should be made to force the patient to take a large amount of liquid as it may have an injurious effect.

The drug treatment of patients with toxic thyroid disorders and serious cardiac complications, is highly important and the careful direction of medication in such patients is essential in order to secure the proper results. The use of morphine and the hypnotics to secure rest has already been considered. Within recent years it has been demonstrated that another drug is of great value under certain circumstances. If the patient has the syndrome which we characterize as exophthalmic goitre as contrasted to adenoma with hyperthyroidism, iodine will produce a remarkable remission with few exceptions when given as Lugol's solution in the average dosage of five minims three times

daily. Whatever may be the mode of action of this drug, all observations agree that in the course of four or five days a most beneficial result usually follows its use, as manifested by a pronounced drop in the basal metabolism with a resultant diminished demand on the heart muscle, decreased restlessness, a fall in the pulse rate, often to normal limits, and a disappearance of nausea, vomiting and other symptoms of an impending thyroid crisis if these symptoms have been present. Following the use of iodine in these patients likewise the distressing cardiac symptoms such as dyspnea, orthopnea, and palpitation usually become much less marked or may disappear entirely. The result from the use of iodine under these conditions may be no less dramatic than the effect of insulin in patients with diabetic coma. Occasionally a patient with exophthalmic goitre will not respond to iodine therapy from some unknown reason but nevertheless it should be used in these patients with the confident expectation of success in almost all. After the drug has been given and a remission secured, it is essential that the daily dosage should be continued until a cure is affected by surgical measures or other means. Otherwise a recurrence of symptoms will follow its omission within 24 to 48 hours. It is important to emphasize that iodine produces only a temporary remission and it is during this time that the most favorable opportunity for carrying out surgical measures is present. In my opinion it is advisable to give iodine to a patient with exophthalmic goitre only under two conditions, (1) when it is desirable to secure a remission in the course of the disease in order that the optimum conditions for operation can be secured. After one remission has been produced it is not likely that a second one of the same extent will follow the use of iodine, (2) in an acute thyroid crisis or when the patient is in eminent danger of death from cardiac failure. In both of these conditions it may be a life saving measure.

It is unfortunate that in adenoma with hyperthyroidism, iodine does not appear to be of value and, therefore, the clinician must manage the patient's condition without recourse to this valuable drug. While there has been some difference of opinion concerning its use in patients with toxic adenomatous goitre, I have never produced an effect either beneficial or otherwise in these patients. There is no contra-indication to its use, however, and it should be given if the patient is considered to have

a toxic adenoma but even the remote possibility of a hyperplastic goitre exists.

Another indispensable drug which is indicated in all patients with toxic goitre, if evidence of cardiac failure exists, is digitalis. Digitalis therapy is often of great benefit to the patient although I have the distinct impression that the same satisfactory results are not obtained in patients with cardiac failure due to toxic thyroid disorders as it is in those in whom the cardiac condition is associated with other causes. In general it should be given to all patients who have

(1) Auricular fibrillation, either permanent or transient.

(2) Marked dyspnea or orthopnea.

(3) Other obvious signs of cardiac failure such as edema of the ankles, enlarged liver or rales at the bases of the lungs.

It is of no advantage to give digitalis to patients with toxic thyroid conditions unless some definite indication exists. In addition to those which have been mentioned above, it is advisable to question all patients carefully for a history of paroxysmal attacks of palpitation and tachycardia which occur in a moderate number of these patients. As such attacks are usually due to transient auricular fibrillation, they are of importance because patients with such a history often develop this arrhythmia either during or immediately following an operation on the thyroid gland. While I have never witnessed a fatality due to such a complication, it appears to be good judgment to digitalize such patients prior to operation, for the patient is then saturated with the drug which most satisfactorily controls the condition.

It is true that actual harm may result from the use of digitalis unless it is given with care. The well known advice to give a dose of moderate size at intervals of several hours until a beneficial effect is attained or toxic symptoms produced, such as nausea and vomiting, should not be followed in patients with toxic thyroid disorders. In these patients it is not uncommon to observe toxic symptoms from digitalis before there is a striking decrease in pulse rate, a diuresis, or relief from dyspnea. Very satisfactory results, however, may follow the use of the drug in doses of moderate size. This may be carried out in a practical way by giving $\frac{1}{2}$ grain of the powdered leaves of standard strength for every 2.5 pounds of patient's body weight. If digitalis has not been given within the two previous weeks, one-half of the dose can be administered at once and the re-

mainder in doses of $1\frac{1}{2}$ grains every four to six hours until the total amount has been taken. The last three or four doses should be given with extreme caution and the drug immediately discontinued if loss of appetite, nausea or vomiting occurs. After the total dosage has been given, it should be discontinued for several days and then resumed in amounts of $1\frac{1}{2}$ grains daily, which is the dose calculated to replace approximately the amount which is destroyed by the body every 24 hours. This so-called maintenance dose can be continued indefinitely in most patients, thereby keeping the heart under the continuous action of the drug.

In the acute cardiac emergencies, which are sometimes encountered in association with exophthalmic goitre and toxic adenoma, it is often of value to remove 300 to 500 c.c. of blood by phlebotomy if the patient's condition seems to be critical. This therapeutic procedure is not used as often as it should be, especially by the younger group of present day clinicians, perhaps as a result of its abuse in the past, but it may give great relief when properly used and in some instances the patient's life may be saved as a result.

Quinine sulphate is another drug which deserves mention although it is less valuable than iodine or digitalis in the treatment of these patients. Foster² recommends the use of quinine sulphate in patients with toxic goitre in whom auricular fibrillation is present, provided the rhythm does not become regular following full doses of digitalis. It is true that quinine will cause the heart to resume a regular rhythm in some patients but in my experience this has not been accompanied by a greater improvement than is ordinarily obtained by the use of other measures such as digitalis and rest. Furthermore, it is now well recognized that the use of quinine may be followed by untoward effects, either from the release of emboli from the auricle when normal rhythm is resumed, or by respiratory paralysis. The former is more likely to occur if the auricular fibrillation is of long standing. It would seem logical to use quinine sulphate in patients who have frequent paroxysmal attacks of auricular fibrillation which are not relieved by the ordinary methods. The drug should be administered according to the method recommended by Foster, who advises that $7\frac{1}{2}$ grains be given every four hours, day and night. If the rhythm does not become regular after six or eight doses, the dose may be doubled for 36 hours. If the cardiac

irregularity does disappear, the dose should be reduced to two or three grains daily and this should be continued for a long period.

I have outlined the plan whereby the acute cardiac emergencies occurring during the course of toxic thyroid disease may be managed and also given the mode of treatment designed to place the heart in the best possible condition prior to thyroidectomy. In some patients it is necessary to carry out pre-operative treatment for only eight to ten days. In others much more time is essential. In general, it suffices to say that a patient should never be operated upon if edema is conspicuous or if there is orthopnea or a wide pulse deficit. A large majority of patients with toxic thyroid disease and cardiac complications can be operated upon with a surprisingly low mortality, provided the proper pre-operative treatment has been used. In fact, it is rare to observe a death due to cardiac failure following an operation under these conditions.

The results of the efficient treatment of the thyroid disease on the cardiac complications in some instances is marvelous. In young individuals, in whom the disease has not been of long duration, the cure of thyroid condition is usually followed by a disappearance of practically all cardiac symptoms and signs. In other patients, in whom the myocardium has suffered greater damage, the improvement is often striking. If auricular fibrillation has been present it may disappear, but even though it does not, the functional efficiency of the heart may be only slightly impaired, provided the appropriate cardiac therapy is prescribed following the operation. In patients who are over 50 years of age and in whom the disease has been present with serious cardiac symptoms for a long interval, the outlook for recovery of the cardiac efficiency is less promising. In such patients the cardiac damage is often irreparable although there may be some improvement and the patient may live for years, but they are frequently doomed to the life of a chronic cardiac invalid. The fate of such patients should impress upon our minds, therefore, the necessity of the early relief of the underlying thyroid condition in order to avoid just such serious and permanent cardiac complications. The cure of the toxic thyroid disorder can not always restore an injured myocardium to normal, but it will, in every patient, relieve the extra burden which the heart is obliged to carry.

There still remains for consideration the management of the cardiac condition of the patient who refuses operation, or for whom the patient's physician considers an operation to be inadvisable. In general, the same principles should be applied in these patients, in a modified form, as have been given in the previous paragraphs. They should lead a very careful and restricted life with ample rest, regardless of an otherwise excellent condition. It is a good rule to follow that they should never indulge in any exercise which causes a definite degree of shortness of breath. The presence of pitting edema is an indication for a rest in bed of at least several weeks and often longer. Digitalis should be given in full doses if there is any evidence of cardiac failure. It is not advisable to give iodine in any form to these patients unless the cardiac condition becomes very serious or an impending thyroid crisis is at hand. The improvement following its use is only temporary and if surgical measures are contemplated at a later date the patient will probably not have the great advantage of an operation during an iodine remission, as a second one is less likely to be produced.

Quinine hydrobromide is an additional drug which I have not previously mentioned and should be given a trial in these patients. It has long been used in patients with toxic thyroid disorders, and while its curative value has not been demonstrated, experience teaches that the palpitation, which is so distressing in some instances, is somewhat diminished by doses of five grains three or four times daily.

If surgical measures are withheld, it is of distinct value, from the general condition of the patient and also the cardiac complications, to treat patients with the syndrome of exophthalmic goitre with the Roentgen-rays. I have never observed improvement to follow the use of this therapeutic agent in patients with toxic adenoma. If the Roentgen-ray is used, treatments should be given at intervals of three weeks for a maximum number of four. The patient's condition should be determined by the estimation of the basal metabolism and a careful consideration of the symptoms and signs of the disease. The indiscriminate treatment of thyroid conditions by the Roentgen-ray is sometimes followed by true myxedema as a result of excessive irradiation. As experience in recent years has made us aware of this possibility there is no excuse for its occurrence. Other complications, which may be incident to Roentgen-ray treatment, are remote possibilities

and need not deter a physician from recommending its use. If the basal metabolism does not approach normal, following a course of four treatments, it is advisable to keep the patient under observation for an additional period of six weeks, which is an arbitrary interval, selected because it is considered that any improvement which can be attributed to this means of therapy should appear by the end of that time. If the patient's condition requires it, a second and a third course of treatment may be given although, if marked improvement does not follow the first four exposures, it is usually not possible to accomplish much good for the patient by this mode of therapy. In a small group of patients the use of the roentgen ray has been followed by the disappearance of all symptoms associated with exophthalmic goitre and with this there has likewise been marked improvement in the condition of the heart if it has shown signs of involvement.

THE HEART IN SIMPLE GOITRE AND NON-TOXIC ADENOMATOUS GOITRE

There still remains for consideration the cardiac complications which are associated with diseases of the thyroid gland in which the basal metabolism is within normal limits. With the present state of our knowledge there is no evidence to prove that the heart is ever injured by the diseases of the thyroid gland of this group, which includes simple colloid goitre and non-toxic adenomatous goitre. There are several interesting problems, however, which arise concerning the proper management of patients who have these thyroid disorders and at the same time complain of symptoms which are suggestive of heart disease. These patients may complain of shortness of breath on exertion which is not due to heart disease but is associated with pressure of the enlarged thyroid gland upon the trachea. There is no reason why the heart should be damaged and there are usually no other symptoms or signs or cardiac involvement. If the dyspnea is severe enough, surgical intervention is indicated to remove the pressure which should give complete relief.

The type of patient in whom errors of treatment have been made rather frequently is the young person who has a slight enlargement of the thyroid gland of the simple goitre type and also complains of nervousness, slight palpitation and dyspnea. On examination there is found a tachycardia and occasionally a simple arrhythmia such as a rare extra systole.

These patients usually have two conditions which are purely incidental in their association, (1) a simple goitre or a non-toxic adenomatous goitre, and (2) a functional cardiac condition of the so-called "irritable heart" or effort syndrome type. Such patients, in addition, usually complain of ease of fatigue and other symptoms of a neurasthenic nature. Their heart is never enlarged, in fact, roentgrams often show that it is smaller than the average. Other signs of cardiac involvement are always lacking, such as rales at the bases of the lungs and true pitting edema. It is true that when such patients are first examined in a practitioner's office the heart rate is usually very rapid, but the tachycardia differs from that which is observed in toxic disorders, as the rate approaches normal when the patient is mentally and physically at rest. In exophthalmic goitre and toxic adenomatous goitre the rapid rate is persistent and even present when the patient is asleep. There is no indication to remove the simple goitre or non-toxic adenomatous goitre from the standpoint of the heart for the patient would be subjected to a major operation without effecting a cure of the purely functional cardiac condition. The correct treatment of the cardiac complaints in such a patient, in most instances, is reassurance and carefully graduated and supervised physical exercises.

There remains one other clinical picture for discussion and that is the syndrome which is presented by the patient who has a non-toxic adenomatous goitre and obviously serious heart disease with definite evidence of cardiac failure, or stating the situation more tersely, the association in a patient of a nodular goitre, a normal basal metabolism, and chronic heart failure. In such an instance it is impossible to deduce that the thyroid abnormality has a casual relationship to the cardiac condition. It is more correct to assume that the heart condition belongs to that large group which has been classified under the head of chronic myocarditis of unknown etiology. The co-existence of a goitre is no proof that it is the cause of the cardiac symptoms, and its surgical removal is not followed by an improvement or disappearance of the cardiac complaints. It should be kept in mind, however, that a non-toxic adenomatous goitre is a potential source of cardiac damage for it may gradually become toxic and produce the symptoms of hyperthyroidism in association with an elevated metabolism. When this does occur, an added burden is placed upon the

heart and cardiac injury may result. Therefore, all patients with non-toxic adenomatous goitres should be kept under observation for evidence of toxic symptoms and cardiac injury, and operation advised early in the transition from the non-toxic condition.

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BACTERIAL FOOD POISONING*

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With the growth of scientific knowledge regarding the specific dangers from insufficient, vitamin deficiency and unbalanced diets, and of overconsumption, improper storage and understerilization of foods, attention has been given to the effect of food upon disease and the death rate. Because of the complexity of the problem, there is not today a definite and complete understanding as to conditions under which a diagnosis of food poisoning is justified. Recent epidemiological investigations, however, have shown that the term should probably be limited to the intoxications of *B. botulinus* and the poisonings by food contaminated with the organisms of the paratyphoid-enteritidis group and perhaps other bacteria.

Reliable facts concerning the prevalence of food poisoning in the United States are difficult to obtain since the disease is rarely made reportable. Food poisoning is a reportable disease in nine states, i. e., Georgia, Kansas, Maryland, Montana, New Mexico, Oklahoma, Washington, Wyoming and West Virginia. Botulism is now a reportable disease in 13 states, i. e., Colorado, Arizona, Idaho, Kansas, Maryland, New York, Minnesota, Oregon, Washington, California, West Virginia and Wyoming. In addition, ordinances of cities like Chicago require this disease to be reported.

FREQUENCY OF BOTULISM

Occasional outbreaks of botulism continue to be reported in the United States. The rarity of the disease, often stressed by various writers, has apparently never been questioned. The publicity usually attendant on outbreaks has been less in re-

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cent years, but it would appear to be far in excess if one considers comparatively the recorded morbidity and mortality.

There is, however, and perhaps rightly so, great importance placed on each outbreak because of its fatal sequence to those who consume the contaminated and toxic food. Likewise, the relation of the intoxication to our preserved food supply is always decidedly menacing, as this supply is rapidly becoming economically more important in American households.

Lewis¹, Jellinek², McCracken,³ Geiger, Meyer and Dickson⁴ and Geiger⁵ have summarized the data available since 1899. It may be of interest again to summarize the data to date (1926), going back, however, to the extensive report of Geiger, Meyer and Dickson, which indicates a total of 91 single or group outbreaks reported in the United States and Canada. A total of 345 cases with 213 deaths, or a case mortality of 61.7, was recorded. Only 30 outbreaks of their collected series were proved bacteriologically or toxicologically.

Since the publication, in September, 1922, of the report by Geiger, Meyer and Dickson, it has been possible to collect data in the United States dealing with 56 additional outbreaks, 24 of which have been proved toxicologically. There is included, however, in this series for statistical purposes one outbreak, which occurred in Scotland in October, 1922, from commercially canned duck paste, in which there were eight cases and eight deaths. Of the 56 outbreaks concerning which information is now available, 21 occurred in 1922, 12 in 1923, eight in 1924, eight in 1925 and the remainder in previous years. A total of 159 cases with 124 deaths, or a case mortality of 78 per cent, has been recorded.

If there is taken an eight-year period, 1918 to 1925, inclusive, an average of approximately 13 outbreaks has occurred annually. This probably represents the average yearly occurrence of botulism in the United States. The number of outbreaks occurring in 1922 (21) was the largest number reported in any one year. It must be recognized, however, that food may be somewhat detoxified by heating or warming up just before being consumed, and the strength of the toxin so reduced that the mild cases resulting may be overlooked or not diagnosed as botulism.

To summarize, there have been reported in the United States and Canada from 1899 to date, and including one outbreak from England, 147 outbreaks, or a total of 504 cases with 337 deaths, giving a case mor-

tality of 67 per cent; 54 outbreaks have been proved toxicologically and bacteriologically.

FOOD INVOLVED

The preserved food products concerned, so far as known, were: vegetables, in 38 outbreaks; meat, four; fish, four; fruits, one; pickles, one, and the remainder, unknown. In 36 outbreaks the food was home canned and in 11, commercially canned. The variety and type of preservation of causative food in these outbreaks is given in the accompanying table. Of the remainder the causative foods are unknown, with the exception of an outbreak that occurred at Longmount, Colo. Two foods were suspected, commercially canned spinach and home canned corn. A careful and critical survey of the epidemiologic evidence points to home canned corn, rather than to the commercially canned spinach. There are reported, however, conflicting toxicologic findings in a recovered empty can of spinach of the pack suspected. In addition, data are available as to five outbreaks in chickens, but only one was proved toxicologically. The causative foods were home canned asparagus, home canned corn (two), home canned string beans and home canned meat.

TYPE OF TOXIN

Epidemiologically, the symptoms of botulism are due to preformed toxins in the food when the food is ingested. The type of toxin present has an important bearing, should treatment with antitoxin be instituted. In the outbreaks included in this series, information is available as to type in 24. Of these, 20 were type A and four were type B.

GEOGRAPHIC DISTRIBUTION

Forty-six outbreaks occurred in the west, seven in the middle west, and three in the east. None were reported from the southern states.

Of the seven outbreaks reported in the middle west, in four the food was canned in the west.

There are several matters of interest; mainly, the proved involvement of foods (sardines, meat and peas) which heretofore have not been noted in the United States. These outbreaks are of prime importance, as they focused attention on these particular foods and their type and method of handling and preservation. Two of these outbreaks were due to sardines of a like brand, mixed with tomato sauce. The product was canned in the west. One

outbreak was due to commercially canned potted meat that was canned in the middle west. The other outbreak was attributed to commercially canned peas that were canned in the middle west. It is of interest to note that in the commercially canned peas and commercially canned potted meat, both canned in the middle west, the type of toxin demonstrated was type B.

The majority of the outbreaks have been due to underheated or underprocessed foods. It is fundamental that methods of canning must insure sufficient heat penetration and make allowance for altitude and the hydrogen-ion concentration of the product. Sanitation by the thorough cleansing, proper storage and the use of fresh products is primarily essential as a protection against botulinus spoilage.

FREQUENCY OF FOOD POISONING

A study of the mortality statistics regarding food poisoning reveals the interesting fact of a steady increase. The difficulties attendant on the classification as a cause of death indicate to the experienced investigator that these statistics at their best are inaccurate. It will be seen from the recorded data used in this study that physicians and others have made imperfect, inconclusive and incorrect returns as to the cause of death, as indicated by subsequent necropsies. Consequently, we have no comparable data as to the real incidence of food poisoning in the United States, and it is decidedly necessary that we approach any compilation with caution. Since 1910 and including 1923 there have been reported in the United States Census Bureau, 9,981 deaths attributed to poisoning by food. The increase has been gradual but steady, and should be regarded with some degree of apprehension. For instance, in 1910 there were reported 157 deaths, while in 1920 there were 957, a rate of 10.9 per million; in 1921, 927, a rate of 10.5; in 1922, 810, a rate of 8.7, and in 1923, 928, a rate of 9.6.

Geiger, in the Journal of the American Medical Association, October 13, 1923, reported 749 outbreaks in the United States, involving 5,210 persons with 399 deaths between 1910 and 1922, inclusive, with a percentage case mortality of 7.5. Additional data are available of 239 outbreaks for 1923 and 1924, inclusive, involving 1,679 cases with 102 deaths, a percentage case mortality of approximately 6.1.

To summarize, data are available for the periods 1910 to 1924, inclusive; 988 outbreaks, involving 6,889 cases with 501

deaths, a percentage case mortality of approximately 7.3. If this percentage case mortality is accurate, then we have had approximately 12,500 cases of food poisoning in 1920, and approximately 133,450 cases for the period of 1910-1923, inclusive. However, it will be shown later that the percentage case mortality of our data can be materially reduced when we analyze the results of necropsies and separate the outbreaks due to botulinus intoxications.

For instance, in the records of 988 reported outbreaks under consideration, we have reports of 59 outbreaks of botulism, with 232 persons made ill. Of this number, 182 died, a percentage case mortality of 78. If we separated this group of cases from those of general food poisoning, we should have of the latter in this series a percentage case mortality of 4.4 instead of 7.3.

In addition, there are records of 62 necropsies at which the previous cause of death has been given usually as "ptomain poisoning," which diagnosis has to be subsequently changed. Likewise, there can be included data regarding 15 instances with 29 deaths of metallic poisoning, due, as the evidence indicates, to murder, suicide or accidental causes. Eliminating these erroneously recorded deaths (91) from the number previously given as having been due to food poisoning, we have a further reduction of the percentage case mortality from 4.4 to 3.3.

From experience in investigations completed during the past year, this case mortality rate in general food poisoning is obviously too high. This opinion is further substantiated by the results shown above of the comparatively few necropsies performed which indicate that food poisoning or "ptomain poisoning" is given not infrequently in error, as a cause of death.

Mayer⁶ states that in Germany in 48 outbreaks attributed to *B. enteritidis* and in 77 outbreaks attributed to *B. paratyphosus* B or *B. suipestifer*, there were approximately 4,000 cases with 40 deaths, a percentage case mortality of one. Savage⁷ states that in 112 outbreaks in England, involving 6,190 cases with 94 deaths, the percentage case mortality was 1.5. A careful search of our records was made, and only those outbreaks were considered in which either the epidemiologic or the laboratory evidence was fairly conclusive that the paratyphoid group was the contaminating organism of the causative food. Of these, in the 988 outbreaks studied, there are 81 outbreaks involving 3,383 persons with 11 deaths, a percentage case

mortality of 0.3. Likewise, data are found in recent literature relative to 21 additional outbreaks, involving 2,266 cases with one death.

Therefore, if one should determine the average case mortality of the German statistics, one; British, 1.5, and that of our own selected outbreaks, 0.3, we have a rate of one minus, which probably is representative of general food poisoning. Contrasting this rate with that of the outbreaks in this series due to botulinus intoxications, 78, one can readily note that there is need for a statistical regrouping and classification, probably on this basis alone, of the mortality of food poisoning, without taking into consideration the deaths caused by the ingestion of poisonous fungi, etc.

DISTRIBUTION OF THE SPORE OF *B. BOTULINUS*

Meyer and Geiger⁸ investigated soils in which certain vegetables had been grown which, after canning, had caused outbreaks of botulism in humans. Cultures of these soils were toxic and the toxin thus formed was neutralized by the corresponding type of botulinous antitoxin. They suggested that possibly the manuring of the soil might be the medium of the pollution of the soil with the spore of *B. botulinus*. However, Meyer and his associates⁹ stated that in over 2,000 samples of soil and other agricultural products in the United States and in other samples from Canada, Alaska, Belgium, Denmark, England, the Netherlands, Switzerland, Hawaiian Islands and China, that were examined, it was demonstrated that the spores of *B. botulinus* were widely distributed in nature. There is recent evidence that Alaskan soils which are acid in reaction are singularly free from the spores, at least in certain areas. The spore was found in greatest abundance in uncultivated mountain soils and to the least extent in soils that had been intensively cultivated. Geiger¹⁰ and Geiger and Benson¹¹ have demonstrated an intensive distribution in certain localities, particularly in the state of Washington. It is of special interest that they were able to demonstrate experimentally that both type A and type B, *B. botulinus*, may exist in the same soil sample, type A predominating in cultures when vegetables such as corn and string beans were planted together with the soil in the culture medium.

In this connection, in a recent investigation of the geographic area mentioned by Geiger and Benson, there was strong evidence that intensive animal manuring, or

soil pollution with animal excreta over a period of years, may affect the type demonstrable in cultures of the soil with the greater likelihood that it would be type B. For instance, it was ascertained that the surface pollution with animal excreta had been constant for many years because of the location of the area examined and its use as a pasture, particularly by horses and cattle. Cultures of soils from this limited area contained toxin of type B, *B. botulinus*, while cultures of soils from other areas five miles away, and usually from soils of the state as a whole, yielded predominantly type A, *B. botulinus*.

It is frequently possible to demonstrate the spore of *B. botulinus* in soil cultures in which vegetables have been grown when the vegetables, after canning, caused outbreaks of the disease in humans. Such results indicate, and the experimental evidence strongly supports the statement, that the spore of *B. botulinus* is usually present where food supplies are grown and the resulting poisoning outbreaks may be in direct ratio to the distribution and the method of the canning of the food.

CAUSATIVE AGENT IN BOTULISM

Orr¹², and Edmonson, Giltner and Thom¹³ found that guinea pigs succumbed to botulism when fed large numbers of toxin-free spores. Coleman and Meyer¹⁴ assert that toxin-free spores may under certain conditions germinate and the vegetative forms multiply and liberate toxin in animals. Geiger¹⁵ states that there is a vast difference in results depending on whether toxin-free spores are fed or inoculated into guinea pigs, even when such spores have been saturated with specific antitoxin and have been incubated. This difference may be quantitative in the case of feeding and on subcutaneous inoculations of the spores. Finally, such spores when fed may remain dormant in the animal body and be recovered from various organs, on autopsy, without the animals showing any previous symptoms of the disease. Geiger, Meyer and Dickson⁴ state, however, that the epidemiologic data of the numerous carefully investigated outbreaks of botulism, indicate that the intoxication has always been preceded by the ingestion of toxin-containing preserved food. Furthermore, these writers call attention to four outbreaks in which the toxic food was boiled and later consumed without any illness occurring. Recently Hervey¹⁶ confirmed these observations. Epidemiologically, there is every indication that a true

botulism infection never occurs in the human being and the symptoms are due to performed toxins in the food when the food is ingested. However, Geiger¹⁷ reported that certain experiments indicate the possibility of the absorption of the toxin from mucous surfaces other than the gastro-intestinal tract and from fresh wounds.

CAUSATIVE AGENT IN FOOD POISONING PROBABLY
DUE TO THE PARATYPHOID GROUP

The short incubation period in food poisoning of this type, the early recovery of the persons ill, the low mortality rate, the absence of continued temperatures, or other evidence of infection especially when the food ingested contains living organisms of the paratyphoid group, are suggestive evidence that these outbreaks are also intoxications. Experimentally, the production of poisonous filterable substances by the various strains of the paratyphoid-enteritidis group is extremely variable. Poisonous filterable substances are rarely produced in broth cultures in as short a period as six hours, but cultures may retain the toxicity for as long an incubation period as 10 days. It must be appreciated that such results are obtained only on intraperitoneal inoculation of the animals and that feeding experiments with filtrates and cultures are invariably negative. It has been demonstrated that the poisonous filterable substances produced are occasionally thermostable since they resist boiling at 100° C. for ten-minute periods. However, it is significant that there are no records of such poisonous filterable substances being demonstrated in outbreaks of food poisoning, when the organisms of the paratyphoid-enteritidis group have been isolated from such foods.

SYMPTOMS

In the majority of cases of botulism, the incubation period is from 24 to 48 hours, though the onset may occur earlier or may be delayed. The earliest onset in the recent outbreaks investigated was 16 hours and the longest 48. It is interesting to note that in one outbreak the amount of toxic food consumed was practically the same, yet there was a difference of 24 hours in the onset of the cases. Gastro-intestinal symptoms are not as rare as is sometimes thought, but are delayed much longer than those observed in outbreaks due to the type of food poisoning caused by the paratyphoid group. In the latter type of food poisoning the symptoms

usually manifest themselves in about two to four hours. The characteristic evidences of the disease recorded in botulism are quoted in their usual order as follows: delayed onset, marked muscular weakness, gastro-intestinal symptoms, disturbances of vision with diplopia and blepharoptosis, loss of ability to swallow and talk, constipation, rapid pulse and subnormal temperature, rarely any pain, death from respiratory failure and a high mortality rate.

As a contrast, we have in the outbreaks due to the paratyphoid group, such characteristic symptoms as follows: sudden onset, nausea, vomiting, abdominal pain, prostration, diarrhea, rise of temperature, and a mortality from 0 to 1 per cent. Therefore, the difference, clinically between these two types of food poisoning is distinct and should be easily recognized.

The explanation of the symptoms in cases of botulism has been under discussion for several years, and recently Schubel¹⁸, Dickson and Shevky^{19,20}, and Edmunds and Long²¹ have published experimental data which are very interesting. Dickson and Shevky state that: "In botulinus intoxications in cats, dogs and rabbits there is a specific effect upon the portions of the autonomic nervous system which Gaskell described as the bulbo-sacral and prosomatic outflow of connector fiber respectively, which results in a blocking of the nerve impulses of those nerves . . . The experiments show, however, that the lesions in these portions of the nervous system are not of central distinction, but are peripheral."

These authors further conclude that: "In addition to the effect upon the fibers of the parasympathetic nervous system, the toxin of clostridium botulinus, types A and B, exerts an influence upon the endings of the motor fibers of the voluntary nervous system which leads to a marked susceptibility to fatigue. There is no effect upon the sensory fibers of the peripheral nerves. The muscle cells of the smooth and striated muscles are not affected."

Edmunds and Long state that: "All the truly characteristic symptoms, however, can be explained by the peripheral motor paralysis. The increasing weakness in the legs, the relaxation of the abdominal wall, the early change in the respiration due to the failure of the nerve endings in the respiratory muscles."

Based on the above findings, Edmunds and Long, recommend artificial respiration and the careful administration of physos-

tigmin in treatment. Geiger¹⁵, however, states that "immobilization and quiet are indicated by the best means available. It is almost unnecessary to call attention to those familiar with the disease in animals to the often observed fact that the merest roughing of the inoculated animal after the disease is manifest, hastens materially the outcome." This clinical observation seems amply supported by Dickson and Shevky²⁰ in their explanation of the nerve factors involved in the production of many of the early symptoms noted in botulism. They make the definite statement that "All the phenomena may be explained on the basis of susceptibility to fatigue in the nerve endings of the motor fibers which supply the skeletal muscles, etc."

To the above measures suggested in the treatment of botulism must primarily be added the use of the specific types of antitoxin. As there seems to be some fixation of the toxin in the body and probably no increase after the poisonous food has been ingested, early administration of the antitoxin is desirable. This is very difficult of application, as usually the disease is not recognized within 48 hours after the food has been consumed and this is not unlikely the time limit of the efficiency of the antitoxin. In this connection it is well to mention that type A is by far the most predominant type demonstrable as causing the outbreaks in the United States. Type B is exceedingly rare as a cause of the disease in humans.

SPOILAGE

In the majority of outbreaks of botulism, the preserved foods responsible have been noted to be visibly spoiled. This spoilage may be a relative matter, as the containers can be normal in appearance and the disintegration of the contents so slight that no odor or taste is detected. Spoilage as to odor and appearance is, therefore, a decidedly doubtful criterion in botulism.

In the 56 outbreaks of botulism recorded in this study, information as to spoilage is available in 41. Eighteen of the foods implicated were stated to be normal in odor and taste and there was nothing unusual in the appearance of the container. In the remainder, 23, the preserved food and its containers appeared abnormal, though it was tasted and served as food.

Schoenholz, Esty and Meyer²², in an extensive piece of work with canned foods, artificially contaminated with spores of *B. botulinus*, report that under the conditions of the experiment toxin formation and spoilage were constant in corn, peas, sal-

mon, sweet potatoes and pumpkin; irregular in asparagus, beets, ripe olives, spinach, string beans, evaporated milk, red and green peppers. Toxin without visible spoilage was moderately produced only after prolonged incubation in acid fruits as apricots, cherries, peaches, plums, raspberries, tomatoes and sauer kraut, and then in exceptional cases only. Spoilage is, therefore, a doubtful criterion in botulism and as Geiger²³ has pointed out, this is true also in outbreaks of food poisoning due to the paratyphoid group.

FOOD SUPPLIES

When the type of food poisoning is recognized as botulism, always suspect preserved foods and meat products, such as sausages. In the type of food poisoning due to the paratyphoid group, always suspect freshly cooked or "warmed over" food, especially if there has been some period of incubation.

LABORATORY PROCEDURES IN BOTULISM

In outbreaks of botulism, the suspected food is tested for the presence of toxin by animal inoculation using mice, guinea pigs or rabbits. Tests are also made for type by neutralization with specific antitoxin. Cultures of the food to determine the presence of spores can be made, but it is cautioned that toxin must be demonstrated originally to prove absolutely the food as the causative factor.

It has been suggested by Meyer and Geiger²⁴ that stools of clinical cases be examined for the presence of *B. botulinus*. This has also been advocated by Hervey¹⁶. Tanner and Dack have published positive findings of *B. botulinus* in two out of 10 samples of stools of normal persons. The value of these findings, however, has been somewhat counteracted by the data of Geiger, Dickson and Meyer⁴, who state: "That the 50 stool specimens of people who had ingested raw vegetables and fruits purchased in the open market proved negative for *B. botulinus*, although repeated examinations of the fruits and vegetables these people ate had shown the presence of *B. botulinus*."

AUTOPSIES

Dubovsky and Meyer²⁶ stated that in four cases studied *B. botulinus*, types B and A, were found in the intestinal contents of the two cases, in the intestinal wall itself, in one case, and from the liver in one case. Recently Geiger isolated *B. botulinus*, type A, from the stomach wall of a case dying of botulism but not from

the stomach contents. Neither the supernatant liquid from the macerated stomach wall nor the stomach contents was originally toxic.

Wilbur and Ophuls²⁷, Armstrong, Story and Scott²⁸, and Geiger, Meyer and Dickson⁴, discussing the histologic changes, found in the cases of botulism noted particularly a characteristic type of thrombus formation in the vessels of the brain. Dickson²⁹, however, states that thrombi cannot be considered pathognomonic of botulism. In this connection, Geiger made an investigation of several cases of illness occurring recently in Chicago. On autopsy of one person that died, the anatomical findings and subsequent microscopical examination revealed thrombosis in the brain and other tissue, and a diagnosis of botulism was suggested. It was later proved that these cases were not botulism.

It has been interesting to note that, occasionally, there is in outbreaks of botulism the history that one person or more after consuming the poisonous food, did not become ill. A search of the records reveals that in 12 outbreaks there were 29 people who supposedly ate the toxic food and were not affected. Aside from the possible mistake of the records because usually the morbidity incidence in outbreaks is 100 per cent, several explanations have been offered for this phenomenon, namely, either there may be a greater concentration of toxin in some parts of the preserved food in the container than in others, or there may be some immunity to the intoxication, or perhaps only one can of several that were served, was toxic.

LABORATORY PROCEDURES, FOOD POISONING, DUE TO PARATYPHOID GROUP

In outbreaks of food poisoning due to the contamination of the food with the organisms of the paratyphoid group, every effort should be made to demonstrate the presence of filterable toxic substances in the causative food. In any event, bacteriologic examination of the food and excreta of the persons ill should be made. It is desired to point out that the stools should be examined as early as possible, as negative results will probably be obtained if examinations are not made within 48 hours after the ingestion of the food.

It has been suggested that tests be made of the blood sera of persons ill in outbreaks of food poisoning due to the paratyphoid groups for the presence of agglutinins. The results so far obtained are inconclusive and of doubtful value, because of the

many contributory and dependent factors in this test, such as previous vaccination with triple typhoid vaccine, the negative bacteriologic findings of a specific organism in the suspected food, the comparatively short duration of illness, the coagglutinins demonstrable among the members of the paratyphoid group and the absence of definite information as to such reaction in the normal individual.

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SOME ASPECTS OF OBSTETRICAL CARE*

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A review of the history of obstetrics shows that no single great advance has been made since the discovery of the cause of puerperal fever by Semmelweiss and the introduction of anesthesia by Simpson. Nevertheless, the period since that time, or the present period, has been marked by numerous minor improvements in technic,

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which have resulted in great reductions in obstetrical mortality and morbidity. Yet, one in practice is frequently reminded that perfection has not been attained. As a result, we have been interested for some time in refinements of methods and have made certain clinical observations and experiments, some examples of which may be considered worthy of mention.

PRENATAL CARE

Without going at length into the subject of prenatal care, I should like to mention several interesting points. We have abandoned prenatal efforts at preparation of the nipples for nursing. Since equally good results are reported to be obtained by hardening solutions or by softening, oleaginous substances, it was concluded that natural processes were alone sufficient, and this has proved to be the case in actual practice.

Diet during pregnancy (with rare exceptions as in diabetes) should not be greatly restricted in quantity or quality. The growing fetus needs a well balanced diet, so to speak, and will obtain the food essentials, even at the expense of the maternal tissues, if necessary. Perhaps, at some risk to the maternal welfare, the markedly restricted Prochownick diet will result in slightly smaller babies on the average,—due to less body fat and fluids,—but with no practical reduction in the size of the skulls and other bony structures, and has now been abandoned as useless, even in cases of contracted pelvis. There is no sound reason for the total elimination of proteins, even in the presence of toxemia. Harding and VanWyck have fed toxemia patients large quantities of proteins with apparently no ill result. As a matter of fact, the usually employed milk diet has a high protein content. On the other hand, there does seem to be good reason for limitation of the sodium chloride intake in toxemia, since the edema is probably associated with salt retention.

W. A. Yoakam, formerly of our staff, has definitely shown that the administration of iodine during pregnancy, (in this section at least), will greatly reduce the incidence of fetal enlargement of the thyroid gland. He observed no ill effects on the mother, even when one of the several forms of goitre was present. Ordinarily iodine salt is usually satisfactory, although occasionally larger doses in the form of sodium or potassium iodide are required.

MANAGEMENT OF LABOR

In the management of labor, we are inclined toward the conservative side and to

this attitude largely ascribe our gross fetal mortality of only 3.77 per cent for babies weighing 1500 grams (approximately 3¼ lbs. or over and gross maternal mortality of less than one in 500. In most instances, patients are better off for analgesia during the first stage by scopolamine and opiates or by the Gwathmey rectal ether method, although neither procedure is entirely devoid of danger for the child. Occipitoposterior presentations, when treated conservatively, make necessary a few more low forceps operations than do anterior positions, but otherwise, in our experience, seldom cause trouble.

After several series of experiments, which have been previously reported, it became evident that one of the ordinary skin antiseptics would give better results than the old scrub and flush perineal preparation. At least, the danger of washing bacteria into the vagina could be obviated. We have found diluted tincture of iodine or two percent mercurochrome to be equally efficient, and either can be applied quickly and easily just before delivery. This simple preparation is also used for vaginal examinations with good results.

For several years, we have been repairing relaxed outlets immediately following delivery with surprising ease. Several old complete tears and a recto-vaginal fistula have been closed with ideal results. The advantage to the patient is obvious, and the procedure ordinarily prolongs anesthesia for only a few minutes.

POST-PARTUM CARE

Following delivery, patients may be given full diet in response to the hunger which is usually present. Liquid, or other limited diet, seems to be in direct violation of the natural demands, when it is remembered that labor entails more or less physical exhaustion, for the recovery from which food (as well as rest) is required. We have never seen any but good results from such a regime.

In 1916, E. D. Plass showed that the usual frequent flushings of perineal repairs with antiseptic solutions were not only unnecessary, but were even harmful. On the basis of his observations, we confine perineal after-care to that necessary for personal cleanliness. If the minimum amount of cat-gut for approximation of the tissue is used (and this is an important point), healing *per primum* takes place almost without exception.

It is unnecessary to mention further examples of our obstetrical care (some de-

parting considerably from the usual routine) in order to indicate that there is still the possibility of refinements of technic which would be for the comfort and welfare of obstetrical patients. From our experience, we are convinced that thoughtful attention to details of treatment gives worthwhile results.

TREATMENT OF CRANIAL AND INTRACRANIAL INJURIES*

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While we frequently speak of the dangers and the mortality of skull fractures, what we are really considering in most cases is not the skull but its contents,—in other words, the skull fracture is often a mere incident, indicating in a measure the amount of force applied but of itself quite innocuous. It is the possible intracranial damage, either immediate or delayed, which chiefly concerns us. And remember it is by no means uncommon to have a fatal trauma to the brain without any break in the continuity of its bony covering. The opposite is even more frequently observed, a simple fracture of the skull without symptoms and without demonstrable intracranial damage. But here we are lead back to our first statement since this type of case has no mortality and requires no special kind of treatment.

Although by some considered obsolete, the old classification of skull fractures,—simple linear, depressed and compound, has much to recommend it when considering the treatment of cranial fractures per se, without regard for possible coincident intercranial damage. A fourth group, the basal fractures, scarcely fitting the above classification since it is based on anatomical position rather than on the type of fracture, is considered by many clinicians as almost a distinct entity. This is probably due to the high mortality which we formerly associated with any fracture through the base.

Linear fractures alone can be considered from the purely fracture standpoint since all other types of necessity imply either immediate or potential brain injury or infection. And from the strictly fracture standpoint, linear fractures require no treatment. We are chiefly interested in their detection as an indication of a rather severe blow to the head and for the pos-

sible intracranial complications which may result. Casting aside for the present the possible coincident brain damage, simple linear fractures require surgical treatment for only one complication: intracranial hemorrhage. This is usually from the middle meningeal artery, more rarely from the superior longitudinal or lateral sinuses, and only occasionally from a large posterior emissary. The symptoms from hemorrhage are usually delayed since the bleeding is practically always extradural. So classical is the typical train of events that no one should fail to recognize that the middle meningeal artery has been torn. Usually after a quiescent period of several hours during which the patient may have returned to consciousness, the pulse and respiration rates decrease, the patient, if previously conscious, becomes drowsy, stuporous and finally, unless operated, in coma, and local irritative or paralytic phenomena develop. These manifest themselves by epileptiform movements of either mild or severe grade on the opposite side of the body. The face only may be involved but as a rule the arm and frequently the leg show Jacksonian movements. If the pressure increases very rapidly, and particularly when considerable general brain injury is present, epileptiform attacks may be wanting and the first indication of localized pressure is a weakness or paralysis of face or arm or both. The hand or arm may alone be involved for two or three hours or more but unless the process is checked, the entire side of the body will usually be involved before death supervenes. If the lesion is on the left side in right-handed individuals, the first symptom of localizing nature may be difficulty in speech due to pressure on the motor speech center.

When symptoms indicative of middle meningeal hemorrhage develop, operation should be performed immediately. The bleeding point is usually found beneath the lower parietal or the temporal bones, but occasionally the artery is torn at its exit from the foramen spinosum. If the former, simple ligation with evacuation of the clot is easily performed. The latter is somewhat more difficult to handle as the dura must be lifted from the middle fossa and the exit of the artery actually observed. By the use of a lighted retractor and continuous suction adequate exposure is greatly facilitated. The artery may be ligated, but we have found it is much simpler and equally efficacious to plug the foramen spinosum with a small wooden peg.

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This being sterile can be left in the skull without fear of any subsequent complication.

The recognition of hemorrhage from the large sinuses may offer greater difficulties. In the cases of superior longitudinal sinus hemorrhage personally observed, both legs were affected. The reflexes were greatly exaggerated and double Babinski phenomena were present. In the more rare cases of lateral sinus injury and in two cases of hemorrhage from a large posterior temporal emissary, personally operated, the symptoms suggested middle meningeal hemorrhage, the fracture line, however, indicating the more posterior position of the probable lesion. Bleeding from the sinus may be controlled by the application of a muscle graft or by ligation.

We believe that every depressed fracture should be operated. Frequently with a depressed fracture we have immediate local damage plus a general increased intracranial pressure. The extent of the local damage cannot be determined by the present symptoms and there is little question but that the actual extent of the damage may be greatly increased by the continued pressure of the fragments. Therefore, immediate operation, providing the patient is not in shock, is always indicated. Even though no symptoms of local pressure or of increased intracranial pressure are present, a depressed fracture should be elevated, not only for cosmetic purposes but to prevent possible later sequelae such as epilepsy. Frequently under a depressed fracture will be found a small bloodclot with laceration of the brain substance. If the clot is not removed and the lacerated cortex thoroughly irrigated, subsequent cyst formation with either local or general symptoms may develop.

We believe that the bone should be saved in all cases where infection is not potentially present and it is frequently possible to reconstruct the calvarium even in the most extensive comminuted fractures. We believe that every case of compound fracture should be operated, no matter how limited the fracture may be. Even in the simple compound linear fractures we frequently find that hair has been forced into the cleft at the moment of impact and the possibilities for meningitis or at least osteomyelitis are excellent. The treatment as developed by Cushing during the war has proven highly satisfactory and consists of debridement of all possible infected and contused tissues. This means an elliptical excision of the lacerated scalp, the re-

moval of contaminated bone fragments or of the fracture line, the excision of the torn dura and the thorough irrigation of the lacerated brain cortex. We do not actually excise brain tissue but by irrigation and suction all broken down tissue can be removed. In bullet wounds of the brain it has been found desirable to aspirate throughout the track of the bullet. This removal of lacerated brain tissue prevents subsequent softening of the adjacent brain as well as removing much devitalized and potentially infected tissue. Bleeding points in the dura can be ligated and hemorrhage from the brain controlled either by the application of silver clips or of muscle grafts. The troublesome bleeding from pachyonian bodies is easily controlled by the application of thin muscle grafts. Under no circumstances should packs or other drainage material be left in place. The scalp should be closed tightly. If the laceration was so extensive that approximation of the scalp edges over the debrided area was impossible, a flap of scalp should be turned from an adjacent region so that the actual defect in the skull and dura is entirely closed. Later the denuded area left by the turning of the scalp flap may be skingrafted, but immediate closure of the intracranial wound is imperative.

In compound fractures of the frontal region involving the frontal sinuses or cribriform plate, operation is indicated even though the case appears hopeless. The one exception to the rule that no packs should be introduced is made in these cases. If on exploring the frontal region the fracture is found to extend through the cribriform plate and there is a superimposed tear in the dura, we have made it a practice to place a strip of iodoform wick between the cribriform and the dura. This allows the brain to become firmly adherent to the dura before infection may reach the subarachnoid space through the cribriform. Once the brain and dura are firmly adherent, the chances for meningitis are materially reduced. If, as frequently happens, the frontal sinuses have been fractured and driven into the brain, we have carefully removed all fragments of bone, irrigated away the lacerated brain tissues and removed the remaining walls of the sinuses so that the dura and scalp will come in immediate contact. If the supra-orbital ridge is preserved, there is little deformity resulting from this operation and the possibilities of meningitis are largely eradicated.

Basal fractures have for long been of

great concern to the surgeon because there is such a high immediate mortality and in those patients who survive temporarily, meningitis frequently develops. Outside of the immediate mortality which is undoubtedly due to extensive brain damage, basilar fractures should be really considered from the standpoint of the compound. Frequently the fracture extends through the petrous portion of the temporal bone with a coincidental rupture of the tympanic membrane and blood or cerebral fluid or both flow from the external ear. We have developed a definite routine in treating this fracture because essentially it is compound and the results have been very gratifying. The external canal is thoroughly cleansed with cotton applicators down to the tympanic membrane. Tincture of iodine 3½ per cent is then poured into the ear so that the canal is completely filled and the external ear sterilized as well. The head is then rotated, allowing the iodine to run from the ear and sterile dressings are applied. If these become displaced, the canal is again wiped out with iodine and the sterile dressings replaced. By following this technic we have had no cases of meningitis develop where the technic was rigorously applied. In the basilar fractures through the cribriform plate, which are also essentially compound, with a free discharge of cerebral fluid from the nose, we believe that a frontal operation should be performed and the dura separated from the cribriform and a iodoform wick placed between the two.

Our chief concern then from the purely fracture standpoint in both compound and basilar fractures is the possibility of infection and every effort should be made to immediately prevent its occurrence.

We now come to the treatment of intracranial damage which may or may not be associated with fracture of the skull. Intracranial injuries may be divided into two groups: those produced by pressure and those due to laceration of contusion of the brain substance. Pressure may be due to either hemorrhage or edema. Hemorrhage is usually due to rupture of the middle meningeal artery and the symptoms point to a localized lesion requiring operation, although there may be rather extensive hemorrhage from laceration of pial vessels. The usual symptoms, however, of brain damage are due to a more or less extensive edema of the brain. The usual treatment for increased intracranial pressure has been a subtemporal decompression either with or without drainage of the

middle fossa but since the work of Weed and his collaborators, it has been found that introduction of hypertonic solutions intravenously will reduce intracranial pressure far more effectively than can a subtemporal decompression. We, therefore, no longer operate for generalized intracranial pressure of traumatic origin. In its stead we use hypertonic solutions, either Ringer's or glucose. Simple sodium chloride in a 35 per cent solution may be used in emergency but at least from experiments, it has certain drawbacks. We, therefore, recommend the use of saturated Ringer's solution or a 50 per cent solution of chemically pure glucose. The Ringer solution has a more immediate but much more transitory effect and in the usual case of increased intracranial pressure of traumatic origin, glucose will be found the most efficient therapeutic agent at our disposal. Immediately upon admission of an accident case with symptoms indicative of increased intracranial pressure, the patient is given 100 c.c. of 50 per cent glucose intravenously. Lumbar puncture may be done while the glucose is being prepared and at times this simple procedure is all that is required. We believe there is no danger associated with lumbar puncture in these cases and it may be performed repeatedly as indicated. Especially in basilar fractures with a very bloody cerebral fluid has lumbar puncture given gratifying results. The fluid is allowed to escape freely until it comes drop by drop, no matter how much fluid is actually collected. The patient is then given hypertonic glucose and placed in a semi-Fowler position. Even though there may be shock present, glucose is indicated as it not only combats the increased intracranial pressure but it is of value in the systemic condition known as "shock." It seems rather surprising at times to find marked increased intracranial pressure with a very subnormal arterial pressure but this combination is by no means rare. The hypertonic glucose solution by its osmotic action takes up the cerebral fluid from the ventricles and the subaracnoid space and the edema within the brain tissue itself. The results at times seem almost miraculous. A patient in deep coma with Cheyene-Stokes or deep stertorous breathing with a very slow pulse and respiratory rate may become sufficiently conscious by the time the glucose injection has been finished to respond to questions and obey simple commands. We have observed this many times and the results

have been so striking and immediate that it cannot be a coincidence.

Hypertonic glucose will not save every patient. It will not bring every patient back to consciousness from deep coma but we believe it will materially reduce the mortality and save extensive brain damage if used in every case. Of course, patients are seen with massive brain injury in which the skull is extensively crushed and in which no therapeutic measure will be of any avail, but in many apparently hopeless cases, the glucose has been a life-saver. As proof that it is more efficient than subtemporal decompression, we have given hypertonic glucose after a subtemporal decompression had been performed and there was immediate change for the better, though the operative procedure had been of no avail. Glucose can be given repeatedly but it is seldom necessary to give a second intravenous injection within five or six hours.

In summary we may state that linear fractures in themselves do not require operation; that all depressed and compound fractures of the vault should be operated; that meningitis may be prevented in basilar fractures by thorough cleansing of the auditory canal in those cases of involvement of the petrous portion of the temporal bone and by an operative procedure in cases of fracture through the cribiform plate. For the treatment of localized pressure most commonly of middle meningeal origin, operation is distinctly indicated. Operation is not indicated for the relief of general intracranial pressure. Here the intravenous introduction of hypertonic Ringer's solution or of 50 per cent glucose preceded by lumbar puncture has proven the most efficient means at our disposal.

TRAUMATIC SHOCK

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Traumatic shock may be defined as a condition of lowered vitality following injury characterized by low blood pressure lowered metabolism and a reduced blood volume.

It was a common observation that the seriously wounded soldier never had shell shock, while it was the soldier with a trivial wound or none at all who suffered from shell shock.

Traumatic shock may appear at once or after a few hours. The late cases are usually those who have had a crushed extremity and shock supervenes usually half

an hour or so after the removal of the tourniquet.

The treatment of shock until the last war has been bewildering with the multitude of measures, none of which were effective and undoubtedly did more harm than good.

Various preparations of strychnin digitalis, nitroglycerin, camphorated oil, alcohol, whisky, adrenalin and ether were injected without avail.

The American Army Shock commission arrived at the conclusion that the treatment by morphine, heat and fluids gave the best results, and called attention to the fact that it was the wounded soldier exposed to the cold who was the victim of severe shock.

It seems to me that the various theories devised on which treatment was based previous to the report of the American Shock Commission are now only of historical interest. The Splanchnic theory of engorgement was one although no surgeon had ever seen engorgement in the abdomen in shock. The Histamin theory was brought forth to explain shock after removal of tourniquet, but shock occurs after crushing of liver with no muscle injury. Fat embolism still hold forth as an explanation of shock in a few cases of sudden collapse. Henderson acapnia theory of lack of C. O. (carbon dioxide) with a complicated blood chemistry called for a treatment of shock by administering C. O. In other words, by adding more ashes to a fire you can make it burn more briskly. The heart failure was blamed for shock but it has been proven many times that it will recover its strength if given proper food fluid for work. Then there was and is the theory of vaso-motor paralysis disproved by cutting the nerves of one ear of a rabbit, producing shock and observing that in the operated ear the vessels will be dilated while on the ear with intact nerves supply there is a spasm contraction and not a dilation.

Dr. George W. Crile, the master surgeon and thinker has been a consistent persisting student of shock. Crile starting with pneumatic suit to overcome the low blood pressure always present in shock, proceeded then to a microscopical study of nervous cells in shock, and has given us the exhaustion cell theory of shock. Crile showed the typical cell changes in brain, liver and adrenal, and this was the limit of our knowledge of shock until two or three years ago. You may recall Dr. Crile comment on the prevention of shock in animals

by use of diathermy of liver, in his address last year.

Henderson study of marathon runners who collapsed on track disclosed a lowering of the sugar content of the blood, and Thalheimer studies of the use of glucose in the toxemias of pregnancy, lead Fisher of Milwaukee to use glucose in post-operative conditions and suggested its use in traumatic shock, and the results have been brilliant and dramatic as that of blood transfusion in severe hemorrhage.

The use of glucose in shock is based on the following facts: All animals are destroyers of energized compounds. It is the phenomena of metabolism that distinguishes living from lifeless matter. The energy of the sun is brought to man by way of the carbohydrates and their use as sugars. Entering the chlorophyl bodies of plants the kinetic energy of the sun is applied to the decomposition of carbondioxide and water and builds up carbohydrates. It is the oxidation or burning of these bodies that supply energy. In the intestines carbohydrates and sugar are absorbed and stored in liver as glygogen (estimated 10 oz.) a colloidal which by hydrolysis or the addition H. O. become blood sugar or glucose.

It has been pointed out that one-quarter of the entire volume of blood in the body is the requirement of the liver.

It may be said that a blood pressure below 100 following injury means shock. In the war commission study of shock there were 93 cases giving blood pressure readings as follows:

16 cases.....	40 - 50
14 cases.....	51 - 60
17 cases.....	61 - 70
26 cases.....	71 - 81
16 cases.....	81 - 90
14 cases.....	91 - 98

The pulse pressure had significances in prognosis.

Above 25 favorable. Below 25 unfavorable. Not practical because diastolic is very difficult to get accurately.

The British surgeon recommends a fluid for intravenious injection in shock of a 6 per cent gum arabic in 0.9 per cent nacl as possessing the same viscosity as the blood plasma and known to remain longer in the blood vessels than normal salt solution.

It was with this in view that when Fisher recommended glucose in shock that we used a 25 per cent solution of glucose instead of a 10 per cent as recommended by him; and as the results have been so

satisfactory we have had no occasion to change the following formula.

Glucose	75 grams.
Normal salt solution	300 c.c.
Insulin	35 units.

Solution of glucose given intravenously produces diureaus as well as glycosuria whereas glucose injected subcutaneously or by mouth produces neither condition and apparently has little effect in shock.

Glucose alone is not available in shock and the addition of insulin is needed, as aid in oxidation.

One unit of insulin is given for each gram of glucose and while we have in a few instances repeated the intravenous injection the third dose has never been given.

The following case is typical of its use at Hurley Hospital.

In a case of crushed pelvis, the patient who was in profound shock with a blood systolic pressure of 67 was given an intravenous by injection of glucose, 75 grain in normal solution 300 c.c. with 35 units of insulin and at the conclusion of the injection blood pressure was restored to 130.

These shock cases have uniformly responded to this treatment, so that during the last two years it has become a routine treatment for traumatic shock and for post-operative weakness when not due to internal hemorrhage.

SOME COMMENTS ON THE ADVANCE IN OTO-LARYNGOLOGY

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Within recent years, I have found it of more interest to my audiences to comment on the recent advances in our specialty, dwelling particularly on those factors which I personally have found of particular value, than to take up one special subject. To my mind, there is no specialty in the practice of medicine in which definite changes have taken place so rapidly. I am happy to say we are learning more and more how to treat patients by conservative means and are more wary about using the knife. The reason for this is obvious: too many operations have been performed in the past which, if they have not met with definite failure, at least have not given the results desired. For example, there was a time in the recent past when any deviation of the septum was considered sufficient cause for its resection. Not only is a deviated septum, to some extent, pres-

ent in 90 individuals out of 100 but, in most instances, such a deviation is but a contributing factor in a nasal obstruction.

In the random remarks which I am about to make, I shall dwell upon the most important additions to our work and the changes in diagnosis and treatment. In the realm of rhinology, first comes plastic surgery. Since the war particularly, the remaking of features and the correction of patent physical defects has become a specialty in itself. There are any number of plastic surgeons today who do excellent work and among them is one in your own state who holds an enviable position—Dr. Ferris Smith of Grand Rapids. On a recent visit, Dr. Defourmantel of Paris, France, had occasion to visit Grand Rapids and see some of Dr. Smith's work. He made the remark that he did the best work that he had seen in America. But plastic surgery should not stop with the remaking and remodeling of noses; nor should it stop with the changing of facial defects only. At present the plastic surgeon confines himself to changing the shape of the nose, remodeling ears and face lifting. The time is soon coming when he will no longer consider himself a rhino-laryngologist and will fit himself to do reparative work on any part of the body. One of my New York associates, long in our specialty, is abroad at the present time and is fitting himself for this kind of work. Dr. Seymour Oppenheimer has sent me a list of reconstructive operations which he has recently performed under the guidance of two great masters who were recently in our specialty. It may interest you to hear the types of operations he is called upon to perform. Among them are the usual facial plastic operations, including hare-lip and epithelial inlays after excision of the eye, and the following: tubular flare from the abdomen for burn of the arm, excision of ulcer of the back and skin readjustment, excision of leg ulcer and skin transplant; tubular flap transplant from abdomen for leg defect, cicatricial contraction of the hand with excision and skin graft; reduction of fatty limbs by fat excision; transplantation of abdominal fat to supraclavicular depression; excision of depressed scar of the face and fat transplant from abdomen, etc., etc. At first it seems amusing that a rhinologist should broaden his field to such an extent but when one thinks of the number of industrial injuries and deformities which take place each year, he will realize that there is much to be done by the man who makes this work a particular study,

If Dr. Gillies can find this kind of work of value in England; if Dr. Defourmantel can find this kind of work of value in France; then Dr. Oppenheimer should find this kind of work much appreciated in America. It is time that we ceased calling the reputable plastic surgeon a beauty specialist; it is time that we dignified his calling even if, from now on, we have to call him a reconstruction surgeon.

The interpretation of conditions within the nose itself has assumed a different attitude during the past few years. As I previously stated, we are inclined to more conservatism. In the treatment of common colds, we have finally come to the conclusion that Nature can do as much as we can although we may be able to temporarily relieve the patient of his symptoms. Two special methods of treatment have proved of particular value in my hands. Chlorine gas treatment gives excellent results if given for a sufficient length of time and in the right dosage and particularly if it is given at the onset of the coryza. We have used it in our office for over three years with benefit and now have a special room built for it in my new hospital. It makes little difference what type of apparatus is used but our preference is for the Gilchrist apparatus which is made by the National Research laboratories in Detroit. The patient should sit in a closed chamber for at least one hour. The second method of treatment is to shrink the mucosa of the nose with a mild cocaine and adrenalin solution. This is applied on flat pieces of cotton in either nostril, and then the patient is placed before a radiant heat lamp for about 15 minutes. When the cotton is removed, the nasal cavities are sprayed with some bland, oily solution. In cases in which mucopus or pus is present, one may wash out the nasal cavities very gently with a mild alkaline solution. In all cases a differentiation must be made between a simple, acute coryza and some sinus inflammation or infection. In such cases, the sinuses should be transilluminated, the same method of treatment applied but forcible suction on the sinuses may be necessary. This is best accomplished by means of a suction douche in the office and by advising a Nichol's nasal syphon at home.

I cannot resist the temptation of stating that nasal surgery has gone through a complete metamorphosis. A marked deviation of the septum may call for an operation on the septum only but, in the majority of cases, nasal obstruction is made up

of many factors among which may be hypertrophies of any of the turbinates, poly-poid posterior tips of the inferior turbinates hanging down into the nasopharynx or diseased tonsils and adenoids in association with a thickening of the nasal mucosa. An operation on one of these parts only, will not correct the trouble. For that reason, we are wont to work out our pathology and to perform multiple operations at one sitting. The results are far more satisfactory. Please do not feel that everything inside the nose and throat are removed. Only enough of each part is removed to give the result desired.

Perhaps no greater advance has been made than in the diagnosis and treatment of diseases of the accessory nasal sinuses. Two evident conditions are worthy of consideration. I refer to the definite infections of the sinuses in children so ably described by Dean, of Iowa City and the relationship of various eye conditions to sinus inflammations or infections. For some years now, Dean has dwelt upon the effects of sinus conditions upon the vitality of children and the relationship of various arthritides to infections of the sinus. Briefly, he has come to two conclusions; first, that many of these sinus infections can be cured by the proper removal of tonsils and adenoids and secondly that such children are lacking in fat vitamins and that a cure can be established by feeding them upon cod liver oil and butter. Such research is significant and far reaching. Although it is necessary to operate upon the sinuses of some children, especially the antrum, a great deal can be accomplished by the removal of throat infections and obstructions and proper diet. One must also recall the fact that 20 years ago the majority of pediatricians stated that children did not have sinuses—a fact dispelled by the research work of Schaeffer of Philadelphia.

But of as great interest is the anatomical relationship of the posterior sinuses especially to the optic nerve and its blood supply. I recall making the remark, as late as 1921, in Kansas City, that one was not justified in opening the sinuses for an eye condition unless some definite pathology was found in the nose, either by examination or by X-ray. But the classic reports of Dr. Leon White of Boston, soon made me see the error of my ways. Many cases of optic neuritis, retro-bulbar neuritis, even resulting in complete blindness, have been cured by the proper exenteration of the ethmoid cells and the opening up of the sphenoid sinuses. A few years ago, I

was called upon to examine a young girl who had suddenly gone blind. Every examination was negative. In spite of this fact, I opened up all of the accessory cavities and within four days, her sight began to come back and is perfect today. In other words, every puzzling condition of the eye warrants a nasal examination and, oftentimes, an operation.

In the treatment of the average nasal condition, we are tending more and more toward conservatism. Almost all acute conditions will respond to proper medical treatment and it is unwarrantable to suggest an operation unless there is definite pain which cannot be relieved in any other way. The subacute and chronic conditions will also, often respond to medical treatment and within the past year or two, we have been able to obtain excellent results from the use of vaccines locally.

I wish to stress the point of the use of vaccines here. It had been my experience in the past that the employment of vaccines hypodermatically did little or no good. Commercial vaccines work as well as autogenous vaccines if they work at all. It was therefore with a great deal of interest that I read of the experiments of Prof. Besredka, of the Pasteur Institute of Paris in rendering immunity in typhoid fever by administering the vaccine by mouth instead of by hypodermic injection. Further work proved that a suspension of the killed organisms in broth could be used on or in any part of the body as a local vaccine and many cases of osteomyelitis and many cases of skin disease of bacterial origin were treated in this way. This work suggested to me the use of the vaccine locally in the nose, throat and ear. A detailed report was made by me before the American Medical Association in June, 1925. It is beyond the province of this paper to go into details but, suffice it to say, that we have used the vaccine in over five hundred cases with very satisfying results, particularly in subacute and chronic sinus cases and in non-healing wounds such as a mastoid wound which lacks vitality. I would suggest its use in all types of surgical cases.

The question of diseased tonsils is one which has not been well decided upon up to the present time and deserves comment here. It is surprising to note how many adults have diseased tonsils and it is equally surprising to find out the number of remote conditions for which diseased tonsils are supposed to be responsible. One must bear two facts in mind—first, that

the size of the tonsil has little to do with the question and secondly that the diseased tonsil may not be the only factor responsible for the remote trouble. I have often seen small, buried tonsils which looked perfectly harmless, cause more trouble than hypertrophied tonsils which came together in the median line. Moreover, it may happen that a shoulder disability, for example, may occur in a person with diseased tonsils, but there may be lime deposits in the subacromial bursa which cannot be removed by getting rid of the original source of the trouble. In other words, the laryngological surgeon should not promise too much. I have often stated that the removal of the tonsils, provided they are the cause of the trouble, will do a great deal of good or even cure if definite connective tissue changes have not taken place, but it is a question how much good such an operation will do when definite pathological processes have become established. An acute rheumatic process will get better when the original source of infection has been removed; a chronic arthritis may not.

The casual inspection of the tonsils is not sufficient to make a diagnosis of a diseased condition. First one should palpate for enlarged glands of the neck, especially the gland underneath the angle of the jaw. The condition of the crypts should be noted but one must bear in mind that caseous deposits in the crypts cause little harm other than local. Palpation of the tonsil is next in order. The tongue should be depressed and with the index finger, the anterior pillar should be stripped from above downward, pressure being made on the tonsil at the same time. In this way the tonsil is extruded from between the pillars so that one may get an idea of its size and consistency and pus will thus be expressed from the superior tonsillar fossa and thus will be established a definite idea of a diseased condition. It is wise, in most instances, to obtain a culture of this pus because the type of organism will often give one a clue as to the seriousness of the condition. Although ordinary cultures from the tonsillar crypts will give a multiplicity of organisms, cultures taken in this way usually show one organism only. Yet, no matter what our conjectures may be in any given case, the proof of our reasoning depends upon the results we obtain.

The removal of adenoids may seem a very simple matter, but it is surprising how many times these masses are improv-

erly removed and it is even more surprising how many times, tissue is removed from the nasopharynx which is supposed to be an adenoid and isn't. To establish a diagnosis, except in children where the condition is self-evident, either at the time of the examination or at the time that the tonsils are being removed, one should examine the nasopharynx thoroughly either with the nasopharyngoscope or with the pharyngoscope. Although most children have adenoids, the reverse is true in adults. This tissue has a tendency to retrogress with age and it is exceptional to find true adenoid masses in patients over twenty-one years of age although small masses may be present in the fossae of Rosenmuller.

I have frequently seen a surgeon place a curette in the nasopharynx and strip down everything there without first exploring the cavity with the finger. It is absolutely necessary to determine the size, situation and consistency of the adenoid, so readily done by placing the index finger in the naso-pharyngeal space. For some time now, we have been using the adenotome devised by Dr. I. D. Kelley of St. Louis, both for diagnosis and for operation. The instrument is placed behind the palate and firm pressure brought to bear upon the pharyngeal wall. Thus any adenoid mass comes within the fenestrum of the instrument. The sharp steel blade is then forced through the adenoid. In the majority of cases, the adenoid is excellently demoted in this way but sometimes it is necessary to follow it with the curette. In all instances the cavity behind the palate should be investigated after the adenoid is removed to be sure that no remnants are clinging to the pharyngeal vault.

Tonsil and adenoid hemorrhage is an important matter. I am happy to say that such accidents seldom occur in my practice mainly, I believe because we use extreme care to see that the patient is safe-guarded before the operation and secondly because we hospitalize all of our patients and use the utmost care to do a clean operation. Every patient has a coagulation and bleeding time test taken and every patient is given calcium lactate three times a day before operation for three days. All children are operated upon under ether anesthesia; the majority of adults are operated upon under cocain or novocain. Such adult patients are given a hypodermic injection of a quarter of a grain of morphin in magnesium sulphate solution one hour before operation. It has been our experience that

serious bleeding always come from small remnants of ragged tissue which should have been removed. Seldom does the bleeding come from an artery; if it does it can be ligated. Most of it comes from torn veins and the more one tries to tie these off, the more difficulty he encounters. It is our custom in such cases to suture the pillars through the muscular part and then to insert a strip of bismuth subnitrate gauze into the fossa thus made. At the end of a day, the catgut will have dissolved and the packing can readily be removed. In rare instances, severe hemorrhages do occur and, at such times, one will have to use his best judgment in the individual case. Sometimes one will have to inject coagulin intravenously or inject horse serum into the deep muscles or he may even have to resort to a transfusion.

Great advances have been made in the study, diagnosis and treatment of various laryngeal and lung conditions due mainly to the expert employment of the direct laryngoscope and the various bronchoscopes. This specialty within a specialty has received the recognition it deserves because of the painstaking work of Dr. Chevalier Jackson and his associates in Philadelphia. Some of this work will be detailed by Dr. Moore of the Jackson Clinic at this meeting in Lansing. Much as I should like to dwell upon it, my personal experience has been limited. The advance in laryngeal and lung surgery has been most romantic and epoch-making and its possibilities are beyond our reckoning. A foreign body in the lung, such as a pin, a pea-nut shell, a tack, etc., presents little difficulty in its removal today. Lung abscesses can be washed out with certainty. Tumors of the lung and the mediastnum can be diagnosed with accuracy. I wish to give Dr. Jackson and his associates every credit for they are setting an example which it is well for all of us to follow—they are constantly training men throughout the country to do this work in the right way. The work in my office is done by my partner, Dr. Arthur Palmer, who has been well trained by them and who tells me that whenever he is up against a difficult problem, he gets in touch with Dr. Jackson's Clinic. These all-too-modest surgeons are always only too willing to advise.

Although many of the acute diseases of the middle ear deserve attention, I shall confine my remarks to pathologies of the mastoid process. One wonders, with our more precise methods of diagnosis and treatment, why more patients are operated

upon for mastoiditis than formerly. The answer is, first that we are living at a time when patients seem to be more prone to infections of this bone of a virulent character and secondly that we are able to make a diagnosis earlier and thus save the lives of patients who, in past years, died of baffling intracranial complications. The mastoid operation itself is a technical operation but the incidence of death from it, when uncomplicated, is practically nil. It is for that reason that I believe the patient should be operated at the earliest moment after it is determined that operation only will save him from serious consequences. In young children two facts deserve grave consideration—first, the patient should be operated upon at an earlier date if both ears are involved in order to save the hearing and, paradoxical as it may sound, no child should be operated upon until there is a definite indication that other factors which can be eliminated have been attended to. For example, a child with a profuse discharge from both ears, running a fairly high temperature but showing by the X-ray pictures that there is no breaking down of the septa between the cells, may have a throat filled with diseased tonsils and adenoids. Often, if these are removed, the ears will cease discharging:

I consider the X-ray picture of the utmost importance in the determination of the seriousness of the underlying mastoid condition. I do not wish you to consider that I allow the X-ray picture to make the diagnosis for me for it should always be interpreted in conjunction with clinical symptoms such as a sagging of the posterior part of the drum, the pulsation of the incision in the drum, etc. Nor is one X-ray picture sufficient in many cases. Often it is necessary to have pictures taken every other day for comparison. It is surprising to see the gradual clearing up of one case in this way and the difference in the amount of destruction in another case.

Complications of mastoiditis are not as common today as they were ten years ago. That is because more men are performing better operations. Among these complications are erysipelas, sinus thrombosis and brain abscess. Erysipelas may be difficult to diagnose at first but when once discovered will respond best to repeated injections of His Leucocyte Extract (Squibb and Company). The diagnosis of sinus thrombosis will rest mainly on a positive blood culture. Although a thrombosis may take place without a positive blood culture, it is my opinion that an operation is un-

warrantable unless the culture is positive. We realize that this opinion is contrary to the one generally expressed; yet in 20 years of practice, I have not had to change this opinion.

When both mastoid processes have been operated upon, it has always been a difficult question to decide on which side the thrombosis has occurred. Fortunately today we can determine this matter by employing the spinal manometer devised by Dr. George Tobey of Boston. By inserting a needle into the spinal canal connected with long glass tubing and exerting pressure upon the jugular veins in the neck, one can tell which vein is thrombosed; for the spinal fluid will not rise in the glass tube when pressure is exerted on the side on which there is a thrombosis.

No greater therapeutic measure has come to our hands in cases of sinus thrombosis than blood transfusion. Whenever a patient becomes devitalized as the result of a mastoid operation, whenever a patient shows symptoms of a possible sinus thrombosis, especially if the blood culture is negative, I have insisted on a transfusion of whole blood with eminently satisfactory results. And in the past few years, when a case has presented itself which needed an operation upon both ears and it was difficult to decide which vein was affected, even when the blood culture was positive, I have given a transfusion with the result that this added new blood has fought off the infection and I have not had to operate. I now have four cases on record of children who are perfectly well today who had a sinus thrombosis with a positive blood culture who have recovered after a transfusion and never were operated upon. In my recent text-book I have dwelt upon this subject at some length.

I cannot conclude this paper without some dissertation upon the subject of progressive deafness, a subject which ought to be of more universal interest than it is. I shall talk of this matter more in detail at the meeting tomorrow. Considering that a survey of the hearing defects of school children in the United States brings out the fact that over 3,000,000 children are suffering from defects of hearing which retards them in their school work, one should give this matter grave consideration.

The average practitioner is little interested in this subject and it is his usual policy to put these patients in the scrap-heap. In the first place, he knows nothing which will help these poor unfortunates and secondly he is inclined to feel that they will

get better or worse no matter whether they undergo treatment or not. But he does not realize that deafened individuals will demand treatment and, if they cannot be improved by legitimate medical men, they will go to the quacks. Millions of dollars are wasted each year in this way and there is untold disaster.

Deafened patients divide themselves into two classes—those that can be helped and those who will have to resort to means other than medical to attune themselves to their misfortune and their environment. But the doctor is needed in both classes of patients. The first class he treats physically, the second class he treats psychologically and refers to one of the agencies which are springing up in various parts of the country—one of the Leagues for the Hard of Hearing, associated with the American Federation of Organizations for the Hard of Hearing.

Children who are deafened need one kind of treatment; adults who are deafened need another kind. I have observed deafened children for a great many years and have, briefly, come to the following conclusions: 1. The main causes of deafness are repeated colds in the head, tonsils and adenoids, discharging ears which have run too long or have not received proper attention and a devitalized state of the child which does not allow the mucosa of the nose, throat and ear to become normal after it has once been diseased. The unfortunate circumstance is that these children cannot tell you that they are hard of hearing and the condition only becomes apparent when the hearing is properly tested or when a report is sent in from the school that the child is backward in his studies. 2. The condition in the ear which causes the deafness is either a so-called catarrhal one or a suppurative one. Eighty per cent of such children can have their hearing improved or the deafness entirely relieved if the ear is properly treated at this time. When one considers the fact that the majority of patients who show deafness later on in life had such a condition present since childhood, one can realize the importance of taking care of the trouble at that time. Please bear these facts in mind and realize that you have an important duty to perform and that the happiness of the next deaf child who comes to you may be preserved if you will only take the time and trouble to go into the case thoroughly and give the proper advice and treatment.

With our newer and more precise meth-

ods of examination, the treatment of the adult deafened is placed on a common sense plane. It is impossible to cure many of these patients; it is possible to improve the hearing of many of them or at least bring the hearing up to a satisfactory maximum where it can be maintained if the patient will co-operate with the physician. Not only must the ears be examined to note the retraction or relaxation of the drum, but one must examine the nose and throat carefully and the condition of the nasopharynx and eustachian tube with the pharyngoscope or nasopharyngoscope. Then the hearing should be tested with the audiometer. If there is a loss in the lower notes of the musical scale, one can do a great deal by local treatment; if there is a loss in the upper tones, one must analyze the general condition of the patient and not be satisfied until he finds the general physical cause which is the underlying irritation to the internal, auditory mechanism. I have seen patients greatly improved by simple Politzerization; I have seen other patients made hopelessly deaf by too forcible inflation of the ears; I have seen other patients cured by the removal of a gall-bladder. Thus one can see how remote the cause of the condition may be. Above all, under no circumstances, should one allow a deafened person to leave with the advice that nothing can be done. One places them in a position where life is not worth while living. As I stated before, such patients must be treated psychologically and they must be impressed with the fact that they are far better off in the hands of the honest otologist who promises little than in the hands of the quack who promises much.

SURGICAL ANATOMY OF THE GALL BLADDER REGION

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The gall bladder and its ducts, more often require operative treatment than any other intra-abdominal viscus, with the exception of the appendix. The technic of gall bladder surgery is very intricate, especially when pus and adhesions are present, and it is important that one should have a clear knowledge of the anatomical abnormalities he may find before attempting to operate in this region.

ANATOMY

Let us first examine the normal anatom-

ical relations as described by all anatomical text-books.

The gall bladder is a conical sac in a fossa on the under surface of the right lobe of the liver, its upper surface is attached to the liver, its fundus is completely invested by peritoneum, and its posterior surface is covered by peritoneum reflected from the liver; the body is in close relation with the first portion of the duodenum and the hepatic flexure of the colon; the cystic duct passes behind and upward to the left, and joins the hepatic duct at the mouth of the portal fissure. The hepatic duct is formed by the right and left ducts, from the right and left lobes of the liver, joined together at the bottom of the transverse fissure. The cystic and hepatic ducts join together and drain into common bile duct, which passes down in front of the foramen of Winslow within the layers of the gastrohepatic omentum. The portal vein is behind it, the common duct hepatic artery to left of it. It descends behind the first part of the duodenum and enters the second part after passing between the head of the pancreas and the duodenum lying on the inferior vena cava. This duct is about three inches long. The hepatic artery, from the coeliac axis, enters the transverse fissure and divides into two branches, one for each lobe of the liver. The right branch gives off the cystic artery, which supplies the gall bladder—this is illustrated in Fig. 1.

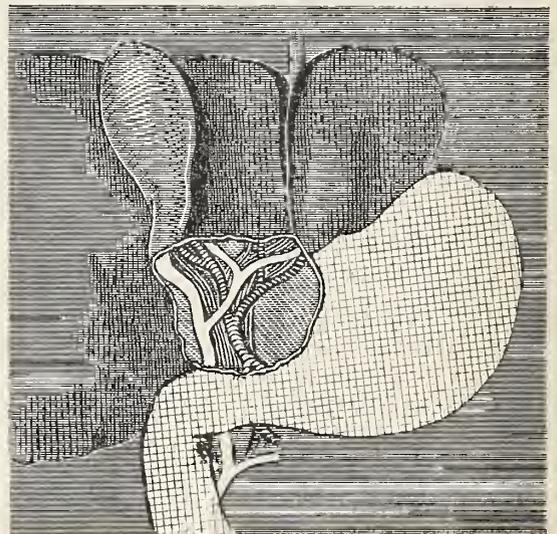


Figure 1

ABNORMALITIES

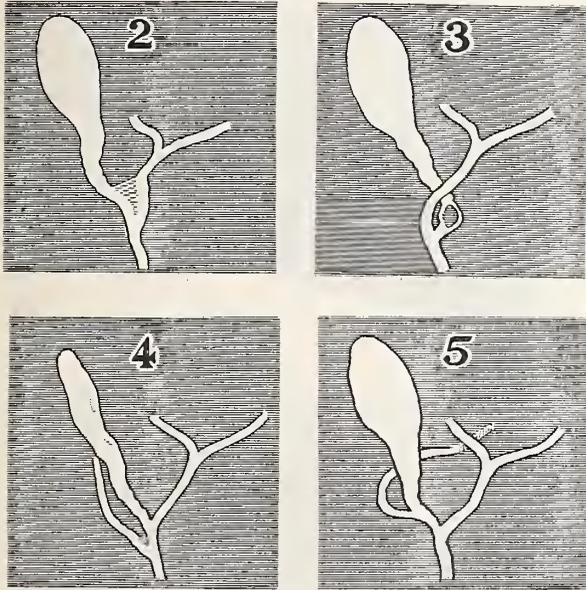
Let us now examine the abnormalities that may be found in the bile ducts.

Normally, the cystic and hepatic ducts join. The hepatic duct is about one inch long, and the cystic duct one and a half inches. They drain into the common duct.

which is three inches long. In a great many cases, about 90 per cent, the cystic duct and hepatic duct do not join when they come together, but run side by side, being held together by a fibrous band, and united about 1/2 in. above the upper border of the duodenum, as shown in Fig. 2. In a num-

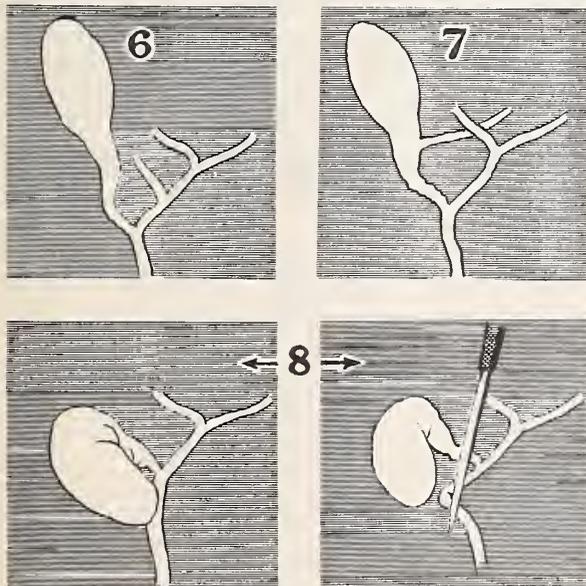
ing abnormality in the ducts is found in the presence of an accessory bile duct. In about 10 per cent of all cases there is present a right accessory hepatic duct—as shown in Figures 4, 5, 6 and 7. Thus, unless the operator is aware of the presence of an accessory duct in this region, in doing a cholecystotomy he is liable to injure or tear it across so that a biliary fistula results—that is, if he has been careful to drain; if he has not drained, the bile leaks through this torn duct into the peritoneal cavity, with disastrous results to the patient. Mr. Flint¹ of Leeds reports eight cases examined post mortem whose deaths were caused altogether by leaking of bile into the peritoneal cavity.

Another complication may follow cholecystectomy from an abnormally short cystic duct with a large sigmoid gall bladder, which may adhere to the common duct—as shown in Fig. 8. When the gall bladder is pulled up, the common duct is pulled up with it, and if the surgeon does not recognize the common bile duct, he may injure it or ligate it. This accident may happen in the hands of the most careful surgeon.



Figures 2, 3, 4 and 5

ber of cases the ducts join below the border of the duodenum; or the cystic and hepatic ducts may enter separately into the duodenum and no common duct be present at all; or the cystic duct may coil itself round the hepatic duct before joining it—as shown in Fig. 3. A stone lodged in such a coil may easily be overlooked, or in removing it the common duct may be opened or injured. But the most interest-



Figures 6, 7 and 8

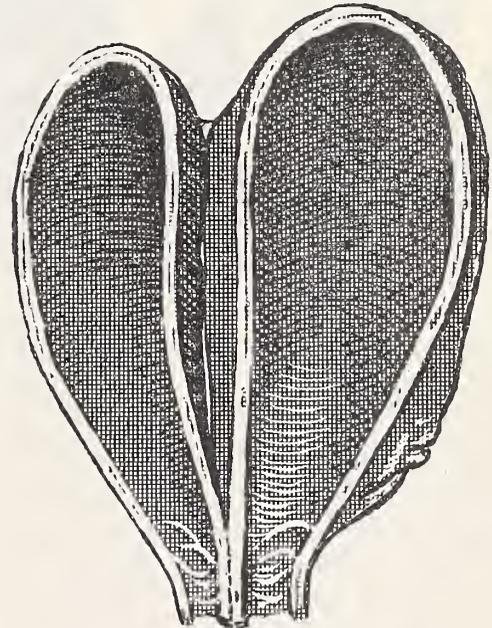


Figure 9

“Two Complete Cavities Each Possessing Its Own Cystic Duct.”

JAMES SHERREN, F.R.C.S.,
(Surgeon to the London Hospital).

OPERATION—July 20, 1910, London Hospital
Woman 25 years old—

1911—Annals of Surgery, Vol. 54, P. 204.

Double Gall Bladder Removed by Operation. Specimen in
Museum of Royal College of Surgeons of England
(No. 551.21).

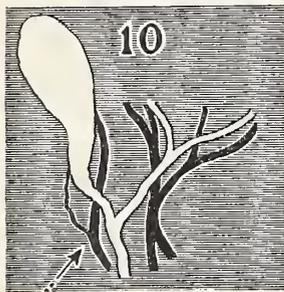
“Joined Only Along a Narrow Portion of Their
Circumference.”

See “Post Mortem” Case, Dr. Purser, November 5, 1886,
British Medical Journal, Academy of Medicine in Ireland
Pathological Section.

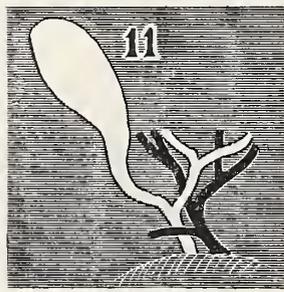
An English surgeon of wide experience informed me that it had happened with him four times. He also stated that he had re-operated upon a number of such cases, which had formerly been operated upon by other surgeons.

A very interesting condition, which has been reported by Mr. James Sherren² in the *Annals of Surgery*, 1911, is that of a double gall bladder. This specimen may be seen in the Pathological Museum of the Royal College of Surgeons, London, (see Fig. 9). It is a very rare condition, only one other case having been reported, by Dr. Purser³, November 5th, 1886, *British Medical Journal*. I have examined Mr. Sherren's specimen, but have never seen any other case.

There are a number of abnormalities in the arteries of this region that the surgeon must recognize. In about 3 per cent of all cases, there are two separate and distinct right hepatic arteries—as shown by Fig. 10,—one coming from the superior



10
ACCESSORY HEPATIC A.
FROM SUPERIOR MESENTERIC



11
GASTRODUODENAL A.
IN FRONT OF SUPRADUODENAL
PART OF COMMON BILE DUCT

Figures 10 and 11

mesenteric artery, passing behind the cystic duct, and giving off an accessory cystic artery to the gall bladder. This accessory artery is easily injured during the cholecystectomy, and causes profuse bleeding. Also, in opening the common bile duct, it is possible to have a severe hemorrhage from the gastro-duodenal artery, which sometimes curves over in front of the supraduodenal part of the common bile duct—as shown in Fig. 11.

As pointed out in the beginning of this paper, there are no normal peritoneal connections between the duodenum and the gall bladder, or the gall bladder and transverse colon. In about 33 per cent of all cases, there is a concentric fold of peritoneum with a free anterior edge, passing downward from the neck of the gall bladder to the first part of the duodenum. This fold may pass upward to reach the transverse colon; it is a remnant of the mesogastrium, and is called by many names,

such as⁴:—the *hepatic colic*, *cystic colic* or *Cystic duodenal ligament*. I have seen this fold many times on the operating table and in the dissecting room—as shown in Fig. 12. I have also seen it mistaken for ad-

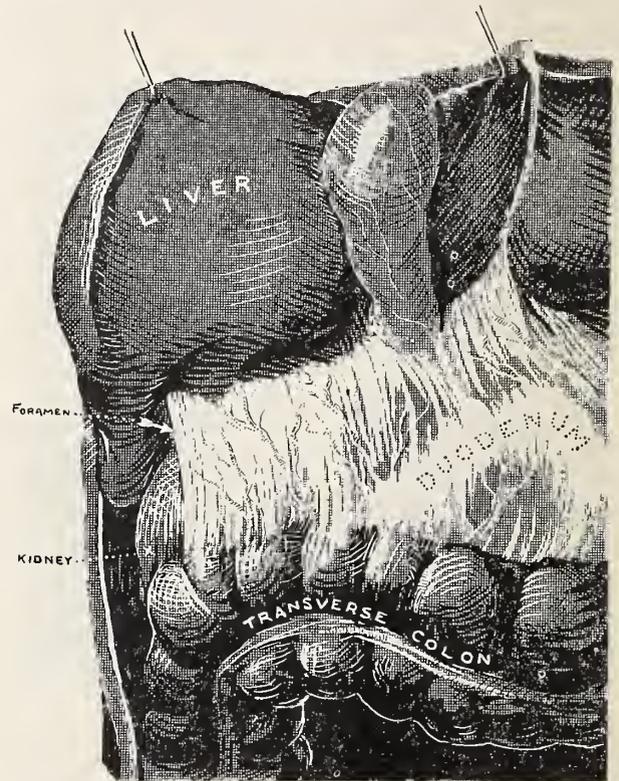


Figure 12

hesions, and a perfectly normal gall bladder removed because the operator was not familiar with the anatomical peritoneal relations of this region.

It is well to know the difference between peritoneal reflections and inflammatory adhesions. Peritoneal reflections always have two layers between which blood vessels ramify, while inflammatory adhesions are composed of only one thin layer, without ramification of blood vessels. It is possible for this cystic duodenal fold to so kink the duodenum as to cause an obstruction. One such case has been reported, (*Lancet*⁵, February 10th, 1923).

The technic of cholecystectomy varies with different surgeons. In doing a cholecystectomy, or in operating upon the bile ducts, wide exposure is very necessary. This is best accomplished by complete anaesthesia and an ample incision. I have been injecting the trunks of the lower six intercostal nerves (see Fig. 13) as they run between the external and internal intercostal muscles, in the intercostal spaces along a line just internal to the lower angle of the scapula, with 2 per cent novocain. To make sure that relaxation is complete,

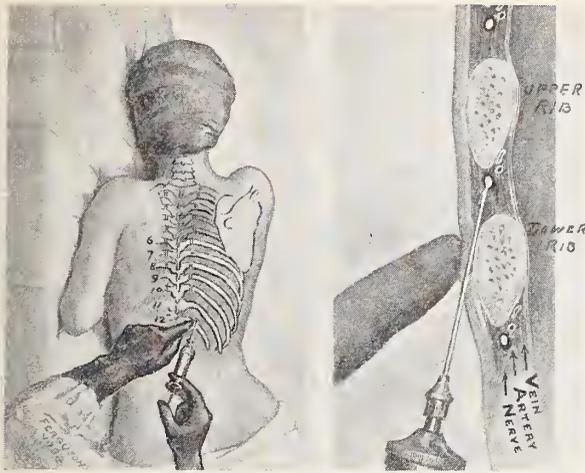


Figure 13

I also inject each layer of the abdominal wall before cutting through it. A right-rectus incision is used, (see Fig. 14) and

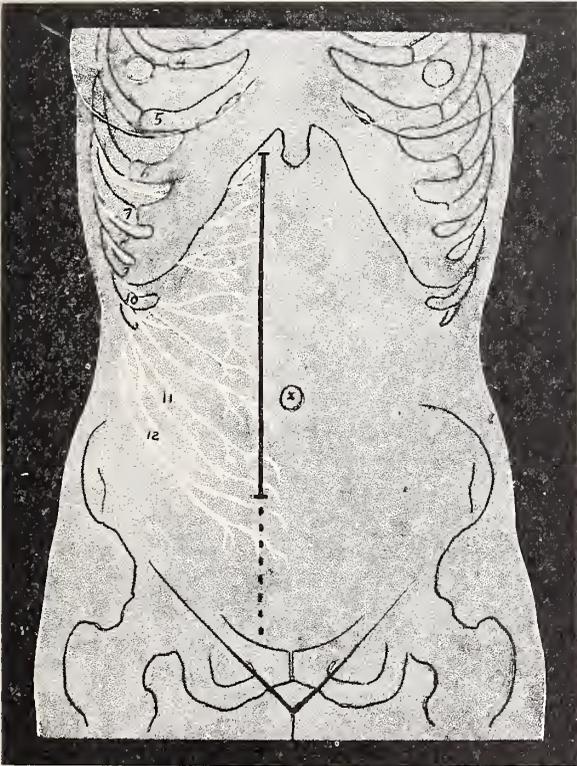


Figure 14

the right rectus muscle dissected from its bed and retracted outward, (see Fig. 15 and 16) so that the blood and nerve supplies of the muscle are not injured. This incision may extend from the lower border of the ribs as far as the pelvis, if necessary. In removing the gall bladder it is always well to fix its neck with a hemostat, then, snip open the gastro-hepatic omentum here, and gently push the fta away downward toward the common duct, exposing the structures in the region; then

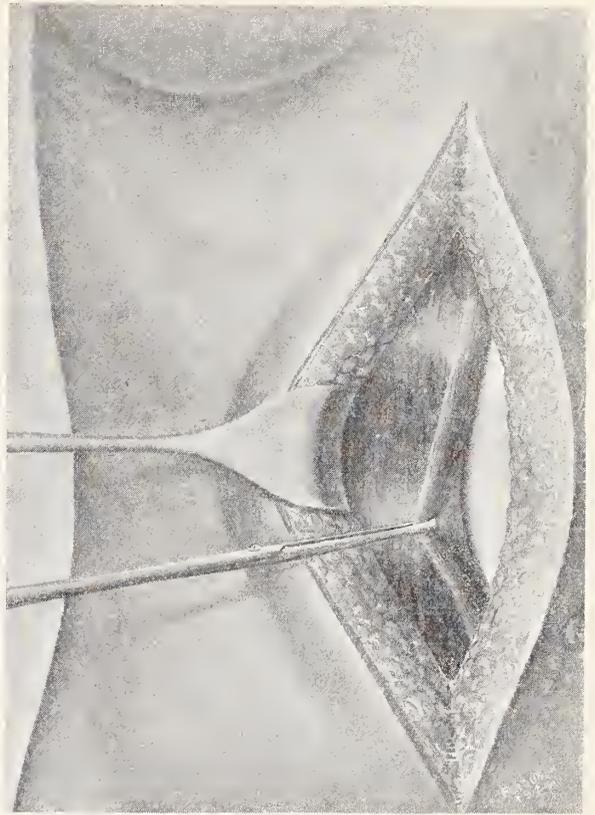


Figure 15

the cystic duct is clamped and ligated, and the cystic artery treated likewise, and the gall bladder removed from below upward.

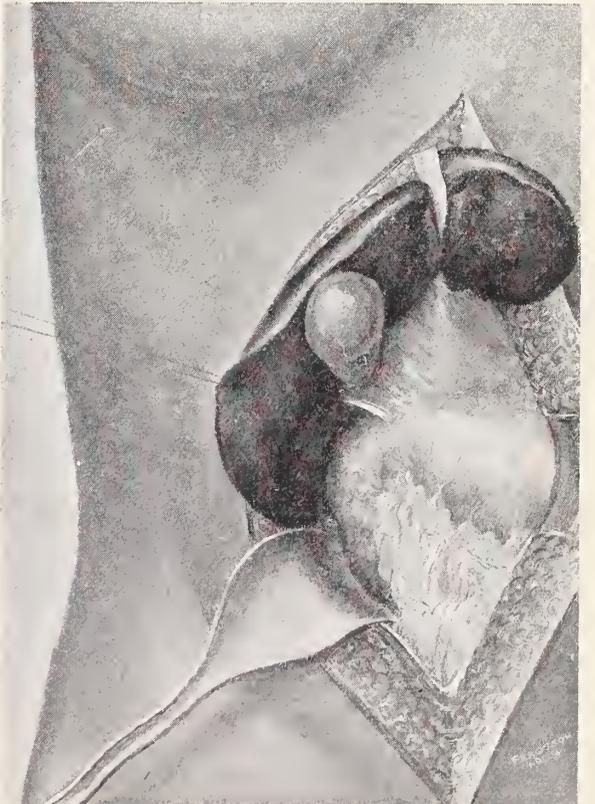


Figure 16

CONCLUSION

In conclusion I wish to state a few rules that one might follow in doing a cholecystectomy, or an operation on the bile ducts.

First—It is well, before every operation, to review the anatomy, normal and abnormal.

Second—In this region never ligate en masse.

Third—It is well never to cut or tie any structure unless one is certain of its identity.

Fourth—Never close the abdomen without drainage after cholecystectomy.

Fifth—Never close the abdomen after a cholecystectomy without examining the common and hepatic bile ducts.

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INDICATIONS FOR AND LIMITATIONS OF DEEP ROENTGEN RAY THERAPY

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The technic of 'short wave' or 'deep roentgen therapy,' as produced by high voltage apparatus and heavy filtration, was a natural outcome of the investigations concerning the physical action of the various wave lengths of the spectrum and especially those of the roentgen rays and of radium. The understanding of the physical properties of radiation led to the development of methods for the application of doses measured with scientific accuracy. Nevertheless, the older methods of treatment are still preferred under certain conditions. The technic of deep therapy is still progressing, however, and it is well for the general practitioner as well as the roentgen ray specialist to keep in touch with the changes in technic and the reasons therefor.

It was thought, a few years ago, that for the treatment of malignant disease a single massive dose of radiation was necessary, so that the entire dose was administered in the shortest possible time. Unfortunately, however, the systemic reactions to the single massive dose are extremely severe and there is no method whereby they can be prevented or successfully treated. To meet this difficulty, three years

ago we attempted to divide the treatment so that the same total amount of radiation would be given over a longer period and it was found that as good or better results could thus be obtained without undesirable reactions which may depress the normal resistance of the patient. By a proper division of the dose, and by allowing a suitable length of time between treatments, it is also possible to take advantage of the cumulative effects of the successive doses of radiation, so that a much larger dose can finally be administered than is possible when only a single dose is used. Another method called the 'fractional dose treatment' consists in administering small doses daily or twice daily, until the equivalent of a total massive dose has been given. We have found, however, that this technic prolongs hospitalization unnecessarily and requires more of the doctor's time without a greater effect than can be secured by the divided technic.

It is known, both clinically and experimentally, that a very large dose of radiation is required to destroy a malignant disease, and since the tissue reactions and cellular changes produced by the single, the divided, and the fractional dose methods vary somewhat, it is probable that eventually the best results will be obtained by using different methods for the treatment of different forms of disease.

Although we now have a fairly comprehensive knowledge of the physical action of radiation and have improved the technic of administration, unfortunately our understanding of the biological effects of radiation is comparatively meager. Considerable research is being carried on in this field, but we are limited by our ignorance of the physiological chemistry even of normal tissues. We have no method whereby to measure biological reactions in tissues nor is there a constant by which we may estimate the reactions of individuals. The cellular changes which are described as nuclear fragmentation, vacuolization, hyalinization, and fibrosis with lymphatic infiltration are not solely characteristic of radiation, though it is thought by some that the cellular changes following radiation can be distinguished from similar changes produced by other agents. Moreover, the fact that these morphological changes do occur does not tell us how radiation has brought them about. Several theories are advanced to explain the production of these biological effects, as, for example, that ionization takes place within the cell; or that intense heat is produced at

the point of impact of the high speed electrons, so that the electrostatic tension of the colloids is interfered with; or that the molecular structure of the constituents of the cell is altered; but none of these theories has been finally established.

Many believe that normal tissues play an important role in the destruction of malignant cells and that radiation directly or indirectly enhances this normal resistance. Certain observations and experiments seem to favor this conception, since it has been shown that less radiation is required to influence malignant tumors *in vivo* than *in vitro*. It may be that the increase in lymphocytic infiltration which follows radiation is due to a reaction of normal tissue to stimulation since it is also observed after other insults to normal tissues.

Primarily through experience, later through experimental investigations, we have learned that certain types of normal tissue are more susceptible to radiation than others. The tissues in the following list are arranged according to their relative degrees of sensibility: leucocytes, germinal cells, spleen, lymph, bone marrow, endocrine organs, blood vessels, dermal structures, viscera, and connective tissue. Cell types in tumors also vary in sensibility, so that malignant tissues may be similarly classified according to their relative degrees of susceptibility, as follows: (after Ewing)

1. Lymphoma: (lymphocytoma, lymphosarcoma, myeloma).
2. Embryonal tumors: (carcinomata of the testes or ovary; basal cell carcinomata).
3. Anaplastic cellular adult tumors: (round cell carcinomata, diffuse carcinomata).
4. Desmoplastic tumors: (carcinoma simplex, squamous carcinomata).
5. Adenocarcinomata: (adenomata of the uterus, intestine, breast, etc).
6. Fibroplastic carcinomata: (osteosarcomata, neurosarcomata).

According to these classifications we may anticipate to a certain extent the probable effects of radiation in any given case, by ascertaining the type of tissue in which the disease occurs or the type of cells of which a tumor is composed.

Several years of experience have now tempered the universal optimistic belief that deep roentgen therapy would become the preferred method for the treatment of all forms of malignancy. At the present time we can only make the general statement that according to our experience, deep therapy is limited to (1) the treat-

ment of conditions which are inoperable, and (2) to use as an adjunct to other procedures.

An effort is being made to group malignancies so that their probable surgical curability may be determined from their anatomical distribution or from the limitation of the diseased area. It is obvious, however, that any grouping is comparative and cannot include all grades of malignancies but that it must be based upon the cumulative experience of many surgeons as expressed by statistical studies of their results. It is frequently difficult, in an individual case, to determine the possible benefits of surgical procedures alone, so that it is essential that the possible benefits that may be derived from other methods of treatment should be taken into consideration.

This indicates, then, for both the surgeon and the radiologist, the necessity for a comprehensive knowledge of the characteristics of malignant disease as well as of the technical details of all the various methods of treatment. Indeed the treatment of malignant disease is becoming so specialized and radiation therapy has proven to be of assistance in so many cases that surgeons may no longer deride the possible benefits to be secured from its use, while on the other hand the radiologist should not attempt to treat all sorts of malignant disease without an appreciation of the possibilities of surgical treatment.

It is obviously impossible to include within the scope of a single paper all the conditions in which deep roentgen therapy is indicated. Over one hundred and twenty different conditions have been cited in which roentgen therapy has proved to be of definite value. I shall therefore confine myself to some of our own observations which perhaps point out the limitations of roentgen therapy rather than the positive indications for its use. I shall purposely exclude from this discussion such non-surgical conditions as lymphosarcoma, lymphoblastoma, the leukemias, etc., in which roentgen ray treatment has proven to be the therapeutic method of choice. For some of these conditions deep roentgen therapy produces quicker results than do the old methods and measured doses may be administered with considerable accuracy.

MALIGNANCIES OF THE MOUTH

For malignancies of the oral cavity we have found roentgen therapy to be of little value except as an adjunct to surgical procedures or to the application of radium in

various forms. We believe, however, that deep radiation of the cervical lymph nodes before and after the operative removal of the growth is distinctly beneficial, whether or not these nodes are clinically involved. A secondary reaction which is of considerable comfort to these patients is the temporary suppression of the activity of the salivary glands. Most patients with an oral malignancy suffer considerably from salivation, so that the temporary relief of this condition is a distinctly palliative measure.

CARCINOMA OF THE THYROID GLAND

There is still some debate among pathologists as to the evidences of malignant degeneration in the thyroid gland. However, a clinical diagnosis of carcinoma can be made in almost 100 per cent of the cases in which the patients are past 55 years of age. In young patients, however, the disease usually is not diagnosed. The condition is not of infrequent occurrence, malignant changes having been found in about 2.2 per cent of our total series of thyroidectomies. The surgical prognosis is good if the disease is confined within the capsule. The most favorable surgical results have been obtained in undiagnosed cases, that is in early cases in which, after a thyroidectomy, microscopic examination has shown the gland to be malignant. When invasion of the surrounding tissues has taken place through the capsule the surgical results are not so good and recurrences are almost certain. It is in this type of inoperable cases in which the gland is hard and fixed and there has been a rather rapid unilateral enlargement, that radiation definitely prolongs life and offers a probable cure in some cases. We have found that in some cases in which a large tumor is present it is advisable before radiation to perform a 'decompression operation,' by removing the large obstructing portion of the gland. In some cases a tracheotomy is required since the oedema and tracheitis which sometimes follow radiation of the neck may occasionally be so severe as to increase the obstructive symptoms and menace the life of the patient.

CANCER OF THE BREAST

There has been much discussion as to the value of post-operative X-ray therapy for breast carcinoma. In a recent report based on a review of the literature and on our own experience, I offered the conclusion that deep X-ray therapy by the cross-fire method not only does not improve the surgical results but, on the contrary, is followed by more frequent recurrences.

Thus, according to our statistics, operation alone was followed by recurrences in the first year in only 16.5 per cent of our cases; while among those cases in which intensive radiation by cross-fire methods followed operation, 35 per cent showed recurrences in the first year. However, most of these cases were treated during 1922 and 1923; and since that time our results have been considerably improved by the employment of less intensive radiation. This experience should indicate to the surgeons the necessity for a very radical operation in all cases of cancer of the breast.

The fact that recurrences were apparently increased after intensive cross-fire radiation pointed out the probability that many malignant cells remain after the complete surgical removal of the breast which must ultimately be destroyed by the natural resistance of the patient. It is possible that this natural resistance is interfered with, not so much by the local effects of radiation, as by the unfavorable general systemic reactions which follow intensive radiation of the large volume of blood in the lung. The unfavorable results in our first group of cases, as reported above, were undoubtedly due to a faulty technic. Our results have been greatly improved by less intensive radiation and by more frequent treatments, following somewhat the former method with lower voltage and less filtration, so that the dose is administered superficially into the chest walls and the gland-bearing areas rather than deeply into the lung.

At the present time we feel that the treatment of an operable breast cancer by radiation alone is not justified excepting in the case of a patient who cannot, or will not, be operated upon. However, certain investigations are being made which seem to offer ground for belief that even in cases of operable cancer of the breast the results of radiation by radium and X-ray combined will equal those of surgical procedures, thus obviating the mutilating and hazardous operations. Several of my patients who were treated by X-ray alone because they refused operation are well past the three-year period.

Pre-operative radiation in cases of cancer of the breast is a logical procedure and though, up to the present time, we have had an insufficient number of cases to make our results of value, nevertheless we feel that we have a sufficient basis for believing that by this method we shall obtain better results. We believe the proper procedure is

to radiate the breast and the gland-bearing area by X-ray, and at the same time to treat the tumor by radium packs and needles, the operation being performed from two to three weeks after radiation. The combined local reaction of the radium and X-rays need not be feared since the breast will eventually be completely removed. It is obvious that there must be the closest co-operation between the surgeon, the radiologist, and the patient in carrying out this method of treatment and one must not be so optimistic as to omit the operation in cases in which the tumor is reduced in size or disappears after radiation.

In cases of cancer of the breast in which the axillary or supraclavicular glands are palpably involved there is much less chance that the patient will be cured by operation alone. A case of this type should no doubt be considered as inoperable since it is usually impossible to remove all the gland-bearing tissues. When the axillary glands are palpably involved operation is followed by 'three-year cures' in about 15 per cent of the cases, while if the glands are not involved 'three-year cures' follow in about 95 per cent. However, probably not more than 5 per cent of the cases of breast cancer which come to the surgeon are free from axillary involvement. In my opinion, cases in which there is axillary involvement are best treated by radiation alone, that is by a combination of X-ray therapy and radium. However, our surgeons are not yet entirely in accord with this opinion. When tumors and glands become reduced in size by radiation there is a temptation to consider that the case has become operable, but it has been our experience that once a case is inoperable it is always inoperable. We have operated upon some cases in which the involved glands were no longer palpable and the tumor had become much reduced in size, but the operation disclosed more involvement of the axillary tissues than was anticipated, and the patients did not do so well as those who were not operated upon. It should be remembered that the average duration of life in cases of untreated breast cancer is almost three years, so that three year statistics are of no comparative value. A great many inoperable cases live comfortably past the three year period after treatment by radiation alone.

TUMORS OF THE FEMALE GENITAL ORGANS

It is well known that the results of the radiation treatment of carcinoma of the

cervix equal, in fact surpass, the results obtained by surgery. Our results show that over 33 per cent of the cases of carcinoma of the cervix which have been treated by radiation have remained symptom-free for four or more years. The anatomical formation and the location of the cervix make it readily accessible for the implantation and application of comparatively large doses of radium. A few years ago in certain clinics an attempt was made to treat these cases by the X-ray alone, since it was thought that it would be possible to deliver sufficient X-ray radiation into the pelvis to destroy malignancy. The cases thus treated showed a temporary improvement but the disease recurred later. At present, the preferred method of treatment is by a combination of radium and the X-ray, radium being the main factor in the cure, and the X-ray an important aid in building up the effects of radium, especially in zones at a distance from the cervix. We believe we have recently improved our technic by delaying the X-ray therapy for about three weeks, or until the radium reaction has subsided. We have found that this procedure minimizes tenesmus and intestinal irritations that otherwise cause considerable distress and reduce the vitality of the patient.

We still treat carcinoma of the fundus by operation followed by X-ray radiation. However, since a few cases treated by radiation alone have made satisfactory progress, it may be that the surgeons will soon yield these cases to the radiologist.

Fibromata of the uterus are usually treated surgically. We exclude from radiation all patients under 38 years of age, any patients showing evidence of pelvic inflammation, and patients in whom the tumor is above the umbilicus, in the last case because the regression of the tumor after radiation is so slow that pressure symptoms may not be relieved soon enough. When hemorrhage is severe we prefer to use radium first, followed by the X-ray, since the reaction to the X-ray is delayed and may not check the bleeding promptly, while the cauterizing effects of radium will give immediate relief. We believe that the method of choice for the treatment of carcinoma of the ovary is surgical treatment. I have been unable to influence papillomatous carcinomata of the ovary by radiation. This condition is characterized by a slow growth with periods of apparent quiescence, so that one may be misled into believing that the patient has been benefited when actually the dis-

ease is following its natural course. Repeated operations sometimes prolong the lives of these patients for a number of years.

CANCER OF THE STOMACH AND OESOPHAGUS

We cannot report that the status of patients with malignancies of the oesophagus or stomach has been improved by radiation therapy. We are frequently misled into believing that patients with carcinoma of the stomach have been benefited because they gain weight and feel better after radiation following a gastroenterostomy or gastrostomy. It should be remembered, however, that this is the usual course of events after such an operation and that it is probably the operation and not the radiation which is responsible for the temporary relief; these patients live from six to 18 months when not treated by radiation so that only those cases which live more than 18 months after treatment can be said to have received any benefit. It is physically impossible to deliver sufficient radiation to destroy a malignant growth of the stomach because of the danger to the adrenals and liver. We have had several cases in which the patients lived as long as 18 months and a few a longer period but, though we believe a few patients have been benefited, we are inclined not to radiate obviously hopeless cases, since we sometimes make them uncomfortable by radiating through the liver. Cancer of the oesophagus is limited in extent and intensive X-ray radiation through the lung may produce pulmonary fibrosis. These cases are treated by radium alone, since our experience has proved that X-ray therapy does not improve the results but, on the contrary, seems to hasten the mediastinitis which is the immediate cause of death in all these unfortunate cases.

CARCINOMA OF THE INTESTINES AND RECTUM

Of course carcinoma of the large intestine should be operated upon if possible. Pre-operative radiation is contraindicated because the resultant inflammatory reactions will interfere with operation; post-operative radiation, however, is justified. For inoperable cases a colostomy or caecostomy should be made, and if possible, tubes of well filtered radium implanted into the lumen of the bowel, following which deep X-ray therapy may be administered. We have thus treated two patients with inoperable carcinoma of the caecum who have lived for more than three years and their caecostomies have closed. It has

been my experience that most malignant growths of the large intestine except colloid carcinoma are amenable to radiation.

The results of the surgical treatment of carcinoma of the rectum are not very good. The average mortality rate of operative treatment is high, being seldom less than 20 per cent, and the curability for only three years is only 16 to 20 per cent. Inoperable cases live from 8 to 12 months, but may survive for 2 years after a colostomy alone. The operability of carcinoma of the rectum depends upon the judgment of the individual surgeon, which frequently means that a possibility of removing the tumor is made the indication for operation rather than a possibility of curing the patient. That this is the case is indicated by published statistics which show an operability rate varying from 19 to 85 per cent. From the standpoint of curability our operable cases have not been more than 10.4 per cent of our total series. The average duration of life after operation in our series has been only six months, as contrasted with 13½ months for cases treated by radiation alone. Thirty per cent of the 46 patients treated by radiation alone are still living three or more years after treatment; 60 per cent are living from two to three years, and 62.5 per cent are living from one to two years. We are now treating more cases of carcinoma of the rectum by radiation alone than formerly, although when the tumor is small and low down in the bowel the patient is usually operated upon. Our procedure in all cases of cancer of the rectum is first to make a colostomy, whether or not there is obstruction, the object being to explore for metastases and to provide complete rest of the rectum, so that the inflammatory reactions of the disease will subside. After about 10 days an examination is made to determine the operability, since frequently the entire picture of the disease changes during this period of rest with daily irrigations of the distal segment. If there is any doubt as to the operability the case is irradiated, and often operable cases are irradiated if the tumor is found to be readily accessible for the implantation of radium. The average dose of radium is from 2,600 to 3,000 mg. hrs. with heavy screening; it is usually applied in tubes but occasionally needles are used. Following the radium treatment, a full course of deep X-ray therapy is given. Not infrequently patients suffer considerably for two or three weeks after radiation, especially when the growth is low down in the

bowel. To allay this discomfort we sometimes make a subcutaneous myotomy of both the external and the internal sphincter so as to eliminate the spasm.

BONE TUMORS

Malignant tumors of the bones are either primary or metastatic. Obviously metastatic malignancies cannot be treated surgically and radiation offers the only palliative measure. It is an interesting observation that sometimes metastases in a distant, untreated area improve when another lesion is irradiated. By conservative treatment pain is relieved and undoubtedly life is definitely prolonged. Patients suffering from bony metastases should always receive the advantage of radiation therapy even though there may be no hope of a cure.

The Committee of Registry of Bone Sarcoma of the American College of Surgeons is uncertain whether or not any case of primary malignancy of the bone has been cured by surgery or radiation. In most of these cases a correct diagnosis is not made until late, as the condition is usually considered to be rheumatism or osteomyelitis. These cases should be referred to the radiologist for pre-operative and post-operative roentgen therapy or, in inoperable cases, for palliative treatment. If a limb is involved and the condition is not obviously inoperable we feel that a radical amputation immediately following radiation offers the best chance of relief. The use of radium in or near bone is contraindicated on account of the sensitiveness of the periosteum which will be destroyed with resultant necrosis. It is interesting to note that ossification will follow the radiation of bone tumors and that in some cases complete ossification may take place, the patient surviving for some time but ultimately succumbing to metastases. I recall that in two cases of osteogenic sarcoma, one of the lower femur, and another of the rib, in which the patients lived over two years but eventually died of metastases, the original tumors were so completely healed by radiation that no malignant cells could be found by microscopical examination.

MALIGNANT TUMORS OF THE GENITO-URINARY TRACT

The embryonal tumors of the kidney or testes are very susceptible to radiation and if operable should be treated both before and after operation. These tumors regress so rapidly that in cases in which the size of the tumor has made one hesitate to op-

erate, the diminution in size after radiation will often make an operation seem feasible. We have found, however, that in such cases there is always more diseased tissue than can be discerned by the palpating hand and we have regretted that we have subjected them to operation. A tumor of this type should be irradiated no matter how hopeless the outlook. I learned this lesson from a case of sarcoma of the testicle with large abdominal metastases, in which I at first refused treatment because we thought the patient had only a few weeks to live. In response to the pleas of the patient and of his family, however, I gave conservative treatment, with the result that the patient has been economically useful for over two years.

Carcinoma of the kidney and hypernephroma, and especially papillomatosis, should be treated surgically excepting in the obviously hopeless cases which may be irradiated for palliation.

Unfortunately my experience with the irradiation of bladder tumors has been limited to inoperable or post-operative cases. Generally speaking, our results have been unsatisfactory as far as cures are concerned. There has been evident palliation in almost all cases, this I think being due more to the relief of the inflammatory state than to actual destruction of the tumor, though we have seen some tumors become considerably reduced in size. Most bladder tumors are papillomata, which are resistant to radiation. Some radiologists have had more favorable results in the treatment of bladder tumors than we are able to report, perhaps because of the nature of our cases. From our experience I believe we may draw the following conclusions: (1) If the tumor is small, it should be excised at once; (2) if it is moderately large, pre-operative radiation should be given, and in about three weeks the operation should be performed, at which time gold seeds of radium emanation may be implanted; and this may be followed by more roentgen therapy; (3) if the tumor is large, it may be treated by cauterization followed by deep X-ray therapy.

For malignant disease or benign hypertrophy of the prostate the treatment is approximately the same as for bladder tumors. Frequently patients are greatly relieved from urinary difficulties though there may be little or no palpable reduction in the size of the gland. The hard schirrous type of tumor does not respond to treatment as well as the soft adenomatous

type, hence the results of the irradiation of a series of malignant tumors of the prostate are apt to be much better than those in a series of bladder tumors, since most of the former are adenomatous. It is possible to irradiate these tumors irrespective of a high blood urea or to use radiation while the patient is being prepared for an operation which is considered hazardous on account of the bloodfindings.

CONCLUSIONS

1. Short wave or deep roentgen therapy is a distinct advance in radiation therapy.

2. Roentgen therapy is indicated for the treatment of certain non-surgical diseases which have long been known to be relieved by roentgen radiation.

3. In the treatment of malignant disease deep roentgen therapy is limited to and is indicated for inoperable conditions.

4. The chief field of usefulness of deep roentgen therapy is as an adjunct to other procedures.

5. Though cures may not always be anticipated, pain may be relieved, life prolonged, and—of especial importance—the period of economic usefulness of the patient may be extended.

RECONSTRUCTION OF THE NASAL BRIDGE BY MEANS OF AUTOGENOUS RIB CARTILAGE GRAFTS

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The depression of the nasal bridge results in marked alteration of the appearance of the patient with much embarrassment as a result of this disfiguring deformity. Anything that may be done to restore the patient's appearance to its original condition certainly is worth while. This distressing deformity may result from:

(1) Congenital mal-formation.

(2) In cases where submucous resection of the nasal septum has been improperly done in that too much cartilage has been removed, or where an abscess has followed as a result of faulty technic.

(3) Abscess of the septum, boils, furuncles, etc., originating in the nasal vestibule.

(4) Atrophic rhinitis, syphilitic gumma of the nose, nasal bones, and nasal processes of the quadrilateral cartilage of the nasal septum.

(5) Trauma resulting from communi-

cated fracture of the nasal bones, the nasal processes of the superior maxilla, or the nasal processes of a frontal or a fracture



1. Front view taken before plastic operation on nose.

of the quadrilateral cartilage of the nasal septum.

These deformities when neglected result in marked depression of the bridge and marked alteration of the appearance of the dorsum of the nose.

PATHOLOGICAL ANATOMY

In cases of depression of the nasal bridge the pathological anatomical picture varies



2. Lateral view taken before plastic operation on nose. Illustrating an article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."

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with the cause of the condition. If in cases following intra-nasal abscess with suppurative perichondritis which results in most cases in the loss of the yellow elastic cartilage of the septum which is absorbed, the result is a marked depression of the nasal distal to the ends of the nasal bones. The nasal bones are in good condition in these cases. The mucous membrane on the septum after these abscesses are healed are usually very thick with much new fibrous tissue formation. If the depression has been due to syphilitic gumma there is usu-

are present. In cases following submucous resection of the nasal septum with or without abscess there is usually a depression below the ends of the nasal bones though the bones themselves are healthy.

TYPES OF MATERIAL TO BE USED AS A PROSTHESIS

From time to time there have been numerous materials suggested as material for reconstruction of the nasal arch. Among those most frequently used are:

- (1) Injection of paraffin subcutaneously.



3. Front view after operation. Cartilage Transplant. Illustrating an article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."



4. Side view taken after operation. Cartilage Transplant. Illustrating an article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."

ally marked destruction and loss of tissue substance not only of the quadrilateral cartilage but the mucous membrane and the septum with considerable crusting and scabbing about the edges. In many cases the nasal bones have been affected by syphilitic periostitis with loss of osseous tissue. If this is the case there is much scarring with dense adhesions to the subcutaneous tissue and possibly the skin to the remainder of the bone which has been destroyed. This condition, from a restoration viewpoint, presents considerable difficulty in elevating the skin overlaying the remainder of the nasal arch. The pathological picture following fracture is one where few adhesions are present, usually a marked deflected and thickened septum but with a more or less normal mucous membrane unless degenerative changes have taken place as a result of nasal destructions but in general healthy tissues

- (2) Autogenous transplants of bone, cartilage, or cartilage and bone.

- (3) Celluloid, silver, gold, ivory, etc.

In Germany paraffin was first used in 1900 and for several years it had a great vogue in this country. Later its use fell in the hands of Charlatans who used it for elevating depressions of the cheeks, wrinkles about the face and forehead and in hernias. The best results were obtained by using paraffin which has a melting point between 110° and 115°. Harmon Smith¹ of New York, who was a strong advocate of this method, made a report several years ago based on a questionnaire sent to 41 physicians and which covered a series of 1252 cases which were not his own. He tabulated the statistics as follows: 1,000 cases were entirely successful, 104 results unsatisfactory. In two of the 104 blindness followed shortly after the operation. In 55 infection occurred and the paraffin

mass was extruded. In 22 the paraffin lay in the wrong location and in 7 the mass shifted. Since Smith's report operators of experience have seen many cases of paraffinomas. These have discouraged even the most enthusiastic for this method and at present I am sure very few operators of experience and judgment prefer the use of paraffin.

THE USE OF BONE

It is well recognized that successful bone transplants depends largely on the osteo-

osteum is not essential. With increased experience Carter again modified his views and now advocates the use of transplants consisting of one inch periosteum covered rib and one-half inch perichondrial covered cartilage. Such a transplant of cartilage and bone he believes should be placed where such tissues normally exist.

Ferris Smith³, who had an extensive experience in the world war, believes that free grafts of bone with or without periosteum are slowly absorbed. Davis⁴, of Baltimore, in a series of brilliant experi-



5. Front view before cartilage transplant to nose. Illustrating an article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."



6. Side view before operation. Cartilage implant. Illustrating an article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."

genetic activities of other bones in which the implant is in contact. This is necessary for the continued viability of the graft. Opinions of rhinologists are at variance respecting the ultimate fate of bone grafts in nasal tissue. Carter² of New York, reports depressed nasal deformities corrected by bone prosthesis and show no clinical change after many years. He has had these radiographed and in his report the outer areas of the transplants are firm but the inner layers which are more or less remote from the circulation show osteoporosis. In his earlier experience Carter regarded firm periosteal contact of the transplant with the adjacent frontal and nasal bones as essential but later modified his views and in 1915 believed that bone denuded of its periosteum is better nourished by close contact with the tissues. Since there is no desire to produce new bone the osteogenetic function of the peri-

mental studies on dogs to determine the comparative permanence of free bone and cartilage transplants found that bone and rib cartilage transplanted beneath the periosteum of the parietal bone and into the substance of the temporal muscles acted differently. Cartilage retains its original size while bone showed a tendency to absorption. The results have lead him to believe that free transplants in soft parts will eventually be absorbed, and if in contact with one end only it will undergo atrophy.

Gillies⁵ holds a similar view in that he believes that bone grafted into various parts of the face and nose will eventually absorb often leaving a frame work of fibrous tissue in sufficient amount to retain the proper cosmetic appearance as originally planned. He believes that those who used bone for transplants will eventually turn to cartilage for prosthesis as a

frame work for the nose. Nelaton⁶ was the first to use rib cartilage transplants to supply a nasal prosthesis. His method was to transplant into the tissues of the forehead between the skin and the periosteum the proper piece of cartilage. After the proper length of time the transplant was enclosed in a pedicle flap which was swung around and then stitched to the nose.

TYPES OF CARTILAGE USED

The type of cartilage is important. Yellow elastic cartilage implants are absorbed

are normal and that there is little evidence of absorption, degeneration, or decrease in size of the transplant. Berkman believes that cartilage is preferable to bone as a supporting material in the nose, and like others does not believe that it is necessary to preserve the periosteum. Selfridge on the contrary reports a case in which he transplanted cartilage on three different occasions and each time it was absorbed but on the fourth was successful.

A summary of the foregoing opinions and conclusions as to the relative merits



7. Front view after operation for cartilage transplant in reconstruction of nasal bridge. Illustrating article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."



8. Side view after operation. Cartilage implant. Illustrating article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."

quickly. There is insufficient time for fibrous tissue replacement. Cartilage of the Hyaline variety from the sternum or the rib is preferable. It is easier to obtain in large amounts and can be secured with or without the periosteum as the judgment of the individual operator dictates. The viability of this cartilage is great as it does not depend on contact with either bone or cartilage for its viability but secures its nourishment from the lymph of the tissues into which it has been transplanted.

Davis⁴ has shown that the transplanted cartilage soon becomes surrounded by a zone of loose connected tissues with numerous blood vessels. The amount of vascularization depends on the length of time the transplant has been imbedded. Histological examinations of the removed transplants showed that the cartilage cells

of bone and cartilage, it is generally agreed that cartilage is preferable to bone as a supporting material for the correction of depressions of the nasal bridge. In the minds of many operations, however, there is still some uncertainty as to the permanence of the transplants as the majority of the clinical cases are of far too short duration to make it possible to come to a positive conclusion.

PRELIMINARY STUDY OF EACH CASE

When a patient presents himself for reconstruction work it is well to be sure that there is no evidence of chronic infection in the nose and throat such as sinusitis, rhinitis or chronic tonsillitis, syphilis or tuberculosis. A careful survey of the patient's general physiognomy is essential to properly evaluate the size and shape of the transplant which will be necessary to reconstruct the architecture of the nasal

bridge. It must be born in mind that the shape of the nose must be in proportion to the general facial physiognomy. A very high narrow nose is out of proportion when placed on a face where a broad nose would be more in harmony with other features. Cabinet size photographs with full profile and front view should be taken.

(1) It is well to X-ray the head with special reference to the facial and nasal bones, especially the profile view;

cast should be made before and after so that in case any suit is instituted against the operator this is very valuable evidence to be presented in court.

METHODS TO BE USED AT TIME OF OPERATION

Gillies⁵ makes a vertical incision in the vestibule of the nostril near the junction of the skin and mucous membrane. The incisions are united by separating the columella at its attachment to the upper lip.



9. Front view just before operation began. Illustrating an article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."



10. Side view taken before operation began. Illustrating an article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."

(2) A plaster paris model of the head and face should be made;

(3) A model in wax from the same mould should also be made as in (2).

When the plaster paris model is complete the rhinologist should build up in wax the type of nose which would be best suited to the other features. The wax prosthesis may then be removed from the model and laid aside to be later used as a guide for cutting and shaping the cartilage implant which is to be introduced at the time of operation. One of the main reasons why a careful study should be made of the face with special reference to wax and plaster models of the face is that later on patients often times are dissatisfied with what was done for them and they will make claims as to what their appearance was before operation. The wax model and plaster paris

The columella is then dissected free and then grasped by suitable forceps, then drawn upwards thereby exposing the free border of the septum. A tunnel is then made through the nasal arch as far as the infra glabella notch. The cartilage prosthesis is then introduced in the tunnel and the columella is then stitched into place.

Another method that is known as the lateral intranasal method. This was evolved to avoid external scarring. It has many disadvantages in that the technic is difficult and lateral displacement of the cartilage prosthesis cannot be avoided in certain cases. The original incision through the cartilage cannot be closed by sutures. This results in a greater liability to infection from the nasal secretions.

Third method, that of incision at the base of the nose at the infra glabella notch.

This incision is at right angles to the line of the bridge and is suitable in certain cases, especially those which already have some external scarring. From this incision with scissors curved on the flap, a tunnel is made beneath the skin of the bridge to the tip of the nose, the cartilage prosthesis which has previously been cut to the shape of the model is then introduced and pushed in place. The original wound is then sutured with silk stitches. This incision is an excellent one and possibilities of aseptic

ment. The original incision is then closed with two interrupted silk sutures without drainage or external splints. A little Collidion dressing is applied to the wound to protect it from nasal secretions. No other dressings are necessary.

This incision in my judgment is a most advantageous one from the standpoint of the alar cartilage in that it splints the two middle columna. It is not difficult to follow the contour of the nasal dorsum as there is little tendency to depart from the



11. Front view after operation. Cartilage implant. Illustrating an article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."



12. Side view after cartilage implant to nose. Illustrating an article by Dr. W. T. Garretson on "Reconstruction of Nasal Bridge."

sis are unexcelled. The result often leaves an undesirable external ear.

The best incision in my hands is that which is used by Lewis⁷ for celluloid implants. He makes a vertical incision through the columna nasi separating the medial columns of the alar nasi cartilages. The lateral lips of the incision are then undercut to the nasal vestibule. With sharp scissors the nasal tip is undermined forming a hood. From this a tunnel is then made in the subcutaneous tissue over the nasal bridge to the infra glabella notch. With delicate retractors the lips of the incision are held apart and the cartilage prosthesis cut to the proper model is then introduced, at first on the side if the implant which is introduced is wide. When past the columnar incision the transplant is turned to position over the bridge of the nose. The so-called hood prevents displacement and extrusion of the cartilage and there is no tendency to lateral displacement.

mid line. This is quite advantageous in that when the transplant is introduced there is no tendency for lateral displacement of the prosthesis. The tip cap or the so-called hood prevents extrusion of the transplant when swelling of the tissues occurs which inevitably follows any operation in this region.

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MICHIGAN'S HEALTH COMMISSION

SIXTH ANNUAL PUBLIC HEALTH CONFERENCE

Fifty out of 83 counties in Michigan were represented at the Sixth Annual Public Health Conference held in Lansing, December 1, 2 and 3, under the joint auspices of the Michigan Department of Health and the Michigan Public Health Association. A total of 291 health officers and public health nurses registered, the largest official attendance of any conference so far. Visitors brought the number at almost every session to well over 400. Public health nurses were in the majority but not as markedly so as at previous conferences, the percentage of health officers increasing this year.

Eaton County sent the first delegate, Ontonagon, Gogebic and Houghton sent their representatives the longest distances, and Wayne and Ingham tied for having the largest representation. Only five counties in the southern half of the state were not represented, and 20 counties in the northern half sent health officers or nurses.

"And so we have arrived at the end of an era," said Surgeon General Cumming, in discussing "Public Health From the Federal Standpoint." "Whether we like it or not, whether we have by heredity, education and environment, absorbed the Jeffersonian doctrine of individualism, with its preachment of the evils of too much government, or whether we have on the other hand absorbed the doctrine of socialism, we are confronted by the inexorable logic of facts that we have a public somewhat enlightened as to the value of preventive medicine and public health. The family physician whose lack of theoretical knowledge was often more than balanced by keen intuition and intimate knowledge of the patient and family history has given place in more settled communities, particularly, to professional treatment by men often unknown personally to the patient, and whose financial investments in necessary equipment and education necessitate business-like and expensive methods. We have a profession well organized in strong guilds, both state and national, and governments, local, state and national, somewhat awakened to the importance of public health measures against so-called pre-

ventable diseases. There is a general appreciation not only of the loss from death due to such diseases as tuberculosis, typhoid fever, malaria, and syphilis, but there is also a rapidly growing realization of the national loss consequent upon lessened efficiency due to ordinary preventable diseases, great cost to the state of mental deficiency due to such preventable causes, as syphilis, and to the number who because of preventable defects and diseases during the period of growth and development are unable to serve their country to the fullest extent in times of stress.****

"What is the present condition of public health? A few years ago not one of our 3,000 counties had a full time health officer, now there are three hundred odd and there would be more if competent men were available. The states with even fairly efficient departments of health could be counted on one's fingers while now all of our states have some organization and many of them such as yours have well organized departments. Federal activities were restricted to the enforcement of maritime quarantine in a few ports, the treatment of sick seamen, and aid to states in serious epidemics. The activities of the public health service now ramify into nearly every phase of activity throughout the country and health functions are scattered through other federal establishments. These are encouraging evidences of progress but there are many obstacles to be overcome. * * * *

Dr. George H. Ramsey, talking on "The Prevention of Diphtheria," stated that after a critical review of all the means at our disposal for the control of diphtheria, he had reached the conclusion that the only effective method was active immunization. Control of the diphtheria organisms can never be attained—it is probable that the percentage of carriers will not appreciably be diminished—so the solution is control of susceptible persons through active immunization.

Dr. O. P. Kimball, of Cleveland, speaking on "Endemic Goitre and Public Health," emphasized the fact that no authentic cases of harm resulting from the treatment of endemic goitre with iodine—chocolate

tablets or iodized salt—had ever been found. The few reported cases were probably coincidences, and were the observations of isolated individuals, with no scientific proof.

Dr. Kimball discussed the work being done in Michigan, Ohio, and Utah in noting the effect of preventive measures upon large groups of children, mentioning in this connection the recently created Federal Goitre Commission made up of three members, Dr. David Marine, a physician from the Mayo Clinic, and one from Utah. Switzerland's experience was also cited to prove the effectiveness and harmlessness of the use of iodine in the prevention of endemic goitre.

Dr. Edwin Bishop, of Lansing, described "The Health Service of the League of Nations" from the standpoint of actual observation abroad this last summer. He sketched briefly the plan of organization,—the Advisory Council, the Health Committee, and the Secretariat, outlining the functions of each and emphasizing the permanence and wide scope of the Secretariat's work.

Harris R. C. Wilson, D.D.S., head of the Cleveland Mouth Hygiene Association, discussed the mouth hygiene work from kindergarten to high school, stressing the necessity of early filling of carious teeth, and of teaching children not only habits of cleanliness but of proper foods also. Dr. Wilson's closing emphasis was upon nutrition during the prenatal period as the only sound basis for progress with either pre-school or school children.

One point of interest in "Sewage Disposal for Large and Small Municipalities" by Langdon Pearse, was that the septic tank is nothing more than a settling basin, that the effluent is not in any sense comparable to drinking water. While the septic tank is an entirely satisfactory solution of the sewage disposal problem for small groups, it has limitations not recognized by its first enthusiastic salesmen. Contrary to a very popular conception, it is a sedimentation tank and nothing more.

Dr. B. Bernbaum discussed "Scarlet Fever," giving what was in the nature of a progress report on work still under way. Dr. Bernbaum stated that 116 scarlet fever cases had been Dick tested 28 days from onset of the disease, at the expiration of quarantine. To 1 S.T.D. (Skin Test Dose) approximately 99 per cent gave a negative

reaction. To 2 S.T.D. about 88 per cent were negative, to 5 S.T.D. 74 per cent, and to 10 S.T.D. 51 per cent.

A group of persons who had not had scarlet fever, Dick positive, were given three immunization treatments of 500, and 2,000 and 20,000 S.T.D. of scarlet fever streptococcus toxin. They were Dick tested at 10 days, 3 months, and 7 months after the last treatment. To 1 S.T.D. 87 per cent were negative at 10 days, 94 per cent at 3 months, and 94 per cent at 7 months. To 2 S.T.D. the results were the same. To 5 S.T.D. 43 per cent were negative at 10 days, 64 per cent at 3 months, and 73 per cent at 7 months. To 10 S.T.D. 27 per cent were negative at 10 days, 45 per cent at 3 months, and 63 per cent at 7 months.

The results indicate that as great a degree of immunity can be conferred by treatments with scarlet fever streptococcus toxin as by the disease itself. It is interesting to note that the percentage of immunity is higher than with diphtheria toxin-antitoxin mixture.

WITH THE ENGINEERS

Stream pollution inspections were made in seven counties during November,—Arenac, Gratiot, Isabella, Oakland, Ottawa, Saginaw and Van Buren.

Sewage Treatment Plant reports were submitted to the department by Sparta, Crosswell, Lowell, Rochester, Petoskey, Hastings and Grand Haven.

Eleven counties, Lapeer, Oceana, Tuscola, Livingston, Charlevoix, Wayne, Iron, Dickinson, Ingham, Macomb and Oakland were visited for inspections and conferences on Sewage Treatment Plants.

In water supply inspections, nine counties were visited,—Newaygo, Oakland, Kent, Grand Traverse, Emmet, Presque Isle, Alpena, Ottawa and Wayne. In addition, ten counties sent plans of water systems for examination,—Eaton, St. Joseph, Kalamazoo, Allegan, Osceola, Dickinson, Wayne, Macomb, Kent and Montcalm.

At the fall meeting of the Michigan Engineering Society, E. D. Rich, Director of the Bureau of Engineering, and John Helper gave a joint paper on "Stream Pollution in Michigan." Colonel Rich also attended the Conference of State Sanitary Engineers at Cleveland on Great Lakes Levels.

TO PHYSICIANS AND HEALTH OFFICERS

It has been satisfactorily demonstrated that persons can be actively immunized against scarlet fever by the administration

of Scarlet Fever Streptococcus Toxin. The period of immunization is not known, but it has been demonstrated that it will last at least two and one-half years.

January 1st, 1927, the laboratory of the Michigan Department of Health, Biologic Products Division, will begin distributing Scarlet Fever Streptococcus toxin for the Dick test, and Scarlet Fever Streptococcus toxin for active immunization. Directions for administering the toxin for the Dick test and for immunization will accompany each package.

Until further notice the Department will confine the distribution to physicians and health officers who agree to immunize only such persons who will be more or less under their observation, and who will agree to report at the end of the year on a re-Dick test of the patient.

DIPHThERIA IMMUNIZATION

The diphtheria immunization unit from the Department gave Schick tests in Montcalm and Cass counties during November. Tests given one week are read the next. Approximately 3,900 persons were tested in Montcalm county, largely school and preschool children. Only two days of the Cass county schedule have been completed, with 483 persons tested and read. Report of the clinic findings as to efficacy of three toxin-antitoxin treatments in different age groups promises to be interesting. It will be compiled as soon as sufficient data has been collected.

ANOTHER EXAMPLE

On September 11, R—S—, a summer resort restaurant keeper of Rapid City, Michigan, died. The case was diagnosed at post-mortem as diphtheria. The physician in charge missed the diagnosis as the woman in question was an old patient of his whom he had treated repeatedly for tonsillitis and quinsy. The death occurred 36 hours after the onset of the disease.

Investigation by Dr. Miller, health officer of Rapid City, revealed that there was illness in a family of transient berry-pickers, camped on the plains near Alden, Michigan. Children from this family had been peddling berries through the whole resort section. Other cases of diphtheria were traceable to this source of infection. Cultures made from convalescents in the family, sent to the Western Michigan Division laboratory of the Michigan Department of Health, came back positive for diphtheria.

While waiting for the culture reports, Dr. Miller put the family under quarantine.

The family loaded their effects in the flivver and started for southern Michigan. Twenty-four hours later when the report was received from the Western Michigan Division laboratory as positive, Dr. Miller went back to confirm the quarantine and give prophylactic doses of antitoxin to anyone exposed, and found that they had left the country.

Inquiry as to the possible destination of the family indicated Muskegon as the probable point at which they would stop. Dr. Harrington, health officer, was called by phone. He finally located the family on a farm near Muskegon, confirmed the diagnosis, enforced quarantine, and no further cases were reported from this source of infection.

Predicating a toxin-antitoxin campaign on this occurrence, 100 per cent of the school children in four townships of Kalkaska county were immunized against diphtheria, and probably 50 per cent of the preschool children.

CHILD HYGIENE AND PUBLIC HEALTH NURSING ACTIVITIES

The field work in November is always interrupted by the Thanksgiving holiday, in fact, the whole week from the point of attendance is necessarily unsatisfactory.

Infant and preschool child clinics were held in the following counties: Otsego, Crawford, Roscommon, Missaukee, Lake and Oceana. Sixteen towns in these counties were reached with a total attendance of 239 children to whom examinations were given. In one town it was necessary to exclude many of the children who came, on account of an epidemic of whooping cough, but at the same time it was possible to give instruction to the mothers on prevention of communicable diseases.

Four nurses have been teaching Little Mothers' League classes in schools in Schoolcraft, Sanilac, Saginaw, Kalkaska, Missaukee, Monroe and Kalamazoo counties. There have been 208 classes taught with an attendance of 4,282 girls. This work, which consists of instruction in the care of babies and preschool children, is given to girls of from 11 to 16 years of age.

Women's classes, taught by a physician and a nurse, were held in various places in Mackinac county. Thirty lessons were given, with an attendance of 293, despite deep snow, mud and bad roads with long distances to be traveled to reach the places.

The midwife inspector has called on 100 midwives in Presque Isle, Alcona, Kent, Muskegon and Ottawa counties. In each instance instructions were given on the

need for cleanliness and the prophylactic care of the baby's eyes.

MICHIGAN PUBLIC HEALTH ASSOCIATION

At its annual meeting in Lansing, December 3, the Michigan Public Health Association elected the following officers:

President, R. C. Mahany, M. D., Owosso; Vice President, Miss Mable Morgan, R. N., Saginaw; Secretary-Treasurer, W. J. V. Deacon, M. D., Lansing; Representative to the A.P.H.A., R. M. Olin, M. D., Lansing.

Directors-at-Large: John Sundwall, M. D., Ann Arbor; Carl E. Buck, M. D., Detroit; R. J. Harrington, M. D., Muskegon; A. A. Hoyt, M. D., Battle Creek; Miss Mary Margaret Roche, R.N., Grand Rapids.

Members of the Association will be interested in the recent changes in the by-laws of the American Public Health Association affecting members in affiliated societies. Under this new ruling all members of the American Public Health Association who live in Michigan automatically become members of the Michigan Public Health Association, an affiliated society, without the payment of additional dues, the membership fee of \$1.00 being paid through the American Public Health Association. Thus members of the Michigan Public Health Association who do not belong to the American Public Health Association, upon payment of their dues become affiliated members of the American Public Health Association.

Members of the American Public Health Association may either pay their dues direct to the Association or to the Secretary of the Michigan Public Health Association, Dr. W. J. V. Deacon, of Lansing.

There is much public health work being done in Michigan by non-official agencies and it would seem wise to co-ordinate all of this work under one general agency for the purpose of preventing duplication and lending more weight to their efforts.

OUR BIOLOGIC PRODUCTS

During the past 90 days, several letters have been received in the office of the Commissioner of Health, from practicing physicians stating that salesmen from Biologic houses have made statements that the product distributed by the State of Michigan is inferior to that sold by the Biologic Houses they represent.

The Commissioner believes that these statements are unauthorized by the management of the various commercial houses involved, and that the statements are made by irresponsible salesmen.

All biologic products distributed by the

Michigan Department of Health are produced under United States Government license No. 99. The Department of Health has met every requirement of the Hygienic Laboratory, that commercial houses are required to meet.

The Michigan Department of Health can produce this material at less cost than a commercial house because there is no sales cost, less over-head, and the exchange can be held to a minimum.

PREVALENCE OF DISEASE

	November Report			Av. 5 years
	October 1926	November 1926	November 1925	
Pneumonia	239	363	496	372
Tuberculosis	554	242	399	409
Typhoid Fever	95	50	84	120
Diphtheria	792	710	474	994
Whooping Cough	431	492	564	352
Scarlet Fever	665	970	877	1,074
Measles	112	324	411	481
Smallpox	34	83	20	141
Meningitis	6	3	9	10
Poliomyelitis	32	6	13	24
Syphilis	1,473	1,308	986	859
Gonorrhoea	1,187	912	850	823
Chaneroid	20	10	6	10

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health				
November, 1926				
	+	-	+ -	Total
Throat Swabs for Diphtheria				1780
Diagnosis	115	529		
Release	267	577		
Carrier	11	237		
Virulence Tests	20	24		
Throat Swabs for Hemolytic Streptococci				662
Diagnosis	181	284		
Carrier	18	179		
Throat Swabs for Vincent's	18	607		625
Syphilis				4912
Wassermann	3			
Kahn	786	4061	58	
Darkfield	1	3		
Examination for Gonococci	148	1104		1252
B. Tuberculosis				448
Sputum	71	345		
Animal Inoculations	5	27		
Typhoid				196
Feces	20	102		
Blood Cultures	1	23		
Urine	2	10		
Widal	1	37		
Dysentery				45
Intestinal Parasites				6
Transudates and Exudates				125
Blood Examinations (not classified)				624
Urine Examinations (not classified)				352
Water and Sewage Examinations				640
Milk Examinations				77
Toxicological Examinations				5
Autogenous Vaccines				2
Supplementary Examinations				121
Unclassified Examinations				487
Total for the Month				12359
Cumulative Total (fiscal year)				67154
Decrease over this month last year				3904
Outfits Mailed Out				14657
Media Manufactured, c.s.				471100
Typhoid Vaccine Distributed, c.c.				1530
Diphtheria Antitoxin Distributed, units				41212000
Toxin Antitoxin Distributed, c. c.				204110
Silver Nitrate Ampules Distributed				3592
Examinations Made by Houghton Laboratory				1289
Examinations Made by Grand Rapids Laboratory				5079

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

MINUTES OF THE EXECUTIVE COMMITTEE MEETING OF THE COUNCIL

The monthly meeting of the Executive Committee of the Council was held in Grand Rapids on Dec. 9, 1926. There were present:

Chairman Stone, Corbus, Bruce, LeFevre and Warnshuis.

1. The Executive Committee met with the officers of the Scientific Sections and some two hours were devoted to the discussion of the type of program for the Annual Meeting at Mackinac Island, 1927.

The following general plan was adopted—That the House of Delegates and Council conduct its business session on Thursday; that the Scientific Sections would hold section meetings on Friday and Saturday mornings between the hours of 9 a. m. to 1 p. m.; that the afternoon of these days be devoted to sports and pastime; that immediately following the dinners on Friday and Saturday evenings there be two or possibly three scientific addresses by invited distinguished guests. Section officers were to arrange programs for their section meetings utilizing such of the invited guests as they might desire to have participate in sectional programs.

2. The proposed Endowment Fund articles of organization, as prepared by the Grand Rapids Trust company, having been under consideration by each member of the Executive Committee, who has had a copy in his possession for the past month, were approved with one or two changes in phraseology and the secretary was directed to execute this agreement with the Grand Rapids Trust company.

3. In compliance with the Constitution and By-Laws the Executive Committee approved the appointments made by the President for the following committees:

Hospital and Charity Survey of the State—Richard R. Smith, Chairman, Grand Rapids; J. Walter Vaughan, Detroit; W. H. Marshall, Flint.

Medical History—C. B. Burr, Chairman, Flint; J. H. Dempster, Detroit; W. J. Kay, Lapeer; W. H. Sawyer, Hillsdale; J. D. Brook, Grandville.

4. Considerable time was devoted to the discussion of illegal practice and a policy outlined which the secretary was directed to observe in the handling of this health problem.

5. The secretary was directed to call a meeting of the representatives of the different organizations in the state that constitute the Legislative Bureau, to be held in Lansing on Dec. 16. This meeting to be called to order by the President, after which the members constituting this bureau were to perfect their own organization.

6. Upon motion of Dr. Bruce, supported by Dr. Corbus the Annual Meeting of the Council is to be held in Ann Arbor on Jan. 24, 1927. The secretary to arrange with the Joint Committee on Public Health Education for a noon meeting, and also to arrange the details for the Conference Meeting to be held in the evening. It was the sense of the Executive Committee that the chairman of the Council should preside at the Conference Meeting on the evening of Jan. 24, 1927.

7. The Executive Committee took up the question of the advisability of the retention of Mr. Harvey George Smith, executive secretary, whose contract expires with the end of the year. This matter was considered informally at the last Executive Committee Meeting, and was laid over for further consideration until this meeting.

There was no question in the mind of this committee but that Mr. Smith had done an excellent work in these last two years, especially in planning for the post-graduate conferences. His work with the various County Societies has, we think, been productive of some results in stimulating them to better work. However a careful survey of the matter leads us to feel that there is little to be gained by continuous personal visits to the various counties, certainly not enough to justify the expense. His loss will be felt most largely in the running of the post-graduate conferences, but again, in view of the fact that these conferences are now very well established in the general plan, we

believe that their activities may be satisfactorily directed from the main office, with the assistance of the councilor of the district, and do not feel justified in further assuming the considerable expense attached. We have therefore decided not to contract with Mr. Smith for another year.

As an expression of our appreciation of his satisfactory work, the Executive Committee has voted him an honorarium of \$500.

The meeting adjourned at 10:45 p. m.

THE NEW HOME OF WAYNE COUNTY MEDICAL SOCIETY

The year 1927 promises to be an epoch in the history of the Wayne County Medical Society.

Early in January, the society moves into its new home in the Maccabees building from the old location on High street, occupied since 1910.

For several years it has been apparent that the old building had outlived its usefulness but not until recently were the members able to agree on a new home that would meet the demands of an ever increasing membership.

With the completion of the magnificent Maccabees building a location was found which met the requirements of the society.

This building erected at a cost of \$2,500,000 is 14 stories in height, adjacent to the Library and Art Museum and is in Detroit's new art center. It is on the main thoroughfare of the city—Woodward avenue—and within a miles' radius of many of the large hospitals.

One of the interesting features of the building is a broadcasting station which can be utilized in furthering medical education throughout the state.

The club rooms of the society are located on the 11th floor facing Cass avenue and reached by six signal control passenger elevators.

The club will consist of a large lounge, council room, committee room, trustees room, secretaries' office, main dining room, kitchen, club dining room (Rathskeller), coat room, lavatory, telephone booths and two roof gardens.

The four principal rooms namely lounge, committee, council and private dining room have been specially fitted with recessed doors so that when occasion demands they may be converted into one large room.

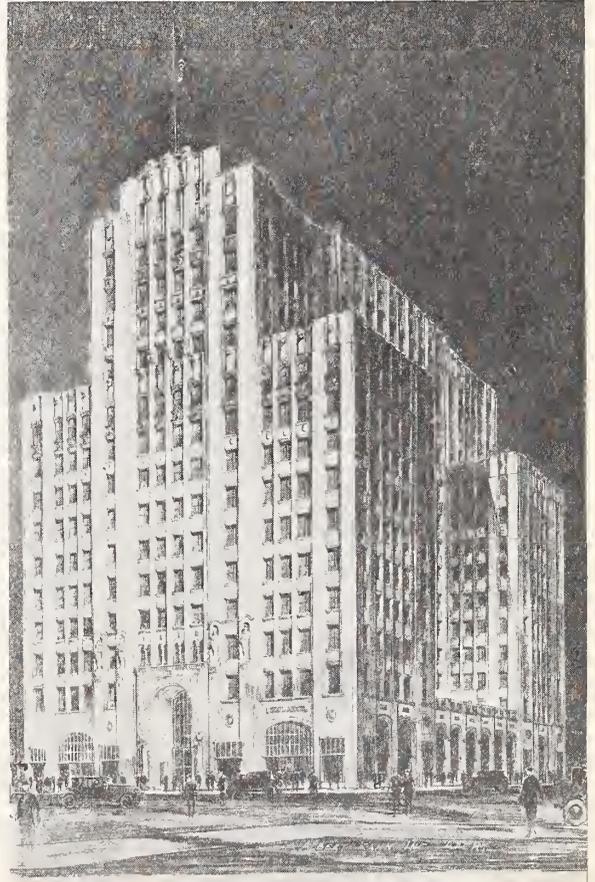
The entire equipment, including furniture, floor coverings, hangings and lighting fixtures, are being specially made by Tuttle & Clark, Detroit, under the personal

supervision of their Mr. George W. Turner, interior decorator.

Special designs have been made by the artists employed with Tuttle & Clark for the furniture for the dining rooms and large lounge room.

Lounge room to be equipped with easy couches, davenport and special chairs. These pieces are selected according to the color scheme of lacquer red, old ivory and verde green.

Glass curtains of English casement cloth on traverse cords and pulleys will be



Maccabee Building

furnished for all windows. Over these are to hang rich damask over-draperies from ceiling line to floor.

Private dining room has been particularly planned to carry out the Pompeian style. The tables are constructed with green bronze bases, polished walnut tops. Chairs for these tables are upholstered in Spanish leather, mottled in green and tan.

Hangings for the windows of this room are of Italian red brocade, tied in with the special colors of floor covering.

Club dining room—The furniture for this room is of the English style, constructed specially carved and to design, using weathered oak finish. The floor of the club dining room is to be covered with

special tile linoleum of old red with moss green inserts.

Special attention has been given to the furnishings of the secretary's office and trustee's room.

The club dining room will be used daily by society members only, while the private dining room will be reserved for those who wish to bring ladies or friends. The latter room will also be used for formal dinners and luncheons.

The complete settings for all this floor have an influence of old English and Pompeian styles. Color schemes have been so arranged as to completely harmonize throughout.

The floor coverings for all spaces is made of one design and quality of lacquer red mist coloring.

The contract for the kitchen equipment has been given to the Michigan Store Fixture company, at a cost approximating \$1,700. This assures the society of a most complete and up-to-date kitchen.

The linens, silver, glassware and china will be furnished by Mr. Young—caterer, who with a competent staff will have charge of the dining rooms and kitchen.

No expense has been spared in considering the comfort and convenience of members. With this in view the club will contain an appropriate medical library and a selection of leading medical journals.

The meetings of the society will be held in the large auditorium, which has a seating capacity of 750 and is located on the main floor of the building.

Adjoining the auditorium a large cloak room under the supervision of paid attendants will be at the disposal of doctors.

The parking question—always an important one—will be greatly improved at the new location.

After long deliberation, much thought and an expenditure of \$20,000 the society feels that it has provided for its members the last word in a Medical Society Home; a place that will reflect credit on Wayne County Medical Society, and lend dignity to the medical profession where members will be proud to entertain visitors and friends.

Dr. J. Albert Kimzey,
Chairman, House Com., Wayne County Society.

COUNCIL MEETING

The regular mid-winter session of the council will be held in the Michigan Union, Ann Arbor, Jan. 24 and 25, 1927. The Council will meet with the Joint Committee on Public Health Education at 12 M., fast time, Jan. 24. The first session of the Council will be called at 2:30 p. m. The

Council and invited representatives from our Medical Colleges, Department of Health and Board of Registration will meet at a dinner meeting at 6 p. m. The Second Session of the Council will be held at 9 a. m., Jan. 25.

R. C. Stone, Chairman,
F. C. Warnshuis, Secretary.

PHYSICAL EXAMINATIONS

There is scarcely a medical publication but that stresses the importance of periodical physical examination of the apparently well. Whenever public health or disease prevention is discussed in lay editorials the need and importance of such a physical examination is stressed. Slowly but with increasing rapidity the public is being educated upon the subject. In increasing numbers they are wending their way to doctor's offices. It is the concern of the American Medical Association and of your State Society that every doctor shall further the movement by conducting such examinations in a thorough and systematic manner, properly evaluate the findings and to render indicated advice. That is the profession's responsibility.

A representative committee of the A. M. A. after months of labor have formulated a standard examination blank. The same committee has compiled a manual that will guide and aid doctors in making the examination. This manual has been distributed to every member of our State Society. To still further expedite the work we now announce that we have made arrangements with a reliable stationery firm to supply these blanks together with an indexed loose leaf binder for filing. This makes for a system that is complete, compact, and can be kept in the drawer of your desk. The price for 100 blanks and folder is \$5.75.

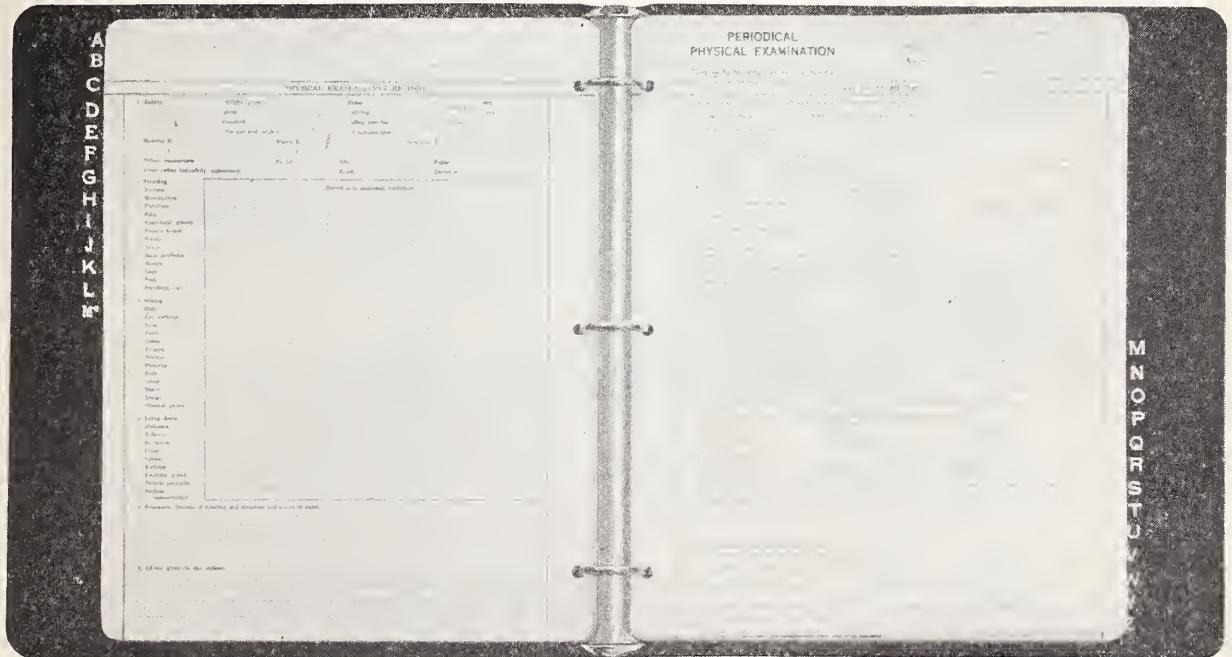
Once more we urge that when persons come to you for a physical examination that you cause such an examination to be thorough and inclusive. Second, that you record your findings on this standard blank; following the manual of the A. M. A. The degree in which every doctor acquits himself of this type of service which the public is demanding will cause their continuance to seek this service from the individual doctor. If you fail to meet the public's demand then it may confidently be expected that they will look to institutions and clinics for this service. We repeat—be thorough, efficient and systematic. Utilize the blank that has been approved and formulated by the American Medical Association.

PERIODICAL PHYSICAL EXAMINATION EXAMINATION BLANKS

Doctor:

This blank is devised by the A. M. A. They are essential to you in making the physical examination, expediting the examination, filing and for future record and reference.

We have provided them in a convenient, durable form as here illustrated:



1. Flexo—Dura-Leather Cover—Loose Leaf Binder.
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3. 100 A. M. A. Examination Blanks.

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You need this outfit in your office. It has been assembled for you.
Use the next page to send in your order.

PERIODIC EXAMINATION RECORD

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Grand Rapids, Mich.

Enclosed find \$5.75. (Check must accompany). Send me to the address below.

Periodic Physical Examination Record Outfit,
as illustrated on the reverse side of this order to:

Dr.

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City

ON TO MACKINAC ISLAND

Our 1927 Annual Meeting will be held on Mackinac Island on the days of June 16, 17 and 18.

On December 9 a joint conference of chairmen and secretaries of all the Scientific Sections was held and the details of our program were outlined as follows:

Thursday, June 16—

House of Delegates.

Friday, June 17—

9 a. m. to 1 p. m.—Section Meetings; 1 to 6 p. m.—Sports and Pastimes; 7 p. m.—Formal Dinner as guests of the Grand Hotel to be followed by the president's annual address and two scientific addresses by invited guests; 10 p. m. entertainment in hotel, theater and ballroom.

Saturday, June 18—

9 a. m. to 1 p. m.—Section Meetings; 1 to 6 p. m.—Sports and Pastimes; 7:15 p. m.—Scientific Program; three addresses by invited guests; 10 p. m.—Entertainment provided by hotel management.

Sunday, June 19—

Recreation—Special trains and boat so as to reach home early Monday morning.

Mackinac Island needs no description. It is a famed summer resort now arresting increased attention because of having been selected as the place for the meeting place of state governors and possibly as the summer vacation home of President Coolidge.

It is purposed to make our 1927 meeting one of excellent scientific interest and also to afford opportunity for recreation and wholesome pleasure. The entire Grand Hotel is under reservation and is at our complete disposal. Two golf courts, several tennis courts, quoit courts, heated swimming pool as well as many beautiful drives and historical points provide wonderful opportunity for out door entertainment. At no time have we had so enticing an environment for our annual meeting.

June is five months distant, still we want every member to bear this coming meeting in mind and to plan to be present. The ladies, surely we want them to accompany you and the kiddies, big and little, too.

Succeeding issues will contain additional announcements—mark the dates June 16, 17, 18 and 19.

DUES

Your 1927 dues are now payable to your County Secretary. County Secretaries will remit your state dues to the State Secretary. Your membership certificate will be mailed from the state office. Incidentally we have enlarged your state certificate so as to give it more prominence when displayed in your office. It will come to you in a large 8x11 envelope containing the wording: "This envelope contains your Membership Certificate." We urge its framing and display for it certifies to your patients that you are affiliated with the accredited medical organization of your county.

Your local secretary renders a vast amount of gratuitous service to you and your local society. Evidence your appreciation by relieving him of a dunning job. Hand him a check for your dues, or mail it to him, during the first week of 1927. Pay your dues promptly.

OBSTETRICS

We hear much regarding poor obstetrical service. Blame is laid at the door of doctors. Governmental and lay associations and clinics seek to remedy the alleged situation and maternal enactments are sought in state and national legislative bodies to improve conditions and provide pre- and natal care.

With the assistance of the State Commission on Health, we have secured some Michigan statistics and submit them for our members review and study.

Facts can be read into these statistics as well as out of them. There are instances in which apparently doctors of certain counties are rendering poor obstetrical care. On the other hand the doctors of these counties cannot always be credited with the blame. Some of the adverse percentages may be due to two factors—mid-wife attendance or the bringing into that county the complicated cases of adjacent counties that are without hospitals. The blame cannot invariably be placed at the door of the doctor.

These tables will serve as an additional reason for consideration of the subject. County Societies should study and survey existing maternal service in their counties. Have a special committee study the problem. If there are local factors that can be improved it is your organization's obligation to bring in indicated recommendations. We shall be pleased to receive reports as to the results that attend your investigations and study.

BIRTHS

STATE AND COUNTIES						Total	Average	Average
	1921	1922	1923	1924	1925	Five	Five	Rate
						Years	Years	Per 100,000
								Population
STATE	96,035	90,042	93,956	98,187	98,983	476,203	95,241	24.7
1 Alcona	158	158	146	125	97	684	137	22.4
2 Alger	233	206	224	243	239	1,145	229	20.7
3 Allegan	928	876	825	858	788	4,275	855	22.5
4 Alpena	503	498	496	512	422	2,431	486	21.7
5 Antrim	318	273	255	237	259	1,342	262	22.7
6 Arenac	205	207	177	195	156	940	188	19.7
7 Baraga	165	157	134	203	180	839	168	20.1
8 Barry	456	449	405	407	402	2,119	424	19.5
9 Bay	1,830	1,665	1,537	1,633	1,541	8,206	1,641	23.2
10 Benzie	174	152	153	150	157	783	157	22.6
11 Berrien	1,497	1,451	1,447	1,577	1,452	7,424	1,485	22.4
12 Branch	454	472	415	399	394	2,134	427	17.7
13 Calhoun	1,522	1,398	1,434	1,454	1,546	7,354	1,471	18.8
14 Cass	460	391	362	357	349	1,919	384	18.6
15 Charlevoix	421	428	398	324	306	1,877	375	23.7
16 Cheboygan	419	356	331	324	301	1,731	346	24.6
17 Chippewa	742	668	601	595	577	3,182	637	25.2
18 Clare	258	247	178	175	169	1,027	205	24.6
19 Clinton	541	537	455	514	459	2,506	501	21.3
20 Crawford	121	114	110	114	104	563	113	26.3
21 Delta	985	921	883	859	797	4,445	889	28.1
22 Dickinson	546	553	535	775	973	3,382	676	34.4
23 Eaton	628	592	538	570	569	2,947	589	19.8
24 Emmet	415	401	377	349	359	1,901	380	24.1
25 Genesee	3,485	3,226	3,776	4,169	3,878	18,534	3,707	23.9
26 Gladwin	249	258	199	163	179	1,048	210	22.9
27 Gogebic	1,005	871	865	835	834	4,410	882	23.8
28 Grand Traverse	424	385	349	327	374	1,859	372	19.1
29 Gratiot	874	829	651	785	704	3,843	769	21.2
30 Hillsdale	568	511	506	493	477	2,555	511	18.0
31 Houghton	1,429	1,259	1,120	1,108	985	5,901	1,180	16.3
32 Huron	994	957	828	820	797	4,396	879	26.4
33 Ingham	2,068	1,902	2,081	2,268	2,321	10,640	2,128	23.3
34 Ionia	739	649	621	645	682	3,336	667	19.7
35 Iosco	204	198	179	166	163	910	182	21.7
36 Iron	575	487	525	467	452	2,506	501	20.9
37 Isabella	685	585	550	537	557	2,914	583	25.4
38 Jackson	1,645	1,437	1,526	1,609	1,535	7,752	1,550	19.4
39 Kalamazoo	1,847	1,724	1,695	1,772	1,666	8,704	1,741	23.0
40 Kalkaska	138	158	114	119	125	654	131	23.0
41 Kent	4,646	4,509	4,688	4,909	5,071	23,817	4,763	25.0
42 Keweenaw	179	112	121	116	107	635	127	19.9
43 Lake	108	81	101	83	84	457	91	20.1
44 Lapeer	651	593	528	545	544	2,861	572	21.8
45 Leelanau	225	219	184	201	172	1,001	209	22.1
46 Lenawee	1,119	1,029	975	955	949	5,027	1,005	20.7
47 Livingston	371	362	320	315	348	1,716	343	19.2
48 Luce	131	132	137	137	114	651	130	18.8
49 Mackinac	247	239	221	202	209	1,118	224	27.8
50 Macomb	1,027	1,004	1,132	1,408	1,486	6,057	1,211	30.4
51 Manistee	459	407	388	347	353	1,954	391	18.7
52 Marquette	1,166	1,039	1,024	1,054	962	5,245	1,049	22.3
53 Mason	466	451	431	385	385	2,118	424	21.3
54 Mecosta	465	425	417	394	358	2,059	412	23.1
55 Menominee	638	614	554	569	576	2,981	596	24.9
56 Midland	520	429	430	418	430	2,227	445	21.0
57 Missaukee	274	261	207	235	190	1,167	233	25.5
58 Monroe	893	833	883	938	995	4,542	908	23.2
59 Montcalm	693	632	638	576	538	3,077	615	19.9
60 Montmorency	114	88	101	97	88	488	98	22.4
61 Muskegon	1,820	1,618	1,876	1,873	1,824	9,020	1,805	25.7
62 Newaygo	388	420	339	337	328	1,812	362	20.6
63 Oakland	2,487	2,358	2,670	3,110	3,459	14,084	2,817	27.4
64 Oceana	495	415	353	375	328	1,966	393	25.2
65 Ogemaw	230	207	171	177	161	946	189	24.1
66 Ontonagon	267	277	212	233	244	1,233	247	17.7
67 Osceola	375	355	311	325	288	1,654	331	21.5
68 Oscoda	47	53	50	32	35	217	43	24.1
69 Otsego	188	143	162	143	121	757	151	24.5
70 Ottawa	1,226	1,214	1,241	1,234	1,176	6,091	1,278	24.9
71 Presque Isle	393	336	374	325	358	1,836	367	28.5
72 Roscommon	45	40	46	42	51	224	45	22.1
73 Saginaw	2,491	2,252	2,321	2,456	2,302	11,822	2,364	22.6
74 Sanilac	827	780	754	707	681	3,749	7,410	23.4
75 Schoolcraft	259	257	223	221	209	1,169	234	21.8
76 Shiawassee	908	773	805	846	807	4,139	828	22.2
77 St. Clair	1,486	1,418	1,343	1,432	1,430	7,109	1,422	23.4
78 St. Joseph	562	542	535	605	553	2,797	559	20.1
79 Tuscola	815	820	716	659	726	3,736	747	22.1
80 Van Buren	665	568	612	596	590	3,031	606	19.5
81 Washtenaw	1,281	1,158	1,312	1,312	1,350	6,413	1,283	24.8
82 Wayne	32,994	31,451	34,550	37,579	39,220	175,803	35,161	28.7
83 Wexford	483	442	449	452	449	2,275	455	24.3

MATERNAL MORTALITY

STATE AND COUNTIES						Total	Average	Average
						Five	Five	Rate
						Years	Years	Per 100,000
						Years	Years	Population
	1921	1922	1923	1924	1925			
STATE	605	551	584	636	629	3,005	601	6.3
1 Alcona	1	1	---	3	1	6	1	7.3
2 Alger	---	---	1	2	1	4	1	4.4
3 Allegan	5	5	5	3	4	22	4	4.7
4 Alpena	6	1	3	3	4	17	3	6.2
5 Antrim	1	2	1	2	---	6	1	3.8
6 Arenac	---	2	---	3	1	6	1	5.3
7 Baraga	1	1	1	3	2	8	2	11.9
8 Barry	5	4	---	1	3	13	3	7.1
9 Bay	10	7	7	8	5	37	7	4.3
10 Benzie	---	---	---	2	1	3	1	6.4
11 Berrien	5	6	11	8	7	37	7	4.7
12 Branch	6	2	---	3	5	16	3	7.0
13 Calhoun	13	10	7	10	16	56	11	7.5
14 Cass	3	1	6	3	5	18	3	7.8
15 Charlevoix	1	2	4	---	2	9	2	5.3
16 Cheboygan	3	4	3	1	1	12	2	5.8
17 Chippewa	3	1	2	5	1	12	2	3.1
18 Clare	1	2	---	---	1	4	1	4.9
19 Clinton	3	5	3	3	4	18	4	8.0
20 Crawford	1	---	1	---	1	3	1	8.8
21 Delta	4	5	7	6	2	24	5	5.6
22 Dickinson	5	3	5	6	6	25	5	7.4
23 Eaton	7	5	1	3	6	22	4	6.8
24 Emmet	11	8	3	5	9	36	7	18.4
25 Genesee	19	15	22	26	28	110	25	6.7
26 Gladwin	8	2	---	1	1	12	2	9.5
27 Gogebic	5	---	10	7	3	25	5	5.7
28 Grand Traverse	10	5	6	2	3	26	5	13.4
29 Gratiot	7	5	4	5	4	25	5	6.5
30 Hillsdale	3	3	2	2	1	11	2	3.9
31 Houghton	9	9	5	12	8	43	9	7.6
32 Huron	6	5	6	2	4	23	5	5.7
33 Ingham	14	9	12	16	14	65	13	6.1
34 Ionia	2	6	4	5	2	19	4	6.0
35 Iosco	---	1	1	---	2	4	1	5.5
36 Iron	4	3	6	2	2	17	3	6.0
37 Isabella	5	5	5	3	5	23	5	8.6
38 Jackson	10	7	8	9	8	42	8	5.2
39 Kalamazoo	14	19	19	11	14	77	15	8.6
40 Kalkaska	---	3	1	2	1	7	1	7.6
41 Kent	26	30	25	28	18	127	25	5.2
42 Keweenaw	---	2	---	1	---	3	1	7.9
43 Lake	---	---	---	---	1	1	1	11.0
44 Lapeer	5	4	5	5	2	21	4	7.0
45 Leelanau	1	---	---	1	1	3	1	5.0
46 Lenawee	6	4	7	6	4	27	5	5.0
47 Livingston	4	1	1	2	2	10	2	5.8
48 Luce	---	1	1	1	---	3	1	7.7
49 Mackinac	1	---	2	1	---	4	1	4.5
50 Macomb	4	6	6	4	11	31	6	5.0
51 Manistee	3	2	3	2	3	13	3	7.7
52 Marquette	11	5	4	11	6	37	7	6.7
53 Mason	4	3	---	---	2	9	2	4.7
54 Mecosta	5	5	2	2	7	21	4	9.7
55 Menominee	1	2	1	2	2	8	2	3.4
56 Midland	3	1	2	2	3	11	2	4.5
57 Missaukee	1	3	1	1	---	6	1	4.3
58 Monroe	4	3	5	2	3	17	3	3.3
59 Montcalm	2	3	8	6	6	25	5	8.1
60 Montmorency	---	---	2	---	---	2	1	10.2
61 Muskegon	4	11	9	8	16	48	10	5.5
62 Newaygo	---	7	4	3	1	15	3	8.3
63 Oakland	17	10	13	12	15	67	13	4.6
64 Oceana	3	4	3	3	1	14	3	7.6
65 Ogemaw	1	1	---	---	---	2	1	5.3
66 Ontonagon	3	3	1	---	1	8	2	8.1
67 Osceola	6	4	4	1	7	22	4	12.1
68 Oscoda	1	---	---	---	---	1	1	23.3
69 Otsego	2	2	---	1	1	6	1	6.6
70 Ottawa	3	7	5	11	2	28	6	4.9
71 Presque Isle	3	4	5	1	2	15	3	8.2
72 Roscommon	---	1	---	---	1	2	1	22.2
73 Saginaw	11	16	13	19	16	75	15	6.3
74 Sanilac	10	8	4	1	5	28	6	0.8
75 Schoolcraft	1	---	---	3	2	6	1	4.3
76 Shiawassee	4	7	3	6	5	25	5	6.0
77 St. Clair	10	7	8	14	13	52	10	7.0
78 St. Joseph	2	2	7	4	2	17	3	5.4
79 Tuscola	3	3	4	2	1	13	3	4.0
80 Van Buren	---	1	1	4	3	9	2	3.3
81 Washtenaw	11	8	11	13	9	52	10	7.8
82 Wayne	214	196	227	263	263	1,163	233	6.6
83 Wexford	4	---	5	2	4	15	3	6.6

STILLBIRTHS

STATE AND COUNTIES						Total	Average	Average
	1921	1922	1923	1924	1925	Five Years	Five Years	Rate Per 100,000 Population
STATE	3,628	3,779	3,657	3,703	3,670	18,438	3,687	38.7
1 Alcona	2	3	10	7	3	25	5	36.5
2 Alger	4	5	7	5	4	25	5	21.8
3 Allegan	30	42	29	34	34	169	34	39.8
4 Alpena	12	16	16	15	28	87	17	35.0
5 Antrim	13	11	14	14	13	65	13	49.6
6 Arenac	7	6	5	3	5	26	5	26.6
7 Baraga	3	11	6	2	6	28	6	35.7
8 Barry	18	26	13	11	9	77	15	35.4
9 Bay	86	65	51	70	68	340	68	41.4
10 Benzie	2	7	3	8	7	27	5	31.8
11 Berrien	40	47	42	50	40	219	44	29.6
12 Branch	17	10	14	6	16	63	13	30.4
13 Calhoun	53	59	52	51	56	271	54	36.7
14 Cass	15	22	10	10	18	75	15	39.1
15 Charlevoix	18	17	7	8	16	66	13	34.7
16 Cheboygan	17	23	22	13	8	83	17	49.1
17 Chippewa	28	31	20	22	19	120	24	37.7
18 Clare	6	14	8	11	4	43	9	43.9
19 Clinton	19	17	12	13	21	82	16	31.9
20 Crawford	4	6	4	4	6	24	5	44.2
21 Delta	35	35	37	35	38	180	36	40.5
22 Dickinson	16	13	18	29	25	101	20	29.6
23 Eaton	22	24	20	18	17	101	20	34.0
24 Emmet	20	16	21	8	25	90	18	47.4
25 Genesee	146	142	142	194	154	778	156	42.1
26 Gladwin	14	6	18	10	1	49	10	47.6
27 Gogebic	31	29	29	29	17	135	27	34.6
28 Grand Traverse	9	14	15	8	15	61	12	32.3
29 Gratiot	34	32	18	27	26	137	27	35.1
30 Hillsdale	23	25	12	12	11	81	16	31.3
31 Houghton	46	49	50	29	49	223	45	38.1
32 Huron	41	24	24	18	21	128	26	29.6
33 Ingham	76	70	87	69	58	360	72	33.8
34 Ionia	23	25	22	19	20	109	22	33.0
35 Iosco	5	5	10	6	4	30	6	33.0
36 Iron	12	12	12	15	10	61	12	24.0
37 Isabella	18	23	14	14	16	85	17	29.2
38 Jackson	70	65	53	65	56	309	62	40.0
39 Kalamazoo	55	53	59	62	72	301	60	34.5
40 Kalkaska	9	7	6	5	5	32	6	45.8
41 Kent	174	142	168	183	168	835	167	35.1
42 Keweenaw	11	6	5	3	5	30	6	47.2
43 Lake	2	3	6	2	2	15	3	33.0
44 Lapeer	24	25	17	18	23	107	21	36.7
45 Leelanau	4	3	7	6	7	27	5	25.0
46 Lenawee	28	53	33	34	42	190	38	37.8
47 Livingston	14	14	14	7	10	59	12	35.0
48 Luce	1	4	5	4	5	19	4	30.8
49 Mackinac	2	8	7	7	7	37	6	26.8
50 Macomb	33	40	34	36	46	189	38	31.4
51 Manistee	11	22	11	9	7	60	12	30.7
52 Marquette	58	46	35	39	35	213	43	41.0
53 Mason	18	24	13	14	19	88	18	42.5
54 Mecosta	14	23	10	10	13	70	14	34.0
55 Menominee	16	23	26	30	18	113	23	38.6
56 Midland	22	6	15	8	15	66	13	29.2
57 Missaukee	8	9	6	5	4	32	6	25.8
58 Monroe	24	20	17	17	42	120	24	26.4
59 Montcalm	26	19	27	17	18	107	21	34.1
60 Montmorency	4	7	2	4	5	22	4	40.8
61 Muskegon	97	64	83	68	49	361	72	39.9
62 Newaygo	10	17	19	15	15	76	15	41.4
63 Oakland	94	102	82	116	120	514	103	36.6
64 Oceana	11	16	19	10	22	78	16	40.7
65 Ogemaw	5	14	5	8	7	39	8	42.3
66 Ontonagon	12	18	12	9	6	57	11	44.5
67 Osceola	20	19	12	11	21	83	17	51.4
68 Oscoda	2	2	2	2	4	6	1	23.3
69 Otsego	8	10	8	3	3	32	6	39.7
70 Ottawa	27	37	35	37	39	175	35	28.7
71 Presque Isle	9	14	9	10	17	59	12	32.7
72 Roscommon	3	3	2	1	1	7	1	22.2
73 Saginaw	90	91	81	78	81	421	84	35.5
74 Sanilac	33	29	35	22	31	150	30	4.0
75 Schoolcraft	10	6	11	9	7	43	9	38.5
76 Shiawassee	28	28	28	36	39	159	32	38.6
77 St. Clair	81	77	59	68	60	345	69	48.5
78 St. Joseph	18	13	11	17	15	74	15	26.8
79 Tuscola	31	22	29	19	32	133	27	36.1
80 Van Buren	18	25	15	23	12	93	19	31.4
81 Washtenaw	57	54	61	48	47	267	53	41.3
82 Wayne	1,359	1,504	1,559	1,593	1,507	7,522	1,504	42.8
83 Wexford	17	12	12	20	23	84	17	37.4

PUERPERAL SEPSIS

STATE AND COUNTIES

	1921	1922	1923	1924	1925	Total Five Years	Average Five Years	Average Rate Per 100,000 Population
STATE	265	208	190	165	174	1,002	200	5.2
1 Alcona .....	.....	1	.....	1	.....	2	0	.....
2 Alger .....	.....	.....	.....	.....	1	1	0	.....
Allegan	3	2	.....	1	1	7	1	2.6
4 Alpena	2	.....	1	2	1	6	1	5.6
5 Antrim	1	2	.....	2	.....	5	1	8.7
6 Arenac .....	.....	1	.....	.....	.....	1	0	.....
7 Baraga	1	.....	.....	1	1	3	1	12.0
8 Barry	3	.....	.....	1	.....	4	1	4.6
9 Bay	5	2	2	3	.....	12	2	2.8
10 Benzie .....	.....	.....	.....	.....	1	1	0	.....
11 Berrien	2	2	2	2	3	11	2	3.0
12 Branch	4	2	.....	1	.....	7	1	4.1
13 Calhoun	5	4	2	2	6	19	4	5.1
14 Cass .....	.....	1	2	1	3	7	1	4.8
15 Charlevoix .....	.....	1	1	.....	2	4	1	6.3
16 Cheboygan	2	2	.....	.....	.....	4	1	7.1
17 Chippewa	1	1	.....	.....	.....	2	0	.....
18 Clare	1	2	.....	.....	1	4	1	12.0
19 Clinton	2	1	1	.....	1	5	1	4.3
20 Crawford .....	.....	.....	.....	.....	1	1	0	.....
21 Delta .....	.....	2	3	1	1	7	1	3.2
22 Dickinson	1	2	1	1	2	7	1	5.1
23 Eaton	3	4	.....	1	3	11	2	6.7
24 Emmet .....	.....	2	1	1	2	6	1	6.3
25 Genesee	6	7	4	11	7	35	7	4.5
26 Gladwin	2	.....	.....	.....	.....	2	0	.....
27 Gogebic	2	.....	4	4	1	11	2	5.4
28 Grand Traverse	6	1	1	.....	.....	8	1	5.1
29 Gratiot	4	1	1	1	.....	7	1	2.8
30 Hillsdale	2	2	.....	.....	.....	4	1	3.5
31 Houghton	4	.....	1	3	2	10	2	2.8
32 Huron	4	1	1	.....	.....	6	1	3.0
33 Ingham	7	5	2	4	3	21	4	4.4
34 Ionia .....	.....	2	1	.....	.....	3	1	2.9
35 Iosco .....	.....	.....	.....	.....	.....	.....	.....	.....
36 Iron	1	2	4	.....	.....	7	1	4.2
37 Isabella	2	2	1	.....	.....	5	1	12.4
38 Jackson	3	2	2	3	3	13	2	2.5
39 Kalamazoo	8	7	6	.....	2	23	4	5.3
40 Kalkaska .....	.....	.....	.....	1	.....	1	0	.....
41 Kent	10	13	9	11	3	46	9	4.7
42 Keweenaw .....	.....	.....	.....	.....	.....	.....	.....	.....
43 Lake .....	.....	.....	.....	.....	.....	.....	.....	.....
44 Lapeer .....	.....	1	.....	2	1	4	1	3.8
45 Leelanau .....	.....	.....	.....	.....	.....	.....	.....	.....
46 Lenawee	3	1	3	1	1	9	2	4.1
47 Livingston	2	.....	.....	1	1	4	1	5.6
48 Luce .....	.....	.....	.....	1	.....	1	0	.....
49 Mackinac	1	.....	.....	.....	.....	1	0	.....
50 Macomb	1	1	2	1	5	10	2	5.0
51 Manistee	3	1	1	1	1	7	1	4.8
52 Marquette	5	3	2	5	.....	15	3	6.4
53 Mason	1	2	.....	.....	.....	3	1	5.0
54 Mecosta	2	2	1	.....	2	7	1	5.6
55 Menominee .....	.....	.....	.....	.....	1	1	0	.....
56 Midland	3	1	1	1	.....	6	1	5.4
57 Missaukee	1	.....	.....	.....	.....	1	0	.....
58 Monroe	1	.....	1	1	.....	3	1	2.6
59 Montcalm .....	.....	1	1	1	2	5	1	3.2
60 Montmorency .....	.....	.....	.....	.....	.....	.....	.....	.....
61 Muskegon	1	8	7	3	10	29	6	8.5
62 Newaygo .....	.....	2	3	.....	.....	5	1	5.7
63 Oakland	7	3	4	2	2	18	3	2.9
64 Oceana	1	.....	2	1	.....	4	1	6.4
65 Ogemaw	1	.....	.....	.....	.....	1	0	.....
66 Ontonagon	1	1	.....	.....	.....	2	0	.....
67 Osceola	5	.....	.....	.....	2	7	1	6.5
68 Oscoda	1	.....	.....	.....	.....	1	0	.....
69 Otsego .....	.....	.....	.....	1	.....	1	0	.....
70 Ottawa	1	1	2	2	.....	6	1	2.0
71 Presque Isle .....	.....	1	1	1	.....	3	1	7.8
72 Roscommon .....	.....	.....	.....	.....	.....	.....	.....	.....
73 Saginaw	3	4	5	4	5	21	4	3.8
74 Sanilac	3	2	1	.....	3	9	2	6.3
75 Schoolcraft	1	.....	.....	1	.....	2	0	.....
76 Shiawassee	1	5	.....	1	2	9	2	5.4
77 St. Clair	3	.....	3	4	5	15	3	4.9
78 St. Joseph	1	.....	3	.....	.....	4	1	3.6
79 Tuscola	2	2	2	.....	.....	6	1	3.0
80 Van Buren .....	.....	.....	1	2	.....	3	1	3.2
81 Washtenaw	3	2	.....	4	4	13	2	3.9
82 Wayne	110	85	87	64	76	422	84	6.8
83 Wexford .....	.....	.....	4	1	.....	5	1	5.3

ALL OTHER PUERPERAL

STATE AND COUNTIES						Total	Average	Average
						Five	Five	Rate
						Years	Years	Per 100,000
							Population	
	1921	1922	1923	1924	1925			
STATE	340	343	394	471	455	2,003	401	4.1
1 Alcona	1	.....	.....	2	1	4	1	16.3
2 Alger .....	.....	.....	1	2	.....	3	0	.....
3 Allegan	2	3	5	2	3	15	3	7.9
4 Alpena	4	1	2	1	3	11	2	11.2
5 Antrim .....	.....	.....	1	.....	.....	1	0	.....
6 Arenac .....	.....	1	.....	3	1	5	1	10.5
7 Baraga .....	.....	1	1	2	1	5	1	12.0
8 Barry	2	4	.....	.....	3	9	2	9.2
9 Bay	5	5	5	5	5	25	5	7.1
10 Benzie .....	.....	.....	.....	2	.....	2	0	.....
11 Berrien	3	4	9	6	4	26	5	7.5
12 Branch	2	.....	.....	2	5	9	2	8.3
13 Calhoun	8	6	5	8	10	37	7	8.9
14 Cass	3	4	4	2	2	11	2	9.7
15 Charlevoix	1	1	3	.....	.....	5	1	6.3
16 Cheboygan	1	2	3	1	1	8	1	7.1
17 Chippewa	2	.....	2	5	1	10	2	7.9
18 Clare .....	.....	.....	.....	.....	.....	.....	.....	.....
19 Clinton	1	4	2	3	3	13	2	8.5
20 Crawford	1	.....	1	.....	.....	2	0	.....
21 Delta	4	3	4	5	1	17	3	9.5
22 Dickinson	4	1	4	5	4	18	3	15.3
23 Eaton	4	1	1	2	3	11	2	6.7
24 Emmet	11	6	2	4	7	30	6	38.1
25 Genesee	13	8	18	15	21	75	15	9.7
26 Gladwin	6	2	.....	1	1	10	2	21.9
27 Gogebic	3	.....	6	3	2	14	3	8.1
28 Grand Traverse	4	4	5	2	3	18	3	15.4
29 Gratiot	3	4	3	4	4	18	3	8.3
30 Hillsdale	1	1	2	2	1	7	1	3.5
31 Houghton	5	9	4	9	6	33	6	8.3
32 Huron	2	4	5	2	4	17	3	9.0
33 Ingham	7	4	10	12	11	44	9	9.9
34 Ionia	2	4	3	5	2	16	3	8.8
35 Iosco .....	.....	1	1	.....	2	4	1	11.9
36 Iron	3	1	2	2	2	10	2	8.3
37 Isabella	3	3	4	3	5	18	4	17.5
38 Jackson	7	5	6	6	5	29	6	7.5
39 Kalamazoo	6	12	13	11	12	54	11	14.5
40 Kalkaska .....	.....	3	1	1	1	6	1	17.6
41 Kent	16	17	16	17	15	81	16	8.4
42 Keweenaw .....	.....	2	.....	1	.....	3	0	.....
43 Lake .....	.....	.....	.....	.....	1	1	0	.....
44 Lapeer	5	3	5	3	1	17	3	11.4
45 Leelanau	1	.....	.....	1	1	3	0	.....
46 Lenawee	3	3	4	5	3	18	3	6.2
47 Livingston	2	1	1	1	1	6	1	5.6
48 Luce .....	.....	1	1	.....	.....	2	0	.....
49 Mackinac .....	.....	.....	2	1	.....	3	0	.....
50 Macomb	3	5	4	3	6	21	4	10.1
51 Manistee .....	.....	1	2	1	2	6	1	4.8
52 Marquette	6	2	2	6	6	22	4	8.5
53 Mason	3	1	.....	.....	2	6	1	5.0
54 Mecosta	3	3	1	2	5	14	3	16.8
55 Menominee	1	2	1	2	1	7	1	4.2
56 Midland .....	.....	.....	1	1	3	5	1	5.4
57 Missaukee .....	.....	3	1	1	.....	5	1	11.0
58 Monroe	3	3	4	1	3	14	3	7.7
59 Montcalm	2	2	7	5	4	20	4	12.9
60 Montmorency .....	.....	.....	2	.....	.....	2	0	.....
61 Muskegon	3	3	2	5	6	19	4	5.7
62 Newaygo .....	.....	5	1	3	1	10	2	11.4
63 Oakland	10	7	9	10	13	49	10	9.7
64 Oceana	2	4	1	2	1	10	2	12.8
65 Ogemaw .....	.....	1	.....	.....	.....	1	0	.....
66 Ontonagon	2	2	1	.....	1	6	1	7.2
67 Osceola	1	4	4	1	5	15	3	19.5
68 Oscoda .....	.....	.....	.....	.....	.....	.....	.....	.....
69 Otsego	2	2	.....	.....	1	5	1	16.2
70 Ottawa	2	6	3	9	2	22	4	8.2
71 Presque Isle	3	3	4	.....	2	12	2	15.5
72 Roscommon .....	.....	1	.....	.....	1	2	0	.....
73 Saginaw	8	12	8	15	11	54	11	10.5
74 Sanilac	7	6	3	1	2	19	4	12.6
75 Schoolcraft .....	.....	.....	.....	2	2	4	1	9.3
76 Shiawassee	3	2	3	5	3	16	3	8.1
77 St. Clair	7	7	5	10	8	37	7	11.5
78 St. Joseph	1	2	4	4	2	13	2	7.2
79 Tuscola	1	1	2	2	1	7	1	3.0
80 Van Buren .....	.....	1	.....	2	3	6	1	3.2
81 Washtenaw	8	6	11	9	5	39	8	15.4
82 Wayne	104	111	140	199	187	741	148	12.1
83 Wexford	4	.....	1	1	4	10	2	10.7

DEATHS FROM ALL CAUSES

STATE AND COUNTIES

	1921	1922	1923	1924	1925	Total Five Years	Average Five Years	Average Rate Per 100,000 Population
STATE	44,186	43,817	49,333	47,304	49,417	234,057	46,811	12.2
1 Alcona	55	56	65	49	56	281	56	9.2
2 Alger	91	82	95	97	99	464	92	8.4
3 Allegan	499	455	534	500	429	2,417	483	12.7
4 Alpena	236	249	250	238	221	1,194	239	13.3
5 Antrim	147	119	146	128	126	666	133	11.5
6 Arenac	111	77	88	94	89	459	92	9.6
7 Baraga	82	69	71	81	66	372	74	8.9
8 Barry	257	298	275	244	296	1,370	274	12.6
9 Bay	850	790	802	778	816	4,036	807	11.4
10 Benzie	101	95	96	69	78	439	88	12.7
11 Berrien	656	714	777	844	865	3,856	771	11.6
12 Brauch	387	341	378	396	361	1,863	373	15.5
13 Calhoun	1,020	967	1,064	1,093	1,132	5,276	1,055	13.5
14 Cass	299	269	307	270	291	1,436	287	13.9
15 Charlevoix	186	171	193	145	186	881	176	11.1
16 Cheboygan	196	154	196	137	170	853	170	12.1
17 Chippewa	287	259	285	242	283	1,356	271	10.7
18 Clare	113	104	102	85	69	473	94	11.3
19 Clinton	299	301	330	279	277	1,486	297	12.6
20 Crawford	44	57	48	47	65	261	52	12.1
21 Delta	385	345	257	324	368	1,779	356	11.3
22 Dickinson	197	203	183	334	339	1,256	251	12.8
23 Eaton	435	395	399	430	413	2,072	414	13.9
24 Emmet	260	277	244	239	239	1,259	252	16.0
25 Genesee	1,259	1,197	1,732	1,368	1,378	6,934	1,386	8.9
26 Gladwin	84	79	61	59	56	339	67	7.3
27 Gogebic	300	276	320	380	335	1,611	320	8.6
28 Grand Traverse	448	427	419	398	411	2,103	421	21.6
29 Gratiot	406	370	401	394	369	1,940	388	10.7
30 Hillsdale	371	401	363	333	424	1,892	378	13.3
31 Houghton	658	678	609	626	701	3,332	666	9.2
32 Huron	448	379	376	311	359	1,873	374	11.2
33 Ingham	948	911	1,125	1,074	1,104	5,162	1,032	11.3
34 Ionia	483	428	498	460	460	2,329	466	13.7
35 Iosco	108	81	88	85	93	455	91	10.8
36 Iron	171	157	183	151	177	839	168	7.0
37 Isabella	279	261	287	253	290	1,370	274	12.0
38 Jackson	989	923	977	971	1,030	4,890	978	12.2
39 Kalamazoo	1,159	1,182	1,213	1,143	1,281	5,978	1,195	15.8
40 Kalkaska	75	52	49	72	60	308	61	10.7
41 Kent	2,342	2,341	2,587	2,409	2,665	12,344	2,469	12.9
42 Keweenaw	62	61	60	50	55	288	57	8.9
43 Lake	48	49	38	43	42	229	44	9.7
44 Lapeer	386	368	451	362	379	1,946	389	14.8
45 Leelanau	101	96	100	82	95	474	95	10.5
46 Lenawee	669	594	705	677	679	3,324	665	13.7
47 Livingston	273	244	249	266	257	1,289	258	14.5
48 Luce	128	128	126	126	131	639	104	15.1
49 Mackinac	101	87	102	103	116	509	102	12.7
50 Macomb	519	541	614	646	663	2,983	596	15.0
51 Manistee	243	249	248	245	256	1,241	248	11.9
52 Marquette	531	474	542	529	541	2,617	523	11.1
53 Mason	246	251	229	244	219	1,189	238	12.0
54 Mecosta	266	268	223	203	225	1,185	237	13.3
55 Menominee	234	240	278	277	298	1,327	265	11.1
56 Midland	184	166	158	175	155	838	167	9.0
57 Missaukee	83	99	69	81	77	409	82	9.0
58 Monroe	425	424	481	467	415	2,212	442	11.3
59 Montcalm	365	393	440	358	380	1,936	387	12.5
60 Montmorency	31	42	29	35	35	172	34	7.8
61 Muskegon	743	702	916	804	810	3,975	795	11.3
62 Newaygo	225	212	221	208	198	1,064	213	12.1
63 Oakland	1,128	1,122	1,402	1,447	1,561	6,660	1,332	13.0
64 Oceana	187	181	194	193	192	947	189	12.1
65 Ogemaw	104	89	78	87	78	436	87	11.1
66 Ontonagon	92	113	98	117	115	535	107	7.7
67 Osceola	180	169	191	177	167	884	177	11.5
68 Oscoda	13	14	13	15	17	72	14	7.8
69 Otsego	78	52	70	62	46	308	61	9.9
70 Ottawa	514	484	562	489	472	2,521	504	10.3
71 Presque Isle	136	122	117	97	121	593	118	9.2
72 Roscommon	25	31	45	26	27	154	31	15.3
73 Saginaw	1,180	1,158	1,374	1,253	1,242	6,207	1,041	9.9
74 Sanilac	360	375	382	325	336	1,778	355	11.2
75 Schoolcraft	99	101	104	104	95	503	100	9.3
76 Shiawassee	556	502	546	453	477	2,534	507	13.6
77 St. Clair	824	802	850	841	798	4,115	823	13.5
78 St. Joseph	338	372	371	330	351	1,762	352	12.6
79 Tuscola	508	445	499	421	414	2,287	457	13.5
80 Van Buren	410	377	434	420	391	2,032	406	13.1
81 Washtenaw	932	969	1,023	1,084	1,170	5,178	1,035	20.0
82 Wayne	12,654	13,455	15,821	15,513	16,533	73,976	14,795	12.1
83 Wexford	284	206	244	239	261	1,234	247	13.2

THE SURGICAL CONSCIENCE

C. D. Lockwood, in the *Archives of Surgery*, selected the above title for this presidential address before the Pacific Coast Surgical Association. It is a subject that is timely and pertinent to present conditions in surgery. It is a splendid article, voicing sound principles and just criticism of present tendencies. We are abstracting certain portions of the address.

The surgical conscience may be discussed under the following headings:

As related to the necessary preparation for the practice of surgery. Are we not as a profession encouraging half equipped and poorly trained men to undertake surgery? Our medical schools and our state laws, by virtue of their conferring and licensing powers, put the stamp of approval on the young practitioner and he is vested with both moral and legal authority to perform the most difficult and dangerous operations immediately on graduation.

Most of the older members of this association obtained their surgical experience and skill in the hard school of general practice. Few of us, I think, would assert that we have not sacrificed lives that might have been saved had we possessed better judgment and greater skill. This is true notwithstanding the fact that we did the best we could. Surgery has made such rapid strides in the last thirty years that it has been impossible to train men adequately and in sufficient numbers to meet the demands of the public. This necessitated the employment of poorly trained and self made surgeons. The broad background that the surgeons of the passing generation acquired in general practice and their brilliant achievements were in large measure due to their wide knowledge of general medicine.

It is no longer justifiable to rely on private practice for training in surgery; neither should we be satisfied with purely didactic and technical training, such as an apprenticeship in surgery affords. But a wise combination of both will insure the requisite technical skill and surgical judgment that should characterize the surgeon of the future.

There is now a surplus of surgeons in almost every community. Competition is now so keen that ambitious young surgeons with little practice and little experience are finding indications for surgery in a large percentage of the patients who consult them. It is the exception to find a woman over 40 who has not had one or more operations and I am sure that all of you will testify that much of this surgery is ill advised and poorly executed.

To all of which there is agreement.

There must evolve a remedy to quicken this surgical conscience. Our present opinion is that it can be controlled by hospital regulations provided we control hospitals by state licensing in order to eliminate the private house hospital that accepts any kind of a patient and any kind of an attendant.

The second heading I would suggest for this discussion of the surgical conscience is, the care that should be employed in the selection of cases for operation. In no field of human activity is

there greater need for a keen conscience and a trained judgment than in the practice of surgery. The most rigid checks are necessary if the patient is to receive just treatment. This is particularly true in the field of elective surgery. In traumatic and emergency surgery the indications for treatment are fairly definite and there is as much danger of erring on the side of conservatism as on that of radicalism, but in the great field of elective or doubtful cases, this is not so. Too often hasty diagnoses are made on insufficient evidence and too little time allowed for thorough preparation for operation. The surgeon is too often influenced by monetary considerations, by the fear of competition and by the opinions of the patient. Sometimes the surgeon's convenience, his vacation plans, his golf engagement or some other social affair will enter into the decision as to when an operation shall be done and may well be the determining factor in its outcome. Often a desire to save the patient expense and incidentally to conserve his resources so that he can pay a better fee will deter the careless and unscrupulous surgeon from resorting to all necessary diagnostic precautions.

The above analysis receives an emphatic "Amen." Here again hospital staffs, chiefs of services and review of case records furnish the braking power. Needless, ill-advised and "for a fee" operations will be restricted and prevented just as soon as hospital officials acquire the courage to operate a "stop" semaphore.

Finally, I wish to discuss the surgical conscience in relation to the fee. I realize that here I am treading on dangerous ground and that I may lay myself open to criticism, but I believe it is incumbent on those of us who are looked on as leaders in the profession to sound a note of warning on this phase of surgical conduct. The division of fees has come to be recognized by all reputable surgeons as a dishonorable and degrading practice. The American College of Surgeons has done much toward bringing this practice into disrepute. Nevertheless, it is still continued by a large group of surgeons and is defended by some men as justifiable. I believe that any unprejudiced mind will condemn it as demoralizing to both the physician who receives a commission for referring the case and to the surgeon who divides his fee. It converts a professional relationship into a commercial transaction and stultifies the conscience of both parties to it. Moreover, it makes a pawn of the patient and tempts both physician and surgeon to recommend unnecessary surgery. While it is still a great evil, it has been driven into the byways and alleys where the scavengers and highwaymen of medicine lurk.

I believe a greater evil than fee splitting is threatening our profession and this is the practice of charging exorbitant fees. There is a strong tendency toward commercialism among surgeons today and the humanitarian and ethical ideals which have been the glory of our profession are in danger of being submerged. Fees out of all proportion to the service rendered and to the ability of the patient to pay are being charged by surgeons of little training and ability. Indeed, much of the surgery for which these exorbitant fees are charged is poorly advised or unnecessary. Many surgeons of standing and ability, indifferent to every sentiment of fairness and generosity, are exacting fees that savor of rank commercialism.

Young men entering surgery are no longer willing to do the drudgery and serve the hard apprenticeship that most of the surgeons of this generation experienced. They expect and demand the same fee as men who have earned their reputations by long and arduous efforts. Few of the younger men are willing to enter general practice and for moderate compensation act as the family adviser in matters of health. The vast majority of our well equipped medical graduates are ambitious to enter the surgical specialties soon after graduation and few of them acquire the broad background which five or ten years of general practice will give. The result of this attitude of mind is that people of moderate means can no longer find competent graduates of regular medicine who are willing to advise them and treat their minor ailments for moderate fees. It is necessary now to consult a series of specialists and incur large bills in order to obtain satisfactory medical service. The growth of cults, free dispensaries and lay movements along medical lines can be largely ascribed, I believe, to this failure of the regular medical profession to meet the needs of the average man. I am not decrying the charging of substantial fees when the patient is able to pay and when real service has been rendered, but the present tendency to emphasize the money making side of our profession should be strongly condemned.

This touches a vulnerable spot, and one that is occasioning much commment on the part of the public. Admittedly there are two sides to the issue. Likewise in the size of a fee well taken arguments emanate from both sides. We concede that money never can fully compensate the surgeon for all that he contributes to a surgical case. Our traditions never contemplated that his compensation in dollars would balance his services. There must ever be a credit charge to ideals, humanitarianism and mercy. Fate forbid that the day may never come when these ideals be displaced by sordid, dollar idolatry. The surgical conscience alone will solve this problem of fees. Grant that it will ever characterize the surgeons of today and of tomorrow.

CAUSES AND TREATMENT OF DELAYED UNION

Delayed union in fractures of the long bones is dependent on

1. Inaccurate reduction,
2. Inefficient fixation,
3. Poor blood supply,
4. Muscle interposition,
5. Disease.

Inaccurate reduction and inefficient fixation account for the great majority of cases of delayed union. Inaccurate reduction can be avoided only by the application of the modern methods of traction and counter-traction controlled by the frequent use of the X-ray. Efficient fixation can be obtained by simple splinting only in the comparatively rare transverse fracture

which has been interlocked end to end. When such interlocking is impossible, then efficient fixation is possible only through some form of traction apparatus. Nothing else will overcome the tendency of the muscles to produce over-riding of the fragments. In fractures of one bone in the forearm or lower leg, this traction apparatus may be substituted successfully by a plaster of paris splint which uses the sound bone as a fulcrum and provides extension and counter extension by maintaining a position of abduction or adduction as the case may require. Such a splint keeps the muscles stretched and thus prevents over-riding.

Accurate reduction is immensely easier if undertaken within the first hour or two after the injury. Efficient fixation is immensely easier if it is applied within the first hour or two before muscle contraction has set in. No matter how severe the fracture or what its nature, reduction should be attempted immediately. We should never wait for the "swelling to subside."

Poor blood supply is occasionally the cause of delayed union in certain fractures where reduction and fixation are entirely satisfactory. Of these the commonest example is fracture of the lower third of the tibia. Less common are fractures of the lower third of the humerus and of the neck of the femur.

Disease is rarely the cause of delayed union; syphilis is the least common cause under this classification.

These statements lead us to the discussion of the fourth cause of delayed union, muscle interposition. It is far commoner than ordinarily supposed. It is most frequent at the, or about the middle of the femur, the middle half of the humerus, the middle half of the tibia and the upper two-thirds of the radius and ulna. It is most apt to occur when the lateral displacement of the fragments has been great at the time of injury;—when any fragment has a long sharp point;—or when delay in reduction has been considerable. It may consist of a large mass of muscle of a mere strand of fascia. It is the most important among the very few conditions which justify open operation of a simple fracture. When it is present open operation should be undertaken at the earliest possible moment that time may be saved for the patient.

The recognition of the presence of muscle interposition between the fragments of the fracture is not easy, although theoretically it should be. It depends on

the very careful application of certain tests. The first of these is the manipulation of the fracture under an anesthetic and with the guidance of the fluoroscope. If the fracture can be brought into perfect position and the rough ends of the bone can be felt to grate strongly on each other, it is probable that there is no muscle interposition. This test is not positive because sometimes one fragment may have penetrated without given sufficient contact to allow union. If it were not for its usefulness in betraying muscle interposition, it would be unnecessary in many fractures of the femur and humerus to employ manipulation under an anesthetic at all. It would be wiser to apply a traction apparatus at once and depend on the extension and counter extension to reduce the fragments gradually.

The second most valuable test of muscle interposition is that supplied by the action of the fracture under the influence of an efficient traction apparatus. It is as follows: If at the end of three days of real efficient traction the fragments as shown by the X-ray are not end to end in both planes, then muscle interposition should be strongly suspected. If the X-ray shows satisfactory end to end reduction at the end of two weeks' time, yet the displacement immediately recurs when the extension is relaxed—then muscle interposition is almost surely present. Careful observance of these tests will ordinarily reveal the presence of muscle between the fragments, and yet in spite of them one may sometimes go wrong as shown by the following cases.

In December of 1925 a man of 25 received an oblique fracture of the left femur at the middle third, in an automobile accident. He was taken to the hospital where an anesthetic was given and a reduction done by the family physician. An inefficient extension apparatus was then applied. At the end of two weeks I saw him, the apparatus was not holding and there was two inches overlapping of the fragments. The physician said that there had been frank crepitus at the original manipulation. An efficient apparatus was applied and the fragments pulled into excellent position. On manipulation without an anesthetic at this time slight crepitus could be felt. Because this crepitus was so slight the patient was warned that there might be need of an open operation later. Six weeks later the position as shown by the X-ray remained excellent and there was slight callus visible. Manipulation seemed to show firm union. The traction was therefore removed. One week later the deformity had recurred and there was displacement and one and one-half inches of shortening. Operation was immediately undertaken. It was found that a sharp spike of the lower fragment was thrust through a large mass of muscle and had been in contact with the upper fragment. The muscle however, formed a complete collar of soft tissue which kept the rest of

the bone ends from each other. This spike accounted for the crepitus and for the small band of callus visible in the X-ray, and which had given the impression of union. At operation the muscle was removed, the fragments put in perfect position and secured by a beef bone plate and screws. Union is now firm and the patient is normal except for a very stiff knee. If operation had been done at once in this case the patient would have been saved eight weeks of time and his knee would not have been stiff.

In contrast to this case, a young woman had a transverse fracture with marked displacement at the junction of the lower and middle thirds of the right femur. At the original manipulation slight but unconvincing crepitus was felt. The ends of the bone could not be engaged firmly. Calipers were applied to the condyles of the femur and she was placed in a Thomas splint with hinged knee piece and thirty pounds of weight applied. At the end of forty-eight hours, the shortening had been completely overcome but X-rays showed a continued moderate backward and inward displacement of the lower fragment. At the end of ten days this was still present. Open operation was done and a large mass of muscle which was caught on one of the irregularities at the outer anterior position of the lower fragment was freed. It was then easily possible to engage the ends of the bone in firm and accurate apposition. This engagement was so firm that traction was unnecessary and a simple plaster spica prevented deformity till healing occurred.

In a third case a boy of seven fell and broke his right femur at about the middle. There were three fragments. Of these the middle one was about two and a half inches long. Its lower end was broken transversely and its upper end in a long oblique. The whole middle fragment lay transversely to the long axis of the leg. The radiologist felt that reduction should be possible under an anesthetic with the aid of the fluoroscope. The family objected strenuously to open operation. Therefore two strenuous attempts were made at closed reduction. Crepitus could be felt at the lower end of the middle fragment but not at the upper. It was impossible to swing this fragment into more reasonable alignment. The family finally agreed to open operation. The middle fragment was found to be so firmly imbedded by its sharp upper end in muscles, that it was necessary to remove it entirely to free it. After removal the muscles were rearranged and the fragment replaced in perfect position. A Parham band held the oblique upper fracture so firmly that a simple interlocking of the lower fracture sufficed. Healing in plaster of Paris was prompt and the Parham band was removed at the end of four weeks.

One final example. A man broke his left humerus at the surgical neck and also about four inches above the lower condyles. Under ether the upper fracture was reduced easily but the lower one, although it could be got in fair position, promptly slipped out as often as it was put in position. Open operation was done and muscle found between the fragments. This was removed and a beef bone plate and screws applied with prompt and perfect recovery.

In conclusion, then, if fractures of the long bones are not promptly and perfectly reduced and held by manipulation and properly applied traction, open operation

should be done at once. Frequently muscle interposition will be found.

It is usually unnecessary to use any foreign body to hold the fragments after the removal of the offending muscle at open operation. If such foreign body must be used, only in emergency should it be metallic. Beef bone is in my experience the best internal splint in fresh fractures where any foreign body must be used. Occasionally to save time, as in case number III just cited, it is necessary to use some simple metallic device such as a Parham band. This should be removed as soon as possible in spite of the fact that metal has been known to stay in place indefinitely without harm.

F. C. Kidner.

ENDOWMENT FOUNDATION

It is quite generally recognized by our medical schools, medical organizations and members of the profession that an outstanding obligation exists to provide post-graduate instruction opportunities for all the members of the profession. Collectively the entire profession is vitally concerned in the maintaining of a high type of medical practice on the part of all doctors of medicine.

Our science executes rapid strides of progress. Principles and theories of yesterday are displaced by the proven new facts and discoveries of today. Methods of diagnosis become more accurate and new methods of treatment evolve from the new facts uncovered. These conditions make it imperative that the recent graduate as well as the man advanced in the years of practice shall have at their ready command opportunity of remaining abreast of the times and acquiring for themselves these accepted methods of treatment. Further, that they be encouraged to discard the old, less efficient methods for the more modern procedures. That unitedly we grasp each others hand and reflect a profession that is efficient for service to all mankind. That, we feel is the outstanding obligation of the profession that is efficient for service to all mankind. That we feel is the outstanding obligation of the profession. We can no longer condone scattered groups of outstanding professional men trailed by the mediocre or wholly incompetent. Well nigh 100 per cent capability is desired for all of our Michigan doctors.

Our State Medical Society has for years been mindful of such a responsibility. In fact it has been the leader, (and we say it with pride) in the field of State Societies

in giving thought to the problem of post-graduate medical education. Through officers and committees we have concerned ourselves with the scientific programs of County Societies. Some 12 years ago we organized clinical teams that went from county to county meetings. Councilor District meetings were sponsored and capable speakers provided for their programs. Regional clinics were conducted. Three years ago District Post-Graduate Conferences were instituted and during the past year two such one or two-day meetings were conducted in each Councilor District. In addition a three-day clinic was conducted at the University Hospital while endorsement and support has been accorded to several clinics arranged by hospitals and local organizations. We are justly proud of this activity and this policy that seeks to maintain our members in the van of medical progress.

However, we are not content with what has been accomplished, much still remains to be done. Increased activity is requisite. It is to that end that our society through its officers and Council is directing its thought and effort. Illustrative of our enlarging scope of activity is the foundation. The purpose of that foundation is set forth in the following articles of its creation:

ARTICLES

THIS MEMORANDUM, Made this 3rd day of January, 1927, A. D., 1926, by and between The Michigan State Medical Society, a Corporation duly organized and existing under and by virtue of the laws of the State of Michigan, with principal office and place of business in the City of Battle Creek, County of Calhoun, in said State, hereinafter called "Settlor", party of the first part, and The Grand Rapids Trust Company, a Michigan Corporation, with principal office and place of business in the City of Grand Rapids, County of Kent, and said State, hereinafter called the "Trustee", party of the second part, witnesseth:

Whereas, The "Settlor" is desirous of establishing a fund, the income from which shall be used for the purpose hereinafter in this instrument specified,

Now, Therefore, it is agreed that funds may be hereafter deposited with the Trustee by the "Settlor", and by other persons, such funds shall be known as the Michigan State Medical Society Foundation, shall be kept by the Trustee with full power to invest, reinvest, convert, and reconvert the same, and any part thereof; to receive, collect and liquidate the income therefrom and the principal thereof to sue for or defend, compromise or adjust any chose in action, and any right or title acquired under or by reason of this trust, to deposit securities under consolidation or merger plans, and to participate in co-operative action through creditor's or bondholder's committees; to pay all taxes, assessments, insurance premiums, attorney fees, and all other expenses incident to the execution of this trust, including the compensation of the Trustee, which compen-

sation shall not exceed one-half (1/2) of one (1) per cent of the fair market value of the fund annually, and to have all other powers necessary or convenient for the exercise of the powers hereinbefore specifically conferred.

(a) The purposes of this trust are to pay from the net income of the fund or funds held in trust on order of Executive Committee of the Council of The Michigan State Medical Society, for the purpose of providing post-graduate instruction without fee for those designated by said executive committee, to conduct clinics and courses of instruction without fee in hospitals and medical schools in the State of Michigan, and to provide funds either by gift or loan to sustain such persons as are designated by said Executive Committee, during the period of attendance on said post-graduate instruction or said clinics.

(b) The principal shall at all times be kept invested and income only shall be used. Should the income for any year be more than is required to meet the recommendations of the Committee the surplus shall be held as surplus income for subsequent expenditures. If for any year more funds are required by the recommendations of the Committee than are available, recommendations are to be met and orders paid from subsequent income in the order of their receipt by the Trustee. The Trustee shall not be bound to determine the worthiness of the persons or property of the objects designated to receive the income of the trust. These things shall rest entirely with said executive committee, and the Trustee shall be bound only to the exercise of good faith and reasonable prudence in the investment and care of the fund.

(c) This trust shall continue in perpetuity and donations thereto may be given special names and designations by the donors, and by the "Settlor" appropriate to the purpose of the gift and in recognition of the giver.

(d) Gifts may be either in money, or property, may be by will or deed, or by subscription agreement, payable in installments and within the purposes hereinbefore in this agreement expressed may be designed for particular objects.

(e) Said "Settlor", and its said executive committee may make such rules governing the disbursing of the net income of the fund as they see fit, prescribe such courses of instruction, select such persons as they may choose, and grant such certificate or diploma upon completion of such courses of instruction as they see fit, and no liability or duty shall attach to the Trustee with reference to those or with reference to the payment of the net income of the fund except that payment be made only upon recommendation by the Executive Committee of the Council of "Settlor."

(f) The recommendations by the Executive Committee of the Council to the Trustee for payment of income shall be in the form of written orders and signed by a majority at least of said Executive Committee. The "Settlor" in writing under its seal shall inform the Trustee annually, and more frequently if there be changes, of the persons constituting the Executive Committee of its Council and of their authorized signatures and the Trustee may rely on such information and make payments upon orders as signed until official information of changes in the personnel of the Committee are delivered to it.

In Witness Whereof, Said Party of the first part has hereunto set his hand and seal the day and year first above written, and on the same date said Grand Rapids Trust Company, the

second party hereto, has caused its corporate seal to be affixed and these presents to be signed by its Vice-President and Secretary in its behalf.

Executed in Tuplicate.(L.S.)
Signed, Sealed and Delivered in the Presence of:
Grand Rapids Trust Company,
By.....
Vice-President
By.....
Secretary.

Funds are necessary for our educational work. The increase of society dues is inadvisable. Consequently needed monies will be forth coming from this foundation. As such monies become available our educational program will be broadened in scope and extent. The Council is now giving careful consideration to the creation of an all-year Michigan Post-Graduate Medical school. It is purposed also to send competent instructors to County Societies for one or two-day programs. We are alert to the need of the day and are seeking to formulate permanent plans that will supply those needs and serve the best interests of our members.

Two bequests have already been made to the foundation. We are seeking others. We want and require an endowment of not less than \$250,000. We believe that it is considerate to suggest, yes urge, that those who are able, should now tender additional bequests. Some may also desire to incorporate such a provision in their will. It must be apparent that monies so bequeathed will provide funds in perpetuity for our profession. But more in that regard will be imparted in a future issue. This statement acquaints you with a plan that has resulted from much thought and labor. It also imparts the broadening scope of your society's endeavor giving added reason for membership affiliation.

DISCONTINUING THE OFFICE OF EXECUTIVE-SECRETARY

In connection with the above heading our members are invited to read the minutes of the last Session of the Executive Committee of the Council. Therein will be found the reason for this change in policy. The hasty conclusion must not be formulated that this is a retrogressive step. On the contrary, it is preliminary to the institution of a new plan of administrative policy that will conserve and enhance organizational activity.

In discontinuing the services of Mr Smith, the society's appreciation and good will follows him into his new fields of labor.

MONTHLY COMMENTS

Medical—Economic—Social

Well, Uncle Sam, through the Supreme Court, has said he has the right to regulate the amount of liquor you can prescribe in a given time. The court procedure was on the principle of the right to limit dosage for you, as a doctor, and not based on the value of whisky as a medicinal agent. To us it has been a hulla baloo over nothing. Still, in certain states, especially on the eastern and western coasts, numerous doctors, prominent and otherwise, have been intensely interested and concerned. Well, now that that's settled, let us forget it.

President Jackson has announced the following appointments:

Committee on Hospital Survey: Richard R. Smith, Chairman; W. H. Marshall, J. Walter Vaughan,

Committee on Medical History of Michigan: C. B. Burr, Chairman; J. H. Dempster, W. H. Sawyer, W. J. Kay, J. D. Brook.

We confidently look forward to some excellent work on the part of these two special committees.

Please note the editorial upon physical examinations and then turn to our Editorial pages where you may secure at a reasonable price a record system for these examinations. You cannot afford to forego possessing this compact record system, neither can you be unsystematic in making these examinations. Start the new year right.

Every doctor for his own protection as well as for the patient, should, as a routine, use the blood Wassermann test. Surely, every surgeon should observe the same precaution. In fact, we believe that hospitals should demand a Wassermann before permitting operation. We recognize that there are definite surgical lesions in spite of a positive report, still this knowledge will materially aid one in the post operative care. On the other hand, operative interference is frequently instituted on assumption based upon symptoms, which symptoms have become pronounced by reason of syphilitic infection. The surgical error in osseous surgery has been 21 per cent due to neglect of the Wassermann in 200 cases. Neurosyphilis outranks all other causes as a symptom producer. There would be fewer operations for gastric ulcer, gallstones, gall-bladders, appendicitis, salpingitis, adhesions, neuralgias and renal calculi were these patients subjected to Wassermanns or spinal puncture. The study of pupillary reflexes and knee reflexes and history of lightning pains and difficult urination might obviate operations. In 200 "stomach troubles," 60 per cent had positive spinal fluids, with 45 per cent positive Wassermanns. Seventy per cent of these patients were relieved of their "stomach trouble," made complete recoveries under proper treatment. Neurosyphilis simulates surgical conditions and the "gastric neuroses" and "overwork" diagnosis of the medical man would

be exposed if before making a positive diagnosis the examination was made to include a Wassermann. Hence we repeat—in every case insist upon a Wassermann.

How do you like it? That is what we want to hear from our members as to the new style of The Journal. No, we are not holden to this tint on our cover page for every issue. We purpose varying the cover color during the year. We will appreciate receiving your impressions and opinions. Incidentally we will also welcome such constructive suggestions as may occur to you.

"Rastus, your dog seems to be in pain."

"Nossuh, he ain't in pain—he's just lazy."

"But surely he must be suffering or he wouldn't howl like that."

"Jes' plumb laziness, jes' laziness—he's sittin' on a thistle."

The above not only has food for a smile but also affords a thought for reflection. Often, yes sometimes quite often, we run into or hear from a doctor in the form of a howl. A thistle is penetrating his hide, things are not going the way he thinks they should, his local Society is all wet, the clinics are not to his liking, etc., and he howls. To our mind, he is a good deal like Rastus' dog—he's plumb lazy. He declines to contribute time or personal effort to remedy or aid to remedy affairs—he's of the type that wants the other fellow to do it all with no effort on his part. He's sitting on a thistle and jes' plumb lazy to start or join in the work of his County Society and so he just howls at the Secretary, President, Program Committee or the Speaker. A shot of pepper might correct his attitude.

Announcement is made in our columns of the Eleventh Annual Clinical Session of The American College of Physicians to be held in Cleveland, Ohio, February 21-25, 1927. A program of unusual interest is being planned in which the Cleveland hospitals and the Western Reserve University will co-operate. A full opportunity will be given every attendant at the Session to see the entire hospital equipment of the City of Cleveland, to meet its prominent clinicians and to form an idea of the amount and variety of clinical material of the city, and to see what is being done in the educational use of this material.

During the mornings, there will be clinics and demonstrations at the various hospitals and in the laboratories of the Western Reserve University; during the afternoons, papers on various medical topics will be delivered by local members of the profession and by members of The College from other parts of the United States and Canada; during the evenings, there will be formal addresses by distinguished guests, American or foreign, and by the President or other representatives of The College.

The American College of Physicians is a national organization in which internists may find

a common meeting ground for discussion of the special problems that concern them and through which the interests of internal medicine may have proper representation. It is not a limited national society of specialists, but on the other hand it is not co-ordinal with large national or sectional organizations of physicians requiring present reasonable qualifications as internists, along with other certain specified requirements, before being accepted as members.

The College has extended an invitation to all qualified physicians and laboratory workers to attend its session. Last year the Clinical Session was held at Detroit and Ann Arbor, and will be remembered as a conference of outstanding merit.

We trust you like the form, type and arrangement of this issue of The Journal. We would appreciate your comments and suggestions. The cover color shade is not permanent—we purpose using a variety of shades during the year. Tell us what you think of it, frank opinions will enable us to please you and meet your desires.

Yearly elections have or are taking place. Committee appointments are being made. We are off on to new year. Our urge is that officers and Committeemen seriously recognize that they have assumed definite responsibilities. Your office is not a perfunctory honor. Work confronts you. Do not neglect it. We want 1927 to record decided activity and accomplishment. We want to advance further than ever before in our history. It is only as you individually and collectively devote your time and effort to the task that we can achieve. Will you do your part?

Physical therapy is a term employed to define the treatment of disease by various nonmedical means. It comprises the use of the physical, chemical and other properties of heat, light, water, electricity, massage and exercise. There are certain definite indications for the use of some one or a combination of several of these physical agencies in the treatment of disease, but to depend on these agencies solely, to use them in lieu of better proved methods, or to employ them without having first thoroughly studied the patient from the standpoint of diagnosis, is harmful practice.

Some physical agencies may be used on the theory that "they will do no harm and may do some good." The psychologic element in their use impresses the patient, usually beneficially but occasionally to his detriment. The use of a certain method may become a habit with the patient, the physician or the technical assistant, so that the course of treatment is prolonged unduly. Again, manufacturers' agents—salesmen absolutely untrained in medical science—visit physicians, extolling the virtues of special physical apparatus, making unfounded claims as to curative values, and emphasizing the money-making powers of these methods of treatment.

Physical therapy came into its legitimate place in medicine during the World War. Today it is gradually taking its place with the usual medical and surgical procedures. But unless we guard against bad habits in its usage, against allowing it to replace careful diagnostic measures followed by well defined but less spectacular methods of treatment, and especially, unless we guard against

its insidious tendency to make its master an easy living, physical therapy may lead into dishonest practice or quackery.

The physical measures that have been found to have certain therapeutic value both by long clinical experience and by laboratory research include:

1. Heat, Natural and Artificial.—Diathermy, hot dry packs, hot water bottle, electric pads, and the combination of heat with light and of heat with hydrotherapy.

2. Hydrotherapy.—Hot and cold packs, hot and cold douches, whirlpool baths, swimming pool.

3. Light.—Heliotherapy or sunlight therapy; artificial light, as that from a mercury arc quartz lamp, air or water cooled, a carbon or modified carbon arc lamp, or an incandescent lamp; gamma rays of radium; roentgen rays.

4. Electricity.—Galvanic, faradic, and sinusoidal currents, static electricity, ionization and combinations of these.

5. Massage.—Manual percussion; stroking, sedative type, brisk kneading type; manipulative as stretching, pulling and corrective.

6. Therapeutic Exercises.—Muscle training exercises, passive and active; mechanotherapy, occupational therapy, games.

Physical therapy is at present in a transitional stage. Its use is extending, but it is still violently condemned in toto by some physicians. Experience indicates that a selected combination of physical measures offers the best results in certain pathologic conditions; in other conditions such measures serve as a beneficial adjunct to the usual medical and surgical treatment. Above all, continued treatment by physical measures seems to result in better functional results than when patients are left to their own devices in securing restoration of function.

Many physical measures, however, have served as the chief of the armamentarium of quacks and charlatans in the past. Moreover, with renewed interest in this subject, cultists have adopted physical measures and have made extravagant unscientific claims as to their value. The avidity with which some have seized on physical therapy solely as a means of financial gain has disgusted most conscientious practitioners of medicine.

The Council on Physical Therapy feels that the following considerations must receive the most careful attention of the medical profession:

1. Physics, physiology and biochemistry must be called on to dispel the empiricism of the past and to prove the true scientific value of various physical agencies.

2. Physical therapy must be recognized as a definite part of medicine, to be practiced and controlled by graduate physicians. It should be used only as one of the triad of medicine, surgery and physical therapy. It should be prescribed only after careful physical and laboratory examinations of the patient have been made. It should never be prescribed except by a physician thoroughly trained in the use of physical agencies.

The treatment of disease, whether by drugs, surgery or physical agents, belongs solely in the realm of medicine. A physician would not refer a patient to a nonmedically trained technician for treatment by either drugs or surgery. Yet many physicians may refer patients to technicians—masseurs, gymnasts or nurses who have received training in physical therapy, or even to members

of various cults for physical therapeutic treatment.

Therefore physical therapy must be recognized as a component part of medicine, and patients requiring this type of treatment should be referred only to physicians trained in this specialty. In this way the use of these methods by charlatans will be largely eliminated.

3. Since physical therapy is a definite part of medicine, every medical school should give a thorough training in this subject. The paucity of postgraduate and undergraduate instruction in physical measures in our medical schools has placed the profession at a disadvantage. Many attempts have been made to remedy this situation. A subject as intricate as physical therapy requires more study than a salesman's assertion that the snapping of a switch or the pressure of a button will definitely assuage any pathologic change.

The making of physical therapists by courses of one or two weeks, often reeking with commercialism, must be condemned. The three to six weeks' courses, sponsored by reputable medical schools, are frankly make-shifts, but do serve to show the would-be physical therapist the breadth of the subject. At least they effect the realization that such a period suffices only for establishing the purely mechanical details of technic and the broader physiologic groundwork on which, aided by his medical knowledge and common sense, one may attempt to erect a physical therapeutic super-structure. The remedy is adequate instruction to undergraduates in the medical schools. Courses starting with biophysics should be given in the last three years. In the postgraduate schools, more intensive and prolonged courses should be offered. Medical societies should invite physicians specializing in physical measures to give sane, scientific courses in physical therapy to their members. A fair proportion of the scientific programs of medical societies should be assigned for discussion of physical measures of treatment.

4. Persistent, prolonged effort must be made to eradicate the abuses of physical therapy. A physician who has installed a diathermy machine or an ultraviolet ray generator can do good in carefully selected cases with one of these methods. He is not, however, fully equipped to render physical therapy. As a rule it is the careful combination of several physical agencies that gives the best results. Again, physicians must guard against the over enthusiastic use of new instruments and the treating of patients for prolonged periods by nurses, technicians, or office assistants.

The training of technicians should be encouraged, for trained technicians are invaluable to physicians specializing in this field. But technicians should be discouraged from establishing individual plants, even though the major part of the work is referred by physicians.

The "treatment habit" is a menace, prevalent in general practice and reaching its zenith in the physical therapeutic departments of civil hospitals. Undesirable and incurable patients may be easily referred to the physical therapy departments, where they remain long after attaining maximum improvement, to the great disadvantage of patients urgently needing such treatment to shorten their time of disability and to secure functional restoration. Under most industrial compensation laws the treatment habit tends to become firmly fixed.

The Council on Physical Therapy of the American Medical Association will endeavor to point out to the medical profession the advantages and the disadvantages of physical therapy so that its abuses may be reduced to a minimum, and its scientific possibilities may be appreciated.

OUR OPEN FORUM

Affording Opportunity for Personal Expression

Editor of The Journal:

Just a line to tell you I will be unable to attend the January meeting of the Council.

I am sailing January 12 for England, Germany, France and Austria. In a six months' visit to the various clinics there and hope to pick up some useful information.

Am sorry I won't be with you all at the next meeting but know everything will go along O.K. without me. J. J. Reycraft has buried the hatchet and everything here is a nice as can be expected. I now hope some decent County Medical Meetings can be pulled off. We are in the grip of the most early winter storm in years and see no let up in sight.

Give the Councilors my kindest regards. It has always been a pleasure to meet with and be associated with such a fine bunch of fellows.

May I wish you and yours a Merry Christmas and Happy New Year.

Yours truly,
B. H. Van Leuven, M. D.

THE JOURNAL
IS
YOUR FORUM—
WE INVITE YOU
TO UTILIZE
IT FOR THE
EXPRESSION OF
YOUR VIEWS
ON
MEDICAL SUBJECTS

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. Wilson Stegeman has located in St. Charles.

Dr. F. K. Lenfesty has been elected President of the Mt. Clemens Exchange Club.

Dr. B. H. Van Leuven, of Petoskey, is spending six months in Europe, sailing January 10th.

Dr. Harry Haze, of Lansing, has been elected Chairman of the newly formed Legislative Bureau. Dr. Vander Slice, of Lansing, is Secretary.

Dr. O. L. Ricker, of Cadillac, has been elected Commander of the local Post of the American Legion.

It is reported that the American College of Surgeons and Clinical Congress will be held in Detroit, in the fall of 1927. Dr. Angus McLean is Chairman of the Committee on Arrangements.

Dr. R. C. Mahaney, of Owosso, is the newly elected President of the Public Health Association. The other officers named are, Mabel Morgan, R. N., Saginaw, Vice President; Dr. W. J. V. Deacon, Lansing, Secretary and Treasurer; Dr. John Sundwall, Ann Arbor, Dr. Carl E. Buck, Detroit, R. J. Harrington, Muskegon, Dr. A. A. Hoyt, Battle Creek, and Mary M. Roche, R. N., Grand Rapids, directors.

A new mercurial Sphygmomanometer, in which several important objections to this type of instrument are overcome, is described by J. L. Wilson, M. D., and H. N. Eaton, A. M., in the November 20, 1926, issue of The Journal of the A. M. A., page 1742. It has no cemented joints, and other common causes of mercury leakage and glass breakage are eliminated by the use of a simple, straight glass tube, held in a resilient mounting which enables the tube to withstand shocks which would otherwise shatter it. Severe tests have proved the sturdiness of the new construction.

The tube is so mounted that it can be removed (as for cleaning) by a simple pressure of the thumb, and replaced with equal facility. Thus, if the glass tube should break, the user can quickly insert a new one himself, without having to return the instrument to the manufacturer for repairs.

The insertion of a new tube does not impair the accuracy of the instrument. Each steel reservoir is an exact counterpart of the master steel reservoir against which each tube is individually calibrated. Therefore, the scale, which is separately

engraved on each tube, is identically accurate for any instrument of this new type.

The design of the instrument (made by the W. A. Baum Co., of New York) was developed along



the lines of maximum service and convenience to the user, without the sacrifice of simplicity and ruggedness, which experience has shown to be so desirable in instruments of this character.

On Thursday, December 2, 1926, the Highland Park Physician's Club held its Annual Clinic at the Highland Park General Hospital. The day was divided into three sessions, morning, afternoon and evening.

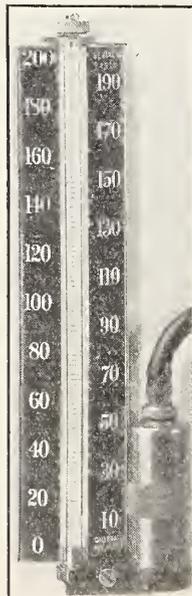
At the morning session an address on Physiotherapy was delivered by Dr. Disraeli Kobak, President of the American College of Physical Therapy. Dr. Edwin P. Sloan, of Bloomington, Ill., analyzed the various cases of goitre, into their constituent classes and illustrated these cases with moving pictures. Dr. Irving W. Potter, of Buffalo, N. Y., demonstrated his method of version with lantern slides. Dr. John O. Polak, of Brooklyn, President of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, gave an obstetrical and gynecological clinic and Dr. Wm. Seaman Bainbridge, of New York City, gave a clinic on Tumors and Cancers.

From 12 to 1 o'clock, a complimentary luncheon was served by the Highland Park General Hospital.

At the afternoon session, Dr. John Phillips, of Cleveland, President of Fellows of American College of Physicians, gave a clinic on Cardiovascular and Pulmonary diseases. Dr. Frank Smithies, of Chicago, demonstrated his method of physical examination in Gastro-intestinal disease. Dr. Geo. W. Crile, of Cleveland, lectured on the Liver, and Dr. J. E. Sadlier, of Poughkeepsie, N. Y., President-elect of the New York State Medical Society, delivered an address on Preventive Medicine and Post-graduate Medical Study.

At 6:30 p. m. dinner was served to 150 doctors at the Highland Park Masonic Temple.

The evening session was held in the auditorium of the Highland Park High School. The opening address was by the Mayor, C. E. Gittins, and was followed by two addresses, one on Obstetrics, by John O. Pollak and the other on "The Pathological Gall Bladder," by Dr. Frank Smithies.



This concluded the scientific program and the Highland Park Physician's Club went into executive session and elected the following officers:

President, Dr. Frank Witter; Vice-President, Dr. H. J. Butler; Secretary, Dr. Chas. J. Barone; Treasurer, Dr. Geo. M. Livingston.

The success this clinic attained was due to the combined efforts of the members of the Highland Park Physician's Club and the Superintendent and Board of Directors of the Highland Park General Hospital.

Under the able leadership of our president, Dr. G. Van Amber Brown, in directing the activities of the committees and the officers of the Club, the attendance by far surpassed the expectations of all. There were over 500 registered for the Clinic and all acclaimed the clinic a successful day.

This demonstrated that there is room for one-day clinics in Michigan, and the Highland Park Physician's Club is planning one each year on the day of its annual meeting.

Highland Park Physician's Club,
Chas. J. Barone, Secretary.

As we are sending final copy to the printer news comes to us of the death of Dr. Herbert M. Rick, of Detroit. His final illness was pneumonia, lasting but four days.

PROGNOSIS OF TETANUS

Astley P. C. Ashhurst, Philadelphia (Journal A. M. A., Dec. 18, 1926), is a firm believer in the efficacy of intraspinal injections of tetanus antitoxin if given early. The patients who recover from tetanus without receiving antitoxin by this route are exceedingly few; those who die if this treatment is used promptly are also very few. To refuse to employ antitoxin by the intraspinal route is, in the present state of our knowledge, absolutely unjustifiable. The diagnosis of tetanus must be made early, and treatment must be very prompt. The promptness of treatment does not always depend on the physician, because the patient may not come under his care early enough. But it is a disgrace to the physician to fail to recognize the disease promptly if the patient is already in his care, and it is inexcusable not to institute drastically efficient treatment simultaneously with the making of the diagnosis. The aim should be: (1) to prevent the further absorption of toxin by abolishing its source (the infected wound); (2) to neutralize that which is being absorbed by immediate intravenous injection of from 15,000 to 20,000 units of antitoxin; (3) to neutralize that which has already been absorbed into the spinal cord by immediate intraspinal injection of from 6,000 to 10,000 units; (4) to administer enough spinal depressants, preferably chloral and bromides, by mouth or by rectum, to exert a physiologic effect, and (5) to keep the patient alive by feeding and nursing. All the antitoxin that is indicated should be given as nearly as can be all at one time and as soon as possible after the diagnosis is made. That amount of antitoxin is enough to last for eight days; by the end of eight days most patients will be convalescent and will not require more. In most cases, repeated doses of antitoxin are a pure waste of valuable and very expensive remedy.

DEATHS

W. A. Oliver, M. D., Camden, Mich., died November 26, 1926, at his home after an illness of several months, due to abdominal carcinoma. He was 73 years old. In 1872, at the age of 18, he began his medical career of 54½ years and at the

time of death ranked among the oldest physicians in the state in point of service.

He studied in the office of Dr. George Young, Pioneer, Ohio, and after 3 years was given a salary of \$300 a year as an assistant. He attended lectures at the Chicago Medical College, but was financially unable to become a graduate. At the time the Michigan State Board of Registra-



W. A. Oliver, M. D.

tion in Medicine was officially organized he was also licensed to practice in Ohio and Indiana because of his geographical location 3 miles from each state line. For 48 years he was in continuous active practice at the same location and in several instances attended three generations of children in the same family. In his early days of practice he traveled by buck-board when possible, but most of the time his calls were made on horse back, carrying saddle bags, over trails which had not yet become roads.

He was twice Mayor in the Village, Health Officer several times, and School Board Member for years. He was County Coroner 12 years and an Officer in the Volunteer Medical Service during the World War. He was made Honorary Member of his Masonic Lodge, having served as the Worshipful Master for 16 years.

At the time of his death he was a member of the Hillsdale County Medical Society, The Michigan State Medical Society, The American Institute of Homeopathy and the Michigan State Homeopathic Society.

Surviving him is his wife, a noble companion for 43 years, and four children.

Dr. William Allen Oliver was born November 5, 1853, in Fulton County, Ohio. He was the son of Nathan and Sarah Oliver, pioneers of that county, moving with them later to Hillsdale County, Mich., where he afterward resided until his death at his home in Camden, November 26, 1926, at the age of 73. At the age of 18 he took up the study of medicine in the office of a preceptor, Dr. Geo. B. Young. This was the custom in those days. He later did collegiate work in Chicago Medical College.

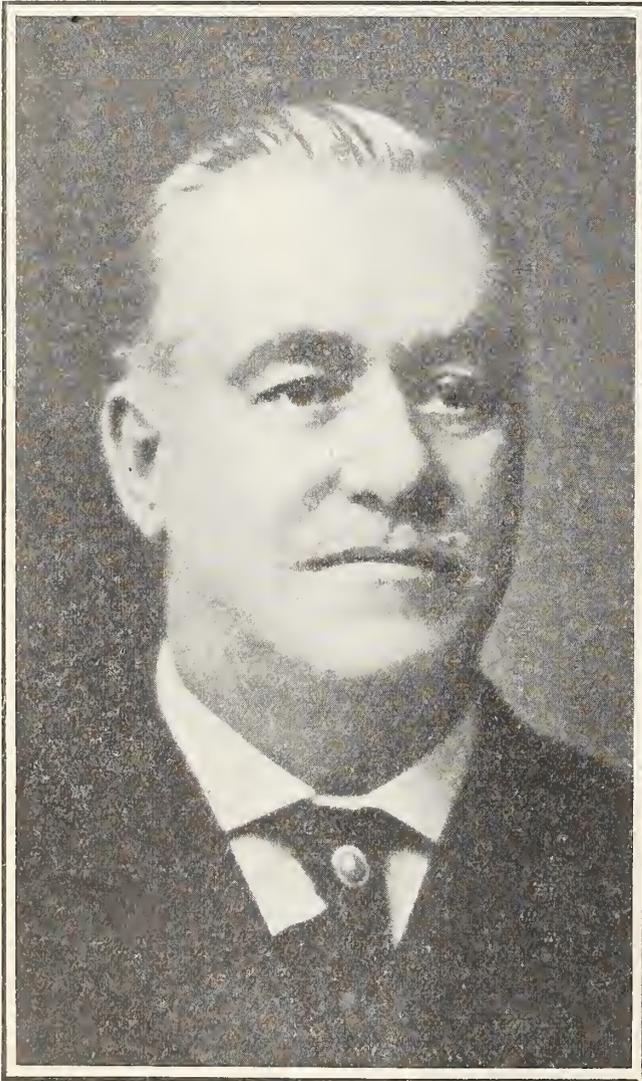
He early located at Camden, Mich., where he practiced nearly 50 years. He was greatly respected and loved in his community and served on

the School Board a number of years and was Mayor of Camden two years.

Be it Resolved, by the Hillsdale County Medical Society, that we extend to the family and friends of Dr. Oliver our sincere sympathy for our mutual sorrow and loss.

D. Emmett Welsh, M. D., Grand Rapids, died December 18, 1926, aged 68 years. Afflicted with diabetes for several years, his declining health for the past six months was accentuated by complicating kidney and heart lesions.

Dr. Welsh, for 25 years, was an outstanding member of the profession, earnestly interested in organizational activity and progress, and ever



D. Emmett Welsh, M. D.

ready to contribute his time and thought to these movements. He was an ex-President and for 15 years served as Treasurer of the Society. At our last Annual Meeting he was elected to Honorary Membership. For 35 years he limited his professional work to that of eye, ear, nose and throat.

Possessing a unique personality he arrested and attracted friends from every avenue of life who mourn his departure. No written tribute can adequately impart the influence Dr. Welsh wielded, nor the spirit that motivated him. Each

friend holds some fact, some incident, some deed that caused Dr. Welsh to be endeared to him. The doctor has gone—memories that are pleasant are left to us and form his epitaph.

THE PRESIDENT AND THE SHEPPARD-TOWNER ACT

The opinion of the President of the United States with respect to the Sheppard-Towner Act may be inferred from an address made by him at a meeting of "The Business Organization of the Government," January 21, 1924, in the course of which he said:

"I take this occasion to state that I have given much thought to the question of federal subsidies to state governments. The federal appropriations for such subsidies cover a wide field. They afford ample precedent for unlimited expansion. I say to you, however, that the financial program of the chief executive does not contemplate expansion of these subsidies. My policy in this matter is not predicated alone on the drain which these subsidies make on the national treasury. This of itself is sufficient to cause concern. But I am fearful that this broadening of the field of government activities is detrimental both to the federal and to the state governments. Efficiency of federal operations is impaired as their scope is unduly enlarged. Efficiency of state governments is impaired as they relinquish and turn over to the federal government responsibilities which are rightfully theirs."

The President has reiterated and reaffirmed that opinion in his recent message to Congress transmitting the budget for 1928, in which he said:

"No estimate is submitted for carrying on the work under the maternity and infancy act, approved November 23, 1921, inasmuch as the authorization of appropriations for this purpose was fulfilled with the appropriation for 1927. A bill is now pending before the Congress extending the provisions of that act to the fiscal years 1928 and 1929. If and when that measure becomes law, I propose to the Congress a supplemental estimate for an appropriation to make its provisions effective. I am in favor of the proposed legislation extending the period of operation of this law with the understanding and hope that the administration of the funds to be provided would be with a view to the gradual withdrawal of the federal government from this field, leaving to the states, who have been paid by federal funds and schooled under federal supervision, the privilege and duty of maintaining this important work without aid or interference from the federal government.

"I have referred in previous budget messages to the advisability of restricting and curtailing federal subsidies to the states. The maternity act offers concrete opportunity to begin this program. The states should now be in a position to walk alone along this highway of helpful endeavor, and I believe it in the interest of the states and the federal government to give them the opportunity."

If the Sheppard-Towner Act is a menace to public welfare, why should it be allowed to continue in force for two years, or even for one? "If eventually, why not now?"—*Jour. A.M.A.*, Dec. 18, 1926.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

To County Officers:

This section contains some very interesting reports, reflecting County Society activities that are well directed. It is work of this type that achieves results. It also reflects time, thought and effort on the part of officers and committees. We are off on a new year. New presidents are assuming office. We proffer congratulations and look forward confidently, that under your leadership, better and extended results will ensue. The opportunity of service confronts each officer. Reflect this service by action that is sustained and enthusiastic. Plan your year of work, outline a concrete program of objects to be attained, press your committees for action, lead the way. Success or failure is your responsibility. We stand ready to aid; command us.

SIGNIFICANCE OF REPORTS BY COUNTY MEDICAL SOCIETIES

The reports of County Medical Societies made by the Secretaries from month to month indicate definitely the interest in County Societies by the membership, and record accomplishment from month to month and from year to year. The Journal has published these records and they now serve as a partial history of progress. Comparisons are indicators of accomplishment and determine bases for deductions. An analysis of the records made during the past three years shows that in 1924 the total reports made to the Secretary of the Michigan State Medical Society numbers 50; in 1925, 79, and this year, 1926, 110. From 1924 to 1925 there was an increase of 29 reports or 58 per cent, from 1924 to 1926, an increase of 69 or 138 per cent. There is no doubt but what these reports reflect the increased activity of the County Medical Societies throughout the state as a whole. It is also true that only a part of the activities are reported which have been determined by visits to the County Societies and the Secretaries. The Secretaries, officers and committees are complimented in achieving this record of progress, a record worthy of the profession and thoroughly appreciated by the public. The following compilation reveals the detailed and comparisons over the past two years with that of 1924, which is the period previous to the adoption of the new program by the Michigan State Medical Society and the employment of an Executive Secretary. Were it possible to secure complete records of all Societies there is no doubt but what the comparisons of these would reveal the same story—a 130 per cent increase in accomplishment in 40 of the 54 County Medical Societies.

NUMBER OF REPORTS BY COUNTIES AND YEARS

	1924	1925	1926
Alpena — Antrim, Charlevoix, Emmett, Cheboygan		8	8
Barry		1	1
Bay	1	3	2
Berrien	2	1	1
Branch		2	1
Calhoun	5	3	7
Cass			
Chippewa—Luce, Mackinac			2
Clinton	1	3	1
Delta			
Dickinson-Iron			
Eaton		1	4
Genesee	5	4	5
Gogebic	1	5	
Grand Traverse—Leelanaw			4
Gratiot—Isabella, Clare	4	4	8
Hillsdale	3	3	3
Houghton—Baraga, Keweenaw	9	11	10
Huron			
Ingham	3	3	3
Ionia—Montcalm	6	5	4
Jackson	1	3	2
Kalamazoo—Van Buren, Allegan	1	2	6
Kent	1	1	2
Lapeer		1	
Lenawee		1	6
Manistee			
Macomb			5
Marquette—Alger		1	
Mason			
Mecosta		1	1
Menominee			1
Midland			1
Monroe	1		
Muskegon		5	3
Newaygo	1	1	2
Oakland		6	1
Oceana			1
O. M. C. O. R. O.—Otsego, Montmorency, Crawford, Oscoda, Roscommon, Ogemaw			
Ontonagon—Osceola, Lake			3
Ottawa			
Presque Isle			
Saginaw			
Sanilac	1		
Schoolcraft			
Shiawassee		1	5
St. Clair	2	1	7
St. Joseph	1		
Tri-County—Wexford, Kalkaska, Missaukee		1	4
Tuscola		1	
Washtenaw	1	1	1
Wayne		6	4
Totals	50	79	119

NOTE:—There reports are not based on reports of total meetings but include, some of them, a number of meetings as for example, Genesee in five reports recorded 85 meetings, and Ingham eight meetings in three reports.

NEW YEAR'S WISHES AND FAREWELL

As the old year passes into the new the Executive Secretary of the Michigan State Medical Society recalls the activities of the year—the work with the Councilors in conducting the Post-Graduate Conferences, the Officers of the State Society and Committees, the Officers of County Medical Societies in establishing more constructive and extensive programs of activity. Working bases have been established with several other State Organizations. The Minimum Program has been placed in operation in more than 40 County Societies, special educational work for the public has been engaged in with success. The Periodic Physical Examination Program is in action. An attitude of study toward problems as they exist in

each County Society has developed, the committee and conference method of accomplishment has been emphasized and back of all has been an extensive growing spirit of friendship. Friendship in reality is synonymous with accomplishment. It makes a profession a joy and a life a happy one. This old passing year will recall to each and all our accomplishments and wish us continued joy and happiness as we enter into the new year. The Executive Secretary personally extends a similar wish. And with the passing of the old year comes also the passing of the office of Executive Secretary so ordered by the Executive Committee of the Council. Such action does not deter me as your past Secretary wishing the Council, the State Medical Society and all County Medical Societies a most successful New Year. Personally, I sever my connections with regret, but know at the same time that a record of work well done in new fields has been written. I move on into other fields, always to be interested in health, the most precious possession of each individual.

HARVEY GEORGE SMITH.

POST-GRADUATE CONFERENCES

The three Post-Graduate Conferences held at Owosso, Saginaw, and Port Huron during the month of December brought to a close for the year 1926, the State activity in Post-Graduate Education. One hundred eighty-eight doctors attended the programs which continues the evidence of the past that the doctors throughout the state desire and demand service from their parent organization. The general expression by one and all of the doctors at each Post-Graduate Conference was one of definite satisfaction. And the expression of satisfaction was proved by the fact that the attendance at the last lecture on the program was as high as that at any other. The Post-Graduate Conference idea is accepted by the membership as an activity of special definite value.

The programs presented at the Owosso, Saginaw and Port-Huron Post-Graduate Conferences are the following:

OWOSSO PROGRAM

December 1, 1926

- 10:15—Opening Statements.
Henry Cook, Councilor, Chairman.
- 10:30—Therapeutics of Common Heart Lesions.
Walter Wilson, M. D., Detroit.
- 11:00—Post-Operative Complications.
Angus McLean, M. D., Detroit.
- 11:30—Practical Points in Rectal Examinations.
L. J. Hirschman, M. D., Detroit.
- 12:00—Luncheon.
- 2:00—Industrial Surgery. G. C. Penberthy, M. D., Detroit.
- 2:30—Nasal Infections. B. N. Colver, M. D., Battle Creek.
- 3:00—Contagious Diseases—Diphtheria.
Bernard Bernbaum, M. D., Detroit.
- 3:30—Diagnosis and Treatment of Acute Infections of the Heart.
Walter Wilson, M. D., Detroit.
- 4:00—Acute Abdominal Diseases.
Angus McLean, M. D., Detroit.
- 4:30—Treatment of Hemorrhoids and Rectal Fistula.
L. J. Hirschman, M. D., Detroit.

BOARD OF COMMERCE, SAGINAW PROGRAM

December 9, 1925.

- 10:15—Opening Remarks.
J. H. Powers, M. D., Councilor, Chairman.
- 10:30—Physical Examinations and Demonstrations.
E. L. Eggleston, M. D., Battle Creek.

- 11:00—Psychiatry and the General Practitioner.
A. L. Jacoby, M. D., Detroit.
- 11:30—Treatment of Pneumonia.
Geo. E. McKean, M. D., Detroit.
- 12:00—Luncheon—Bancroft Hotel.
- 2:00—Skin Clinics. H. R. Varney, M. D., Detroit.
- 3:00—Laboratory Aids in Diagnosis.
J. J. Moore, M. D., Chicago, Ill.
- 3:30—Treatment of Nephritis—Acute and Chronic.
Geo. E. McKean, Detroit.
- 4:00—Psychiatric Analyses. A. L. Jacoby, M. D., Detroit.
- 4:30—Medical Management of Ulcer.
E. L. Eggleston, Battle Creek.

PORT HURON PROGRAM

December 10, 1926.

- 10:00—Opening Statements.
A. J. MacKenzie, Councilor, Chairman.
- 10:30—Pneumonia. Stuart Pritchard, M. D., Battle Creek.
- 11:00—Medical Management and Treatment of Gastric Ulcer.
John B. Youmans, M. D., Ann Arbor.
- 11:30—Dermatology. R. A. C. Wollenberg, M. D., Detroit.
- 12:00—Luncheon.
- 2:00—Pre-Natal Care. L. W. Haynes, M. D., Detroit.
- 2:30—Contagious Diseases—Scarlet Fever, Value of Vaccines.
C. C. Young, State Bacteriologist, Lansing.
- 3:00—Bronchiectases. Stuart Pritchard, M. D., Battle Creek.
- 3:30—Eczema. R. A. C. Wollenberg, M. D., Detroit.
- 4:00—Arthritis—Etiology and Management.
John B. Youmans, M. D., Ann Arbor.
- 4:30—Essential Obstetrical Procedures.
L. W. Haynes, M. D., Detroit.

CALHOUN COUNTY

The 50th Annual Business meeting of the Calhoun County Medical Society was called to order in the bridge room of the Post Tavern, at 5 o'clock, Tuesday, December 7, 1926, the President, Dr. James A. Elliott, presiding. The minutes of the previous meeting were approved as printed in the Bulletin. Dr. Gorsline read a communication from "Hygeia" relative to the subscriptions received from the County Society.

The following applications for membership were given their first reading: Dr. Fahndrick, Dr. Wilma C. Weeks, Dr. A. J. Rivers, Dr. Caroline Hilborn, and Dr. R. H. Hilborn.

Bills were presented as follows: Phoenix Printing Company, \$15.50; Dr. C. W. Brainard, sending postal cards, \$6.10; theatre tickets, \$11.50; total, \$17.60; Dr. L. E. Verity, posting Bulletin, \$1.60. The bills were ordered to be paid. It was moved by Dr. Sleight and seconded that the Secretary-Treasurer's report as printed in the Bulletin be accepted. The motion was carried.

Dr. Kingsley reported for the Board of Directors to the State Society, stressing the importance of periodical physical examinations, which was one of the main topics discussed at the last state meeting.

Election of officers resulted as follows: President, Dr. W. F. Martin; Vice-President, Dr. R. H. Harris; Secretary-Treasurer, Dr. H. B. Knapp; Delegates to State Society, C. S. Gorsline and Geo. C. Hafford; Alternate Delegates, A. F. Kingsley and W. L. Godfrey.

Moved by Dr. Gorsline a vote of thanks be extended to the Secretary for the services that he has performed during the past two years. Motion carried.

The President, Dr. Elliott, said a few words, thanking the various officers and members of the Society for their co-operation during the past year.

Dr. Winslow mentioned the death of Dr. A. E. Halstead, of Chicago. Dr. Colver reported for the Necrology Committee.

On motion of Dr. Sleight, seconded by Dr. Martin, it was unanimously voted that the three members of the Calhoun County Medical Society namely: W. L. Godfrey, E. L. Parmeter, and J. H. Kellogg, who have completed 50 years in the practice of medicine, be recommended to the Michigan State Medical Society for honorary membership, and that the Calhoun County Society hereby place them as honorary members of this body.

There was an informal discussion of the apparent need in this county of a place for the treatment of tuberculosis in children, and a resolution was passed urging the County Board of Supervisors to provide a children's pavilion annex to the Calhoun County Hospital. On motion it was voted to refer this matter to the Anti-Tuberculosis Committee of the Society for action, with the recommendation that the matter of a preventorium at the County Hospital be also provided. This subject was brought up by Dr. Serio, of Albion, and had the unqualified support of each member present.

A short address by the retiring President, Dr. Elliott, completed the order of business. Adjournment to the Post Tavern dining room, where dinner was served and a scientific program followed.

The ladies in attendance were taken to the Regent Theatre for an evening's entertainment.

Officers of the Society for 1927 as follows:

President—Dr. W. F. Martin.

Vice-President—Dr. R. H. Harris.

Secretary-Treasurer—Dr. H. B. Knapp.

Delegates to State Society—C. S. Gorsline, George C. Hafford.

Alternate Delegates—A. F. Kingsley, W. L. Godfrey.

Member Medico-Legal Committee — W. H. Haughey.

Councilor, Third District—R. C. Stone.

Board of Directors—M. A. Mortensen, Thos. Zelinsky, A. F. Kingsley, George A. Haynes and Jas. A. Elliott.

Program Committee—R. C. Stone, Jos. Rosenfeld, G. C. Hafford, B. G. Holtom, E. L. Eggleston, and J. S. Pritchard.

Entertainment Committee—H. H. Lowe, A. T. Hafford, R. D. Sleight, S. K. Church and M. J. Capron.

Anti-Tuberculosis Committee—C. R. Hills, H. R. Allen, E. C. Derickson, G. A. Haynes and L. S. Hodges.

Public Health Committee—A. F. Kingsley, P. P. Serio and Chas. W. Heald.

Necrology Committee—B. N. Colver, J. W. Gething and Wilfrid Haughey.

Venereal Disease Committee—A. A. Hoyt, S. R. Eaton, A. W. Nelson, J. J. Holes and A. T. Hafford.

Illegal Practice Committee—W. H. Haughey, R. H. Harris and Geo. C. Hafford.

Legislative Committee—C. S. Gorsline, Thos. Zelinsky and H. M. Lowe.

Public Education Committee—Stella Norman, E. M. Chauncey, G. B. Gessner, E. P. Russell and R. H. Baribeau.

LENAWEE COUNTY

I hope you will not think I am indulging in self-praise when I tell you that I feel that our Society in Lenawee County has brought to a close another year and perhaps one of the most successful years in a long time.

The December meeting of the Lenawee County Medical Society was held at Adrian, Michigan, December 3, 1926, taking the form of the Annual Banquet, which was served at the Lenawee Hotel.

This year a new idea for this county was promulgated by inviting the members of the Lenawee Bar Association to meet with us. The result was a good turnout of over 60 physicians and members of the bar with their wives.

Our guest of honor was Dr. James Inches, of Detroit, who spoke to us for what seemed like a very short time, though in fact was over two hours, illustrating his lecture with lantern slides and motion pictures. It was a wonderful entertainment and gave us a knowledge of Africa and its people that could never be obtained from books. It is utterly impossible for us to express in words the great appreciation we feel toward Dr. Inches for coming out from Detroit with his equipage and for his generosity in what he told and showed to us of his marvelous trip through the length of Africa from Alexandria to Cape Town.

This meeting closes our year which has been very successful in a great many ways, not many things have been accomplished that really stand out as great, but, we are progressing and we feel that a real constructive program of Scientific Medicine can be put through next year. Our success this year lies entirely in the excellent spirit of good fellowship between our members and the willing co-operation of the members with our officers.

Special credit is due President Mammel, for it was he who started our year with a wonderful meeting at his home and for the way he finished the year by getting Dr. Inches to come out and close our year with a fitting climax as I have described above.

Our next meeting will be held in January, probably at Blissfield, Dr. A. E. Lamley being our prospective host.

A complete report of the past year and a report of our election of new officers for the next year will be made in January.

R. G. B. MARSH, Secretary.

HOUGHTON COUNTY

The Houghton County Medical Society held its regular monthly medical meeting at the Miscow-aubic Club, Calumet, Tuesday, December 7, with 15 members present. After reading of minutes of the previous meeting and allowing of bills, Dr. K. C. Becker of Mohawk read a very interesting paper on "Psychoanalysis," Dr. O. A. Kohlhaas, of Calumet, read a paper on "Prostatectomy. He demonstrated various instruments and the technic of sacral block.

These papers were fully discussed by those

present and were enjoyed by all. The Society then adjourned to lunch. Hope you will be able to read this report. Wishing you a very Merry Christmas and a Happy New Year,

Fraternally,
G. C. Stewart, Secretary.

KALAMAZOO, ALLEGAN AND VAN BUREN COUNTY

The November meeting of the Kalamazoo Academy of Medicine was held at the United States Veterans Hospital No. 100, Camp Custer, November 16, 1926 as guests of their staff.

The afternoon was profitably and enjoyably spent in going over the hospital viewing the equipment, and the work of the different departments.

The banquet served at 6:30 was a sumptuous repast, made the more enjoyable by a musical program rendered by patients of the institution.

Succeeding the dinner the meeting was called to order by the President, Dr. McNair. The minutes of the previous meeting were read and approved as printed in the bulletin. Several communications for the Society were read.

Dr. V. H. Wells, Lawton, and Dr. Hugo Aach, Kalamazoo, were voted into active membership of the Society.

The President appointed to the Legislative Committee authorized at the last meeting:

Dr. Frederick Shillito, chairman; Dr. D. P. Osborne, Dr. A. S. Youngs, Dr. O. H. Stuck, Dr. Wm. R. Young.

A Committee on Medical Relief in Disaster to conform to the general plan of the State Society and the American Medical Association was appointed.

Chairman: The Secretary of the Society; Dr. Ross U. Adams, Dr. John T. Burns, Dr. Leo J. Crum, Dr. A. E. Henwood, Dr. R. J. Hubbell, Dr. C. A. Youngs.

Civilians appointed to this Committee were:

Mr. Bartlett C. Dickinson, Mr. J. Stanley Gilmore, Mr. David Hersfield, Mr. Arthur Ruppert.

As no further business demanded the attention of the Society the meeting was turned over to Dr. Dobson, chief medical officer in charge. Dr. Dobson extended the greetings of the staff and gratification at the excellent attendance. After a few introductory remarks the meeting was turned over to Dr. Hentz who had charge of the clinical program, which was carried out as printed in the Bulletin.

The meeting was returned to our President and a motion was made by Dr. Andrews, supported and unanimously carried, that the Society extend our most sincere thanks to the Staff of the Veterans Hospital and their co-workers, for the entertainment of the afternoon, the excellent repast and entertainment of the evening and the very instructive scientific program which had been rendered.

Dr. McNair gave a brief talk in which he expressed the sentiments of the Society, calling our attention to the benefits to be derived from the meeting. He was sure that we all had an ever increasing respect and personal liking for each member of the Staff. He was also quite sure that from now on each one of us would have a personal pride in the institution for the excellency

of its equipment, the unsurpassed kindness and treatment afforded the patients, and scientific attainments of the Staff. He expressed his deep appreciation for the entertainment and songs of the patients and for the entire program of the afternoon and evening.

KENT COUNTY

The Kent County Medical Society held their Annual Meeting on December 8, 1926, at the Pantlind Hotel, Grand Rapids, Mich. A dinner meeting was held following which Rev. Alfred W. Wishart of the Fountain Street Baptist Church addressed the Society on the subject, "Religion and Medicine." His address was largely concerned with the facts in common between religion and medicine with an explanation of the rationale of religion for a physician.

Dr. Vernor M. Moore of Grand Rapids was elected President for the ensuing year. Other officers elected were Dr. Norman S. Vann, Vice President; Dr. H. T. Clay, Secretary-Treasurer. The delegates to the Michigan State Medical Society of the year 1926 were reelected, this being considered a good policy in view of their experience and knowledge of the workings of the House of Delegates.

The present membership of the Society is 197, which represents a net gain of 11 members. There has been held fifteen meetings, six of which were addressed by local members of the Society. The use of local speakers we believe is worthy of mention, as evidence of co-operation among the membership. There is a greater solidarity among the membership this year than there has been for a great many years and a better unity of purpose for the betterment of the future of medicine.

H. T. Clay, Secretary.

GENESEE COUNTY

The following are officers of Genesee County Medical Society, 1926-1927:

President—Dr. Wm. H. Marshall.

Vice President—Dr. L. W. McKenna.

Secretary—Dr. G. J. Curry.

Treasurer—Dr. G. R. Goering.

Medico Legal Officer—Dr. C. H. O'Neil.

Delegates to the State Society—Doctors C. F. Moll and H. E. Randall.

Alternate Delegates—Doctors J. G. R. Manwaring and J. Benson.

Board of Directors—Doctors F. Miner, C. Chapel, W. Winchester, A. Paterson and F. Reeder.

Legislative Committee—Doctors H. Cook, Chairman; L. L. Willoughby, C. H. O'Neil, H. E. Randall and M. S. Knapp.

Public Education Committee—Doctors C. B. Merritt, Don Knapp and J. Curtin.

Public Health and Civic Relations Committee—Doctors E. D. Price, Chairman; W. Winchester, and L. Jones.

Membership and Attendance Committee—Doctors E. D. Pierce, Chairman; W. Winchester and L. Jones.

Membership and Attendance Committee—Doctors H. Knapp, Chairman, and D. Brasie.

Research Committee—Doctors L. Himmelberger, Chairman; G. J. Curry and Berton Chambers.

Tuberculosis Committee—Doctors W. Winchester, Chairman; A. Reynolds and F. Miner.

Library Committee—Doctors H. E. Randall, Chairman; J. Curtin and L. Himmelberger.

Entertainment Committee—Doctors C. F. Moll, Chairman; W. G. Bird and A. Thompson.

Program Committee—Doctors Merton Chambers, Chairman, and G. J. Curry.

Ethics Committee—Doctors B. E. Burnell, A. Patterson and M. S. Knapp.

Scientific Teams (Senior)—Doctors J. G. R. Manwaring, Surgery; M. C. Knapp, Medicine; D. Jickling, Pediatrics, and Max Burnell, Obstetrics.

Scientific Teams (Junior)—Doctors L. Bogart, General Surgery; Merton Chambers, Medicine; R. A. McGarry, Skin and Syphilis; G. J. Curry, Orthopedic Surgery.

Secretary's report Genesee County Medical Society, 1925-1926:

Total Membership	111
Delinquents	10
Associate Members	3
Honorary Members	4
(Doctors Burr, Callow, Handy and Gould.)	
New Members	3
Average Attendance	60%
Number of meetings of Genesee County M.S.	14
Number of Speakers	14
Number of Out of Town Speakers.....	13

The Chairman of the Program Committee arranged the subjects to conform to the idea of a diversified post-graduate course extending over the official year. The various papers and talks covered practically every field in medicine and surgery.

All meetings of this Society except the last three, have been reported to the Michigan State Medical Society, and have been published in the Journal. These will appear in the October or November issue.

The Sixth District Meeting was held at Flint, December 9, 1925.

The M. S. M. S. Conference (Post-Graduate) was held at Bay City, April 7, 1926.

The Genesee County Medical Society was entertained at the University Hospital, April 28, 1926.

George J. Curry, Secretary.

ST. CLAIR COUNTY

A postponed regular meeting of the Saint Clair County Medical Society was held at the Hotel Harrington, Port Huron, Michigan, at 6 p. m., December 9, 1926, with the following members and guests present: Doctors Waters, Derck, Ryerson, Burley, Attridge, Heavenrich, Vroman, Morris, Callery, Cooper, McCue, McKenzie, O'Sullivan, Clancy, Windham, Smith, Wellman, McColl, Moffett, Kesl, Bovee, Wheeler, Guy L. Kiefer, Bert Estabrook and C. F. Thomas.

Following dinner and a social half-hour the business session was held in the hotel parlors. Upon motion duly made, supported and carried the regular order of business was suspended and the speaker of the evening, Dr. Guy L. Kiefer was introduced by the President.

Dr. Kiefer made a splendid address upon Diphtheria and Scarlet Fever, taking up in the course

of his address the following points: the present virulence of Diphtheria in the City of Detroit; the advisability of giving one large dose of antitoxin upon clinical diagnosis before consideration of the bacteriological findings; toxin-antitoxin immunization, its value and its apparent failure to produce immunity in about 15 per cent of cases; the reliability of the Schick Test; the proper dosage of antitoxin in Diphtheria, as follows, for mild early cases, 10,000 units, for moderately severe cases, from 20,000 to 30,000 units, and severe cases, 40,000 units; the lessened mortalities of scarlet Fever as compared to 15 years ago, which Dr. Keifer attributed to better nursing, diet and public health education all of which prevented complications such as nephritis, otitis, cellulitis, etc.; the disease should be combatted now because of the after effects rather than because of its mortality rate; the discovery of Scarlet Fever antitoxin should be credited to the Doctors Dick of Chicago; the use of Scarlet Fever antitoxin is followed by lessened toxemia and fewer complications and is justified; in severe cases convalescent serum gives markedly good results and the speaker suggested that hospitals keep a supply of same always on hand; one-quarter of the curative dose of Scarlet Fever antitoxin will give a passive immunity to an exposed individual for a limited time, and in cases of continuing exposure the dose may be repeated without danger; dangers of anaphylaxis are not great and this phenomena should not deter members of the profession from use of serums; the serums of the present day were safer and their use not followed by untoward results because the present day serums were properly aged; regarding active immunity for Scarlet Fever the speaker stated that such could be produced by successively increased doses of S. F. toxin or by Larsens' Serum; in exposures to Scarlet Fever the speaker seemed to think it would be unwise to attempt immunization by any toxin mixture; in conclusion Dr. Kiefer, by request of President Moffett, discussed how modern Boards of Health had increased the practice of medicine and developed the various specialties.

Dr. Bert Estabrook followed Dr. Kiefer and briefly covered the following points: In Diphtheria passive immunity should be given all exposures irrespective to length of time exposure had existed; that he had seen Clinical Diphtheria in twenty-one cases where toxin-antitoxin immunization had been attempted; that all cases given toxin-antitoxin should be Schick tested six months afterward; that parents should be told that toxin-antitoxin was not always a preventative and that 15 per cent were failures; that high virulence such as existed at present in Detroit, frequently overcame partial immunity; that in epidemics where virulence is high antitoxin should be given early in clinical Diphtheria irrespective of history of attempted immunization, etc.; that in cases of laryngeal involvement unless one may be sure that condition is spasmodic croup always give antitoxin to cover the possibility of Diphtheria; in Scarlet Fever the speaker believed the toxemia and complications were definitely lowered by previous tonsillectomy, adenectomy and proper dental prophylaxis; that manufactured S. F. antitoxin is more potent than convalescent serum because it contains many more units of protection; that Larsens' Toxin may be given with safety to exposures to Scarlet Fever, even though in some few cases a dermatitis similar to the S. F. rash occurs.

The President then called upon Dr. C. C. Clancy, Past President of the State Medical Society, to close the program and thank the guests for the very profitable evening. This Dr. Clancy did in his usual fine manner. The meeting adjourned at 9:55 p. m. after a rising vote of thanks was given the speakers of the evening.

George M. Kesl, Secretary.

BARRY COUNTY

The House elected the following officers in our Society for the year 1927:

Dr. A. W. Woodbine, Hastings, President.

Dr. Guy C. Keller, Hastings, Secretary-Treasurer.

Dr. B. C. Swift, Middleville, Delegate State Society.

Dr. C. K. Brown, Nashville, Alternate Delegate State Society.

Dr. R. W. Griswald, Freeport, Medical Legal Advisor.

During the last year we have had 12 regular Society meetings and one public city lecture by Dr. Kellogg, of Battle Creek.

Of our 12 meetings, five have been of home talent work, two were laymen speaker's programs, one a clinic and four were meetings with out of county speakers.

For about four months we have been having a weekly health talk in the leading county paper written by various members of the Society. We will continue these health talks throughout the coming year.

Guy C. Keller, Secretary.

BAY COUNTY

Monday evening, November 29th, the Society was addressed by Herbert V. Barbour, Esq., of Detroit. He spoke in a very interesting manner on the subject of Malpractice Suits. The meeting was held at the Elk's Club with dinner served at 6:30 p. m.

Wednesday evening, December 8th, retiring President, Dr. V. H. Dumond was host to the Society at a turkey dinner held at the Wenonah Hotel. The occasion was the Annual Meeting at which the following officers were elected:

President, Dr. D. T. Smith, Omer, Mich.

Vice President, Dr. E. F. Crummer, Essexville, Mich.

Secretary-Treasurer, Dr. L. Fernald Foster, Bay City, Mich.

Medico-Legal Committee, Dr. A. W. Herrick, Bay City, Mich.

Delegate, Dr. V. H. Dumond.

Alternate, Dr. J. W. Hauxhurst.

L. Fernald Foster, Secretary.

EATON COUNTY

The Annual Meeting of the Eaton County Medical Society was held at the Charlotte Hotel the evening of December 2nd, 1926.

Following dinner the Society proceeded to the transaction of business and election of officers with the following results: President, C. S. Sackett, Charlotte; Vice President, F. W. Sassaman,

Charlotte; Secretary-Treasurer, H. J. Prall, Eaton Rapids; Delegate, P. H. Quick, Olivet; Alternate, Stanley Stealey, Charlotte; Legislative Committee, J. B. Bradley of Eaton Rapids.

Following a discussion of other matters of local interest the meeting adjourned.

H. J. Prall, Secretary-Treasurer.

GOGEBIC COUNTY

The Gogebic County Medical Society in its annual meeting elected the following officers for 1927: President, Dr. Paul R. Liberthal; Vice President, Dr. T. S. Crosby; Secretary-Treasurer, Dr. Louis Dorpat. The next meeting will be held on Monday, January 10, at 8 o'clock, p. m. in the offices of the Ironwood Health Department.

Louis Dorpat, Secretary.

GRAND TRAVERSE-LEELANAU COUNTY

The regular meeting of the Grand Traverse-Leelanau County Medical Society was held at the General Hospital, Tuesday evening, December 7th. In the absence of the President, Dr. Sladek, the Vice President, Dr. Swartz, called the meeting to order at 8 o'clock.

The following officers were elected for the ensuing year:

President—Dr. F. G. Swartz.

Vice President—Dr. George F. Inch.

Secretary-Treasurer—Dr. G. A. Holliday.

Medico-Legal Counsel—Dr. F. P. Lawton.

Communication from Dr. Warnshuis relative to a Local Legislative Committee, was read, and the Chair appointed the following to serve:

Doctors Fred Murphy, L. Swanton, H. B. Kyselka, George F. Inch and G. A. Holliday.

Dr. J. W. Gauntlett read a very instructive paper on "The Nothing in the Eye as a Diagnostic Point." A full discussion followed. Adjourned.

G. A. Holliday, Secretary.

IONIA-MONTCALM COUNTY

The Annual Meeting of the Ionia-Montcalm Medical Society was held at Hotel Belding, Thursday evening, December 9th.

After partaking of an excellent banquet the following program was given:

"Eye Emergencies," Dr. John R. Rogers, Grand Rapids.

"The Physiology and Pathology of Pregnancy," Dr. Alexander M. Campbell, Grand Rapids.

Dr. C. T. Pankhurst, of Ionia, formerly of North Star, transferred his membership to the Ionia-Montcalm County Society.

Dr. Levi E. Duval, Ionia, and Dr. J. M. Irving, Lyons, were elected to membership in the Ionia-Montcalm Society.

The following officers were elected for 1927:

President—Dr. C. H. Peabody, Lake Odessa.

Vice President—Dr. H. B. Weaver, Greenville.

Secretary-Treasurer—Dr. H. M. Maynard, Ionia.

Delegate—Dr. R. R. Whitten, Ionia.

Alternate Delegate—Dr. Geo. E. Hom, Entrican.

H. M. Maynard, Secretary.

INGHAM COUNTY

At the present date there are 89 members in good standing in the Ingham County Medical Society as compared to 96 in 1925. The difference in number is due to six members being delinquent in dues, three leaving for New York, two for Florida and one for Detroit. There was one death during the year and one member has apparently dropped out due to a prolonged illness. During the year we elected five men to membership, so that we have a loss of eight men as compared to last year.

There were nine scientific meetings held during the year with an average attendance of 47. There were four noon luncheons for business meetings, with an average attendance of 44. There were two social meetings and our annual picnic with an average attendance of 60. Average total attendance of 60. Average total attendance of all meetings was 50 or about 57 per cent of total membership.

The outstanding feature of the year was the holding of the State Meeting in Lansing in September. Every member of the Society co-operated so willingly and well that the meeting was a real success. We received letters of commendation from several sources to that effect. We may well be proud of our work on that particular occasion.

In reviewing the year's work we find that we have practically fulfilled the requirements of the Minimum Program in every respect.

At our Annual Meeting the following officers were elected: H. S. Bartholomew, President; K. Brucker, Vice-President; C. F. DeVries, Secretary-Treasurer.

C. F. DeVries, Secretary.

WASHTENAW COUNTY

Presidents and Secretaries since 1910 were:

1910—President, James F. Breakey; Secretary, J. W. Keating.

1911—President, J. W. Keating; Secretary, J. A. Wessinger.

1912—President, F. R. Waldron; Secretary, J. A. Wessinger.

1913—President, Wm. Blair; Secretary, J. A. Wessinger.

1914—President, T. Klingman; Secretary, J. A. Wessinger.

1915—President, A. W. Hewlett; Secretary, J. A. Wessinger.

1916—President, J. G. VanZwaluwenburg; Secretary, J. A. Wessinger.

1917—President, R. A. Clifford; Secretary, J. A. Wessinger.

1918—President, Mark Marshall; Secretary, J. A. Wessinger.

1919—President, Udo Wile; Secretary, J. A. Wessinger.

1920—F. R. Waldron; Secretary, J. A. Wessinger.

1921—President, H. H. Cummings; Secretary, J. A. Wessinger.

1922—President, J. A. Wessinger; Secretary, W. E. Forsythe.

1923—President, J. A. Wessinger; Secretary, W. E. Forsythe.

1924—President, T. S. Langford; Secretary, W. E. Forsythe.

1926—President, G. F. Muehlig; Secretary, A. D. Wickett.

1926—President, H. D. Barss; Secretary, T. S. Langford.

Theron S. Langford, Secretary.

DETROIT SOCIETY OF NEUROLOGY AND PSYCHIATRY

The Detroit Society of Neurology and Psychiatry held its second regular meeting for the current year at the Henry Ford Hospital, Thursday, December 16th. The following scientific program was given by the members of the staff of the Henry Ford Hospital:

- Neurosurgical CasesDr. J. H. McMillan.
- Case PresentationDr. Frank J. Sladen.
- Case of Convulsions with Peculiar Crampton's PhenomenaDr. J. C. Moloney.
- Presentation of Neuropathological Material
.....Dr. F. W. Hartman.

1. Questionable Landry's Paralysis;
2. Psychopathic Personality with Masochistic ReactionsDr. G. B. Smith.
- Some Difficulty in Diagnosing Spinal Chord TumorsDr. A. S. Crawford
- Neuropsychiatric Diagnosis in the General HospitalDr. Thos. J. Heldt.

The meeting was attended by both local and out of town members.

TOLERANCE TO DIGITALIS IN EXPERIMENTAL DIPHThERIA

That digitalis is an effective circulatory stimulant is confirmed by the series of experiments reported on by Harry Gold, New York (Journal A. M. A., Dec. 18, 1926). A considerable rise in blood pressure when it was previously low occurred in a number of animals after varying doses of ouabain. The study shows that direct synergism between diphtheria toxin and digitalis does not exist even though the heart has been severely injured by the toxin, and that diphtheria toxin does not diminish the tolerance of an animal to digitalis unless that animal has been reduced to a state of extreme circulatory depression or collapse. There are clinical conditions in which patients become more susceptible to the digitalis bodies. It has been frequently seen that some patients with heart disease in the terminal stages become extremely susceptible to the toxic action of digitalis. It is doubtful, however, whether the increased susceptibility to digitalis observed in nearly moribund animals has any important bearing on the clinical problem of the use of digitalis in patients with diphtheria. The experimental work does justify the expectation that in certain cases of circulatory disturbances produced by diphtheria, digitalis in the proper dosage would be of value.

BOOK REVIEWS AND MISCELANEY

Offering Suggestions and Recommendations

SURGICAL ANATOMY OF THE HUMAN BODY—John B. Deaver, M. D., Vol. II. Price for three volumes, \$35.00. P. Blakiston's Son & Co., Philadelphia.

This is the revised second volume of this three volume set of Surgical Anatomy. The regions covered are the upper extremities—neck, shoulders, back and lower extremities. It is profusely illustrated with accurate comprehensive drawings and pictures. Primarily it is an anatomy that is complete in text and details. What is more, and of far greater importance is that it is an anatomy emphasized on the principles of surgery. Coming from the pen of a surgeon of outstanding attainment and ability, this text assumes a role of authority. No surgeon can afford to be deprived of this reference assistant to his operative work.

THE PRACTICE OF MEDICINE—A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania. Second Edition, entirely reset. Octavo of 1174 pages. Cloth, \$7.50 net. W. B. Saunders Company, Philadelphia and London.

The author has very completely set forth a description of internal diseases in a manner that is in accord with our present knowledge. It is concise, amply complete in stressing pathology, diagnosis and treatment. This revised edition is complete, represents untold labor because of its thoroughness. It is a text that should supplant the old schoolbook text too frequently found in the doctor's library. The placing of this Practice on your reference shelf will provide one with the most practical medical text existant.

RECENT ADVANCES IN PHYSIOLOGY—C. Lovatt Evans, London. Second Edition. Price \$3.50. P. Blakiston's Son & Co., Philadelphia.

Just what its title states. It meets its title completely and leaves nothing for the reviewer but to commend. We urge, too, that many medical men may well read this text to disabuse their minds of principles and functions that have been disproven.

SKETCH OF THE HISTORY OF THE MAYO CLINIC AND THE MAYO FOUNDATION—185 pages. Cloth, \$3.50.

An estimate and accurate picture of the development of all phases of the work of this great clinic—from the earliest beginnings to the present. Not only of interest from the historical standpoint, but of value in aiding individuals and institutions to perfect their organizations.

We regret, though, that the compiler did not see fit to include business methods imparting details of registry, records, histories, financing and the relationship and duties of staff members. As it is, it is a fair year book comparable to that issued by many institutions.

PNEUMOCONIOSIS (Silicosis)—A Roentgenologist's study. Henry K. Pancoast, M. D. Cloth, 186 pp., price \$4.00. Paul B. Hoeber, Inc., New York City.

This is a splendid presentation of a study of pneumoconiosis based on findings uncovered in X-ray examinations of numerous chests. Excellent plates are included accompanied by notes on existant pathology. As such then it is valuable to all X-ray men and the frequency of the condition warrants steps for prevention.

PRINCIPLES AND PRACTICE OF ORAL SURGERY—S. L. Silverman, D.D.S. Cloth, 326 pp., 280 illustrations. Price, \$6.00. P. Blakiston's Son & Co., Philadelphia.

This is somewhat of an elementary text, containing many illustrations from other existing texts. The author has, however, carefully presented his subject. He has lucidly imparted governing principles and the essentials of technic. The final result being the setting forth of the proper procedures when dealing with conditions embraced in the field of oral surgery.

THE MEDICAL CLINICS OF NORTH AMERICA—(Issued serially, one number every other month). Volume X, Number III, (Mayo Clinic Number, November, 1926). Octavo of 275 pages with 55 illustrations. Per clinic year, \$16 net. W. B. Saunders Company, Philadelphia and London.

Received.

PRACTICE OF PREVENTIVE MEDICINE—J. G. Fitzgerald, M. D. Second Edition. Price, \$7.50. C. V. Mosley Company, St. Louis, Mo.

The author is professor of Hygeine and Preventive Medicine at the University of Toronto. In this text he has outlined the principles of preventive medicine as well as the essentials requisite to attain results. As such the text supplies for practitioners and workers the fundamentals for intelligent supervision of community preventive activities. It is a most dependable reference and guiding discussion.

DISEASES OF WOMEN—Harry S. Crossen, M. D. Sixth Edition. Price \$11.00. C. V. Mosley Company, St. Louis, Mo.

This is the sixth revised edition of a text that has ever commanded our admiration and good opinion. In this edition we find it again fully abreast of the day. New material has been added, including the use of iodized oil for X-ray visualization of the tubal and uterine cavities. Featuring as it does, first diagnosis and then treatment, it is ever found to be a source of helpfulness. One will find effective measures that accomplish results and relief by means of medical treatment. The surgical technic is complete and of recognized standard. All in all it is a text that every medical man will find to be a guide and dependable consultant for all of his gynecological work.

SHELL SHOCK AND ITS AFTERMATH—Norman Fenton, Ph. D. Price \$3.00. C. V. Mosley Co., St. Louis, Mo.

An intelligent, interesting discussion of this war complication.

PHYSIOLOGY AND BIO-CHEMISTRY IN MODERN MEDICINE—J. J. R. Macleod, Toronto. Fifth Edition. Price \$11.00. C. V. Mosley Company, St. Louis, Mo.

This standard, valued text is brought up to the science of physiology as it stands today by this fifth revised edition. It retains its original purpose in serving as a guide to the application of the truths of physiology in the bedside study of disease. We know of no text that is so thorough, wherein the medical application is so intimate. We urge anew that every medical man utilize this text for reading and study in order that his conception of physiological principles may harmonize with our present day truths.

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ORIGINAL ARTICLES

ACUTE PANCREATITIS*

IRVIN ABELL, M. D.

LOUISVILLE, KY.

In a series of more than 300 operations on the biliary tract the writer has encountered 10 cases of acute pancreatitis. All but one occurred in the course of more or less prolonged cholecystitis, presenting varying degrees of gall bladder pathology. The term "acute pancreatitis," as here employed, covers at least three distinct conditions, acute pancreatic necrosis, acute hemorrhagic pancreatitis, and pancreatic abscess. It is believed that the latter is but an advanced stage of the first two, the patient surviving the acute onset with subsequent infection and suppuration of damaged pancreatic tissue and hemorrhagic deposit resulting in abscess formation. Of the 10 cases, five occurred in men and five in women: five were markedly obese, one moderately so, three were of muscular development, and one quite emaciated. The average age of the patients was 39.7 years; the individual ages being 17, 32, 34, 39, 50, 51, 51, 54, 56 and 64.

PREVIOUS HISTORY

Four of the 10 patients had had typhoid fever and all but one gave a definite history of gall bladder disease. Duration of symptoms referable to gall bladder: two cases one year, two cases two years, one case three years, one case six years, one case eight years, one case 10 years, and one case 20 years; average five years, ten months. Seven gave a history of gall bladder colics, while in the remaining three the colic that occurred with the onset of the pancreatitis was the initial one.

All had suffered digestive disturbances for varying periods of time. One had undergone an operation for removal of stones and drainage of gall bladder six years before coming under my care, at which time he presented a second crop of calculi in his gall bladder with an acute hemorrhagic pancreatitis.

SYMPTOMS REFERABLE TO ACUTE INVOLVEMENT OF PANCREAS

Duration—Two cases two days, three cases three days, one case four days, two cases five days, one case seven days, and one case ten days. In seven, the symptoms attracting attention to the pancreas, developed at periods varying from one to four weeks following a gall bladder colic, there being a subsidence of pain and other subjective symptoms referable to the gall bladder before onset of those referable to pancreas or else a continuation of gall bladder symptoms with those of pancreas gaining in intensity and consequent ascendancy. In three, the pain accompanying the onset of the pancreatitis was the initial one the previous symptoms being of reflex digestive character of mild degree.

Pain—The pain in seven was acute, severe and agonizing, accompanied by incessant nausea and vomiting, representing the ultra acute type; in three it was much less severe, the cases pursuing a milder course. In five it was referred to the epigastrium and right subcostal region, being described as similar to that experienced with previous attacks of gall bladder

*Read at Annual Meeting, September, 1926.

colic; in two it was felt in the right subcostal region, extending across the upper abdomen to the left subcostal area; in three the maximum intensity was noted in the left subcostal area. Cyanosis was observed in but two. The pulse in three was under 100, 88, 90 and 96; in seven over 100, 110, 115, two 120, 138, and two 140. Temperature varied from 99.5 to 102. Systolic blood pressure from 100 to 154. Considering the pathology found at operation, the leucocyte counts were not high, 5300, 6800, 9800, 11800, 12000, 12700, 13300, 14800, 15300, 18800. Such blood findings are in harmony with the belief that the extensive destruction of pancreatic tissue is due to an activation of the trypsinogen within the pancreas rather than to actual bacterial attack.

Urine—The urine in all cases showed presence of albumin; none showed the presence of sugar. Bile was present in five, casts in four, microscopic blood in seven and microscopic pus in nine.

Mass—In five patients no mass was detected, while in the remaining five an enlargement was distinctly palpable: in three the mass was felt in the right hypochondrium, in one in the left hypochondrium, and in one it extended transversely across the abdomen.

Pre-Operative Diagnosis—The diagnosis in five was acute cholecystitis; in one of these the detection of a mass at the site of the pancreas after the patient was anesthetized led to a correct diagnosis before the incision was made. In one the condition was thought to be acute intestinal obstruction, in three a correct diagnosis of acute pancreatitis was made, while in one no diagnosis other than acute abdomen was made.

Morbid Anatomy—Free fluid was found in the greater peritoneal cavity in three cases, in one of which it was bile tinged and of large quantity; hemorrhagic fluid exudate was present in the lesser peritoneal cavity in seven instances, varying in amount from a few to 2600 c.c.

Rather widely disseminated areas of fat necrosis were encountered in four and none detected in six cases. The gall bladders were visibly diseased in all ten cases, and nine contained calculi; the common ducts of all, upon palpation, were negative for stones.

In three cases the pancreatic lesion presented as a hemorrhagic pancreatitis, in two the hemorrhagic infiltration being confined to the pancreas and tissues immediately adjacent; in one, of moderate size, in the other of such extent as to form an

oblong mass across the abdomen which was palpable through a rather thick wall; in the third the infiltration involved not only the pancreas, but extended into the subhepatic and right perirenal spaces and into and behind the ascending mesocolon as far as the cecum. In one case the pancreas was enlarged to approximately four times the normal size, nodular and elastic, biletined fluid in lesser and greater cavities, thickening and edema of gastrohepatic omentum and pancreatic fatty capsule, all of which bled on manipulation, although no visible hemorrhagic deposit was present.

Two presented a moderate increase in size of head and right half of body with marked enlargement of left half of body and tail, the mass involving the gastric surface of spleen, the lesser peritoneal cavity and the transverse mesocolon; no visible hemorrhagic deposit present.

In two the head of the pancreas was markedly enlarged and in one at operation was thought to be a subacute pancreatitis accompanying an acute cholecystitis: the patient died nine days after operation and autopsy revealed acute pancreatic necrosis involving the head and part of the body of pancreas.

In one, the lesion presented as a retroperitoneal pancreatic abscess holding six ounces of pus in which were flocculi, caseous masses and bits of sloughing pancreatic tissue. Cultures from pus showed colon bacillus.

In one, the condition presented as a pseudocyst of the lesser peritoneal cavity, 2600 c.c. of hemorrhagic fluid, sterile upon culture, being removed: the layer of peritoneum forming the posterior wall of the lesser cavity immediately over the pancreas had disappeared, the partly necrotic pancreas being exposed to view upon removal of fluid.

OPERATIONS

In eight cases a drainage of the pancreas was employed, the route of approach being through the gastrocolic omentum in four and the gastrohepatic omentum in four: in six of the eight, cholecystostomy with removal of calculi was done, in one cholecystectomy was done, in one the condition of patient was so precarious that the gall bladder pathology was not disturbed. Of the two in which pancreatostomy was not employed, in one, the pancreatic inflammation involved the left half of the body and the tail of the pancreas without apparent necrosis and a removal of calculi and cholecystostomy was relied upon to give drainage: in the other, the pancreatic

pathology was thought to be a subacute inflammation complicating cholecystitis: a cholecystectomy with common duct drainage was done followed by death, autopsy showing acute pancreatic necrosis.

SYNOPSIS CASE HISTORIES

Case 1. No. 5237 * 2-23-1917—Male, age 32. History of gall bladder colics. Duration of present illness three days. Pain, nausea, vomiting, tenderness in the right upper quadrant, jaundice present, bile, albumin, casts and pus in urine. White cell count 5300, P. M. N. 64.7, small lymphocytes 23.3, large lymphocytes 11.5. Tentative diagnosis—Cholecystitis. Operation: head of pancreas shows marked enlargement; removal of large distended gall bladder containing calculi; drainage of common duct through cystic duct. Post-operative history: No bile from drainage tube; bleeding from bowel, stomach, gums and drainage tube; severe epigastric pain, collapse and death on ninth day after operation. Autopsy: Acute pancreatic necrosis. Pathological report: Chronic cholecystitis, acute and chronic pancreatitis.

Case 2. No. 10,097 * 3-16-1921—Male, age 51. Operation for gall stones six years ago. History of colics before and since operation. Last colic seven days ago, since when has been confined to bed. Pain in epigastrium radiating to gall bladder area and to right renal area. Temperature 98.2, pulse 90. Slight jaundice. Rigidity and tenderness in right upper quadrant, most marked tenderness in right renal area. Urine contains bile, albumin, casts, microscopic blood and pus. White cell count 6800. Tentative diagnosis: Cholecystitis with recurrent calculi. Operation: Adherent mass consisting of gall bladder, duodenum, pylorus, colon and omentum. Upon separation, hemorrhagic infiltration with areas of necrosis in pancreas, subhepatic and right renal spaces, and ascending mesocolon as far as cecum, gall bladder containing calculi removed and common duct drained through cystic duct. Gastrohepatic omentum opened and pancreas drained with gauze cigarette; cigarette drains placed in subhepatic and right renal spaces. Recovery.

Case 3. No. 13119 * 11-8-1922—Female, age 39. History digestive disturbance; no colics. Acute onset 48 hours ago; pain, nausea, vomiting, constipation, slight cyanosis. Pulse 120, temperature 102. Leucocytes 15,300. P.M.N. 86.5 per cent. Abdomen shows slight mass in left upper quadrant. Urine shows albumin, casts, microscopic blood and pus. Tentative diagnosis: Intestinal obstruction. Operation: Acute hemorrhagic pancreatitis; pancreastomy through gastrohepatic omentum; cholecystostomy with removal of stones. Recovery.

Case 4. No. 14,099 * 10-15-1923—Male, age 52. History of gall bladder colics and reflex digestive disturbance. Has had recurrent attacks of iridocyclitis for years. Last colic four weeks ago. Since onset of last or present illness has had continual pain in right upper quadrant. For past week has had fever, 101-102°. Tender mass in right upper quadrant. Leucocyte count 12,800, P.M.N. 78 per cent. Urine shows albumin and microscopic pus. Tentative diagnosis: Cholecystitis. Operation: Gall bladder contains stones and is not adherent to mass. Cholecystostomy with removal of calculi. Mass corresponds to pancreas, and overlying omentum shows multiple

areas of fat necrosis. Mass approached through gastrocolic omentum and is found projecting into lesser peritoneal cavity. Opened and evacuated of six ounces of pus showing colon bacillus on culture; necrotic putty-like masses of pancreatic tissue removed from abscess cavity; drainage. Recovery.

Case 5. No. 15,678 * 3-31-1924—Female, age 34. Colics and digestive disturbance for more than one year, marked and associated with vomiting at intervals for past year. At times vomitus has contained blood. Has been bedfast for past six months. Weight one year ago 173, present 100. In October, 1923, first noted swelling or mass in upper abdomen which at times has disappeared; has been constantly present for past month. Pulse 138, temperature 100. Fluctuating mass occupying upper abdomen between the costal margins, extending from ensiform to point below umbilicus, most marked to left of midline. Blood shows hemoglobin 68, red blood cells 3,170,000, leucocytes 13,300. Urine shows albumin, microscopic blood and pus. Tentative diagnosis: Cholecystitis, pancreatitis with pseudocyst of lesser peritoneal cavity. Operation: Local anesthesia; lesser peritoneal cavity opened above stomach and evacuated of 2600 c.c. of hemorrhagic fluid sterile on culture. Pancreas shows necrosis of surface exposed in sac. Gall bladder contains multiple calculi and is not disturbed. Edges of incision in lesser cavity are sewn to parietal peritoneum and lesser cavity drained with tube. Recovery.

Case 6. No. 16,360 * 9-1-1924—Female, age 50. Digestive discomfort, epigastric pain and colics for three years. For past six weeks has noted increase in pain which has been practically continuous with evening temperature of 100 to 101. Abdomen has increased in size. While in hospital for further study was seized with acute pain, nausea, vomiting, and fever rose to 102; pulse 140. Abdomen shows the presence of fluid, is tender and rigid over gall bladder, extending to left midline. Leucocyte count, on entering hospital, 11,800, after onset of acute attack 18,100; P.M.N. 82.5 per cent. Urine shows albumin, microscopic pus and blood. Tentative diagnosis: Cholecystitis, acute pancreatitis. Operation: Bile tinged, free fluid in greater cavity. Gall bladder is thick walled, edematous and contains stones. Cholecystostomy with removal of stones. Pancreas is greatly enlarged, nodular and soft in consistency; adjacent tissue is edematous, hyperaemic and bleeds on slightest manipulation. Gastrocolic omentum opened and drains placed down to head of pancreas. Recovery.

Case 7. No. 16,713 * 11-3-1924—Male, age 64. History of gall bladder colics and digestive disturbance over a period of 20 years. Mild colics three weeks ago. Present acute illness began with severe colic six days ago; pain has necessitated opiates continually since. Nausea and vomiting marked. Abdomen exquisitely tender in epigastrium and under right costal margin. Pulse 108, temperature 100. Leucocytes 9800. Urine shows albumin, microscopic pus and blood. Tentative diagnosis: Cholecystitis. When under the anesthetic a mass could be felt, extending across abdomen, corresponding to site of pancreas; added diagnosis of acute pancreatitis made. Operation: General peritoneal cavity contains free clear fluid. Lesser peritoneal cavity opened through gastrocolic omentum contains hemorrhagic fluid, multiple areas of fat necrosis in omentum and mesocolon. Pancreas is imbedded in hemorrhagic exudate and presents multiple

areas of necrosis. Cholecystostomy with removal of calculi; pancreatostomy with tampon drainage. Recovery. During convalescence this patient had several hemorrhages from drainage tract requiring packing for control.

Case 8. No. 17,157 * 12-18-1925—Female, age 51. History of gall bladder colics and digestive disturbance over a period of years. Duration of present illness four days; severe colic, nausea, vomiting, slight jaundice; greatest intensity of pain noted in left upper quadrant. In previous attacks or colics pain has always been noted in right upper quadrant. Pulse 96, temperature 101. Tender over entire epigastrium, most marked to left midline. Leucocytes 12,700. Urine shows albumin, bile, microscopic blood and pus. Tentative diagnosis: Cholecystitis. Operation: Gall bladder thick walled, non-adherent, contains multiple stones. Pancreas is enlarged, the left half of body and the tail are greatly enlarged and imbedded in inflammatory infiltration which involves the hilum of spleen and transverse mesocolon. No hemorrhagic deposit present. Cholecystostomy with removal of stones. Recovery.

Case 9. No. 17,796 * 6-17-1925—Female, age 17. History of digestive upset of one week's duration one year ago. Similar disturbance for past three weeks, characterized by burning, fulness and discomfort in epigastrium. Twenty-eight hours before admittance to hospital suffered severe, acute pain in left upper abdomen radiating to axilla and back, accompanied with marked vomiting. Temperature 101, pulse 120, slight jaundice, stony rigidity over entire epigastrium, tenderness most marked to left of midline. Bile, albumin and pus cells in urine. White cell count 14,800, P. M. N. 80, small lymphocytes 18, large lymphocytes 2. Tentative diagnosis: Acute abdomen. Operation: General cavity contains free fluid. Gall bladder shows subacute inflammation with adherent omentum and colon. Mass at site of left half of pancreas approximately 4x3x2 inches is exposed through gastrohepatic omentum; mass consists of nodular enlargement of part of body and tail of pancreas with adhesion of and inflammatory infiltration into transverse mesocolon. Pancreatostomy with drainage through gastrohepatic omentum. Cholecystostomy. Recovery.

Case 10. No. 18,893 * 12-5-1925—Male, age 56. History of gall bladder colics and digestive disturbance over a period of years. Present illness began with acute onset 40 hours ago—pain, nausea, vomiting, collapse. Temperature 101, pulse 140; leucocytes 12,000, P.M.N. 81, small lymphocytes 11, large lymphocytes 7, eosinophiles 1. Urine shows albumin, casts, microscopic pus and blood. Tender mass under right costal margin. Tentative diagnosis: Acute gangrenous cholecystitis. Operation: Acute gangrenous cholecystitis with multiple calculi present. Many areas of fat necrosis in omentum and transverse mesocolon. Mass at site of head of pancreas which is exposed through gastro-hepatic omentum; turbid fluid in lesser cavity. Pancreas presents multiple areas of necrosis. Drainage through gastrohepatic omentum. Cholecystostomy. Death on eighth day following operation.

SUMMARY

Acute pancreatic necrosis, acute hemorrhagic pancreatitis and pancreatic abscess are not separate clinical entities, but represent different stages of the same process, the origin of which is not entirely

clear. The rapid destruction of pancreatic tissue is due to the activation of trypsinogen within the gland itself; normally this is done by the enterokinase in the duodenum. The most logical explanation for its activation within the pancreas is that it is due to a retrograde injection of infected bile or duodenal contents through the ducts of wirsung and santorini as well as by the minute hemorrhages and bacterial toxins resulting from a pancreatic lymphangitis. Biliary tract infections have been present in more than 50 per cent of the reported cases, in 100 per cent of the series herewith reported. The lymphatics draining the gall bladder and bile ducts are in intimate association with the lymphatics of the head of the pancreas before they join the aortic group. Infection following this path readily enters the head of the pancreas where resultant inflammation and minute hemorrhages may readily activate the pancreatic ferment. The powerful digestant action of the ferment upon the blood vessels of the pancreas doubtless explains the presence of marked hemorrhagic deposit while the absorption of the autolyzed pancreas, toxic proteoses is in large measure responsible for the shock and early toxic manifestations.

The areas of fat necrosis commonly seen in the peritoneum, root of mesentery, mesocolon and omentum are due to the action of ferments in the escaped pancreatic secretion upon the fat molecule, breaking it up into its component glycerine and fatty acids. Cases reported in which such areas have been observed in the pericardial and extrapleural fat would indicate that these ferments are capable of transportation by lymph or blood stream.

There are no pathognomonic symptoms, pain, vomiting and collapse being the most important encountered. The physical signs will depend on the stage of the disease at which the patient is seen: in some cases the lack of symptoms and physical signs is remarkable when compared with the extent and severity of the local lesion.

Laboratory examinations are of but little aid in reaching a diagnosis; for this reliance must be had upon the history of previous upper abdominal disease, the present symptoms and physical findings. Pain radiating from the right costal margin across the upper abdomen, tenderness following the course of the pancreas, pain and tenderness to left of mid line, and the detection of a mass in the pancreatic area are beacon lights when elicited. After all it is not so important to make a correct

diagnosis of acute pancreatitis as it is to make a correct diagnosis of acute pancreatitis as it is to make a correct diagnosis of an acute surgical lesion in the upper abdomen: the predominance of symptoms at and above the umbilicus will usually permit of this localization when prompt operation will direct one to the pathology. The earlier the operation the less the destruction of the pancreas, the less the absorption of toxic proteoses the less the peritonitis and consequently the greater the number of recoveries. The indications are to relieve tension, to stop hemorrhage, to prevent leakage and to afford drainage: the fact that the pancreas has no proper capsule, being imbedded in loose retroperitoneal cellular tissue and fat permits of rapid extension of inflammatory infiltration: pancreatostomy with application of tampon and tube drains in and around the focus of pancreatic destruction will best fulfill these indications. The drainage of the gall bladder, when the condition of the patient permits, is a worthwhile procedure in promoting recovery and securing immunity from further attacks.

DISCUSSION

Dr. L. M. Bogart, (Flint, Mich.): I should like to ask if the doctor noticed any diabetic symptoms in some of these cases. I had a case about two months ago of acute gall-bladder where we drained the gall-bladder and we had a very severe diabetic coma in the patient. I called in Dr. Marshall and he ordered huge doses of insulin, 65 units, I believe, every three of four hours. When the drainage was made, the sugar had entirely disappeared and it has been free ever since.

Dr. Henry J. Vandenberg, (Grand Rapids, Mich.): I believe this is the best paper I have ever heard on the subject of acute pancreatitis. I am sure it has been the best illustrated paper I have ever seen on the subject.

I think there are two points that should be emphasized. One is the frequency with which we have cholecystitis preceding acute pancreatitis. When we are dealing with gall-bladder conditions we ought to think not alone of the gall-bladder as the principal part of the trouble, but we ought to have a larger picture of the disease and we ought to think first of the pancreas, particularly hepatitis and secondarily myocarditis, nephritis and so on and so forth. This picture that we have seen of acute pancreatitis is such a striking one that we can bear that in mind when we are thinking of gall-bladder trouble, of which we see so much. It ought to urge us to insist upon having something done for gall-bladder trouble.

There are several cases that are not so outstanding as the very acute cases, and I think the doctor mentioned that where we go into the abdomen and see these little patches, they have been there for some time, and we haven't the history, probably, of the real acute attack with shock, and so forth, that we sometimes get.

Another important thing that the doctor mentioned that I want to emphasize is that when we see a very acute abdominal case we ought not to

delay. I saw a case two weeks ago where the patient had acute pancreatitis. This patient died a few hours after I was called in. It was too late to do anything. I believe one should act immediately, and I don't know of anything that will give you such a striking picture of something seriously happening in the abdomen as acute pancreatitis. There is more shock with it than there is with a ruptured stomach or a duodenal ulcer. Those patients are cyanotic and the pain is worse than one generally sees in an abdominal condition.

I happen to think of two cases that we had in the last year or two who are alive. They have had all this time occasional attacks of very severe pain. I think that is quite to be expected as we know that pancreatitis produces pain.

When the gall-bladder is removed and the patients continue to have pain, we think it is because they had some pancreatitis or hepatitis. That is a pretty good explanation for it.

Dr. Irwin Abell: Answering Dr. Bogart's question, none of these patients presented sugar in the urine at the time of operation.

The two types of chronic pancreatitis that we see are the interlobular type, in which deposition of the fibrous tissue is largely between the lobes of the pancreas, and the other in which the infiltration of the fibrous tissue is an interstitial intra-acinous one and there will be destruction of the cells of the hilus of the lungs. In none of these did we have glycosuria at the time and yet in two of those we have subsequently had glycosuria, increased blood sugar, definite evidence of pancreatic function, and both of those patients at the present time are still under the care of their physicians and I presume will be as long as they live, on account of the deficiency of the pancreas, which is a result from this attack of acute inflammation. When the patient has apparently recovered from acute pancreatitis I think he should by no means be discharged from observation, because in a certain percentage of them you will get the evidences of pancreatic deficiency and in still another percentage you will get pancreatic cyst formation, and such an individual has to consider himself a fit subject for competent observation and care as long as he might live.

The man who has consistently examined the pancreas in every instance in which he has operated for gall-bladder disease knows the importance of the pancreatic involvement in the course of gall-bladder infection is at once apparent.

I presume in our own series of cases where we have examined the pancreas in cases in which we have operated for gall-bladder disease there has been more or less demonstrable disease and alteration in the contour, the shape, the size of the pancreas in at least 50 per cent of such cases. In a percentage of our series we have routinely removed a small piece of the liver for microscopic examination and rarely does your microscope show normal liver and cellular tissue. You will be able to demonstrate an interlobular, interstitial hepatitis with oftentimes fatty degeneration in the liver cells.

If you bear these facts in mind, hepatitis, pancreatitis, colonitis and cholecystitis, then we must, if we wish to deal intelligently with diseases of the gall bladder, look upon this entire system as one unit and not upon each alone; all must be considered really as one system if we wish to approach intelligently the solution of the problems that are presented by diseases which most oftentimes have their origin in the gall-bladder. (Applause).

ADENOMYOMA OR ENDOMETRIAL IMPLANTS IN THE ABDOMINAL WALL*

J. P. PRATT, M. D.
DETROIT, MICH.

Endometrial implants have been observed in many tissues. Apparently they are limited to the lower half of the abdomen or abdominal wall of the female, the majority being near the uterus. According to their location in the abdominal cavity or in the abdominal wall they have been designated respectively intra-abdominal or extra-abdominal. The latter group may be further divided into tumors of the umbilicus, round ligament, and laparotomy scars. The present discussion is concerned chiefly with the implants in scars.

Adenomyoma of the uterus and tubes was first described in 1896 by Cullen¹ and Von Recklinghausen². The first observation of adenomyoma appearing outside the uterus and tubes was made by Russell³ in 1899. Since then the interest in this characteristic growth has increased until at the present time there is an extensive literature on this subject. Great credit is due Sampson⁴ for his valuable contributions which have brought about such widespread interest.

A review of the literature reveals 42 cases to which are added the following four case reports:

Case No. 1—C. K., age 45, not married. Previous operations: Dilatation and curettage and ventral fixation. Dysmenorrhea was noted previous to operation. This was relieved for four years. Then the pain became intense in the lower abdomen during menstruation. Hysterectomy was done. At this time it was noted that there was a very intimate association of the body of the uterus and the abdominal wall. This was consistent with the statement that there was infection and a long convalescence at the previous operation. Following the hysterectomy there was considerable relief from symptoms. A nodule in the scar was noticed soon after operation. This increased in size at menstruation. It was more painful at this time. There was some pain and tenderness throughout the month. No change in color of the scar was noted. The lump was removed 14 months after the hysterectomy. Microscopic section showed typical endometrial cysts imbedded in scar tissue. On examining the scar about the uterus removed at the previous operation the same typical tissue was found. There was no definite encapsulation.

Case No. 2—M. C., age 37, married, no pregnancies. Previous operation 10 years ago through a midline incision. The exact nature of the operation not known but it was probably a ventral fixation. For the past four or five years there has been much pain in the abdominal scar at time

of menstruation. The menstrual flow has been more profuse. Patient also stated that blood came from the scar at time of menstruation. There was some increase in size at that time.

The scar as it appeared at the time of menstruation is shown in Fig. 1. In the middle of the scar there was a dark red nodule, irregular in outline, from which dark blood escaped to the surface of the abdomen. When menstruation was over this closed over but retained its color. The lump was tender.

At operation the mass in the scar was found to be continuous with the uterus. The mass and the uterus were removed. The line of demarcation between the nodule and normal tissue was not sharp. The left ovary contained a tarry cyst.

The specimen removed showed typical endometrial tissue in the scar.

Case No. 3—E. R., age 45, married. Previous operation eight years ago, repair of cervical laceration, appendectomy, and suspension. Two years ago she noticed a small lump in the laparotomy incision for a week before and during menstruation. At that the lump burned and pained. The lump was removed. It extended to the peritoneum but was not continuous with the uterus. It was not definitely encapsulated. The mass removed was 2x2 cm. It showed typical endometrial tissue in scar tissue.

Case No. 4—This is reported here through the courtesy of Dr. F. W. Hartman. Patient, age 41. Complaint, pain and weakness with menstruation. Previous operation, appendectomy 17 years ago. Suspension of uterus 16 years ago. Dilatation and curettage seven years ago. Salpingoophorectomy two years ago, probably for tubal pregnancy. Six months ago she noticed a tender lump in the lower end of the abdominal scar. This was more tender and painful at time of menstruation. Just preceding the period she would have a little dark discharge from the nodule. For the past month the pain in the lump has been constant. Examination showed a hard tender lump at the lower end of the scar. This was removed. It extended through the abdominal wall but apparently not attached to the uterus. The mass was about the size of a walnut, not definitely encapsulated.

Table No. 1 does not include any data concerning the specimens removed. However, a microscopic examination was reported in all instances. Characteristic endometrial tissue was noted. There was considerable variation in the relative amount of epithelium and stroma as well as in the arrangement of these tissues to form tubules, solid bodies or cysts. In about one-third of the cases there was a definite statement that the growth was not encapsulated or sharply defined, when examined during or after removal. The preoperative examination, however, often gave the impression of a fairly well defined nodule. The size of the nodule was expressed by comparison to a cherry, walnut, hazelnut, or chestnut. Measurements varied from 1 to 8 cm. The relation of the growth to the surrounding tissue was not constant. In 10 instances there was a definite connection with the uterus. As many

*Read at the Annual Meeting—September, 1926.

TABLE 1

No.	Year Reported	Age Pt.	Previous Operation	Yrs. after Oper. when seen for lump	Pain in lump at menstruation	Years Duration of lump	Reported by
1.	1903	35	Ventral fixation Salpingoophorectomy	2	Yes	—	Meyer—5
2.	1905	—	Ventral fixation	—	Yes	—	Amos—6
3.	1912	Mid.	Ventral fixation Salpingoophorectomy Appendectomy	6	Yes	2	Klages—7
4.	1915	—	Excision ovarian tumor	—	—	—	Amann—8
5.	1916	Mid.	Laparotomy for perforation of uterus at abortion	4	—	3+	v. Franque—9
6.	1919	—	Ventral fixation	8	—	—	Meyer—10
7.	1919	45	Ventral fixation	20	—	—	Fraas—11
8.	1919	38	Gilliam's suspension Colpoplasty	4	Yes	1¾	Broun—12
9.	1920	30	Suspension	—	Yes	2	Mahle-MacCarty—13
10.	1920	46	Ventral fixation	Several	—	1	Mahle-MacCarty—13
11.	1920	34	Laparotomy for perforation at abortion	9½	—	3 days	Cullen—14
12.	1922	—	Removal of extensive adenomyoma	8	—	—	Cullen—15
13.	1922	—	Cesarean	—	—	—	Cullen—15
14.	1922	—	Cesarean	—	—	—	Cullen—15
15.	1922	—	Cesarean	—	—	—	Sampson—16
16.	1922	—	Cesarean	—	—	—	Sampson—16
17.	1923	30	Ventral fixation Salpingoophorectomy	4	—	3+	Lauche—17
18.	1923	35	Ventral fixation Oophorectomy	2	Yes	1+	Lauche—17
19.	1923	37	Ovarian operation	13	Yes	6	Lauche—17
20.	1923	26	Ventral fixation Ovarian tumor	4	Yes	½	Lauche—17
21.	1923	22	—	—	—	—	Tobler—18
22.	1923	25	Appendectomy Tubal Sterilization	4	Yes	—	—
23.	1923	41	Salpingectomy	2	—	1½	Tobler—18
24.	1923	32	Tubal Sterilization	12	Yes	2	Tobler—18
25.	1923	30	Appendectomy	2	Yes	1½	Tobler—18
26.	1923	38	Ventral fixation	6	Yes	—	Tobler—18
27.	1924	30	Cesarean Salpingectomy Hysterectomy	4 9 7 5	Yes No	1 5	Lochrane—19 Sampson—20
28.	1925	46	Ventral fixation	—	—	1	Lemon & Mahle—21
29.	1925	35	Ventral fixation	4	Yes	—	Lemon & Mahle—21
30.	1925	38	Alexander's suspension	4	Yes	—	Lemon & Mahle—21
31.	1925	43	Ventral fixation	12	Yes	—	Lemon & Mahle—21
32.	1925	30	Suspension	5	—	2	Lemon & Mahle—21
33.	1925	27	Salpingectomy Laparotomy for adhesions	4 2	—	—	Lemon & Mahle—21
34.	1925	36	Ventral fixation Curetage	3	—	3	Lemon & Mahle—21
35.	1925	40	Hysterectomy and Oophrectomy	6	—	—	Lemon & Mahle—21
36.	1925	35	Salpingectomy and Right Oophrectomy Appendectomy	9	Yes	3	Lemon & Mahle—21
37.	1925	24	Ventral fixation	4	Yes	—	Vassmer—22
38.	1925	23	Ventral fixation Salpingectomy	5	—	5 mo.	Rosenstein—23
39.	1925	20	Cesarean and section of tubes	2	Yes	—	Danforth—24
40.	1925	32	Cesarean	3	Yes	2	Heaney—25
41.	1925	38	Suspension and section of tubes (fundus opened)	3	Yes	3	Heaney—25
42.	1925	36	Colotomy Laparotomy for pelvic inflammation	2	Yes	—	Nicholson—27
43.	1926	45	Ventral fixation	4	Yes	1	Here reported
44.	1926	37	Ventral fixation	10	Yes	4	Here reported
45.	1926	45	Suspension	8	Yes	2	Here reported
46.	1926	41	Appendectomy Suspension Salpingoophorectomy	17 16 2	— — Yes	— — ½	— — Here reported

Table 1 shows some of the observations most commonly noted in the case reports.

more specified that there was no such connection. Muscle, fascia, and skin shared in the involvement. In some instances all the layers of the abdominal wall were penetrated by the growth.

The clinical symptoms are few. At times the lump was discovered by accident. Pain in the scar at time of menstruation is the most constant symptom. Table I shows this was present 26 times. The pain may begin before and may last after menstruation. One report stated there was no pain. The others made no mention.

As shown in Figure I there may be bleeding from the nodule in the scar at

time of menstruation quite comparable to the menstrual flow from the uterus. (This was also noted in cases 17, 34, and 37). A few observed a change in color at time of menstruation. Fourteen noted increase in the size of the lump preceding or during menstruation. This is probably more common than is really indicated by the few notations concerning it.

The age of occurrence varies from 20 to 46. The average age is slightly less than 35. From 20 to 29 there were 7, from 30 to 39 there were 20, and from 40 to 46 there were 9.

The duration of the lump average two

years. The shortest time noted was three days while the longest was six years.

The interval between the operation and the appearance of the patient for observa-



Figure 1—Case No. 44, showing menstrual flow from growth in scar.

tion of the lump in the scar varied from 2 to 20 years. The average number of years was six.

The type of the preceding operation was somewhat varied. By far the most common was ventral fixation. Next in frequency was opening of the uterus, either by Cesarean section or perforation during curettage. Suspension of the uterus was most common.

The explanations offered for the origin of endometrial tumors are varied. It seems quite probable that the origin is not



Figure 2—Case No. 44. Uterus with endometrial implant in abdominal wall and portion of the skin attached.

always the same. But in this particular group, in laparotomy scars, the sequence of events is quite uniform; an operation

on the pelvic organs of a woman in the child bearing age; most frequently the procedure involves either the uterus or tubes. After a varying interval a nodule develops in the scar containing typical endometrial tissue. This evidence is all in favor of implantation being the source of the growth.

The lesson to be learned is that endometrial tissue can be transplanted as has



Figure 3—Cross section of uterus with adeno-myoma of uterine wall and endometrial implants in the scar of abdominal wall attached to the uterus.

been shown by others experimentally and by these clinical cases. The possibility of such transplantation should be considered while operating upon the organs containing endometrial tissue. Caution should be used not to traumatize normal endometrium, especially during ventral fixation of the uterus.

SUMMARY AND CONCLUSIONS

1. Implantation of endometrial tissue in a laparotomy scar is not an uncommon occurrence. Forty-two cases are reviewed and four new cases added.

2. It follows, more frequently, an operation in which normal endometrium has been traumatized.

3. Ventral fixation is the most common type of operation preceding scar implantation. Special care should be used during this operation not to penetrate the endometrium.

4. Although the growth in the scar was not encapsulated local excision was sufficient. Two cases recurred of incomplete removal. A second operation relieved both of these.

5. All local symptoms have been relieved by removal of the growth.

6. Regardless of the cause of other endometrial growth this group in the laparotomy seem to be due to implantation.

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SOME PHASES OF DYSTOCIA

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There are several common types of dystocia which complicate labor and which cause the obstetrician a certain amount of anxiety.

In this discussion we do not refer to the types due to early recognizable causes such as contracted pelvis, tumors obstructing the birth canal, or malformations of the fetus, but rather to dystocia occurring in patients with normal pelvic measurements and without abnormalities of either baby or mother.

When a pregnant woman consults her physician for prenatal care, a careful history is taken and a physical examination including pelvic measurements is made in order to ascertain her physical qualifications for motherhood. Assuming no abnormalities are found, he instructs her in the essentials of prenatal care and notes in her record the diagnosis—normal pregnancy, normal pelvis; and the prognosis or outlook—normal delivery at term.

This patient then returns at regular intervals throughout the pregnancy, when the urine is examined, the blood pressure determination made and the patient weighed at each visit.

In the last months of pregnancy she is feeling well, she has gradually gained 15-20 pounds, she has overcome minor difficulties and no abnormalities or complications are found on examination. Now palpation of the abdomen is done to determine the presentation and position, the relation of the head to the pelvis and the size of the fetus. In 90 per cent of the cases the baby is of average size and there is no indication for particular concern about it. But the remaining 10 per cent present one of the problems which confront the obstetrician.

A baby weighing nine or ten pounds, if delivered through the birth canal, usually causes dystocia in a primipara, and we all know that the delivery often terminates only by interference, i. e., forceps delivery, or possibly version and in some cases by Cesarean Section after a long labor.

The child may be injured at birth, may be stillborn or die of asphyxia or cerebral hemorrhage, and the mother not infrequently is deeply lacerated. In addition there is increased risk of puerperal sepsis due to manipulation, and the very certain increase in morbidity rate coincident with operative procedures.

There are several complications of labor which may be directly attributed to a relative disproportion between the baby and the pelvis or to an oversize fetus in a normal pelvis. These include malpositions, such as persistent occiput posterior position, breech, brow and face presentations, asphyxia neonatorum, trauma to fetus, injury to maternal soft parts, operative deliveries, and puerperal infection.

Our inquiry then is—How shall we manage labor in this patient in order to preserve the life of the baby and prevent the possibility of serious complications in the mother?

First and most important is the prophylactic treatment or intelligent prenatal care. This means not a casual examination of the urine and blood pressure estimation to rule out toxemia, but also the careful watching and recording of the patient's weight at each visit. She should be instructed as to the proper diet and not allowed to gain an excessive amount of weight. From the seventh month the abdomen should be examined at least once a month and during the ninth month every week. These examinations are made in order to rule out disproportion between the size of the fetal head and the pelvis, and to estimate the weight of the baby.

Is it possible to make any reasonably accurate estimate of the size of the baby? If an honest attempt is made as a routine measure with each patient, taking into consideration the height of the fundus above the symphysis, the thickness of the abdominal wall, the amount of amniotic fluid and the size of the palpable fetal head at the inlet, then the estimate checked regularly with the true birth weight, it is possible to acquire considerable skill in fetal weight estimation.

It is an error of judgment to advocate interference except when there is definite indication. Yet it is vitally important, if we are to be conservative at the time of delivery, that the fetus be of a size capable of passage through the pelvis.

The estimated date of confinement is often misleading. We calculate nine months and seven days from the date of the last menstrual period as the probable date of the onset of labor. Many women deliver at or near that date, others have seven-pound babies three or four weeks earlier. DeLee states "It is wise to terminate pregnancy shortly after its 275th day," but he states also in the same paragraph that there is no positive method for determining the size of the child. It is my opinion that these statements should

be reversed. We can judge the size of the child with reasonable accuracy, but we cannot tell when conception took place nor when the 275th day arrives.

Whenever there is impending disproportion between the size of the baby and the normal pelvis, the medical induction of labor may be employed to advantage, and will in some instances eliminate the necessity for forceps delivery or Cesarean Section, and prevent injury or death to mother and fetus.

We have employed castor oil, quinine and high warm enemata for the medical induction of labor. The procedure is as follows:

At 6 p. m.—1½ oz. castor oil.

At 7 p. m.—10 grains quinine sulphate.

At 8 p. m.—A high warm enema is given.

At 9 p. m.—10 grains quinine sulphate.

If contractions do not begin by 6 a. m. the following morning, a second enema is given and at 7 a. m. 10 grains of quinine is repeated. If labor does not then begin, a second attempt is made repeating the procedure three days later.

Though medical induction with this method fails entirely in about 15 per cent of the patients, it is successful in the majority and is well worth the trial.

Any operative procedure for the induction of labor carries the risk of infection and should be considered major obstetrics, not applicable to the home. It should be performed only in a well equipped hospital under the best aseptic conditions. The operations are:

1. Stripping the membranes from the cervix.
2. Packing the cervix and vagina.
3. Voorhees bagging with or without rupture of membranes.
4. Introduction of the bougie.

These operations should be in reserve for those cases which do not respond to the medical induction, but used only when the demand for induction is indicated by impending disproportion.

What should be done for those patients who are allowed to go to term or beyond term, and do have oversize babies? A. C. Beck at the Long Island College Hospital resorted to a thorough test of labor in a series of 1,138 clinic cases reported in the American Journal of Obstetrics and Gynecology in December 1922. In this series there were 79 long labors. All but 13 patients delivered spontaneously. Forceps were used in only six cases, either because of a marked change in the fetal heart rate or a prolonged second stage. Two breech extractions were done for the same reasons, and five labors were term-

inated by the low two flap Cesarean Section. Seventy-four of the babies in this series weighed over 8.8 pounds. The experiment required no little courage on Beck's part, and the prolonged labors entailed excessive suffering, even though a minimum of interference was actually necessary.

When we consider, however, that in some of our representative hospitals one out of every eight pregnancies is terminated by forceps delivery, or one in every 25 by Cesarean Section, would not the more frequent induction of labor result in a greater number of normal deliveries and in fewer operations?

Let us now consider a second type of dystocia, one with which everyone practicing obstetrics is familiar. I refer to delayed labor in patients whose pains begin well, and in which there is good progress until near the end of the first stage, or in the second stage when the contractions become weaker and finally stop—the so-called secondary uterine inertia. After a sleep and rest the pains return and are usually strong. This type is best treated by rest which may be given by morphine. Delivery should not be effected when the uterine muscle is fatigued, unless the fetal heart shows signs of embarrassment. Usually this is not the case, because as the pains become weaker there is little pressure on the fetal head. Delivery at the time of uterine fatigue places the patient in danger of serious post-partum hemorrhage.

The third type of dystocia or delayed labor to which your attention is called occurs in both multiparae and primiparae, in patients with relaxed abdominal muscles. The first stage may progress normally with good uterine contractions, but in the second stage, with the head on the perineum, progress stops. The pains continue regularly and strong, but with each contraction the abdominal wall rises and there is no advance of the head when the patient uses her secondary forces. There is but little pressure exerted downward in the axis of the birth canal, but rather outward in the line of least resistance at right angles to the axis of the pelvis. Forceps may be and usually are applied in these cases, but here again the patient is subjected to the risk of infection and often unnecessarily.

Delivery may frequently be effected by the application of a tight abdominal binder which should be used early in the second stage of labor while the contractions are strong. The X-ray shows this effect fairly

well in a patient with a pendulous abdomen. The binder used was designed by Beck and is fastened by means of straps and buckles, making it capable of being applied snugly. When properly adjusted it holds the uterus perpendicular to the pelvic inlet and prevents distention of the weaker parts of the abdominal wall, thereby increasing the intra-abdominal pressure making the bearing-down efforts more effective. The lower straps may be loosened as frequently as desired to allow for auscultation of the fetal heart. The action of the binder is always within our control and in this respect has an advantage over pituitrin.

In conclusion—a reduction in the number of cases of dystocia may be effected by intelligent prenatal care, especially during the last few weeks of pregnancy; by the medical induction of labor in those women who show an impending disproportion between the size of the baby and the pelvis.

In order to reduce infant mortality and maternal morbidity, conservative obstetrics should be the rule at the time of delivery, but good obstetrical judgment and technical skill are requisites when the indications for interference are present. In the interests of both mother and child more attention should be given to the prevention of necessity for operative procedures and their attendant risks.

PREGNANCY AND LABOR FOLLOWING GYNECOLOGICAL OPERATIONS*

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With the exception of amputation of the cervix and fixation of the uterus, there is little in the literature in regard to pregnancy and labor following gynecological operations. Perhaps this has been due in part to the fact that ill results are fewer or less disastrous following some of the other common operations. On the other hand, the proportion of obstetrical patients who have undergone such operations is now so considerable that the possible resulting complications, even though uncommon, are worthy of consideration.

A study of 1,400 hospital obstetrical cases showed that 80 or 5.7 per cent had previously undergone gynecological interference, without taking into account such minor procedures as uterine curettage and cauterization of the cervix. Many of these

*Read at Annual Meeting, September, 1926.

patients had been subjected to multiple operations, so that the number of adnexal operations was 38, ventral suspensions of the uterus 35, plastic operations on the cervix 14, and repairs of the vaginal outlet 16. No doubt the incidence outside of hospitals is lower, yet even there it is probably considerable.

OPERATIONS ON THE ADENEXA

As should be expected, operations on the adnexa were of the least significance during pregnancy and labor. In fact, only one patient out of our group of 38 had any complication which might have been due to the operation, namely, severe abdominal pain during pregnancy which was attributed to adhesions.

SUSPENSION OF THE UTERUS

Round ligament suspension of the uterus, in contrast to ventral fixation, has hitherto received scant consideration. However, it is commonly met with among obstetrical patients (one in every 40 in our series) and may occasionally lead to disastrous results, especially when the unintentional but frequent result of fixation from adhesions occurs. DeLee¹ states that uncomplicated suspensions may cause abortions and abdominal pain, and that fixation by adhesions may lead to abortion, difficult labor and post-partum hemorrhage. J. W. Williams² as early as 1906 called attention to such possibilities and now feels that suspension, as well as fixation, should not be employed during the child-bearing period without sterilization. Manton³ expressed somewhat the same opinion before this society in 1924. Spalding⁴, in reporting a case of rupture of the uterus following suspension, stated that because of this danger, as well as the questionable therapeutic effect on sterility, backache, etc., he practically confined the operation to cases of pelvic varicocele.

The fact that our results do not bear out such views may well be due to the smallness of the series, though in general they are in accord with those of Cragin⁵ and Reyes⁶. Only one of our 35 patients complained of severe abdominal pain. The occurrence of abortion was approximately four times as frequent as in the whole group but still was not high, being three in 35 or about 8.6 per cent. Although the uterus was fixed to the abdominal wall in six of the 32 patients who went to term, no malpositions resulted. Furthermore, in no instance were the adhesions sufficiently strong to displace the cervix enough for serious dystocia. The average length

of labor for the 12 primiparas was approximately 18 hours and for the 20 multiparas seven hours, the longest labors for the two groups being 36 hours and 15 hours, respectively. Twenty-nine of the deliveries were spontaneous, two by breech extraction, and one by low forceps. Bleeding was not increased, the largest amount of blood lost by any patient being 725 c.c., with an average for the 32 deliveries of 240 c.c. as compared to an average of 305 c.c. for the first thousand deliveries in the series.

The after results confirmed DeLee's¹ statement that pregnancy often impairs the operative result. In five, or 15.6 per cent, of the 32 patients delivered at term the uterus was in retroposition six to eight weeks post-partum. The possibility of such a result, as well as the danger and the often questionable therapeutic value, would seem to be sufficient reason for thorough consideration of the circumstances before undertaking suspension of the uterus during the child-bearing period. In the event of pregnancy following such an operation, the obstetrician should be certain of the position of the cervix at the end of pregnancy as a guide to the method of delivery to be employed.

OPERATIONS ON THE CERVIX

It was stated before that consideration of operations on the cervix has been largely confined to amputation. As a consequence, this operation is now seldom performed before the menopause because of the frequency of abortion in the event of pregnancy, or difficult labor should the pregnancy go to term. In the present series of 1,400 there was only one case each of high and low amputation, neither presenting any special features.

The advantage of trachelorrhaphy over amputation of the cervix, so far as future pregnancies are concerned, was pointed out by Leonard⁷ in 1914. He found that, whereas amputation resulted in frequent abortions and dystocia, trachelorrhaphy usually had no such ill effect. Rawls⁸ while finding that trachelorrhaphy might be an even more potent cause of dystocia, agrees that it does not so often lead to premature interruption of pregnancy as does amputation.

In this series there were eight deliveries following trachelorrhaphy, without any special dystocia attributable to the operation. Two labors were prolonged to approximately 25 and 33 hours, respectively, but in each instance labor pains were weak and inefficient. The average length of

labor for the group was 11 hours and 45 minutes, not far from the generally accepted average for multiparas.

The effect of labor on these repairs is of interest. Rawls⁸ found that relaceration occurred in 50 per cent of his cases. In our group it occurred definitely in five or about 42 per cent. In several other instances, where an imperfect operative result had been obtained, the tears were considerably deeper after delivery.

The Sturmdorf⁹ conical excision of mucosa had been done in four cases. If we can judge from the literature, very few pregnancies have been observed following this operation. Magid¹⁰ recorded nine with abortion in one instance but normal labors at term in the others. Coventry¹¹ saw two cases in which there was no ill effect except delay in the first stage of labor. Eastman¹² reported an instance of rupture of the uterus, after 10 hours and 40 minutes of labor, from an upward extension of a cervical tear. Polak¹³ believes that tracheloplasty may have the same effect on pregnancy and labor as amputation, but not so frequently. Among our four cases there occurred one abortion at four months, two premature labors, and only one normal labor at term. In spite of the excellent plastic result of this operation, it cannot yet be recommended, from the standpoint of our present information, for use during the child-bearing period.

REPAIR OF THE VAGINAL OUTLET

More or less extensive gynecological repairs of the vaginal outlet had been done on 15 patients who were delivered at term. No definite dystocia resulted in any case, but relaceration occurred in nine instances, and in four episiotomy was done. Although all were repaired again, and healing was per primum, there was considerable relaxation following several of the tears, apparently due to stretching and separation of deeper tissues. Mesio-lateral episiotomy gave excellent results where employed and perhaps should have been done in the majority of these patients. We consider that we have practically an absolute indication for this procedure when there has been a successful repair of a third degree tear, in order that the weak scar tissue union of the sphincter ends be not jeopardized by tearing or even stretching. Two such patients in our series were treated in this manner with no impairment of sphincter action. Naturally, episiotomy would also be indicated to overcome dystocia secondary to a perineal repair, as in the case reported by Roume¹⁴.

DISCUSSION

Dr. Lewis E. Daniels (Detroit): With regard to suspension as compared with shortening of the round ligaments, the ventral suspension operation should not be done in a child-bearing age as Dr. Siddall said any more than a Sturmdorf operation should be done. I think it is a mistake to perform a ventral suspension for a retroversion anyway.

The shortening of the round ligaments if done according to the technic of Simpson, in which the ligaments are shortened and brought through the internal ring and fastened to the under surface of the fascia, should not give any complications during labor provided the peritoneum has been properly closed, that is, the peritoneum has been closed with its layers turned out so that no adhesions are formed.

I had occasion to deliver a patient who was in her seventh pregnancy and had never had a live baby. In the six previous pregnancies she had aborted or had given birth to a premature baby in each case. Following the sixth pregnancy, she had a Sturmdorf operation done in Ann Arbor. She became pregnant in the summer of last year and delivered in February of this year a full term baby weighing seven and one-half pounds. Her labor lasted for three hours. There was no dystocia due to the Sturmdorf operation. Inasmuch as this operation had been done in order that the patient might carry her pregnancy to term, we felt the result was very good.

I have one other case in mind that I will just mention. It is a case that delivered a full term baby following a Sturmdorf operation without dystocia, and there was no difficulty due to the operation.

Dr. A. E. Catherwood (Detroit): Recently I saw in the literature a case report of rupture of the uterus following Sturmdorf operation. Perhaps some one present will remember who it was by; I have forgotten who reported the case. I had quite a vogue of doing the Sturmdorf operation when it first came out and before we started using the cautery. I have delivered five cases, although I think there are more than that, in which I did a Sturmdorf, and they have all gone through perfectly normal pregnancies with no miscarriages at all, and with no dystocia whatever. None of them were premature any appreciable amount. They have been perfectly normal. Three of the cases were rather elderly primiparae who had had bad endocervicitis. That was the reason for the Sturmdorf. These patients had been sterile until that time, and now they are perfectly well, perfectly normal labors and have live babies.

If a Sturmdorf is done properly, with the proper suturing of the flaps, and done within reason and not really made an amputation, I don't believe it adds anything in the way of dystocia or trouble of any kind to normal pregnancy. That has been my observation.

Dr. Harold Henderson (Detroit): I think it makes all the difference in the world as to what kind of operation is done. The statistics he has collected are operations done by a great variety of men, and the types of shortening the round ligaments are naturally various types. Under such circumstances you wouldn't expect such good results as if the operations had been done by the same man, and the same man had been doing very good work.

I have delivered one patient four times follow-

ing shortening of the round ligaments after the type of operation Dr. Daniels described. Her uterus is up in good position and her perineum is still in pretty good shape. My experience includes several Sturmdorfs without any particular dystocia. Also myomectomies and resections of the tube. Most of the gynecological operations can be done with safety with regard to the future obstetrical case if the gynecologist bears that in mind. The chief difficulty is a great many men in doing the operation do not think about the patient having childbirth again. Under those circumstances, I think many things are done which do make dystocia possible.

Dr. R. S. Siddall (Detroit): My series of cases is too small to draw any conclusions from, and I am glad to hear of other cases reported after suspensions and Sturmdorf; still in those series we have the same limitation. The series are also too small to draw any hard and fast conclusions.

With regard, though, to the shortening of the round ligaments trouble has been experienced. So much so that Williams in his textbook reports a number of cases of shortening of the round ligament with extreme difficulty in at least four, I believe. He states he does not believe in any type of suspension and especially fixation during child-bearing period.

I have a patient at the present moment who was operated on by a very capable surgeon who shortened the round ligaments. I saw her the fifth month, and it was evident that the uterus was adherent to the abdominal scar, and even at that time the cervix was pulled up as high as the promontory of the sacrum. The final outcome of the case will depend upon whether the adhesions are dense enough to hold the uterus up in its present position.

With regard to the Sturmdorf operation, I have no doubt if it is done properly that it will not give any trouble; it should not; the muscles should not be touched. On the other hand, because of the difficulty of dissecting away all of the mucosa and not touching the muscles. I doubt whether the results would always be good. There is no definite line of clearance. It is almost necessary to get out some of the muscle.

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FOREIGN BODIES IN EYE BALL*

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The subject of penetrating foreign bodies has been gone into with such great thoroughness by many practitioners of vastly greater experience than mine in this field, that modesty should hinder me from presenting it before this audience. As we must, however, consider each case of foreign body in the eyeball as a law unto itself and in view of the difficulties of procedure and uncertainty of results, the report of a few cases selected for their diversity may bring out a profitable discussion and helpful suggestions for the future. The procedure used will be mentioned as each case is presented. I wish to emphasize, however, the necessity, becoming to me more apparent all the time, of the surgeon not taking anything for granted—that is that every eye injury should be considered guilty of the presence of a foreign body until proved innocent. In other words when there is the slightest possibility of a foreign body being present the X-ray should be resorted to, followed by localization with Sweet's localizer when its presence is established.

My thanks are due to Dr. Vernor M. Moore, of Grand Rapids, whose charts and pictures I am showing at this time, for his careful and accurate work.

CASE REPORTS

The examination of the right eye with numerous radiograms fails to show a foreign body which can be definitely interpreted as such. We are therefore unable to find any points which can be considered as foreign bodies, and are therefore unable to localize in this case.

Foreign body localized 12 millimeters back of cornea, one millimeter below center, and eight and a half millimeters to temporal side.

Case 1—J. G., age 32, struck in right eye by sliver of steel, January 27, 1925, while hammering. When first seen, the day following the injury, a small central wound of the cornea was evident, as well as an opening in the lens capsule about 3 m.m. from center of cornea. No wound of iris was made out. After dilating pupil a beginning opacity of lens was apparent, Vn 20/200. An X-ray taken at this date showed the location as in

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chart, the foreign body of very minute size being suspended in the vitreous—having traversed the entire thickness of the lens. At this time the large magnet was applied, but no effect was had on the position of the foreign body.

The lenticular opacity gradually increased, vision reduced to 10/200 a week later, and two weeks later to indistinct form perception. The eye remained practically free from inflammatory reaction and further operative measures were refused by the patient.

The curious feature of this case was that an X-ray taken two months later failed to reveal any foreign body; owing to its small size it had evidently become oxidized and absorbed.

The examination of the left eye for injury 1/16/25—foreign body—was carried out as follows: Radiograms made on the same film, first with the eye directed downwards and then with the eye directed upwards,—the foreign body was seen in the region of the orbit, which was in the lower part, and on looking upwards moved with the vision, and somewhat anteriorly. This is interesting because it checks up with the Sweet localization. With Sweet localizer, the foreign body was measured as $2\frac{1}{2}$ m.m. by 1 m.m., and is located 8 m.m. back of the cornea, 9 m.m. below, and 2 m.m. to the temporal side. It therefore appears to be lying in the vitreous, along the floor of the globe.

Case 2—N. DeR. struck in left eye January 15, 1925, by sliver of steel, while hammering. Patient called at my office, but no foreign body was found. A small apparently superficial wound of conjunctiva at outer canthus. Patient was given simple treatment, and told to return in a few days if eye caused any trouble. Vn. 20/20. This patient was not seen again until April 8th, when patient returned complaining of some failure of vision and some discomfort in eye. Examination showed a slightly dilated pupil, numerous floating vitreous opacities and a generally hazy vitreous, but a fairly distinct view of fundus could be obtained. Vn. 20/40. An X-ray was taken revealing the foreign body as shown in chart. With a fully dilated pupil the foreign body could be seen. The foreign body having been in the eye for so long a time a consultation was had with Dr. Parker, who after getting identical results with the Sweet Localizer, advised removal through the Scleral route. This was accordingly done on May 6th, 1925. A flap of conjunctiva was dissected and the sclera exposed—a superficial suture was introduced on both sides of the proposed incision, the incision made by plunging a cataract knife through the sclera so as to make an incision coinciding with Antero-posterior axis of the eye. The tip of a portable magnet was applied to the wound and the foreign body removed without loss of vitreous. The scleral wound closed by one stitch and two stitches in the conjunctiva. Recovery was uneventful, patient leaving the hospital in 5 days. Vision gradually improved, being 20/50 three weeks after operation and 20/40 about six weeks later. This condition remained the same until 6 months later when an extensive retinal detachment in the opposite pole of the eye occurred, reducing vision to indistinct form perception—where it has remained ever since.

The examination of the radiograms of foreign body in eye, with Sweet localizer, shows the foreign body 10 x 5 millimeters, lying 6 millimeters back of center of cornea, 11 millimeters below, and neither to temporal or nasal side. The lo-

calization was made of the edge nearest to the lower border of the eye. We assume therefore that the foreign body lies outside of the globe, in the median line, 11 millimeters from center of eye-ball. The long axis is antero-posterior.

Case 3—H. S., age 42, was struck in left eye by piece of metal while using a punch hammer—was seen by another surgeon at that time, and an X-ray picture taken showing a large foreign body apparently embedded in the lower wall of the eye-ball. Was advised at that time that no attempt at removal should be made. I saw this patient six weeks later as he was suffering some discomfort and there was a beginning discoloration of the eyeball and adnexa. An X-ray taken at this time with the localizer showed a very large metallic mass, which although in intimate contact with the lower anterior part of the sclera had not apparently perforated it. The eye being already sightless, and thoroughly disorganized by the violence of the injury, there was no question except to relieve discomfort. The operation was postponed for one reason or another, principally by the refusal of the employing company to stand the expense, but was finally undertaken at the patient's own expense on February 16th, 1926, more than seven months after the accident. At this time the conjunctiva was thoroughly discolored by iron rust and the eye very uncomfortable. The removal was comparatively easy and done under a local anesthetic, although the foreign body was encapsulated and firmly attached to the sclera. The location of foreign body, which measured 10x7 m.m. and weighed 15 grains, is shown in the chart and accompanying picture.

The examination of the right eye with approved Sweet localizer, shows the foreign body about one by two millimeters in its dimensions, lying 26 millimeters back of the cornea, one millimeter below, and three millimeters to temporal side. This localizes in the normal eye back of the globe, the normal eye measuring from 23 to 24 millimeters in antero-posterior diameter. Inasmuch as the wound of entrance is directly over the center of the cornea, the foreign body must have passed through the lens and through the posterior part of the eye. Two independent localizations were made, showing a variation from each other of one millimeter in antero-posterior diameter. Both however localize outside of the eye. It is within the margin of error possible that the foreign body may be located on the sclerotic coat in the posterior part of the eye. We prefer to assume, however, that it is entirely outside of the globe.

The examination of the stereograms of the skull with particular reference to the right eye, for injury 6/1/26 when hit face against table, shows the following: There is a foreign body shaped something like an arrowhead, with the point projecting to the median line below the splenoid, and the outer or blunt end, lying at the inner side of the right orbit. It, therefore, inclines downwards and toward the median line and backwards from the nasal side of the orbit, to the point above indicated. It is regular in outline, has a flange on the anterior part, and is apparently hollow, as shown by regular area of lesser density extending from the anterior end towards the point. It is of a density less than metal, and of about the consistency of a piece of bone. We are unable to identify the material in this foreign body.

Case 4—P. S., age 28, injured in same manner

as other cases, that is while hammering on steel—July 17, 1926. Was seen immediately after the accident. At this time there was a central wound of the cornea, through which aqueous was escaping. The following day after the anterior chamber had re-formed and the pupil dilated by atropine a central wound in the capsule and beginning milkiness of the lens could be seen. The X-ray shows the foreign body having traversed the entire eyeball, and lodged in the tissues of the orbit. In the course of a week the entire lens had become opaque and vision reduced to indistinct form perception. No operative measures were undertaken in this case as there was no hope of extracting the foreign body, and the patient refused extraction of the lens. The result would be very uncertain as it is quite likely the foreign body traversed the macular region.

Case 5—L. S., age 22, was admitted to hospital June 1, 1926. His account of the accident was that in scuffling with a fellow employe he had slipped and in falling had struck the right eye on the corner of a table. Was seen by interne and surgeon in charge, who found a wound in upper lid of right eye near inner canthus which was considerably swollen, and bleeding freely. The wound was stitched and the patient put to bed.

Ten days later I was asked to see and take charge of the case by the first attendant as the eye was nothing well. At this time there was very extensive swelling of the tissues surrounding the eye and a tremendous chemosis of the conjunctiva which prevented the closing of the lids. The eyeball apparently was normal, cornea clear, vision good, pupil reacting normally, no fundus changes. The conjunctiva was scarified on June 11th and again on June 16th, and diathermy used daily—by June 19th patient was able to close the lids, and insisted on returning to his home which was in another part of the state.

Reappeared again in my office about six weeks later, about August 18th, complaining only of double vision. On examination I found the right eye markedly deviated to the right, and downward. A hard mass could be felt in the upper inner angle of the orbit which I took to be a dislocated fragment of fractured bone. The X-ray shows what actually was present.

We have been unable to locate this patient since that time until Monday, September 13th. On this day there is more swelling of upper lid and some discharge from eye which the patient attributes to having taken cold. He was very much surprised when shown the X-ray picture and still adheres to his original version of the accident—so that the nature of this foreign body will not be known until it is extracted. This, I hope to do next week.

DISCUSSION

Dr. Don M. Campbell (Detroit, Mich.): I am sure we have all enjoyed Dr. Rogers' very unusual and interesting series of cases which he has presented to us in his usual scholarly manner. The cases themselves were all of extreme interest and many of them are unique.

I don't know that I want to particularly discuss the individual cases excepting just to say a few words about the general subject of foreign bodies in and around the eye.

The first thing that strikes one is that the subject itself has become of very great interest and very great importance, as compared with a few years ago.

If you will allow me, I should like to put on

one slide that is part of a paper which I read last year. However, it went on to say that the subject had become of very great importance and it just was a little thing in general literature that showed how important the whole subject of industrial injuries had become in America during the last ten years. There are so many different places that a foreign body can be situated that one can say very little in a general way about the general subject of foreign bodies but must judge every single case individually.

Slide. Here is one that is situated in the cornea, and there is only one route by which this foreign body can be removed; that is by the careful dissection in front of it through the corneal layers and then the application of a magnet to the wound and the extraction of the foreign body in that way. The thing that can happen to that foreign body is that it may drop into the anterior chamber and there become a true intra-ocular foreign body, in which the case the diagram we have now represents the situation and the foreign body can be extracted by corneal scleral section and the application of the magnet to the wound.

We have this slide that I wish to put on for a moment so that we can just get a vivid idea of the importance of this thing.

The importance of medical and surgical work to modern industry is well illustrated by the fact that in January, 1926, the American Academy of Political and Social Science, in the edition of their annals, devotes its entire issue of 224 pages, made up of 43 articles by the foremost executive industrial surgeons, safety engineers, teachers, publicists and government experts, to the consideration of the various phases of industrial saving, so that the relation of the profession to industry has become an extremely important one. Now, of course, it is a very simple matter to remove that foreign body; it can be removed without any difficulty.

Here is one that represents a little different problem. This foreign body is lodged in the iris; it has gone through the cornea, through the anterior chamber and is lodged in the iris. We do a lot of these things to get ideas into your head that certain things should be done in a certain way. In order to get this foreign body out, you have got to do two things. You must dislodge it in the iris and you must extract it from the anterior chamber. The practical thing that has come by a rather long experience is that the way to do that is to extract it, if possible, from the iris before you open the anterior chamber. You can do this very frequently by a strong magnet pull. It is very much easier to extract the foreign body from the anterior chamber if it is loose in the anterior chamber than if you have to drag it out from the iris after you open the eyeball.

Here is an extremely critical situation. This is a picture, all of these are drawn from cases, and they are extremely difficult to handle, especially this type.

Here is a man who had a small piece of steel perforate the eyeball and the X-ray showed that it lodged in the sclera body. His vision was three-fourths, his eye absolutely uninjured, the normal eye as it had been before injury; his vision was perfect in every way. The problem was how to extract this thing without injuring the eye. First we made very accurate localization. You can get a fairly accurate localization usually by the X-ray, but in a case of this kind the X-ray localization is not quite accurate enough to tell you

just where you have to go down through the sclera in order to reach this place, and sometimes a very careful examination of the eyeball will show the wound entrance. Sometimes the wound is so small that in the course of a day it disappears and then it is extremely difficult by inspection to tell where the thing went in, at least there is a great deal of difference when we make the approach two or three millimeters to one side.

We have found that there are two things that will locate and tell exactly where that foreign is. Sometimes we get them one way and sometimes another.

This particular case was gotten by examination in which Dr. Carter, who is associated with me in this kind of work, was able to find that the sclera and the conjunctiva had become adherent at a certain point in the neighborhood of this wound and so he judged at that point it must have been that the foreign body passed, and by dissecting down through the conjunctiva and then dissecting down through the layers of the sclera we were able, by the introduction of the magnet into this small aperture we made over this section, to extract this foreign body without entering the eyeball, which insured, of course, a perfect normal eye in the future. A very much different story might have been told if he had entered the interior of the eye and searched around with the sclera and in that case there is a certain magnet point to find this. Sometimes you can't even find adhesion between the conjunctiva and method by the use of the magnet by which we are able to tell.

This is a very interesting point in accurate, minute localization of the presence of foreign bodies situated any place within the eyeball if you can get into contact with the sensitive tissue. That is, it would be of no use, for instance, in trying to localize in the lens or in the vitreous if it was not possible to draw it into contact with the vascular and nerve construction of the eyeball, but with this method I am going to tell you about in the particular case we have just had, it helped out very much in the localization of the foreign body.

Slide. That would have been the other method, the next best method. To remove it, would be to drag it into the anterior chamber through magnetic pull and then out through the cornea, which we are able to do sometimes.

Slide. Here is a very interesting problem in intra-ocular foreign bodies, the fetching of foreign bodies in the lens, and we have two diagrams here that indicate what the situation may be. In this particular one the foreign body lies in the lens but a piece of it sticks out in the anterior chamber. That is a condition that cannot be left and must be dealt with immediately because the iris contracting will come in contact with the foreign body and there produce irritation, produce iridocyclitis eventually and come in contact with fluid of the eye; the iron becomes oxidized and a condition of siderosis is brought about.

Slide. Here is the other situation that occurs in foreign bodies of the lens. That is where the foreign body is imbedded entirely in the lens, surrounded by the lens tissue. I believe that in the majority of cases of this type it is far better to leave this foreign body alone and then extract the foreign body and cataract by the ordinary cataract extraction. The thing can, however, be dragged out in the anterior chamber and be removed as an anterior chamber extraction, but at least in our experience the foreign body is best

handled by allowing it to cataract and then extracting the foreign body and the cataract together.

If you have one of these foreign bodies and don't know the exact location of it, take the small point of the ring magnet and go around the ring with it, touching it at different places; it is perfectly astonishing how accurately the patient will say that that is where he has the greatest pain. It adds a great deal of accuracy and precision to the localization of the foreign body.

In conclusion I just want to show you we have many other of these possibilities in foreign bodies. When I first began to be interested in intra-ocular foreign bodies, the usual way, and the only way known to extract these things was by a scleral puncture as is shown in this diagram. However, we almost always got the foreign body; that was not difficult at all, but almost all of these cases eventually, as the case that Dr. Rogers described to you, ended in the destruction of the sight, so that it became imperative that some other way be devised of getting these foreign bodies out other than making a scleral puncture. Ten of 15 years ago scleral puncture was the usual thing; now that has become the exception. At the present time we very, very seldom make a scleral puncture for the removal of the foreign body in the vitreous.

We have been able, by a refinement of magnet pull manipulation, to drag these cases of foreign body up through the suspensory ligament into the posterior chamber, out through the pupil to the anterior chamber and then have it removed. It is a very rare thing when we are not able to do that now, but sometimes it cannot be done and then we must resort to the use of the scleral puncture.

One kind of case that is likely is the case in which the foreign body is extremely small, and, consequently, in the magnetic arc the magnetic pull is very weak; consequently, it doesn't draw it out through the anterior chamber.

We are not losing sight in as many of those cases where we do a scleral puncture as we formerly did because it has become impressed upon us that if we can keep these patients lying down for 10 days after, the attachment is not so ready to take place and it also minimizes the disturbance within the vitreous body and adhesions will not take place. This is impressed upon us by the case of a young man who had one of these foreign bodies six or seven years ago and who insisted upon having a general anesthetic given. We gave him a general anesthetic of ether, and the day following he had ether pneumonia and was very ill; he was in bed over eight weeks. He forgot all about the eye and when he got up the eye was perfect and has remained perfect to the present day.

We have felt from that experience that the ill effects of the puncture might have been minimized by keeping the patient on his back for 10 days or two weeks after the operation.

I am going to show you a thing of historic interest. This is one of the earliest treasures I have in the treatment of intra-ocular foreign bodies. Then I am going to show you my most modern treasures.

This is a picture of an X-ray taken in the early part of 1879. You will remember that was probably 14 or 15 months after Roentgen gave his monograph to the world on the X-ray in 1895. This X-ray was taken before there was an

X-ray expert in Michigan. There may have been an expert some place in America, but there was no X-ray expert in the medical profession in Michigan when that picture was taken. It was taken by one of those curious fellows obsessed with the X-ray and the idea that electricity governs all things, even life; that life is dependent on electricity, and still he was an X-ray enthusiast. He lived out at the county house at Eloise, not as an inmate, and he had one of these static machines. As soon as he found out about the X-ray, he got one of these tubes and this is the picture that was taken at that time, many years ago. You can see the foreign body. Of course that was long before there was such a thing known as localization, long before Sweet's chart was ever thought of, and we are fortunate in getting this thing out by finding an incision and taking it out by a small hand magnet. That is my oldest treasure in this work.

Now I am going to show you my newest one, one that I think has done a great deal to make the work of extraction of foreign bodies more precise, more easy and better gotten at, and that is the Ring magnet which has displaced in our work the ordinary giant magnet or the magnet of Cobb, or the Victor magnet that is used in this country. This magnet perhaps does not give you quite as strong a pull as some of the larger magnets, but it certainly gives you the greatest amount of illumination of your field and the field of illumination is as good as it is during cataract operation and it gives you absolute control of the direction of your magnet pull.

The counterweight here is lowered over the head of the patient. The patient's head sticks up through the ring and then in that position the various pencils are introduced through the magnet arc and through those pencils to get the magnet pull. If you wish to convert your magnet into a giant magnet of the ordinary type, this can be used, but these are hand instruments and are held in the magnetic arc in front of the eye; the magnetic pull is directly up through the long axis of this pencil and under the most perfect illumination you can direct and vary the magnetic pull any degree and amount that you may wish.

CLINICAL ASPECTS OF LARYNGEAL CANCER*

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Since the earliest days of medical science the cancer problem has assumed an important role in progressive medicine. The medical scientists endowed with persistent enthusiasm have struggled to bring to life new facts concerning this malady, while the clinician grasping each new theory has put forth an inexhaustible effort to combat the disease. To most of us the sum and total of this toil appears to be of little value when estimated in terms of real service to our patients for we have frequently watched our earnest and well directed efforts ruthlessly cut by malignant advance

and in the face of numerous failures have lost our desire to continue any longer as eager experimentalists. To one endowed with a practical sense of value however comes the feeling that within the last decade research and experimentation have brought forth certain measures which occasionally tend to control, if not actually eradicate malignant disease.

It is doubtful if the laryngologists as a whole have kept pace with medical and surgical progress as regards malignant disease. They have long realized the serious nature of cancer and the hazards attending its treatment and have passed their cases on to the X-ray or radium expert, that they might give their attention to phases of the specialty productive of more satisfying results.

The writer realizes that the concrete achievement of this paper fails to disclose any new discoveries. Its only justification perhaps lies in the fact that it brings before you an old subject of no little importance to the laryngologist with clinical data which may be of some service in the diagnosis and rational treatment of laryngeal cancer.

References to the subject and the statistics herein compiled are made from a careful analysis of 100 consecutive cases of cancer of the larynx examined in the Department of Otolaryngology, University Hospital.

In the matter of etiology we are without scientific facts. The postulations or irritative stimuli such as chronic inflammations, as well as hereditary influences are noted in nearly every treatise on malignant disease but after years of diligent research they still remain etiological factors in theory only. Social standing bears little relation to its occurrence since it is as frequently seen in those enjoying ideal conditions in life as in the poor.

The age incidence is similar to that of carcinomata occurring in other parts of the body. It is more common after the age of 40. In our series 75 per cent occurred between the ages of 50 and 65. The youngest patient was 29 and the oldest 84.

From the standpoint of sex incidence it is a noteworthy fact that of 100 cases studied, malignant disease of the larynx was observed in but 14 females. In our experience laryngeal carcinoma has been about seven times as prevalent in males as in females.

Symptomatology needs but brief mention. Altered voice is no doubt the earliest symptoms. Its presence depends upon the

*Read at Annual Meeting, September, 1926.

location and extent of the lesion. A new growth involving the supra or infra-glottic regions may attain considerable size before arousing suspicion that the larynx is the seat of a disease process. When hoarseness does appear, its insidious development an dcommon occurrence in practically all forms of laryngeal disease gives but little warning of the serious nature of the lesion present. It is an interesting fact that in our series of cases, 80 per cent of the patients appeared for examination six months or more after the initial symptom—hoarseness. Fifteen per cent sought advice in the fourth or fifth month of their illness but in not a single instance could we discover that the patient had consulted a laryngologist until more than two months had elapsed since the onset of laryngeal symptoms. It is obvious therefore that in rapidly proliferating neoplasms of the larynx the lesion has already assumed serious proportions when the first laryngeal examination is made. Pain referred to the pharynx or ear occurred only in those cases where a mass of a considerable size with oedema and infiltration of the surrounding tissues was discovered. Purulent and blood stained expectoration, dyspnoea, and dysphagia appeared as late symptoms of the disease. Seventy per cent of our series presented a number of the latter symptoms; evidence that they were in extremis and beyond surgical relief.

Metastasis occurred as a late development in the cases studied. Only 12 per cent revealed palpable cervical glands which were considered clinical evidence of metastasis. Radiographs of the chest were taken in 10 cases where it was believed that metastasis had taken place on account of the patient's extreme condition but in only two instances were pulmonary carcinoma found. Six autopsies were performed. Three patients died of bronchopneumonia and lung abscess and were free from metastasis. One showed metastasis to the deep cervical lymph nodes of the anterior chain and in another case both the cervical glands and the lungs were the seat of malignant invasion. One post mortem revealed a malignancy of the prostate gland as well as of the larynx but microscopical examination of the new growths demonstrated that the neoplasm in the prostate was a primary adenocarcinoma while that of the larynx was a primary squamous cell carcinoma each developing independently of the other. Clinical observations as well as post mortem

examinations would seem to substantiate the opinion that metastasis is usually a late development in the course of malignant neoplasms of the larynx. If this is true the urgent need of the day is an early diagnosis and a surgical technique that will completely dispose of the primary focus.

The diagnosis of laryngeal cancer is not always simple. It is not infrequently mistaken for other ulcerative processes within the larynx notably tuberculosis and syphilis although a thorough clinical study of the case in question usually reveals the true identity of the lesion. It is a noteworthy fact however that syphilis and cancer of the larynx may occur simultaneously for there is plenty of clinical as well as pathological evidence in support of the fact that malignant degeneration occasionally develops on a gummatous base. Three cases in our series showed on microscopical examination a tertiary Lues combined with a squamous cell carcinoma of the larynx. It must be remembered too that a pathological examination does not always clear the diagnosis. When the tissue submitted included only the superficial parts of the lesion and fails to contain its mucous membrane attachment the pathologists may find only histological evidence of a papilloma and report no signs of cancer present. In the writer's experience this error has occurred often enough to convince him that a negative report from the pathologist does not relieve the laryngologist of further responsibility in the case. The presence of suspicious clinical signs of malignancy should serve to leave the diagnosis an unsolved problem deserving of further study. A piece of tissue taken from the periphery of the lesion which includes its attachment to mucous membrane is likely to reveal under the microscope the true nature of the new growth.

As previously stated 70 per cent of our patients were the victims of far advanced laryngeal cancer. They were beyond the reach of surgical interference and hopelessly lost. Apparently a large proportion of these patients did not receive a correct diagnosis or failed to comprehend the seriousness of their illness until late manifestations of the disease appeared. Others had received dilligent anti-syphilitic treatment over a long period of time, while another equally unfortunate group seeking conservative measures had placed their confidence in radiant energy or widely advertised serums only to despair in the late stages of malignant disease.

TREATMENT

The present unsatisfactory and unsettled knowledge of the treatment of cancer precludes the possibility of stating any definite rules referable to the therapeutic measures to be employed when the larynx is the seat of malignant change. There is a diversity of opinion among eminent laryngologists but they probably agree on one premise, namely that cancer without metastasis is controlled for an indefinite time or possibly cured when the primary lesion is entirely removed. If this is an accepted opinion, then how may such be accomplished? On the available methods of treatment which one will we employ? The answer to this question is entirely dependent upon the character of the lesion in question. Is it a large fungoid mass deeply infiltrating the submucosa and perichondrium, or is it a small circumscribed lesion definitely limited to the superficial tissues and not advancing into the deeper structures of the larynx. Is it distinctly visible on or above the vocal cords or is it situated in the subglottic region more or less indistinct in the reflected image of the larynx in the mirror. These are some of the very obvious questions which necessarily confront the laryngologist when he is to pass judgment on the method of attack. Laryngeal cancer may occasionally assume the character of an epithelioma similar to that found on the skin of the face or other cutaneous surfaces of the body. It may be of small proportions, slow growing, definitely limited to the superficial tissues and free from extensive infiltration. When such a lesion exists and is readily accessible from above it is reasonable to assume that it may be successfully eradicated by direct or indirect laryngoscopy with biting forceps and cautery. Perhaps too this type of lesion lends itself to destruction by radiant energy although in the writer's experience X-ray and radium treatment of laryngeal cancer has been very discouraging. It is true that radium treatment enjoys enthusiastic support in many quarters but the writer has yet to see a single case of laryngeal cancer cured by radiant energy alone. Most of us can bear witness to the fact that small malignant lesions of the larynx have been successfully destroyed in a few instances with laryngeal forceps and cautery by direct or indirect laryngoscopy. When the diagnosis is made early and the lesion is small and definitely confined to the superficial tissues, it is reasonable to expect that the biting forceps, cautery, diathermy, one or all of them may oc-

asionally destroy the entire new growth and render a cure. But how are we to know when we are dealing with such a lesion? This is the all important question and one frequently difficult to answer. Here again I believe we must return to the methodical methods of practice and rely entirely upon the clinical behavior of the neoplasm to determine whether or not radical or conservative interference is necessary. Little can be gained from a microscopical study of cell type. If the pathologist can give us information referable to the extent of infiltration his report is of much value but to place great confidence in an analysis of cell type may lead to an error in judgment. Repeated observations and a careful study of clinical behavior is in the writer's opinion the most important guide in the selection of the method of attack.

Once satisfied that we are dealing with a laryngeal neoplasm that demands radical surgical interference we have at our disposal the choice of two procedures, thyrotomy with submucous resection of the tissue involved or laryngectomy. While the former operation has the enthusiastic support of several laryngologists it has not been productive of satisfactory results in our hands. One has only to study the microscopical section of a rapidly proliferating cancer of the larynx with its far reaching invasion of perichondrium to understand the difficulties involved in an attempt to strip the cartilage free from every vestige of cancer. Following thyrotomy and extensive resection of the intralaryngeal tissues exuberant granulations may fill the larynx which if converted into fibrous connective tissue forms a complete stenosis. When such a process does occur the larynx is rendered a non-functioning organ and the surgeon left with no assurance whatsoever that the malignant process has been entirely eradicated.

Thyrotomy or laryngofissure is an operation commonly recommended for those cases of laryngeal cancer in which not more than the anterior one-half of one vocal cord is involved. It is not a procedure of choice when the arytenoid region or the posterior extremity of the cord is the site of the lesion. Neither is it employed when opposing cord surfaces are affected or when the infiltration has extended into the anterior commissure. No doubt small superficial lesions definitely limited to the anterior one-half of one vocal cord and not infiltrating the perichondrium can be successfully removed by this method. Nevertheless it is reasonable

to assume and in fact has been demonstrated that this type of lesion lends itself to complete destruction by the more conservative methods above mentioned. If in a given case it is necessary to remove all the perichondrium from the thyroid cartilage on one side, then the operator is placing unwarranted confidence in the submucous resection of the larynx for such an accomplishment is practically impossible. The perichondrium does not strip with ease like that of the costal or septal cartilages for example, on the contrary it is firmly attached to the thyroid cartilage and after a most painstaking dissection there still remains a roughened surface with scattered patches of fibrous tissue any of which may harbor nests of cancer cells. To the writer it would seem less speculative and more in keeping with good judgment to completely extirpate the larynx in those cases where there is clinical or pathological evidence that the neoplasm has invaded the deeper structures. By such a method alone can the surgeon have reasonable assurance that every ramification of the new growth has been removed.

The most important contraindication to the laryngectomy is malignant metastasis. Several laryngologists have emphasized with force the crying need of careful metabolic estimations, functional tests of the kidneys, cardio-vascular examinations, etc. and in the face of abnormal findings have advised against the laryngectomy. It is obviously unwise to operate upon the patient who is so nutritionally impoverished or constitutionally undermined that the mere administration of an anaesthetic is a grave risk to his life but too much importance must not be given to those constitutional diseases which are so frequently the more or less normal affects of advancing years. The general surgeon does not expect all of his gall bladder and prostrate patients to have normal cardio-vascular-renal systems and metabolic rates, neither should the laryngologist insist upon such ideal conditions when dealing with so grave a malady as laryngeal cancer. When the patient's condition will tolerate any major surgical insult he is by the same token a good risk for laryngectomy.

The technique does not differ in many respects from that employed by Keen, Jackson, McKenty and others. We have adopted the general underlying surgical principles which are practically the same in all methods, making here and there a few departures from the general rules

when such seemed to fulfill the requirements in the given case.

The entire operation was performed under local anesthesia. In this the technique differed from the usual method employed which calls for a local anaesthetic in the soft tissue dissection and ether anaesthesia when the larynx itself is extirpated. Complete removal of the larynx under local anaesthesia has certain obvious advantages in that there is less danger of post-operative aspiration pneumonia and little likelihood of troublesome vomiting occurring when patient is reacting. A solution of apothosin one per cent, potassium sulphate two per cent, calcium chloride two per cent is used freely, in the soft tissues of the neck with both superficial and deep injections. Two to three ounces of the solution are used in order to thoroughly infiltrate all of the soft tissue within the field of operation.

An incision is made in the median line of the neck extending from the hyoid bone down to the suprasternal notch. A transverse incision is made at the upper end of the verticle one. It may be only necessary to carry the latter though the skin and soft tissues down to the superficial muscles in order to secure retraction of the wound margins and adequate exposure of the field of operation. The soft structures are then freed from the lateral wall of the larynx beginning above at the thyrohyoid membrane and extending down to the third or fourth ring of the trachea. The dissection is made as closely as possible to the larynx and trachea.

The larynx is then severed from the trachea and the stump of the latter brought forward and securely sutured with several deep retention sutures and many smaller interrupted ones to the skin of the neck. Close approximation of tracheal walls and skin is an ideal to be accomplished. There is enough relaxation of the oesophagus to permit of the trachea being anchored to the skin in this manner without dissecting the latter free from the anterior oesophageal wall. The avoidance of separation of trachea and oesophagus would seem to obviate the danger of infection descending between these two structures into the mediastinum although the stump must be firmly fastened to the skin since it shows a great tendency to retract later into the depths of the wound. It is obvious that such an accident would defeat one of the most important surgical principles of the operation, namely the prevention of flow of secretions downward into the lower respiratory tract. The

larynx is now drawn forward and upward and with a blunt dissector and finger, freed from the anterior wall of the oesophagus. Care should be taken not to buttonhole the oesophagus during this process. The superior horns of the thyroid cartilage are cut with scissors, a pack placed into the hypo pharynx through an incision in the thyrohyoid membrane and the larynx lifted out of the neck.

With the larynx removed one finds a V-shaped rent in the upper part of the anterior oesophageal wall which should be carefully closed with two lines of sutures, one of silk through the mucous membrane and submucosa buried by a second of cat-gut through the musculus. A similar line of sutures unites the anterior lip of the oesophagus to the free edge of the anterior wall of the pharynx. The skin incision is then closed by one large mattress suture placed at the junction of the transverse and verticle incisions together with the sutures necessary to close a part of the former. A single piece of perforated rubber tubing serving as a drain is placed in the wound with ends protruding through either extremity of the transverse incision.

The lower part of the wound is not closed but left widely open with one or two iodoform packs inserted. This would seem to have some points of advantage in that part of the operative field in which infection is destined to occur is adequately drained and left accessible to cleansing measures at all times. In the healing process which follows there is a natural tendency for this wound to close spontaneously or it can be closed later when the opening into hypo-pharynx has sealed and infection is no longer active.

Too much emphasis cannot be laid on the importance of careful post-operative attention. Preparation is made to combat shock and the patient is placed in bed, with lower extremities elevated and shoulders lowered for the first 24 hours after operation. The second day less elevation is maintained and as soon as possible the patient is raised into a semi-reclining posture and encouraged to change his position frequently.

Every possible care should be taken to prevent the drainage of secretions into the trachea. Two special nurses trained in trachial work are in attendance with a suction apparatus available every inspiration is guarded against the possible introduction of discharges into the lower air passages. Narcotics are withheld in order that nothing may interfere with the normal protective reflexes of the trachea.

The dressings wrung out in iodoform emulsion are changed every three or four hours and the tracheal cannula is wound in conical form with bismuth subnitrate paste tape and firmly introduced into the trachea and secretions may not drain along the walls of the tube into the lower air passages.

The patient is fed through a rubber catheter introduced into the oesophagus through the nose and every effort is made to keep his nutritional requirements adequately fulfilled.

As has already been mentioned there is a natural tendency for the lower part of the wound to close spontaneously. When this process is unduly delayed the skin margins may be freshened and one or two mattress sutures of silk worn gut or silver wire can be used to bring the wound edges in apposition after the infection has resolved.

LIVER FUNCTION TESTS IN CHILDREN*

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The liver is an organ of manifold functions, any one of which may be damaged without necessarily causing insufficiency of the hepatic functions. A number of tests have been evolved, each particularly concerned with one phase of the liver's activity.

The importance of the liver in carbohydrate metabolism has been shown by Mann and his associates¹. Following total extirpation of the liver in dogs a gradual and progressive fall in blood sugar occurs, resulting ultimately in the group of symptoms known as the "hypoglycemic reaction."

The liver converts into glycogen the monosaccharides absorbed from the intestine. It holds the glycogen as such until the tissues require sugar, when it reconverts the glycogen into glucose and water. All monosaccharides are not taken up with equal facility by the liver.

Laevulose is very rapidly taken up by the liver. It is the only sugar in ordinary use which, following ingestion by normal subjects, does not cause an appreciable rise in blood sugar. MacLean and De Wesselow² following the work of Sachs³,

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Straus⁴, Bergmark⁵, and Isaac⁶, began to use laevulose as a test for hepatic function. When a normal subject is given a "loading dose" of laevulose, the blood sugar remains low and the "curve" is practically flat. If, however, hepatic insufficiency is present, the blood sugar following the ingestion of laevulose rises and remains elevated for more than two hours. This observation has been confirmed by Bodansky⁷ on dogs and by Spence and Brett⁸, Covell⁹, and Tallerman¹⁰ on human subjects. The laevulose tolerance test has since been widely used in the estimation of hepatic efficiency. The clinical application of this test is, however, difficult because numerous other factors such as pituitary, pancreatic, and other endocrines must be considered in those cases in which the ability of the organism to metabolize carbohydrate is reduced.

Tallerman¹¹ has applied the laevulose test to a number of children suffering from ketosis and has shown that there is a derangement of carbohydrate metabolism in a majority of these cases accompanied by hepatic insufficiency, as shown by the test.

In carrying out the laevulose tolerance test on children, we gave 1:5 gm. of the sugar per Kilo dissolved in 100 cc. of water. The amount of laevulose given was usually between 25 and 40 gms. The fasting blood sugar was estimated and blood sugars again determined one-half, one and two hours afterwards. A modified micro-chemical Folin-Wu method was used¹².

The effect of the liver on protein metabolism has been studied in detail by numerous observers. It is known to be the seat of intermediary nitrogen metabolism. The amino acids brought to it by the portal vein are converted into urea through the stage of ammonium carbonate. The inability of the damaged liver to form urea from amino acids has been shown by Falk and Saxl¹³. They fed glycocholl to animals and found that it was excreted in the urine unchanged in those animals whose livers had been previously damaged. Bollman, Mann, and Magath¹⁴ found that after extirpation of the liver in dogs, a decrease in blood urea occurred. Rowntree, Marshall and Chesney¹⁵ showed that in many cases of liver disturbance, there was a lowering of the blood urea.

Based on the fact that the conversion of amino acids into urea depends upon the normal functioning of the liver. Cohen and Levin¹⁶ have devised a test for determining the ability of the liver to form urea. This test consists of feeding a child a protein

meal containing 1 gm. of nitrogen per Kilo. The blood urea, fasting and four hours after a protein meal, is determined. In a series of normal children it was found that the blood urea rose from an average fasting level of 11 mg. per 100 cc. to 18 or 20 mg. per 100 cc. The failure of the blood urea to rise at least 50 per cent of the fasting level, indicated to them that there was a disturbance in the urea-producing mechanism of the liver.

The protein meal given consisted entirely of the brown meat of chicken, each 5 gm. of which contains 1 gm. of nitrogen.

In discussing the protein metabolism of the liver, the Hemoclastic Crisis of Widal should be mentioned¹⁷. This is a test for the proteopexic activity of the liver based on the theory that the so-called post-prandial leucocytosis is dependent upon a normal liver parenchyma. In the presence of hepatic disease a leucopenia rather than a leucocytosis should follow a protein meal. Numerous observers have not found this test to be sufficiently constant to be of clinical value. For this reason we omitted this test in our work.

Numerous dye substances have been used to test hepatic efficiency. These tests are based upon the fact that the liver is an excretory organ and will excrete certain dyes after their injection into the blood stream. Several dyes have been used, chief of which are methylene blue, Congo red, indigo carmen, azorubin s., rose bengal, phenoltetrachlorphthalein and Bromsulphalein. The last two dyes have received most attention. In 1909 Rowntree and Abel¹⁸ observed that when phenoltetrachlorphthalein was injected into the circulation, it was eliminated solely by the liver. Rowntree attempted to estimate liver function after injection of the dye, by determining the amount of dye which could be removed with the duodenal tube. Rosenthal¹⁹ determined the rate at which the dye leaves the blood stream. One hour following the injection of 5 mg. per Kilo in normal subjects, there is usually none or only a faint trace of the dye in the blood serum. In cases of liver damage, Rosenthal and numerous observers have shown that there is an appreciable amount of dye unabsorbed by the liver. The phenoltetrachlorphthalein test was followed in many instances by a general reaction, and thrombosis at the site of injection. The dye is highly irritant and requires considerable dilution with normal saline. To overcome these disadvantages, Rosenthal and White^{20, 21} have recently introduced Bromsulphalein. This dye is non-irritat-

ing, requires no dilution, and produces little, if any, general disturbance. Rosenthal found that in normal rabbits 85 per cent of the Bromsulphalein injected intravenously was excreted in the bile within one hour. Following extirpation of the liver in rabbits the dye is retained almost in toto during the early period following injection.

In our work we first used the phenol-tetrachlorophthalein test but because of the occurrence of thromboses locally and, in one instance, the occurrence of haemoptysis, we began to use Bromsulphalein as soon as it was available. The Bromsulphalein test was carried out by injecting intravenously 2 mgs. of the dye per Kilo, without previous dilution. The sample of blood is removed in one-half hour, clear serum obtained, and placed in two small test tubes. Two drops of 10 per cent sodium hydroxide is placed in one tube and one drop of 5 per cent hydrochloric acid in the other. Any dye remaining in the serum becomes at once apparent in the presence of the alkali. The colored serum is compared with suitable standards and the amount of dye remaining in the serum is thus readily determined.*

The formation and excretion of bile pigment are characteristic activities of the liver. The liver, however, is not essential to bilirubin formation²². A high percentage is formed in the reticulo-endothelial system outside the liver. The liver is, however, essential to its excretion. measure the bilirubin content of the serum. It is the sole excretory organ in health.

Various attempts have been made to The simplest methods have been based on the theory that the intensity of the serum color is an index of the quantity of bilirubin, since the latter is the chief pigment in the serum. A colorimetric comparison using a 1:100 solution of potassium bichromate as a standard has been widely used, the readings being termed the icteric index. In general, the values for normal serum have been found below 5,^{23, 24, 25, 26}

This method is quite satisfactory in following the variations in frank icterus but difficult of application in conditions in which the serum bilirubin is only slightly increased. Confusion may also be caused through the presence of zanthophyll and carotinoid pigments in the blood.

Attempts have been made to produce the green or blue oxidation products of bile pigment under conditions permitting quan-

titative estimation of the color developed. These methods have been based on the well known Gmelin test for bile pigment which consists of adding nitric acid to the bile containing medium. These tests were not very successful. It remained for Van Den Bergh²⁷ to evolve a quantitative test for bilirubin which has since been widely used.

The Van Den Bergh test depend upon the addition of Ehrlich's diazo reagent to blood serum and estimating the depth of the color developed. The immediate development of a violet color indicates a "direct" reaction. The proteins are then precipitated with alcohol. The development of a rose-pink color after the addition of alcohol indicates an "indirect" action. Van Den Bergh claimed that the "direct" reaction means obstructive jaundice and the "indirect" reaction means hemolytic jaundice. Although not all observers are agreed on the value of the Van Den Bergh Test in this differentiation, the value of the test for quantitative estimation of bilirubin in serum is generally accepted. The quantitative test is carried out by comparing the rose-pink color developed with a standard preferably made pure bilirubin. The normal readings vary from 5 to 2 mg. of bilirubin to 100 cc. of serum.

The relation of the liver to urobilin formation seems to have been finally established by Elman and McMaster²⁸. These investigators showed by animal experiments that the urobilin in the form of its precursor, urobilinogen, is formed in the intestinal tract from bile pigments and is carried by the portal blood to the liver which normally excretes it in the bile. The presence of urobilin in the urine, according to the present evidence, is an indication of the inability of the liver to take up the urobilin brought to it from the intestine. It is then excreted in the urine. Wallace and Diamond²⁹ have investigated the presence of urobilinuria in cases of liver disturbance and have found it a valuable test of liver function. They obtained a quantitative estimation of urobilin in the urine by adding to it paradimethylamincazobenzaldehyde in hydrochloric acid solution. The resultant pink color is diluted until it disappears, the result being expressed in the number of dilutions required. They found that in many cases of liver disturbance there was an increase in the urobilin in the urine.

In the series of cases investigated by us, urobilin was estimated quantitatively by means of a modified Joyce test. This depends upon the development of a fluore-

*The dye in sterile ampoules and standards are obtainable from Hynson, Westcott and Dunning, Baltimore, Md.

scent color when a zinc acetate solution in alcohol is added to the urine containing one drop of tincture of iodine. The mixture is then diluted until the fluorescent color disappears. Each liter of dilution is multiplied by 8.5, the result being the milligrams of urobilin per 100 cc. Normally the amount of urobilin excreted in the urine in 24 hours varies between 20 and 30 milligrams.

The tests described above, namely, laevulose tolerance, protein meal, dye absorption, icteric index and Van Den Bergh tests and the estimation of urobilin in the urine, were all carried out in parallel on a number of children. Many of these showed no evidence of liver disturbance except for a moderate degree of liver enlargement. In this group were a number of well compensated cardiac children and patients convalescing from pneumonia. The tests were also carried out on two cases of Hodgkin's disease with large livers and on a few cases of catarrhal jaundice. Because of the infrequency of marked liver disturbance in children our work was chiefly confined to those cases showing as sole evidence of liver disturbance only slight or moderate liver enlargement.

Disturbance of one type of physiological activity does not necessarily indicate disturbance of others. In many cases only one or two of the tests were positive. In the cases presenting only enlarged livers, occurring in cardiacs, following pneumonia and in Hodgkin's disease, the protein test alone, as a rule, was positive. In no case was the protein test negative in the face of any other positive test. During convalescence from pneumonia and during functional improvement in the cardiac cases the protein test became normal. It seemed to us that the return to normal of the protein test closely paralleled the improvement of the exercise tolerance in the cardiac children.

The icteric index and Van Den Bergh test frequently gave evidence of liver damage before any of the other tests except the protein meal test which seemed to us the most sensitive. In all the cases in which the dye test was positive we were able to diagnose liver damage clinically. The dye was always retained in the blood when the serum bilirubin was high. With the development of jaundice an increase in the failure of dye absorption by the liver occurred. The jaundice per se undoubtedly causes the liver damage.

Increase in urobilin in the urine seemed to approximately parallel similar changes in the serum bilirubin.

The laevulose tolerance test seemed to us to be the least sensitive. It was usually positive in well marked cases of liver disturbance showing both enlarged liver and jaundice.

It would seem that laboratory methods are unnecessary for the diagnosis of well marked cases of liver disturbance. In questionable cases of liver disturbance, however, the protein meal test is apparently a valuable aid in the diagnosis and in the estimation of the degree of damage.

DISCUSSION

Dr. B. Raymond Hoobler, (Detroit): I think Dr. Levin's finding in relation to cardiac cases is very interesting. You speak of the liver damages in those instances. Could simple congestion account for the conditions that you found in those cardiac cases, or do you think there was some actual damage to the peritoneum? Could these liver tests be used in attempting to estimate the gravity or the prognosis of cardiac function return?

We are handling a large number of cardiac cases in the Children's Hospital. We have a cardiac clinic and probably now have 500 to 600 cardiac cases. We take the acute cases to the hospital and the others to the convalescent home. We have nurses who visit them in their homes. Anything we can get in the way of coming to some definite conclusions as to how much exercise or liberties we can allow these cardiac patients will be of great help.

Dr. David J. Levy, (Detroit): I would like to ask a question. He states that levulose is the only sugar which can be employed in liver function tests, in that it doesn't produce hypoglycemia. I wonder if pentose does not act in the same way. I am reporting a case of pentosuria. We find the pentose constantly in the urine. The pentose can be tested, but there is no disturbance in the urine. I am wondering beyond what point 2.1 per cent pentose might be administered without causing this disturbance as being characteristic of levulose.

I want to ask further if, in the series of cases investigated, any pentosuria cases were involved, and if he thinks there might be a worth-while point of attack in the study of a case from the standpoint of liver function.

Chairman Cowie: Is there any further discussion on Dr. Levin's paper? The status of the liver function test, as you all know, for some time has been quite up in the air. Most of the tests that have been worked out have failed to be what they hoped to be.

I was very much interested in this test of Dr. Levin's as it seemed to me to be so simple and quite analogous to another food test which we have been using for some time, the glucose test. I hope something will come out of the work. Dr. Levin is out at the university with me now.

Dr. Samuel J. Levin: In regard to cardiac children, we wouldn't think that this test would be very accurate in a case showing any signs of decomposition because possibly food substance might be absorbed, but in a case well compensated, as I stated before, the power of the patient to form this substance, from an osmosis to urea, seems to return with exercise tolerance.

Whether it is going to be of value in determin-

ing whether the patient should be allowed the increased tolerance, I do not know. It may take more observation. We could see that the patient was able to sit up without getting short of breath and at times able to stand up, and the test was normal. At the time we made the observations we thought it would be very useful and it might be of value to us to determine whether a patient should be allowed to be up and around. It will be very interesting to see what others will get with this test.

As far as pentose is concerned, I have not run into anything which refers to any sugar but levulose as being a sugar which does not cause hyperglycemia. I have had no experience personally with pentose.

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THE TREATMENT OF FRACTURES OF THE OS CALCIS*

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Fractures of the os calcis constitute about three-tenths per cent of all fractures occurring in the larger cities of the United

States. The disability following these fractures has been a matter of considerable concern to insurance companies, who usually fall heir to them. With the improvement in the care of fractures generally, there has been little progress in the care of this type, and the allotted disability still averages from 12 to 18 months. The more severe cases are permanently disabled. They cannot continue their former occupations, which because of their hazardous nature are often particularly remunerative.

So common are fractures of the os calcis in large industrial centers that it is possible in the literature to find reports of as many as 50 cases in one series. Nevertheless, the writers of such articles are usually not well satisfied with the results obtained by ordinary methods.

It is interesting to note in the literature and in text books the amount of space allotted and the descriptions of technique given for treatment, during the past 20 years. Scudder in 1903 gives 36 lines to the entire subject. Cotton, in 1924, devotes 22 pages.

Fractures of the os calcis are most often caused by landing on the feet from a fall of 10 feet or more. They are common among telephone line workers, painters and scaffold workers. There is an old rule: "the higher the fall the lower the fracture." This is often true. Fractures elsewhere, as in the arm, sometimes occur from the secondary fall as the feet give way.

The point which I wish particularly to emphasize is the necessity for accuracy of X-ray diagnosis in the first place and correctness of X-ray interpretation following attempted reduction. Cases have come under our observation which were treated by manipulation in excellent hospitals and reported by the X-ray departments as being in good position. The surgeon caring for these cases had evidently justly felt satisfied that the best result was obtained. Yet, in checking them up later it was found that they were either inadequately X-rayed or else important features which cause disability were not observed and reported.

The important causes of latent disability in fractures of the os calcis are:

I. Irritation of the calcaneo-cuboid and calcaneo-astragaloid joints by displaced fragments.

II. Lateral displacement of the fragments causing impingement on tissues and interference with tendon motion.

III. Flat foot and knock ankle deformity causing improper weight bearing.

*Read at the Annual Meeting, September, 1926.

IV Loss of the normal length of the os calcis by impaction.

To obtain X-rays which will clear these points, plates must be taken in three directions as shown in the lantern slides; i.e., (a) anterior-posterior, (b) lateral and (c) through the os calcis from the rear at a 45° angle.

TREATMENT

Cotton and Wilson in 1908 described the use of the urethral sound passed over the os calcis through small incisions in the skin as means of leverage to restore the position of the posterior fragments. They also advocated the use of a mallet to re-impact the lateral fragments. Tenotomy of the tendo-Achilles was considered by them to be an unsafe procedure. Other authors have used the Steinman pin or ice-tongs as means of applying more permanent downward traction on the posterior fragments.

A technique has gradually been developed and standardized by Dr. A. C. Hall and I, for all fractures of the os calcis with displacement. This procedure, which will be shown in lantern slides along with the results as demonstrated by X-ray, consists in:

I. Allowing the patient to rest four to eight days until the swelling begins to subside, then careful preparation of the skin.

II. Open lengthening of the tendo-Achilles by the sliding method. This is used as a means of avoiding the more dangerous subcutaneous tenotomy.

III. Breaking up of impaction and reduction of displacement of the posterior fragments by use of the number 24 urethral sound passed over the os calcis through small incisions in the skin. To obtain sufficient leverage the patient is turned on his stomach and the toes allowed to reach just over the edge of the table. Counter-pressure in the arch is obtained with a padded wooden board wrapped in sterile dressings and sustained against the surgeon's chest.

IV. The inner side of the foot is placed against a sand bag and the fragments under the outer malleolus impacted with a mallet and rolled bandage.

V. When the restoration seems complete a cast is carefully applied with the foot in slight inversion at a 90 degree angle. The rolled bandage is left carefully in place under and behind the external malleolus to prevent any recurrence of the displacement of the lateral fragments. The cast is undisturbed for four weeks when

the anterior half is removed. At six weeks the feet are removed only for daily motion and heat. At eight weeks the casts are entirely removed and two weeks later weight bearing begun in specially prepared shoes. A small outside upright of steel with an inside T-strap prevents lateral strain while a high arch support of felt prevents strain on the os calcis itself.

The data for this paper is based on the results of over a hundred operated cases. A number of these Dr. Hall and I have done together. My personal series consists of over 30. There has not yet been an infection, so the procedure can scarcely be considered hazardous.

The average disability has been under six months, even though many were of both feet. A number of severe cases have returned to their original work in three and one-half months. If, at the end of six months, function is not complete and weight bearing is painful it is the rule to fuse the calcaneo-cuboid or the calcaneo-astragaloid or both as may be indicated. If there is impingement on the peroneal tendons, this is chiseled away. It is probable that the joints more often than any other factor cause disability, due to traumatic arthritis.

DISCUSSION

Dr. C. S. Clark, (Jackson, Mich.): How long after his operation on his average case does he attempt to get the patient back onto his feet in order to carry his own weight?

Dr. Wm. Cassidy, (Detroit, Mich.): There is practically no series of injuries in the Industrial Surgery Division today which gives such a long period of disability as that of fracture of the os calcis. We have seen them up to as high as five years still having pain in the region of the os calcis, in the tarsal joints upon stepping, that is, while they are sitting down they have no disturbance, but the minute you put them on their feet and they attempt to do any work, they complain of pain. Even after fixation of the joint they don't all get well. It is a distressing thing to treat.

Minor injuries at times produce a major amount of symptoms, in certain individuals. Fractures of the os calcis up to the past five years, have been surgically treated; they have been treated in a sort of haphazard, care-free, slipshod way often without immobilization, many times with a little adhesive plaster attachment and a great many times with simply moist dressings or heat, no attempt being made to reimpact the fracture which is badly displaced, the surgeon being afraid to open the foot on account of infection. Today, with the average good surgeon's technic, he should not be any more afraid to open the ankle joint than to open a man's head. All you hear about material causing infection is tommy-rot for the reason that these things do not serve as food for organisms; you read the literature and you think the steel is what produced the bug in the individual who has osteomyelitis.

That is not true. What produces it is the dirty surgeon, the fellow who doesn't stay clean or clean his patient up thoroughly before, or selects the wrong period of time to operate his patient. If you go into a fracture in the first 48 hours, the chances of infection are two to one that they would be in the next 82 hours. You have also got your original trauma. In every individual you must bear in mind that you are operating through a septic field, no matter how sterile the skin is, the skin is still infected, and the less you handle the skin, the less amount of infection you are going to have, and the essential point to realize in all bone work is that bone is a low grade tissue which resists infection badly, it isn't like muscle, it hasn't the protection of the muscles. Bones infect easily, and as a general rule it lasts a long period of time and is hard to get rid of.

The direct proportion of your results will vary with how accurately you approximate your fragments, how carefully you immobilize your fractured bone and how meticulously and consistently you do your after care as regards mobilization later in the way of loosening up the tendons, the muscles, the fascia bands and the joint structures at large, together with education of the mental attitude of the patient.

Every industrial case today comes to you with a mental attitude as a rule that the pain is there and he will lay around month in and month out and often the doctor is at fault in allowing him to do so. He can give him a small job to do and change the mental attitude of the patient, and it seems to me this is one of the fundamental principles the medical profession should take into consideration in the treatment of industrial injuries, for the reason that the whole thing reflects back upon the group as to how much they pay for their daily bread in direct proportion to the number of injuries received and how long they lay around before they go back to work, because the contractor has to add to the cost of production.

It all comes back to you, and there is no reason why this thing can't be gotten together and the medical profession stand on their feet and get these fellows back to work much earlier than they are doing at the present time.

I think Dr. Funston is to be congratulated on bringing this before us, because this is happening day in and day out. It is a constant procession of cripples; these cripples can be improved and should not be allowed to drift around month in and month out, year in and year out, taking money from industrial commissions and the insurance companies, which adds a higher rate to the insurance.

Dr. Robert Funston: I thank the gentlemen for the discussion. In regard to getting the patient back on his feet, that is done after the first eight weeks. In eight weeks they begin weight bearing in a specially prepared shoe with a support under the arch and with an outside upright, inside strap. Practically the entire strain is taken off the os calcis itself when they begin their weight bearing. We try to get them back to some form of work at the end of three months, if they will go. Some of these cases will go quite readily; others we have difficulty with. Many of them don't want to go back to work because they feel when they do they are out of luck for any further compensation. (Applause).

LAST ILLNESS AND DEATH OF WASHINGTON*

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WASHINGTON, D. C.

FROM ORIGINAL ARTICLE IN VIRGINIA MEDICAL
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Of Washington's manner of life there was never until the most recent time but one opinion. His manner of death, however, became immediately after its occurrence the subject of a controversy, which has never been satisfactorily settled in all the hundred and twenty-five years which have since elapsed.

The announcement of his death came as a stunning blow to the country, unprepared by any knowledge of a recent illness. Universally reckoned as a man of tremendous physical vigor, it seemed all the more strange to learn that he died of a simple cold of only forty-eight hours' duration.

The cause and nature of his illness were called into question, and the medical management of the case came in for severe criticism which was aimed only at the physicians in attendance. There have since been added innuendoes inspired by an iconoclasm rampant in certain quarters in the present age, which are intended to reflect upon the character of the great man himself. Fortunately we have the records; for the death as well as the life of Washington have been chronicled with singular exactness to even the minutest details. And if we review these records in the light of now advanced state of medical science, we should in the first place obtain a verification as to their consistency with fact, and, in the second place, arrive at a correct opinion as to the nature of the illness and of the method of treatment.

Besides the published statement of his physicians, there is the circumstantial account of the last days of Washington by his devoted secretary, Col. Tobias Lear. This, written under date of December fourteenth, might be viewed in a sense as a continuation of Washington's own diary; for, as we know, throughout the greater part of his life he wrote down with scrupulous exactness the commonplace occurrences of his daily life, and there is an entry as late as December the thirteenth, probably the last words he

* Read by invitation at the fifty-seventh annual meeting of the Medical Society of Virginia, in Norfolk, October 12-15, 1926.

penned, being the very day before the day of his death.

It will be interesting and at the same time apropos to preface the account of the illness given by Lear, with a transcription of the last entries in Washington's diary:

December 1—Mr. Foot dined here.

December 2—Lord Fairfax, Lady, Daughter and Miss Dennison dined here.

December 3—Mrs. Stuart and Daughter went away after breakfast.

December 4—Morning clear, wind at northwest and mercury at 36. From ten o'clock until two, very little snow; it then cleared and became very mild and pleasant, mercury at 38; wind at north.

December 5—Morning raining and continued to do so moderately through the day with wind southeast; mercury 38 in the morning, and 36 at night.

December 7—Rainy morning with wind at northeast, mercury at 37; afternoon clear and pleasant, wind westerly, mercury 48 at night. Dined at Lord Fairfax's.

December 9—Morning clear and calm; mercury 31, afternoon lowering, mercury at 32 and brisk wind from the southwest. A very large hoar frost this morning.

December 11—But little wind and raining, mercury 44 in the morning; 38 in the night; about nine o'clock the wind shifted to northwest and it caused raining but it continued cloudy. Lord Fairfax, his son Thomas, and Daughter, Mrs. Warner Washington and son Whiting and Mr. John Herbert dined here and returned after dinner.

December 12—Morning cloudy, wind at northeast and mercury at 33. A large circle around the moon last night. About ten o'clock it began to snow, soon after hail and then a settled rain. Mercury at 28 at night.

December 13—Morning snowing and about three inches deep, wind at northeast and mercury at 30. Continued snowing until about one o'clock, and about four o'clock it became perfectly clear. Wind at same place not hard. Mercury 28 at night.

Now, according to Colonel Lear, Washington on December 12th was riding about his farm from ten to three o'clock and the weather at this time was bad, "Rain, hail and snow falling alternately with a cold wind."

He observed with regard to the General on his return "that his neck appeared wet and that snow was hanging upon his hair"

and that he came to dinner without changing his dress.

The next day, Friday, the General did not go out as usual, in the forenoon, for he had taken cold and complained of a severe sore throat. He went out, however, in the afternoon to mark some trees which had to be cut down. He had now a "hoarse-



Dr. James Craik

ness which increased in the evening, but he made light of it. He spent the evening reading the papers, and when he met anything interesting, he read it as loud as his hoarseness would permit." On retiring, Colonel Lear suggests that the General take something for his cold, but he answered, "No, you know I never take anything for a cold. Let it go as it came."

On the next day, which was Saturday, at three o'clock in the morning, he told Mrs. Washington that he was very unwell and that he had an ague. It was observed that he could scarcely speak and that he breathed with difficulty. At daybreak, Mr. Lear came in and found the General breathing with difficulty and hardly able to utter a word intelligently.

"A mixture of molasses, vinegar and butter was given, but he could not swallow a drop, and when he attempted, he appeared to be distressed, convulsive and almost suffocated."

Rawlins, the overseer, was sent for at Washington's request to bleed him, and

except in some non-essential particulars. Before proceeding to discuss the case, let us, after the correct manner of writing clinical histories, now add what we find out as to the patient's family health history, and of his own previous illnesses, his habits of living and his physical characteristics, all of which are important in arriving at a correct diagnosis and prognosis in this case, as well as in all others.

Family Health History. On his father's side, the Washington's were short lived. The great grandfather, Colonel Washington, died at the age of 54; the grandfather Lawrence died at the age of 37, and the father Augustine, at the age of 49.

By a remarkable coincidence, the last illness of Washington's father appears to have been very similar to his own. He is known to have contracted a cold after an exposure in a storm and to have died after a brief illness. Of the immediate family of the patient, we find that, of those who had the same father but a different mother, Butler died in youth, Lawrence age 34, Augustine age 40, and Jane age 13. Of those who had the same mother as well as father, Bettie died at 64, Samuel at 47, John Augustine at 51, Charles at 61, and Mildred in infancy. Washington's oldest half brother, Lawrence, from whom he inherited Mount Vernon, is thought to have had tuberculosis. Washington made a trip with him when he went to Barbadoes in search of health.

On his mother's side we have not such definite information, but his mother, we know, lived to the good old age of 82, dying ten years before the death of the General.

Physical Characteristics and Habits. Describing his impressions, a writer in the *London Chronicle* wrote, "Washington is now 47 years of age. He is a tall, well made, rather large boned man, and has a genteel address. His features are manly and bold, his eyes of a bluish cast and very likely, his hair a deep brown, his face rather long and marked with smallpox; his complexion sunburnt and without much color; his countenance sensible, composed and thoughtful." George Washington Parke Custis wrote "General Washington's powers were mostly in his limbs. They were long, large and sinewy. His frame was of equal breadth from shoulder to hips. His chest though broad and expansive was not prominent, but rather hollowed in the center. He had suffered from a pulmonary affection in early life, from which he never entirely recovered.

His frame showed a remarkable development of bone and muscle; his joints were large and could a cast have been preserved of his hands in these degenerate days, it would be said to have belonged to a being of a fabulous age."

We cannot omit description⁶ of Dr. James Thacher, an eminent physician of



Dr. Ewell Cullen Dick

his day. Writing in 1778, he depicted him as "remarkably tall, full six feet, erect and well proportioned. The strength and proportion of his joints and muscles appeared to be commensurate with the pre-eminent powers of his mind." And he goes on to say, "the severity of his countenance and majestic gracefulness of his deportment impart a strong impression of that dignity and grandeur, which are his peculiar characteristics, and no one can stand in his presence without feeling the ascendancy of his mind and associating with his countenance the idea of wisdom, philanthropy, magnanimity and patriotism. There is a fine symmetry in the features of his face, indicative of a benign and dignified spirit. His nose is straight and his eye inclined to be blue. He wears his hair in a becoming cue and from the forehead it is turned back and powdered in a manner which adds to the military air of his appearance. He displays a native gravity, but devoid of all appearance of ostentation."

By actual measurement by Mr. Lear, after death, the body was found to be in length 6 ft. 3½ inches; across shoulders 1 ft. 9 inches; across elbows 21 inches.

Whatever may have been Washington's inheritance, it is certain—by assiduous self-discipline, which he practiced in physical as well as in mental matters—he constantly trained and increased his strength, his agility and powers of endurance. In boyhood games of wrestling, running, throwing, pitching quoits and the like, he is said to have excelled all his companions. One of the most frequently repeated anecdotes refers to his throwing a stone across the Rappahannock river, an incredible distance.

Throughout his whole life, constantly in the saddle in early life fox hunting, and later, in his campaigns,—he is generally said to have exhibited an expertness in horsemanship rarely excelled.

With regard to his habits, Irving writes, "He was an early riser, often before day-break in the winters when the nights were long. On such occasions, he lit his own fire and wrote and read by candle light. He breakfasted at seven in summer and eight in winter.

Two small cups of tea, and three or four cakes of Indian meal, (called hoe cakes) formed his frugal repast. Immediately after breakfast he mounted his horse and visited those parts of his estate where any work was going on, seeing to everything with his own eyes and often aiding with own hands. Dinner was served at two o'clock; he ate heartily but was no epicure and was not critical about his food. His beverage was small beer or cider, or two glasses of old madeira. He took tea of which he was very fond early in the evening and retired for the night about eight o'clock.

Previous Illnesses. What, if any illnesses Washington suffered in childhood is not known. It is surmised that he had measles, simply because he was much with Mrs. Washington, who had an attack early in their married life, and he did not contract it.

The earliest illness of smallpox at the age of 19, contracted during his visit with his brother Lawrence at Barbadoes. He was, he says, "strongly attacked." He was ill about three weeks and his face was left slightly marked. Shortly after he returned he had what was called "a violent attack of pleurisy which reduced me very low." During the Braddock campaign, Washington, then thirty years of age, was

stricken with a fever, accompanied by an intense attack as a result of which he was unable to continue the march. The nature of the trouble is unknown, but was apparently contagious as his servant developed the same kind of illness. Washington's indisposition continued without abatement from June 19 to 23, when he says "I was relieved by the General's ordering a physician to give me Dr. James' powder"* one of the most excellent medicines in the world. It gave me immediate relief and removed my fever and complaints in four days."

Two years later, while on the frontier, Washington was seized with an attack of dysentery with fever, which compelled him to leave the army and return to Mount Vernon. A few months later, this disorder was still returning at times obstinately upon him, he complains, "in spite of all efforts of the sons of Aesculapius." "At certain periods," he goes on to say, "I have been reduced to great extremity and have much reason to apprehend an approaching decay being visited with several symptoms of such a disease."

It was at this time, when on his way to Williamsburg to consult the best physicians there, that he met the widow, Martha Custis. The medical treatment was evidently successful, for despite the pessimistic foreboding to which he had just given utterance, within one month he was engaged, and within one year happily married.

In 1761, Washington was ill again with a fever of some kind, probably malarial, on account of which he made a visit to Warm Springs. He suffered considerably with pain and a disturbed sleep. A relapse occurring, he again became quite despondent. He writes "I was very near my last gasp. The indisposition increased upon me and I fell into a very low and dangerous state. I once thought the grim King would overcome my best efforts and that I must sink in spite of a noble strength."

In his diary, we have an account of the recurrence of the dysenteric ailment in 1768:

March 2—Hunting; again caught a fox with a bobbed tail and cut ears, after several hours' chase in which most of the dogs were worsted.

March 3—Returned home much disordered by griping and violent straining.

* NOTE:—James' powder was a mixture of an anti-moniou oxide and calcium phosphates. It was diaphoretic in action and used frequently for inflammatory ailments of the respiratory organs.

March 4—At home with above complaint; sent for Dr. Rummey, who came in the afternoon.

March 5—Very bad, the doctor staying with me.

March 6—Something better. Doctor staying with me and Mr. Ramsey stayed to dinner.

After confinement at home of about a week, his recovery was indicated by entry under date of March 14: "Hunting with Captain Posey and Lund Washington; started and caught a fox in about three hours."

While in his retirement at Mount Vernon, at the close of the war, we learn from his diary that in September, 1786, he had suffered from attacks of ague and fever, the malarial character of which is quite evident from the fact of their periodicity and from their treatment and relief by the bark prescribed by Doctor Craik.

Entry of September 2, says "Kept close to the house all day, being my fit day in course, at least any exposure might bring it on. Happily missed it."

Shortly after assuming his office as President, Washington was laid up with a severe attack of what was called anthrax, but which was evidently carbuncle, located upon the left hip. It proved to be a very virulent process, causing such prostration of his strength that the country was at the time greatly alarmed for fear of a fatal outcome. The malady caused him great pain and discomfort and confined him to house nearly six weeks. When later he was able to go out, his coach had to be especially constructed to allow him to lie at full length. He was then under the medical care of Doctor Samuel Bard, one of the most eminent practitioners of New York.

Washington, when on a visit to Boston, was delayed a considerable time on the outskirts in rain and stormy weather because the city and state authorities were unable to settle a stupid dispute as to the etiquette of receiving the president. The result was that he developed a troublesome cold which caused some inflammation of the eyes. It seems that just following this visit an epidemic of colds developed in the city, which were from the incident, commonly referred to as the "Washington influenza."

In 1790, the federal government was removed from New York to Philadelphia. In the spring of this year, Washington was taken with another illness which almost

proved fatal, in the nature of inflammation of the lungs, probably pneumonia.

The close application to public business, and the incessant demands upon him incident to the office, proved no doubt to be a very great strain. He wrote, "I have already within less than a year had two severe attacks, the last worse than the first. A third, more than probably, will put me to sleep with my fathers. At what distance this will be, I know not.

"I am thankful that I am so well recovered, though I still feel the remains of the violent affection of the lungs, the cough, the pain in my breast, shortness of breath, not having entirely left me."

When Congress adjourned, August 12, 1790, Washington set out on a voyage to Newport, R. I., with the hope of having his health benefited by a sojourn in this already famous health resort. In a letter written by Jefferson to Madison June 9, 1793, he says, "The President is not well; little lingering fevers have been hanging about him for a week or ten days and affecting his look most remarkably."

The last year or so of his life his health was certainly much impaired. He writes under date of August 30, "No account of weather, etc., kept from hence to the end on account of a sickness commenced with a fever on the 19th and lasted until the 24th, which left me debilitated."

The same year he wrote to a correspondent explaining his failure on account of "debilitated health occasioned by the fever, which deprived me of 20 pounds of weight, I had when you and I were at Troy Mill Scales, rendering writing irksome."

In addition to the illnesses enumerated, Washington suffered certain infirmities of a minor kind. His teeth early in life (1754) gave him trouble and his expense accounts show frequent visits to the dentist, losing from year to year one tooth after another until finally all were gone and had to be replaced by a plate. He began to use glasses at the age of 46; in 1783 he remarked that he had grown almost blind as well as gray in the services of his country. His hearing in later years of life at least was noticeably impaired. Maclay remarked this in 1793, and said he believed the President heard only a small part of the conversation in which he engaged. Washington, himself, writing to Jefferson in 1786, said that he was sensible of a decay in hearing and that perhaps his other faculties might be falling off.

The above account of his last and former illnesses gathered from various reliable sources comprise such exact and detailed clinical data, that it may be said to constitute a fairly complete anamnesis, on the basis of which, even at this late day, we feel justified in reopening the case in order to consider the diagnosis and treat-



Dr. Gustavus Brown,

(Father of Dr. Gustavus Richard Brown)

ment in the light of accumulated experience and the more advanced state of medical knowledge of the present period.

Summarizing, we find that Washington came of short lived paternal ancestors in whom there was a marked tendency toward affections of the respiratory tracts; that, by a life in the open, with constant exercise of his physical energies and regular and temperate habits, he developed a marvelous constitution, which was indeed put to severe test by the hardships of his military campaign and the evactions of his political life, not showing decided signs of breaking until the last one or two years of his life.

He had a number of illnesses, the nature of all of which is not definitely known, though the following seems well established, viz., smallpox, dysentery, malaria, pneumonia. In addition, he had much trouble on account of carious teeth. His illnesses were several times of such

severity that his life was almost despaired of, and he seemed at these times to have taken a most pessimistic view of the outcome. With regard to his last illness, it was clearly due to taking cold from exposure to very inclement weather, accentuated by failure to change his clothes which had become wet from rain and snow. Within twelve hours he had developed symptoms of an acute inflammatory condition of the throat, indicated by difficulty in speaking, swallowing and breathing. His chief symptoms in the order of their occurrence were sore throat, hoarseness, cough, chill, difficulty of breathing, difficulty in swallowing, expectoration, fever, loss of voice and suffocation.

There is no mention that the interior of the throat was examined at any time, and we believe that it was not done; otherwise, it would certainly have been mentioned by Lear, or by his physicians. Chest examination was negative.

Outside of simple catarrhal inflammation of the mucous membranes, the acute inflammatory affections of the throat are of three kinds:

1. Those attended with formation pus, as quinsy.
2. Those attended with the formation of a pseudomembrane, as diphtheria.
3. Those characterized by watery infiltration, as inflammatory edema.

We will consider briefly the individual affections suggested by the symptoms in Washington's case:

1. *Acute Laryngitis*.—This affection, designated in the text-books as acute catarrhal laryngitis, is due to simple inflammation of the mucous membrane of the larynx, and occurs as the result of taking cold. It is marked by hoarseness, and there may be complete loss of voice; there is usually sore throat, slight fever and some cough, but ordinary acute laryngitis is not attended with difficulty in breathing, which this distinguished patient had to an extreme degree. Moreover, ordinary acute laryngitis is a mild affection, never ending fatally.

2. *Quinsy*.—This is suggested by the chill, fever and very difficult swallowing, and probably also by the observation of Lear that when the patient attempted to use the gargle, he suffocated, and when the gargle came from the throat some phlegm followed. But that this should not be taken to mean the purulent discharge of quinsy is evident enough when you re-

flect that the latter occurrence is invariably followed by the most pronounced relief and generally by a prompt recovery from the ailment. Opposed to the idea that the trouble was quinsy is not only that a fatal termination in this disease is a most exceptional thing, but also that it is at any rate of quite rare occurrence in the aged. Quinsy is, furthermore, nearly always a unilateral disease; it causes a marked swelling on the outside of the throat, especially on the side affected, and usually causes the patient to hold the head toward that side and is apt to be attended with a trismus, that is to say, inability to open the mouth except for the slightest distance; none of these symptoms appear to have been noted. The swallowing in the case, says the physician's statement, was difficult rather than painful; but in quinsy painful swallowing is an outstanding feature. Beyond all this, there were symptoms in Washington's case which do not belong at all to the picture, viz., the hoarseness and loss of voice, and especially the difficult breathing.

3. *Laryngeal Diphtheria*.—The hoarseness and loss of voice, with increasing difficulty in breathing with eventual suffocation suggest the idea of diphtheria. Opposed, however, to this assumption is the fact that laryngeal diphtheria is eminently a disease of childhood and quite rare in the aged; secondly, the absence of any history of diphtheria in the neighborhood; besides, the usual clinical course of diphtheria is very different from that here shown, namely, a slow onset, with toxic symptoms comparatively severe, but local throat symptoms comparatively slight. The marked difficulty in swallowing does not belong to the picture of laryngeal diphtheria.

4. *Inflammatory Edema of the Larynx*.—This differs from the simple laryngitis which is an inflammation confined to the membranous lining of the larynx, in that it involves the tissues lying beneath the mucous membrane, that is, of the submucous tissue. It is characterized by dropsical effusion or edema of the submucous tissue, causing great swelling in the epiglottis and other parts of the larynx. As a result of the inflammatory swelling, there is marked difficulty in swallowing, which becomes painful and almost impossible when there is much involvement either in the posterior or anterior region of the larynx, especially if the epiglottis or lid of the larynx is swollen. When the infiltration encroaches

upon the chink of the glottis, there occurs naturally difficulty in breathing, increasing it may be to the point of suffocation.

It is generally recognized as being due to the action of organisms of unusual virulence, especially the streptococcus. It is initiated by severe rigor, followed by a rise of temperature, attended by marked prostration, and the process is of rapid development, not infrequently ending fatally.

The symptoms and the course of the disease in Washington's case corresponds so exactly with a typical history of acute inflammatory edema that, despite our distance in time and the absence of modern diagnostic criteria, we have no hesitancy in setting up this as the correct diagnosis. The inflammatory type of edema must not, of course, be confounded with the non-inflammatory sometimes occurring as secondary to certain chronic organic diseases, as in Bright's disease, for instance. The edema in such instances is of a passive kind coming on slowly and not attended with evidences of severe local inflammation such as mentioned.

There are certain other acute throat troubles which might be thought of in connection with this case, as Vincent's or Ludwig's angina, but there is no justification for concluding their presence. Vincent's angina never assumes such an acute stormy clinical course, and Ludwig's angina cannot be diagnosed without the characteristic swelling in the floor of the mouth and the hard, board-like rigidity encircling the neck, which we have no reason to think were present in this case.

Before making any criticism of either the diagnosis made or the treatment instituted by the physicians in attendance upon Washington, it is very important that we bear in mind the difference in the state of medical knowledge between that era and the present, and especially the limited knowledge then existing with regard to disease of the lower throat, which is, in fact, a modern specialty.

It was fifty-six years after Washington's death that Manuel Garcia described before the Royal Society of London a method of examining the larynx, now universally practised, and it was even later when Pasteur and Koch had laid the foundation of modern bacteriology, now so essential in the diagnosis and treatment of disease of every kind.

The eighteenth century was, as Garrison says, the age of theorists and system makers in the science of medicine, when tedious and platitudinous philosophizing

upon *a priori* ground was the fashion of the day. Little had been done to establish a definite pathology of throat conditions. John Fothergill, a close friend of Franklin and known for his sympathetic sentiments for the American cause, wrote in 1748 the first complete description of diphtheritic sore throat. John Huxham, whose name has become associated with the cinchona treatment of malaria, wrote in 1757 an essay on "Malignant Sore Throat," and Samuel Bard, of New York, who by an interesting coincidence was Washington's physician during one of his severe illnesses, published in 1771 a paper dealing with the subject of "Angina Suffocativa," referred to by Osler as a classic of the first rank. The diagnosis made in Washington's case by the attending physicians after consultation was "Cynanche Trachealis." This diagnosis has often been assailed as incorrect, but was it not correct according to the standards of classification then existing? At the period of which we write, Edinburgh, already famous for its surgery through the influence of the Monroes and the Hunters, had now also become the chief center for internal medicine largely from the prestige of such names as Cruikshank, Withering and Cullen. "First Lines in the Practice of Physics," by William Cullen, Professor of Medicine at Edinburgh, was at that time authoritative throughout the English speaking world at least, and we may well imagine that it was the chief source of information for Washington's physicians, especially as we know that Doctor Craik was a Scotchman born, and a graduate at Edinburgh, and Doctor Brown the son of a Scotchman and likewise a graduate from Edinburgh. Doctor Elisha Cullen Dick, notwithstanding his middle name, was not Scotch, but American born and a graduate of the University of Pennsylvania.

Cullen has a chapter in a work published in 1778, devoted to the subject of Quinsy, or Cynanche, of which he considers there are four varieties, viz., cynanche tonsillaris; C. maligna; C. trachealis; C. pharyngis; C. parotideae.

Of cynanche trachealis, he writes, "This name has been given to an inflammation of the glottis, larynx or upper part of the trachea, whether it affects a membrane of these parts or a muscle adjoining. It may arise first in these and continue to subsist in them alone, or it come to affect these parts from the cynanche tonsillaris or maligna spreading into them.

"In either case it has been a rare occur-

rence and a few instances of it have been marked and recorded by physicians. It is to be known by a peculiar croaking sound in the voice, by difficult respiration with a sense of straightening about the larynx, and by an attending pyrexia.

"From the nature of these symptoms and from a dissection of the bodies of persons who have died of this disease, there is no doubt of its being of an inflammatory kind. It does not, however, always run a course of inflammation, but frequently produces such an obstruction of a passage of air as suffocates, and thereby proves suddenly fatal.

"If we judge rightly of the nature of this disease, it will be obvious that a cure of it requires a most powerful remedy for the inflammation, to be employed upon the first appearance of symptoms. When a suffocation is threatened, whether any remedies can be employed to prevent it, we have not an experiment to determine.

"As we suppose the disease to be an inflammatory affection, so we attempt a cure of it by the usual remedies of inflammation, and which for the most part we have found effectual. *Bleeding, both topical and general, has often given almost immediate relief, and by bleeding repeatedly has entirely cured the disease.* Blistering, also near to the part affected, has been found useful. Upon a first attack of the disease vomiting immediately after bleeding seems to be of use, and sometimes removes the disease. In every stage of the disease, an antiphlogistic requirement is necessary, and particularly the frequent use of laxatives. Though we suppose that a spasm of the glottis is often fatal in this disease, we have not found antispasmodic remedies to be of any use."

While vague as regard pathology, the symptoms described are such as correspond very closely to those of inflammatory edema as we call it today. The disease is seen as located, notwithstanding the name tracheal, in the region of the glottis or larynx; it is marked by altered voice, sense of constriction, fever and difficult respiration due to obstruction, and tending to end fatally. The diagnosis made by Washington's physicians was then correct, according to the nomenclature then existent, and we may say, taking Cullen as an authority, indicates very closely the true condition, as it is understood today. It appears from a letter written by Doctor Brown to Doctor Craik a very few days afterwards that the diagnosis was at first quinsy, and that the

change was evidently due to Doctor Dick's influence. In this letter, too, Doctor Brown assumes that he with Doctor Craik should reproach themselves for the excessive bleeding. But, as a matter of fact, the term quinsy at that time was not a misnomer as it would be today. It is now generally understood to refer to an abscess of the tonsil or the peritonsillar tissue; but, originally, the term quinsy had the same significance as the word cynanche, that is to say, a suffocative affection of the throat, and we find that it is used as a generic designation synonymously with cynanche by Cullen as the heading of his chapter on the subject.

With regard to the treatment of the case, after reading Cullen we cannot fail to be struck with the faithful adherence to the methods recommended by this authority. Blistering, bleeding, emesis and catharsis are the main stays of his therapeutic regimen. In addition to them, Washington had the benefit of hot mustard foot baths, and hot steam inhalation, which form part of the present methods in the treatment of this class of throat affection. In regard to the bleeding, this had been the occasion of the chief condemnation visited upon Washington's physicians. It was with this in mind that Ford in his "True Washington" says, "There can scarcely be a doubt that the treatment of his last illness by the doctors was a little less than murder."

Such brutal cock-sureness of statement could emanate only from an opinionated layman, ignorant of the possibilities in such a case. If there is anything certain about the case it is that the chief factor responsible for the fatal termination was the asphyxia, due to obstructive swelling in the region of the glottis.

Admitting the possibility that the blood-letting was a contributory factor, no blame can properly be attached to Washington's physicians on that account. They were following the best authorities, instituted treatment orthodox in that day and, indeed, widely practised for the following forty or fifty years. With men of such influence as Benjamin Rush, in their own country, enthusiastically advocating the practice of blood-letting, and with Cullen specifically advising its use, with repetition to be of advantage in this kind of case, Washington's physicians would indeed have laid themselves open to censure if they had failed to use it as they did. It must be realized that Washington's illness was one of a tendency toward fatal term-

ination. Moreover, he was not, as some have assumed, a man at that time in the full vigor of health but presenting, as remarked by himself as well as by others, decided evidences of physical deterioration.

What treatment would we use today and what difference in result could we expect?



Dr. Samuel Bard

It is at the very beginning of an attack of this kind that treatment is most effective, and very often simple measures will answer. A cold ice compress placed on the outside of the throat with pieces of ice to swallow; with laxatives, diaphoretics, simple diet, rest in bed, and especially rest of the voice is the line of treatment which today would generally be prescribed in the very beginning with hope of aborting an attack. In this connection, it is apropos to remark that Washington was himself guilty of an indiscretion which we regard as of much importance in the hygiene of cold-catching. On coming into the house, his neck, as remarked by his secretary, was wet and snow was clinging to his hair. He came to dinner which had been waiting for him, without changing his clothes. If Washington had but dried his clothes, it is possible that a glow of healthy reaction would have set up and his cold would never have developed.

The next day, signs of cold were present and he complained of a sore throat, but

he was again indiscreet in going out in the afternoon in spite of cold inclement weather "to mark some trees which had to be cut down." In the evening he had a hoarseness but "he made light of it." There was evidently congestion in the region of the vocal cords, which is a condition that demands complete abstention from the use of the voice. But we learn that that evening, the distinguished patient spent the evening reading, and "when he met with anything interesting or entertaining, he read it aloud as well as his hoarseness would permit." On his return that night Mr. Lear observed that he had better take something to remove the cold. Washington's reply was, "No, you know I never take anything for a cold. Let it go as it came." The next morning at two or three o'clock, it had already reached a severe stage; he could scarcely speak and breathed with difficulty. Even then, this great man, more concerned for the comfort of others than himself, would not allow Mrs. Washington to get up and call a servant for fear that she might take a cold.

When by our modern method or laryngoscopy, we have demonstrated and edematous swelling of the tissues of the larynx, the first thought would be the application of adrenalin. This remarkable agent, discovered in 1901 by Takamine, has the effect of producing a powerful constriction of the blood vessels, lessening the blood supply and producing within a few minutes a blanching of the tissue and lessening the swelling. As its effects are only temporary, it is necessary to repeat at intervals the application. If the inflammation is too intense to be conquered in this way, the next step is to practice what we call scarification of the tissue, that is, making short incisions into the infiltrated tissue which should bring about a reduction of the swelling by escape of the serous fluid from the mucous membrane. When these measures fail, more heroic surgery must be adopted. This consists in either the introduction of a tube by way of the mouth, allowing the patient to breathe *per vias naturales*, or the opening of the windpipe by incision from without, that is, the operation of tracheotomy. The former operation, intubation, as it is called was not introduced into practice until about 1856, by Bouchut and Trousseau, of Paris—still later perfected and made a practicable method by the labors of O'Dwyer, of Cleveland. It is true that the operation of tracheotomy was known in Washing-

ton's time; in fact, the opening of the windpipe was practiced sporadically even in the most ancient times, as shown by some obscure historical references, but it never at any time gained currency as an accepted surgical procedure. The criticism which has been aimed at Washington's physicians for not performing the operation is a very unjust one, in not taking into account the prevalent practice and opinion of the times. In the middle of the eighteenth century there were attempts here and there to introduce it into practice and, strange to say, for the resuscitation of drowned persons, upon a mistaken theory of the causation of death in such cases. Hume, of Edinburgh, as early as 1756, recommended the performance of opening the windpipe, bronchotomy as it was then called, for the relief of suffocation in pseudomembranous croup, but the first record of the performance for this condition is by Andree, of London, in 1782.

The fact is, as soon as one recommended the procedure for any purpose, he was immediately opposed by the leading authorities, and he would have few or no followers. It was just in the year 1798, one year before Washington's fatal illness, that Desault and Bichat, of Paris, the most eminent surgeons of that day, published their brochure on tracheotomy as a surgical procedure. In the work they took the stand that it was not a surgical procedure to be recommended in any form of angina. In the year of 1807, Louis Napoleon, having lost his oldest son from an attack of croup, called a conference of physicians and offered a prize of 12,000 francs for the best essay dealing with the subject. It was the universal conclusion that the operation of opening the trachea was useless and inefficacious in such cases. It was really not until 1826, after the appearance of the famous treatise of Bretonneau on Laryngeal Diphtheria, that tracheotomy was looked upon as a justifiable intervention. If, then, we condemn Washington's physicians for not giving him the chance of that operation, what would the world have said at that time if they had taken that chance and failed? It is an operation to which, when other measures failed, we would resort today, and with a fair chance that it would save the life of the patient; nevertheless, the best surgical authorities are careful to warn against too much confidence in its success in this class of cases, and of leading the family to believe that it is a certain means of averting death. Even when the asphyxia is completely re-

lieved, there is great danger if the heart has been weakened in the struggle for breath, that death may ensue from cardiac failure.

Now, summarizing our knowledge of the case, taking into consideration not only all records with regard to this last attack of illness, and likewise in connection with it all available documents as to the patient's previous health history, his family inheritance and contemporary references to his peculiarities of constitution and temperament, we feel that we are entitled to certain definite conclusions.

In the first place, it is certain that Washington did not have quinsy as most often stated in the histories; nor diphtheria, as next frequently reported; nor ordinary acute laryngitis, as very often affirmed; nor pneumonia, as many believe; nor cancer, or tuberculosis, which have been here and there intimated.

All information leads us to believe that the malady responsible for his death was an acute inflammatory edema of the larynx, an affliction which attacks the tissue lying beneath the mucous membrane. It is characterized by a painful swelling of the structures of the larynx and the adjacent tissues below and above, including the epiglottis, causing great difficulty as well as pain in swallowing. When the swelling involves the glottis, the narrow gateway to the lungs, it obstructs the entrance of air and threatens death by asphyxia, or actual suffocation. And when it appears in a violent form, as in this case, it is, we may assume, actuated by some virulent micro-organism—in all probability the streptococcus. The diagnosis made by Washington's physicians, as given out in a statement five days after his death, *cynanche trachealis*, indicates that they had an idea of the location and nature of the malady, as near as it was possible in the limited knowledge then existent of this class of diseases—in fact, much more nearly correct than the diagnoses which have found current acceptance in the opinions of our own day.

In regard to the treatment, while not that which we should administer at the present time, it was the orthodox treatment of that day. It followed closely the authority of the great Edinburgh school of medicine, of which two of Washington's physicians were themselves graduates. Bleeding the patient was expressly advised for this affliction, and its repetition recommended as the most effective means of combating its progress.

It was the widespread practice of that time, in fact, for many years following, to take huge quantities of blood, and it may be incidentally mentioned that Washington himself was a firm believer in the practice and frequently ordered it for those of his household or the slaves upon the estate.



Dr. William Cullen (1712-1790)

Washington's death was not due to excessive bleeding, as has been sometimes recklessly stated; it was the inevitable consequence of a relentless encroachment of the inflammatory swelling upon the narrow passageway at the glottis, cutting off the vitally necessary supply of oxygen, and associated no doubt with a general toxic infection from some virulent micro-organism, most likely the streptococcus. Unless relief comes otherwise in such a case, it is obvious that the patient, whether bled or not, must succumb from air starvation. Washington, then, you may be sure, was not bled to death; rather it may be said that he choked to death, for death was due primarily to suffocation.

At the present time in such a case *in extremis*, we would perform the operation of opening the trachea to allow the direct ingress of air to the lungs. There is a chance, though not a certainty, that it would save the patient's life from a fatal termination which, in such a case, is favored by the general toxic state and cardiac depression.

Washington's physicians are not to be censured for failure to perform the operation because its employment in such cases did not have the indorsement of the medical authorities of that day—in fact, they were mostly opposed to it.

A survey of the health history of Washington's family and of his own personal previous illnesses indicates an inherited tendency toward inflammation of the respiratory passages. His father died by a peculiar coincidence under circumstances much the same as those of his own case, death occurring rather suddenly from a severe inflammation contracted as a result of exposure to inclement weather. Washington's half-brother, Lawrence, had pulmonary infection, probably tuberculosis, which was the cause of his death.

Washington himself had during his life several illnesses affecting the upper or lower respiratory tract. During the Braddock campaign, he was for some time out of commission on account of an illness apparently of the nature of a contagious affection of the respiratory tract; in Boston, he had an attack of something like the influenza; he was the subject once or twice of a pleuritic affection; and he had once a nearly fatal attack of pneumonia. What,

we may ask, would have been the fate of this country of ours, had not this great man succeeded in overcoming an evident inherent constitutional weakness by a rigid discipline of his physical energies!

With habits from youth of constant exercise and a life adapted to the development of bodily vigor and a capacity for endurance, there was prepared for our country in its time of trial the one man who was equal to the situation.

The foundations of Washington's ill-health of his late years, and the beginning of the decline which led to his last illness was no doubt the abrupt change in the character of his life, necessitated by his taking up the arduous duties of the presidency. Very loath to assume the honors and longing constantly for his beloved Mount Vernon, his sense of duty and ardent patriotism held him too long, for the good of his health, to the exacting routine of administrative work.

We cannot refrain from drawing one other lesson from the case which we think of importance in connection with the subject of the seriousness of taking cold. A simple cold led directly to a fatal result. Two faults were committed, the evils of which should be emphasized; first, Wash-



The Death Bed of Washington

ington, coming in from the storm with his clothes cold and wet, neglected to change—one of the most effective means for inviting the onset of a cold. Secondly, when the cold had produced a hoarseness, indicating that it settled in the larynx and affected the vocal cords, he persisted in using his voice in reading aloud, thus doing the very thing that would tend to increase the congestion and intensify the inflammation of the parts particularly affected.

Washington was exceedingly pessimistic about his own illness; he had made up his mind that he was going to die, and he did what he could to dissuade his physicians from making special efforts for him and let him die in peace. "I find I am going," he said to Mr. Lear. "My breath cannot last long. I believed from the first that the disorder would prove fatal." And, a little later, he repeated the same conviction to Dr. Craik: "Doctor, I die hard, but I am not afraid to go. I believed from the first attack that I should not survive it. My breath cannot last long." And later, when Doctor Brown came into the room, "I feel myself going; I thank you for your attention but I pray you to take no more trouble for me. Let me go quietly. I cannot last long."

When he was ill in New York from carbuncle, Washington revealed a similar pessimistic attitude of mind and the same equanimity in the contemplation of death. Being alone one day with his doctor, he asked him his candid opinion as to the result. "Do not flatter me with vain hopes; I am not afraid to die and can therefore hear the worst." He gave expression, too, more than once to a premonition of death. He was but fifty-two years of age when he wrote to Lafayette, "I have often asked myself as our carriages separated whether that was the last sight I would ever have of you, and, though I wanted to answer 'no' my fears answered 'yes.'" In 1797, writing to another friend, he said, "To cultivate my farm, which requires close attention, will occupy the few years, perhaps days, I may be a sojourner here," and in September, 1799, in a letter to Colonel Burges Ball, "I was the first and now the last of my father's children by the second marriage. When I will be called upon to follow is known only to the Giver of Life. When the summons comes, I shall endeavor to obey with good grace." And did he never obey with better grace? Afflicted with a malady of the most painful and distressing character, he exhibited a

patience and fortitude rarely seen. And mark through it all his never failing courtesy, his thought for the comfort of those about him, rather than for his own, and his sincere gratitude for services rendered him.

Truly, as he lived the life of a great general, and patriot, statesman, he died the death of a Christian gentleman.

The Rochambeau.

NOVASUROL IN THE TREATMENT OF THE CARDIO-RENAL EDEMA

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Since the introduction of the mercury compound Novasurol into the treatment of edema by Saxl and Heilig in 1920 an exceedingly powerful and sometimes harmful diuretic was given for the use of the profession in cardio-renal disease as a last resort, when digitalis preparations, purin derivatives or the saline, or the glucose treatment in combination with an adequate diet failed. However, the pharmacological action of novasurol is still a complicated biochemical problem.

We have used novasurol during the past year on several cases, five of them are briefly described and discussed.

Case No. 1—David M., age, 58 years. Admitted May 9, 1927, with generalized considerable anasarca. Weight 220 lbs. Pulse 120, regular. Blood pressure 152 to 72 mm. Respiration labored rate 24. Heart enlarged. Urinalysis high specific gravity, much albumen, many granulated casts. Blood N. P. N. 24.

Diagnosis—Acute tubular nephritis following grippe.

Treatment—Liberal protein diet with reduction of NaCl and water, digitalis and theobromine internally. May 14, '26, patient's condition worse, he gained 5½ lbs in weight, pulse feeble, respiration much labored. Digitalis and theobromine discontinued. Novasurol 1.2 cc. given intravenously every five days for three doses, diet the same—considerable diuresis. After 23 days patient had lost 72 lbs in weight. Blood pressure 148, albumen positive, no casts. July 8, '26: patient discharged as recovered. October 14, '26: patient informed the hospital that his weight is 158 lbs. and that he eats general diet.

The fact that a low Na Cl diet in combination with diuretin and digitalis did not show any results at all upon the edema, may lead to the conclusion that this edema was caused by a toxism upon the capillary endothelium according to the experiments of the uran and chrom nephritis. The result of the novasurol treatment was most excellent.

Case No. 2—Mrs. Emily E., age 66 years. Patient was under our observation since November,

1925. She always had large generalized oedemata affecting the eyelids, and difficulty in breathing. Blood pressure high, ranging between 180 to 220 mm. Heart enlarged, albumin and many casts in the urine, which did not disappear upon digitalis medication, specific gravity 1.024. Blood N.P.N. 40, and secondary anemia.

Diagnosis—Arteriosclerotic nephrocirrhosis, malign form of Fahr-Volhard.

Prolonged treatment by dieting with theobromine medication gave no relief. On May 19, 1926 she developed an uremia of the axotaemic type. Vomiting, slow pulse, anuria, positive Babinski and coma. Hot baths and high enema were given. In July she developed a marked larynx edema with considerable dyspnoea. Novasurol was given one to two cc. intravenously with good results, as the larynx edema disappeared for about 14 days, then another novasurol treatment had to administered. Thus the larynx edema was kept under control until October 10, 1926, as another considerable larynx edema with anuria developed. Again novasurol was given and followed by a paradox reaction, with increase of the larynx edema and an acute lung edema. Patient stayed anuric and passed away on October 11, 1926.

No dietetic routine, whether protein low or salt low or water carence was administered, showed any noticeable effect upon the oedemata; digitalis and theobromine did not work; only the fact that the oedemata did not follow the laws of gravity as there was a considerable oedema of the eyelids, may point out that this oedema was of the chemical type. The result of the novasurol medication was prompt in the beginning of the treatment; but the last injection produced a paradox reaction, evidently by overdosis.

Case No. 3—Mr. James M., age, 79 years. Admitted October 21, 1926, with headache, dizziness and oliguria. Pulse 84 regular. Blood pressure 160 to 84 mm. Heart enlarged 12 cm. from medial sternal line, many sclerotic shells can be felt in the wall of the radial arteries, few moist rales over entire lungs, slight oedemata on both ankles, spastic paralysis on both legs. Oppenheim and Romberg's symptom positive, in urine no albumen and no casts, specific gravity 1.020, Blood N.P.N. 26.2, Hemoglobin 55 per cent.

Diagnosis—Arteriosclerotic nephrocirrhosis, benign form of Fahr-Volhard.

Treatment—Novasurol was given and followed by an immediate considerable diuresis for two days. Novasurol was repeated three days later with only little results, then tincture strophanthi was added to the novasurol and followed again with a marked diuresis through the entire treatment. Patient was discharged from Hospital December 26, 1926.

Case No. 4—Mary J., age 71 years. Admitted July 3, 1926. Complains constant dizziness and headaches. Irregular bowels. Blood pressure 155 mm. to 85 mm. Heart enlarged 12 cm. from medial sternal line. Second aortic sound is accentuated. Few rales over entire lungs. Moderate oedemata of both ankles and legs. Urine contains albumen, granulated and fatty casts. Hemoglobin 75 per cent, blood N.P.N. 52.

Diagnosis—Arteriosclerotic nephrocirrhosis, malign form of Fahr-Volhard.

Treatment—Low protein diet, novasurol intravenously, every third to fifth day in combination with digitalis and squill. Patient had a good diuresis, and was able to be up and about on Sep-

tember 1, 1926. Blood N.P.N. found 28.2, urine contained casts.

These two cases differ only in the fact that the one is complicated by renal insufficiency and the other not. Both oedema agree in the fact that they follow the laws of gravity and that to some extent they are influenced by digitalis preparations. Both edemata may be continued merely as mechanical ones. The novasurol treatment had fair results, which were increased by digitalis preparations.

Case No. 5—Mable G., age 58 years. Admitted September 25, 1926, with generalized anasarca, difficulty in breathing, respiration rate 38, and oliguria, heart enlarged 13.5 cm. from medial sternal line, no murmurs, heart sounds low, pulse rate 108, blood pressure 125 to 65 mm. High specific gravity of urine, albumen present, no casts. Blood N.P.N. 28.1, Wassermann negative, husband suffering from tables dorsalis.

Diagnosis—Myocardial degeneration, (syphilitic?).

Treatment—Tr. strophanthi, caffen citrate.

September 27, as the large oedema responded only slightly upon the treatment and patient threatened to exhaust, novasurol was given 1.2 intravenously and followed by large diuresis for three days, bowels became quite loose. Novasurol was repeated several times every 4-7 days, according to patient's condition, and on November 18, patient was able to be up and about.

January 3, 1927—Without our knowledge the patient took patent medicine for her kidneys, which colored the urine greenish and caused immediately oliguria and another considerable generalized oedema with a large ascites.

January 10, 1927—Again novasurol was given intravenously with digitora (Upjohn.) with good results, and patient is recovering well.

This case shows no evidence of kidney complications. The oedemata is influenced to some extent by digitalis preparations and follows the laws of gravity. It is to be considered as a mechanical one. Addition of purin derivatives did not improve the action of digitalis. Novasurol in addition to digitalis showed good results.

Calomel was used as a marked diuretic, especially when the intestinal diarrhoea is prevented by opium, long before the discovery of novasurol. Owing to the traces of mercury ions, given off by the calomel in the gut, it makes the intestinal epithelium, with which it comes in contact, swell, so that the reabsorption of the intestinal secretions is hindered and the water prevented from entering the lymph and the blood, and, therefore, the oedematous tissues are forced to release their water to the anhydraemic blood. Molitor and Pick showed according to their experiments that in a similar manner the mercury ions gradually split off from the novasurol, increase the swelling of normal tissues reached by them so that they withdrew water by way of the blood stream from the water rich, oedematous, tissues. With the excretion or chemical neutralisation of the active mercury, the imbibition pressure in the tissues falls to normal, and the water set free flows into the blood and over into the kidneys.

According to this theory of Molitor and Pick the increase of larynx oedema and the acute lung oedema in case No. 2 upon the use of novasurol was a toxic dosis. A permission for an autopsical study of this case was not obtained; however a short theoretical consideration of the mercury poisoning may be added. It is an important

phase of the mercury poisoning that the calcium metabolism is involved. The calcium is received from our food, kept in solution in the blood and in the tissues by the albumen colloids and carbon dioxide according to Hofmeister. The calcium salts stay ionized and there is no chemical compound between calcium and albumen. Normally about 80 per cent of the calcium is discharged through the gut, especially through the large intestine, most of the 20 per cent left is discharged through the kidneys. The toxic doses of mercury causing enteritis and degenerative processes in the epithelium of the tubuli contorti of the kidneys, etc., necessitates the diversion of the calcium metabolism in a manner that the larger amount of calcium ions are discharged through the kidneys already degenerated by the mercury, as the intestines badly injured by the enteritis are unable to take care of them. This way every mercury poisoning is characterized by calcium precipitation into the tubuli contorti of the kidneys. A clinical conclusion can be withdrawn from this as it contraindicates the coincident use of saline cathartics as magnesium salts of the sulphuric, carbonic, phosphoric, or tartaric acids, which form precipitates or sparingly dissociated compounds with calcium. (Romertson, Principles of Biochemistry.) In fact, they increase the Na/Ca ratio, which is considered to be the active principle of the saline cathartics, and thus prepare the ground for Calcium metastasis into the kidney epithelium. It is further to be recalled that according to M. B. Schmidt (Aschoff, Pathologische Anatomie, Bd. 1.) the chemical changes in the blood by the nephritic condition itself produce lessening of the dissolving power of the calcium salts. From these reasons we avoided the use of saline cathartics, while the patients were under the influence of novasurol. This fully meets the statement of Ph. S. Hench, that in certain cases, when diuresis has not followed the use of ammonium chloride, or merbaphen alone, combined treatment is effective, the chloride by mouth and the merbaphen intravenously. This is especially true when the blood chlorides are found to be low. According to Keith and Barrier in every case in which ammonium chloride was given, two characteristic chemical changes occurred in the plasma: a fall in the carbon dioxide combining power and a rise in the chlorine content. The amounts of calcium and magnesium excreted daily were small and showed considerable variation both in concentration and total excretion. Thus by the addition ammonium chloride to novasurol Ph. S. Hench increases the Na/Ca ratio, obtains a chemical condition in the blood which leads to hyperirritability of the tissues, without increasing or precipitating the calcium ions in the blood. The choice of ammonium chloride as a combined treatment with novasurol is from this point of view very fortunate.

Under proper indication the results obtained from the use of novasurol in cardio-renal edema are often so excellent that we recommend the use of it to much larger an extent than has been done up to now.

Still novasurol as well as calomel are to be considered as remedies of last resort. In case of cardinal edema that cannot be influenced successfully by digitalis preparations, an attempt with low Na. Cl. diet and water carence, in renal edema a much more extensive dietetic routine should be first attempted. In old sclerotic people an attempt with diuretin, if this is without result, theocylon,, in young people better theocin-

natioaceticum, or euphyllin should be first tried. Toxic conditions from novasurol are rare, as long as the first dosis of novasurol does not exceed 0.75 cc., and the following doses do not exceed 1.5 cc. given in a few days pauses, if the result is not sufficient. (Romberg, Munchener Med. Mchschr.)

DISCUSSIONS

Edemeta are disturbances of the hydrostatic equilibrium in the inter-endothelial stomata of the capillary wall, which is produced by the varying pressures in the blood stream and in the tissue spaces, and the exchange of dissolved substances produced by the secretory and absorptive activities of the capillary endothelium which is determined by chemical and osmotic forces (Limbeck, Grundriss der clinischen Pathologie des Blutes). The cardiac edema is caused merely mechanically by venous hyperaemia and follows the laws of gravity. The nephritic edema is caused either by an insufficiency of the kidney to discharge Na Cl or water, or by a general toxic injury to the capillaries and the tissues, consisting of a toxic change of the salt and water metabolism according to Aschoff, the experimental proof of which was given in the uran-nephritis and chrom nephritis in rabbits, by Heinicke.

REPORT OF A CASE OF A PIN IN THE APPENDIX*

H. M. NELSON, M. D.
DETROIT, MICH.

True foreign bodies causing appendicitis are very rare. In general it may be said that appendicitis due to irritation and trauma from foreign bodies does not represent more than 2-3 per cent of all cases. Sharp pointed metallic foreign bodies represent a class by themselves. They have rarely been found, even in large surgical experience, and this occurrence represents a surgical curiosity. The literature on this subject has been carefully reviewed by Mitchell¹, Mahoney² and Fowler³. The earliest probable case found in the literature by Mitchell was that which Ruysch of Amsterdam reported in 1691. Since then there have been about forty cases reported. Twenty-six of these cases were in males and fourteen in females. The majority of cases occurred in children. In only a few cases was there a history of the patient having swallowed a pin.

All types of appendicitis may arise from irritation due to pins. In some there are only mild symptoms which lead to chronic appendicitis with recurrent attacks. Most often there is a rapid perforation and abscess formation following the first symptoms.

The mortality of these pin cases is very high. In thirty eight of Mahoney's cases there were twenty-one deaths and seventeen recoveries. A percentage of 55.2 per cent deaths against 44.8 per cent recoveries. Of course, the older cases had a much higher mortality than the more recent ones.

The pin may be free from deposit and is rarely corroded. It is usually the nucleus of a fecal concentration which covers the head and most of the shaft.

The case I wish to report is that of a female, age 22, who came to the hospital October 27th, 1925. She had been having occasional attacks of

* Henry Ford Hospital.

rather sharp right lower quadrant pain for the past three years; none of them were accompanied by nausea, vomiting or fever, or were severe enough to confine her to bed. For a week previous to her visit to the hospital she had been acutely ill with pain in the right lower quadrant which was accompanied by nausea and vomiting and fever, and some localized tenderness. She had been told by two different doctors that she had acute appendicitis and was advised to have an operation. There was no history of having swallowed a foreign body. The night before her admission to the hospital, the pain became severe again after a period of twenty-four hours of comparative comfort. On examination her temperature was 98, pulse 96, respiration 20. Abdominal examination revealed a tender, firm mass over McBurney's point which seemed to be about the size of an orange. This mass was assumed to be an appendicial abscess. The white count was 15,500 with 75 per cent PMN. Urine and blood Wassermann were negative.

This patient was admitted to the hospital for drainage of the appendicial abscess. On opening the peritoneal cavity it was found to be clear. Adherent to the pelvic wall and behind the cecum was a large sausage shaped mass, brownish red in color which proved to be an enormously enlarged and thickened appendix. Considerable difficulty was encountered in freeing this mass and the distal end was broken. A pin surrounded by a large concretion was expressed in freeing it. The appendix was then removed. It was 7 cm. long and 14 mm. in diameter at the amputated end and 12 mm. at the distal end. In its center it had a diameter of 26 mm. The walls of the appendix were greatly thickened and indurated with the exception of the area in which the foreign body had lodged, which was about normal thickness. In places the lining of the appendix was ulcerated and necrotic. The ulceration extended deep into the muscle. The foreign body consisted of a pin which was surrounded by concretion about 8 mm in diameter. The point of pin was uncovered. Microscopic examination showed much oedema and diffuse infiltration by round, wandering cells, eosinophiles, polymorphonuclear leucocytes and hemorrhage. The patient had a rather stormy convalescence after the operation. The wound healed after about seven weeks, following which the patient had no recurrence of her symptoms and gained weight rapidly.

REFERENCES

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2. Mitchell, J. F. Presence of Foreign Bodies in the Appendix. Johns Hopkins Bulletin, 1899, Vol. X.
3. Fowler, R. H. Foreign Body Appendicitis. Amer. Journal Surg. 1912, Vol. 56, P. 427.

RUPTURED VENTRAL HERNIA

J. EDWIN WATSON, M. D.

DETROIT, MICH.

Report of a case of spontaneous rupture of a Ventral Hernia, with a subsequent abdominal fistula.

A survey of the literature fails to find any cases of large ventral hernias which have been strangulated and ruptured through the abdominal wall, leaving permanent fistula. I am reporting this one as an unusual case.

Mary Brown, a negress, 58 years old, was ad-

mitted to the Detroit General Hospital, December, 1926, complaining of a rupture.

Past History—Notes that she had childhood diseases: measles, chicken pox, scarlet fever and diphtheria, with normal recoveries. Typhoid fever 15 years ago with normal recovery. She had a burn about the face 13 years ago from gas explosion.

Menstrual History—Unessential. Married at the age of 18 years. She had six living children, five died in early childhood, one unexplained miscarriage.

Family History—Nothing of importance.

Present Illness—Twenty-five years ago following childbirth noticed a small tumor on the abdominal wall, which for a time was irritated. The swelling has persisted and gradually increased in size. On October 17th, 1926, the mass suddenly became much larger and was unable to completely reduce the mass. In a short while this broke and started to discharge fecal material. She had very little pain previous to the rupture.

Cardio Renal—Has had swelling of feet and legs with shortness of breath for past 15 years. Some headache and dizziness during the day. Nocturia, No. 3 or 4 times.

Respiratory—Slight unproductive cough.

Gastro-intestinal—Chronic constipation, recurrent generalized abdominal pains, and cramps, abdominal distention.

Physical Examination:—

A colored woman about 60 years of age weighing about 300 lbs.

Ears and Nose—No pathology.

Eyes—Ectopian of lids of both eyes with conjunctivitis. Vision fair. Pupils react slowly to light and accommodation.

Mouth—Pyorrhoea. Tongue coated. Tonsils hypertrophied, slight tremor of tongue, with no speech defect.

Neck—Submaxillary and sublingual glands enlarged.

Chest—Breath sounds harsh. Mucous rales at both bases. No area of dullness.

Heart—Enlarged to the left. Aortic and mitral murmurs. Heart tones poor quality. Vascular: Pulse, 116 to 120 per minute. Blood pressure, 160/70. Vessels tortuous and sclerosed.

Abdomen—Muscle wall thin and flabby, pendulous and superimposed layers of fat. A tumor the size of 10 centimeters below the umbilicus and to the right discharging fecal material, with sloughing tissue about tumor mass. Skin irritated.

Genitalia—Lacerated cervix and perineum, senile outlet.

Extremities—Knee jerks sluggish. Oedema over tibia.

Mentality—Sluggish.

Laboratory—Blood, R. B. C. 3,100,000; W. B. C. 6,000; Hyb, 70 per cent; Poly, 70 per cent; Wassermann, negative.

Urine—Color, normal. Reaction, acid. Sp. Gra. 1020. Alb, trace, Sugar, neg.

Diagnosis—(1) Ventral Hernia with foecal fistula. (2) Ectropia of eye lids. (3) Myocarditis chronic. (4) Arterio-sclerosis.

Progress—Four weeks have passed, fistula has continue to drain fecal material. Care of the skin has healed irritated condition. No future surgical treatment has been used because of the physical condition of the patient.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

MEASLES EPIDEMIC OF 1926

An analysis of the incidence of measles in Michigan for the year 1926 reveals an epidemic the magnitude of which has not been surpassed during the past 15 years. During this year there were 40,658 cases of measles reported in the state together with 576 deaths.

What is the reason for the occurrence of an epidemic of such magnitude? There are two factors which account in a large part for such an occurrence. Of all the infectious diseases, measles ranks with smallpox at the top of the list as being the most contagious. In addition to this fact man is more universally susceptible to this disease than to any other, possibly except-

ing smallpox. With smallpox, however, we have a most effective means in vaccination to prevent the spread of this disease, while with measles we have no such effective preventive measure.

With such diseases as diphtheria and scarlet fever there is a tendency towards the development of natural immunity as a person grows older. This is not true with measles, as we find an adult who has never had this disease just as susceptible as a young child.

There is another factor which has been observed to take a part in the occurrence of an epidemic of measles. This is the tendency towards periodicity of such epidemics.

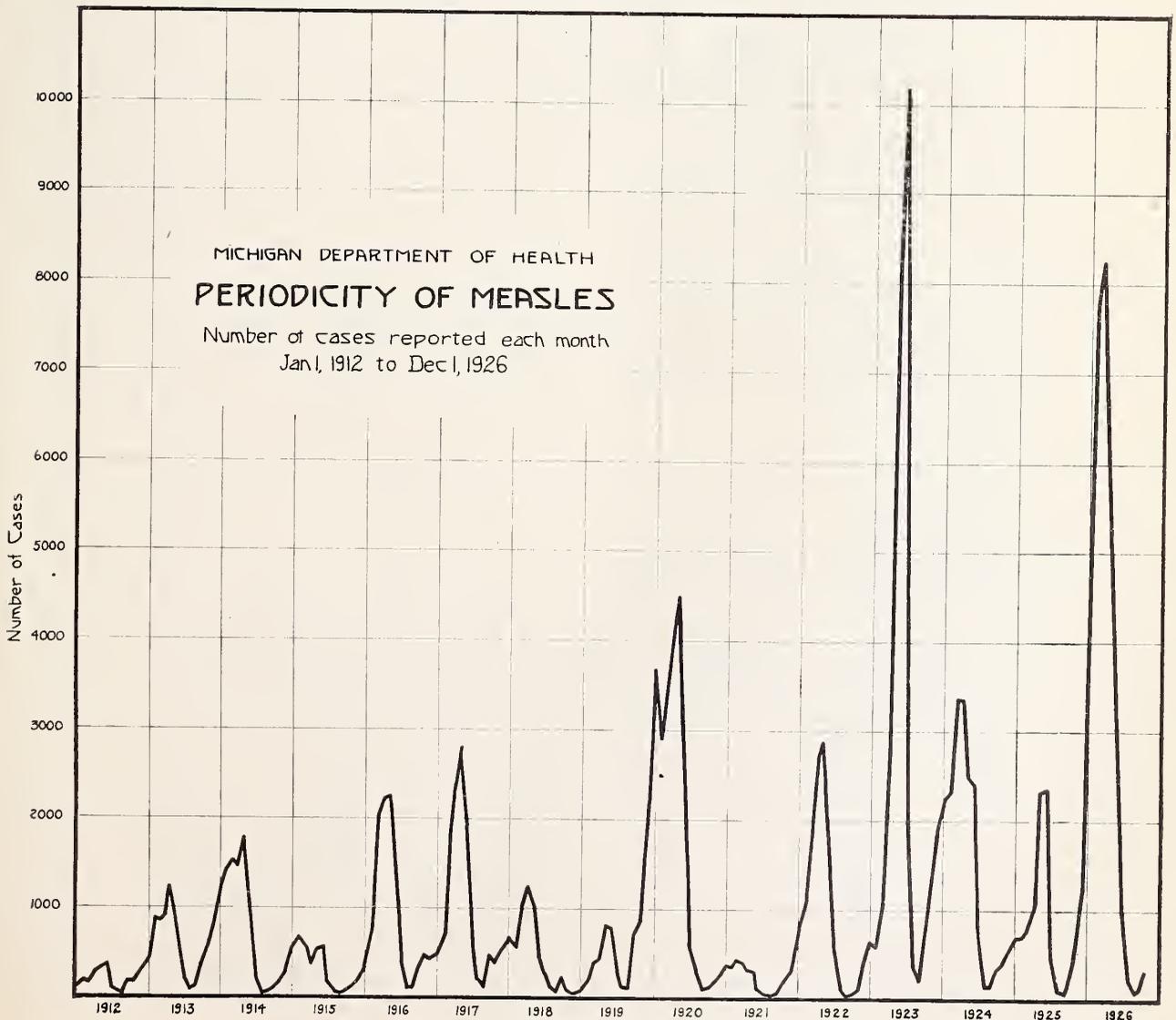
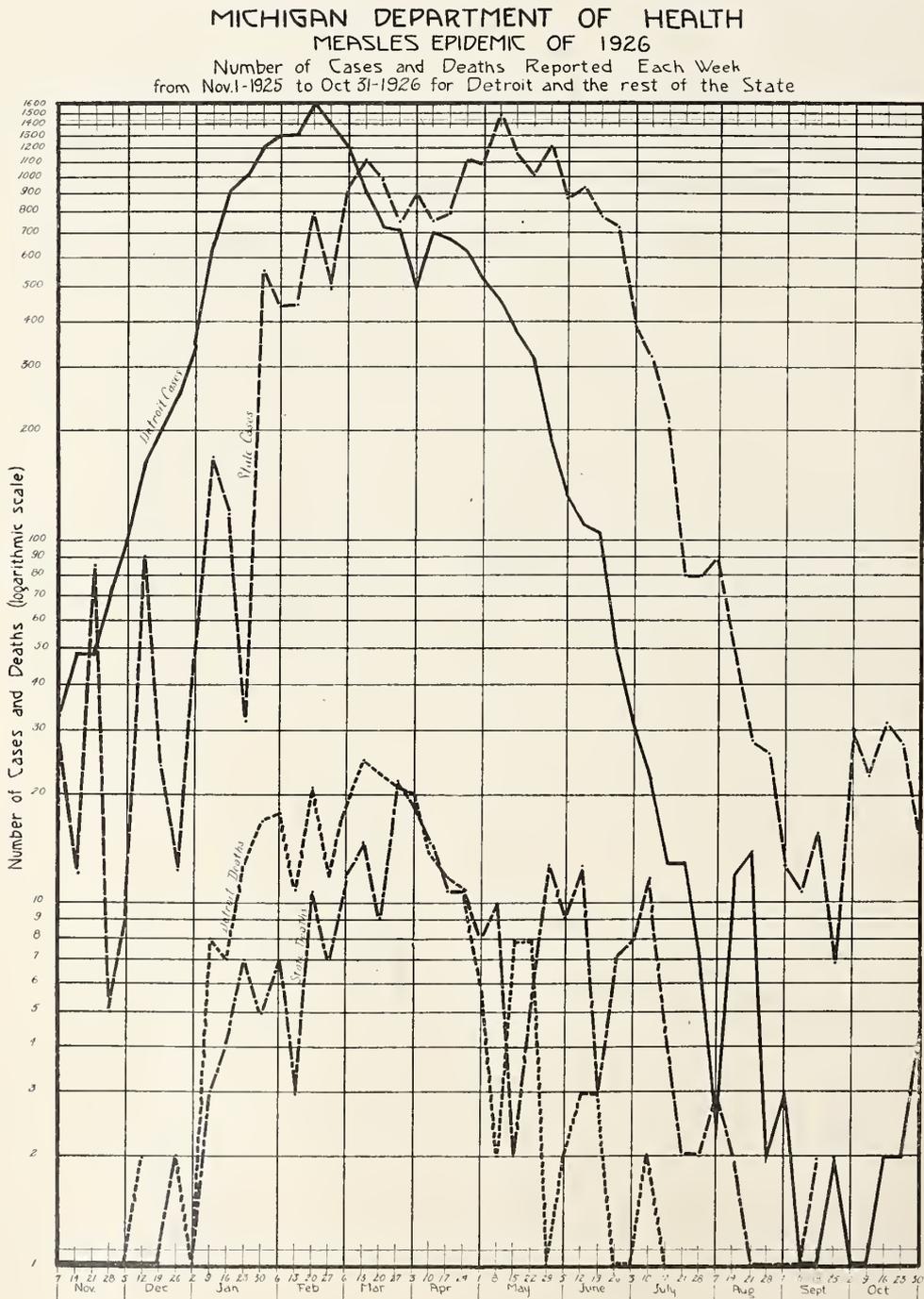


Chart 1 shows the number of cases of measles which have been reported each month in the state of Michigan for a period of 15 years. It is to be noted that there is a definite tendency towards periodicity of the epidemic waves. The time interval between valleys and peaks varies from one to three years. The interval between the larger peaks is quite regularly three years while with the smaller peaks the interval varies from one to two years. Various theories have been advanced as to the cause of such periodicity. However, the one most generally accepted is the accumulation of a sufficient number of susceptibles to make an epidemic possible.

It is observed in Chart I that the peak in 1923 rises higher than the one in 1926; however, the epidemic in 1923 was of shorter duration and consequently the total number of cases was much lower than in 1926. There were 30,041 cases with 258 deaths reported in 1923, while in 1926 there were 40,658 cases with 576 deaths.

During 1926 up to and including the month of November the number of cases reported was somewhat below that of the normal five-year average. In December, however, the number reported jumped to twice the norm with subsequent increases of over five times in January to nearly



eight times the norm in February.

Chart 2 shows the number of cases and deaths reported each week from November 1, 1925 to October 31, 1926 in Detroit and the rest of the state. A logarithmic scale was used in order that all figures could be placed on one chart and thus be better visualized. Of the cases reported in Detroit there is a marked rise in the curve beginning in November which reached the peak or mode February 20, whereas, of the cases reported from the state, outside of Detroit, the curve does not begin to rise abruptly until the last two weeks in January. Of the cases reported from the state the mode is not reached until the 8th of May, or 11 weeks after the Detroit mode. The similarity of the two curves is very striking. The curve of the state cases corresponds very closely to that of the Detroit cases, following after an interval varying from six to eleven weeks.

The curves of the deaths reported by weeks from Detroit and from the remainder of the state are scarcely less interesting. The abrupt rise in both curves begins about the same time, January 2. The Detroit curve rises somewhat more rapidly and reaches the mode March 13, just three weeks after the mode of cases reported.

The state curve is bimodal. The first and highest mode occurs on March 27 or two weeks after the mode of the Detroit curve while in the number of cases reported there is an interval of 11 weeks between the modes. The second mode, somewhat lower than the first, occurs on May 29 or three weeks after the mode of cases reported for the state. It will be observed that this secondary mode in the death curve follows the mode of the case curve at the same interval as appears between the modes of cases and deaths in Detroit.

Is this three weeks interval between the mode of deaths and the mode of cases reported significant? Does it mean that in cases of measles terminating fatally, death occurs on an average three weeks after the onset of symptoms?

The peak of the curve of State deaths occurred in March, two weeks after a secondary peak in the number of cases reported but six weeks before the mode of cases reported. What is the reason for this? Are there any other factors which would tend to increase the mortality during the month of March? We immediately think of pneumonia, a disease which is most prevalent during the month of

March. Bronchopneumonia is one of the common and most fatal complications of measles and probably accounts to a greater or less degree for the occurrence of the mode of state deaths during the month of March as is the case with the Detroit mode instead of at the time of the secondary peak during May, some three weeks after the mode of cases reported.

W. J. V. D. and P. F. O.

PREVALENCE OF DISEASE

	December Report			Av. 5 years
	November 1926	December 1926	December 1925	
Pneumonia	363	523	715	546
Tuberculosis	242	297	432	379
Typhoid Fever	50	24	103	79
Diphtheria	710	593	453	585
Whooping Cough	492	502	684	427
Scarlet Fever	970	1,224	1,386	1,311
Measles	324	413	1,215	873
Smallpox	83	79	75	181
Meningitis	3	7	13	10
Poliomyelitis	6	5	1	5
Syphilis	1,308	1,058	1,255	903
Gonorrhoea	912	772	799	746
Chaneroid	10	3	6	9

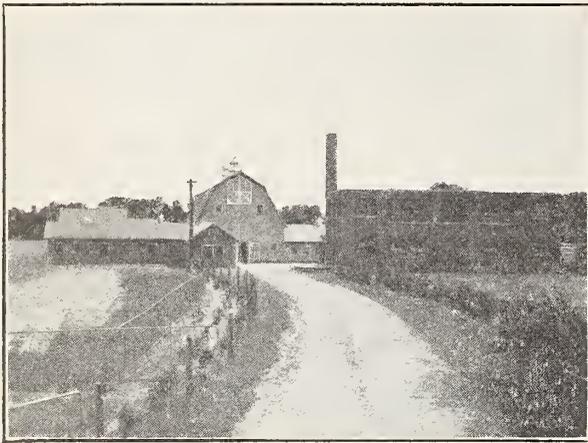
CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

December, 1926

	+	-	+ -	Total
Throat Swabs for Diphtheria				1634
Diagnosis	68	499		
Release	373	477		
Carrier	11	206		
Virulence Tests	18	7		25
Throat Swabs for Hemolytic Streptococci				666
Diagnosis	194	257		
Carrier	28	187		
Throat Swabs for Vincent's	18	549		567
Syphilis				4980
Wassermann	1	3		
Kahn	845	4041	88	
Darkfield		2		
Examination for Gonococci	115	1185		1300
B. Tuberculosis				364
Sputum	77	258		
Animal Inoculations	2	27		
Typhoid				117
Feces	15	52		
Blood Cultures	1	18		
Urine		3		
Widal		28		
Dysentery				29
Intestinal Parasites				12
Transudates and Exudates				160
Blood Examination (not classified)				544
Urine Examinations (not classified)				317
Water and Sewage Examinations				369
Milk Examinations				89
Toxicological Examinations				7
Autogenous Vaccines				5
Supplementary Examinations				172
Unclassified Examinations				724
Total for the Month				12081
Cumulative Total (fiscal year)				79235
Decrease over this month last year				3477
Outfits Mailed Out				15311
Media Manufactured, c.c.				390900
Typhoid Vaccine Distributed, c.c.				1405
Diphtheria Antotoxin Distributed, units				27294000
Toxin Antotoxin Distributed, c.c.				33450
Silver Nitrate Ampules Distributed				3404
Examinations Made by Houghton Laboratory				1281
Examinations Made by Western Michigan Division Laboratory, Grand Rapids				4920

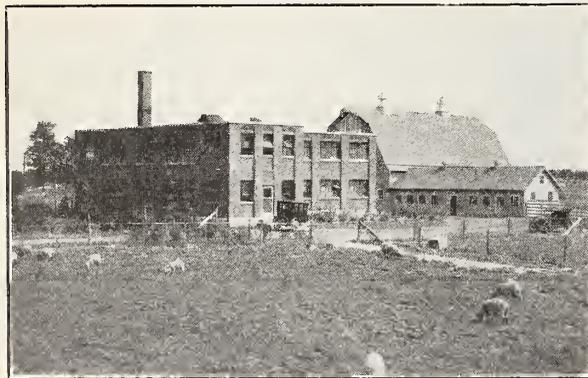
MICHIGAN DEPARTMENT OF HEALTH BIOLOGIC PRODUCTS PLANT



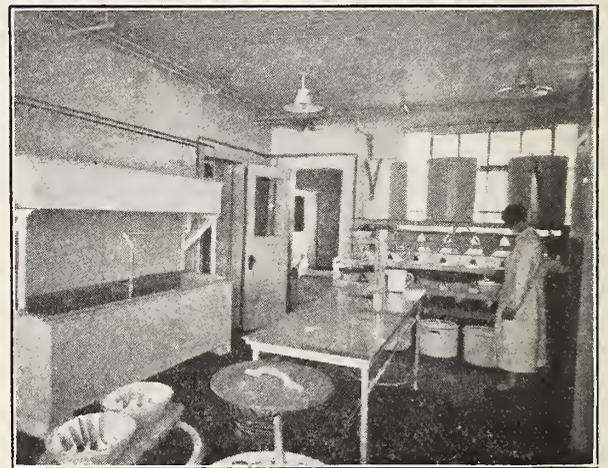
General view of Biologic Plant, west side



Horse barn and bleeding rooms



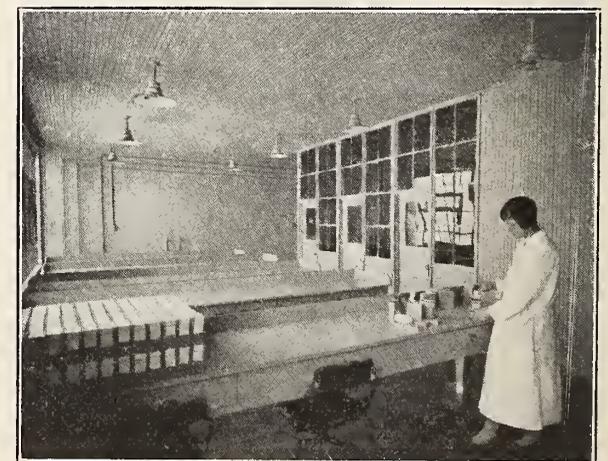
General view of Biologic Plant, south side



Concentration room



Small animal storage



Filling and packing room

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

STATE COMMISSIONER OF HEALTH

Governor Green's appointment of Dr. Guy L. Kiefer of Detroit as Commissioner of Health is met with universal approval and hearty endorsement. We are wholly confident that his administration will be characterized by efficiency, effective, sane health conservation activities, accepted measures of prevention and consistent methods of public education. The interests of the public will be paramount still not unconcerned with the interests of the profession. We do not look for pernicious measures or methods conducive to extended paternalism.

Dr. Kiefer requires no introduction to the profession, the public or to health agencies. A noble reputation is his by reason of his years of labor as a health official and his constructive contributions to the science of preventive medicine—in fact he is a pioneer blazing the trail and establishing procedures that have gone far in conserving the public's health welfare. He is so recognized locally and throughout the nation.

Dr. Kiefer in accepting this appointment is doing so at a considerable personal and financial sacrifice. Enjoying as he does a lucrative consulting practice in Detroit, he relinquishes it to render a state service that is entirely inadequately compensated. The call for service came to him, after much persuasion he accepted. In doing so he has set a most noble example, that redounds with credit through him to the entire profession. It is a splendid contribution, characteristic of the profession and one to which we will refer with pride for all time.

COMMITTEE APPOINTMENTS

Death, as noted in our last issue, created vacancies in two of our standing committees. These vacancies have been filled by President Jackson who announces the following appointments.

Dr. A. M. Hume of Owosso to succeed Dr. D. Emmett Welsh as a member of the Legislative Committee.

Dr. Walter H. Winchester of Flint to succeed Dr. Herbert M. Rich as a member of the Committee on Tuberculosis.

APPENDICITIS

Last month we imparted the statistical report of recorded maternal deaths in the state. We suggested that the results be studied by our County Societies in order that local factors might be ascertained with the view of instituting measures that would reduce the mortality rate. With a similar purpose in mind we are appending hereto the mortality rate in appendicitis, covering a five year period.

Study of this table reveals several outstanding facts. In five years there were 3,132 deaths from appendicitis in Michigan, a yearly average of 626 deaths. In 1921 there were 603 deaths while in 1925 there were 729 deaths. This is rather a startling condition and a goodly part of these deaths—yes, a majority—could have been prevented. It is an accepted fact that every death from appendicitis is preventable. Death follows because somebody erred: Either the patient called a doctor too late or declined early operation; the doctor erred in diagnosis or failed to urge operation; lastly, the surgical technic and post-operative treatment was bad.

Certain clinics and hospitals report year after year an appendicitis mortality of from 1 to 4 percent. Some six months ago we compiled a study of 11,400 cases, acute and chronic. The mortality was 2.9 per cent while in 5,736 acute cases it was 4.23 per cent. These figures were from 35 hospitals. The query is pertinent: Is your county reflecting an average mortality and if not, why not? That is a topic for discussion and investigation at your Society meeting.

A death rate of 729 cases in one year in Michigan, from appendicitis is uncalled for and unnecessary. It indicates the need for the institution of educational measures for both doctors and the public to reduce this fatality rate by at least 50 per cent. Your County Society should take the initiative.

APPENDICITIS

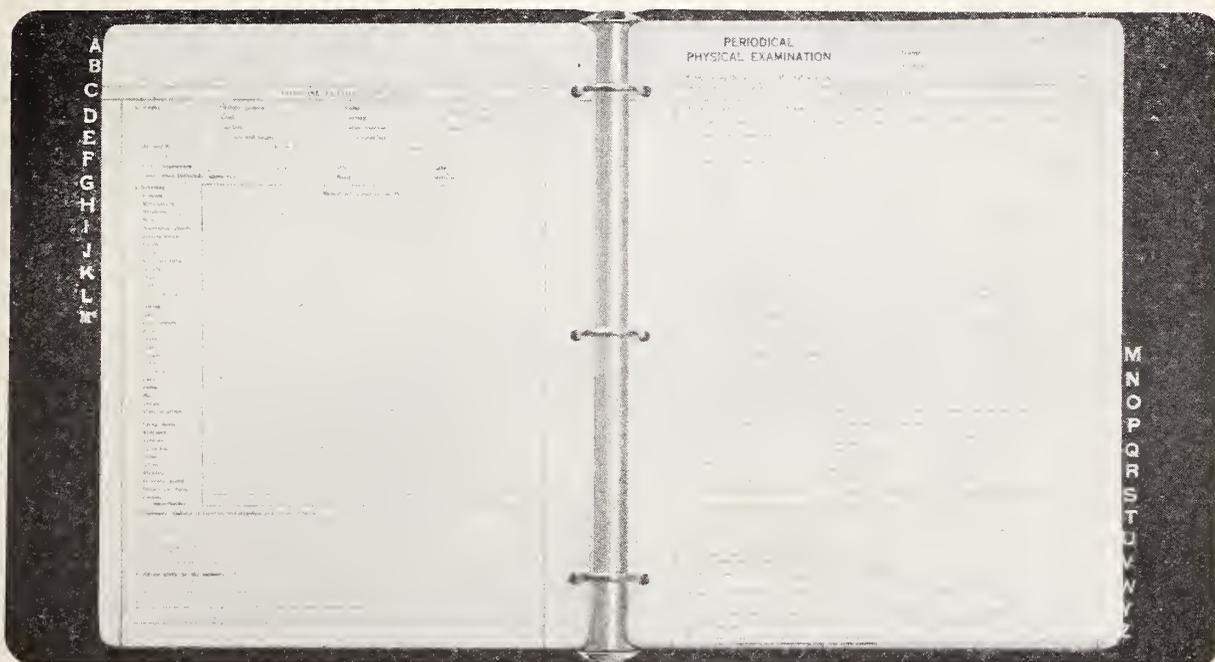
	STATE AND COUNTIES					Total	Average	Average
	1921	1922	1923	1924	1925	Five	Five	Rate Per
						Years	Years	100,000
STATE	603	534	629	637	729	3,132	626	16.2
1 Alcona	2			3	1	6	1	16.3
2 Alger	3	2	3	3	2	13	3	27.1
3 Allegan	9	7	3	9	3	31	6	15.8
4 Alpena	5	1	3	3	2	14	3	16.7
5 Antrim				2		2	0	.....
6 Arenac			1	1	1	3	1	10.5
7 Baraga						0	0	.....
8 Barry	4	6	1	4	4	19	4	18.4
9 Bay	20	10	21	14	19	84	17	24.0
10 Benzie		1	1	2		4	1	14.4
11 Berrien	8	7	5	7	9	36	7	10.6
12 Branch		1	5	3	2	11	2	8.3
13 Calhoun	13	18	10	14	11	66	13	16.6
14 Cass	2	3	4	4	1	14	3	14.5
15 Charlevoix	1	3	2	2	3	11	2	12.7
16 Cheboygan		2	3	1	1	7	1	7.1
17 Chippewa	7	6	3	2	5	23	5	19.8
18 Clare	1			1		2	0	.....
19 Clinton	2	3		3	2	10	2	8.5
20 Crawford	1		1	1		3	1	23.3
21 Delta	9	2	6	4	7	28	6	19.0
22 Dickinson	4	3	3	3	2	15	3	15.3
23 Eaton	4	5	4	3	3	19	4	13.5
24 Emmet	13	4	7	7	10	41	8	50.7
25 Genesee	22	13	15	21	20	91	18	11.6
26 Gladwin					0	0	0	.....
27 Gogebic	7	9	6	4	6	32	6	16.2
28 Gd. Traverse	10	2	4	6	6	28	6	30.7
29 Gratiot	4	3	3	6	5	21	4	11.1
30 Hillsdale	6	1	7	1	4	19	4	14.1
31 Houghton	8	9	14	15	16	62	12	16.6
32 Huron	9	4	7	6	5	31	6	18.0
33 Ingham	9	11	17	16	16	69	14	15.4
34 Ionia	4	5	1	2	2	14	3	8.8
35 Iosco						0	0	.....
36 Iron	5	3	4	3	2	17	3	12.5
37 Isabella	5	2	4	2	2	15	3	13.1
38 Jackson	12	10	14	14	14	64	13	16.3
39 Kalamazoo	14	15	16	11	18	74	15	19.8
40 Kalkaska						0	0	.....
41 Kent	35	38	33	34	43	183	37	19.4
42 Keweenaw		1		2	1	4	1	15.7
43 Lake					1	1	0	.....
44 Lapeer	6	5	3		4	19	4	15.2
45 Leelanau		1				1	0	.....
46 Lenawee	4	4	6	4	3	21	4	8.2
47 Livingston	3		2	2	3	10	2	11.2
48 Luce			1	2	4	7	1	14.5
49 Mackinac	1		2	1		4	1	12.4
50 Macomb	4	10	3	6	13	36	7	17.6
51 Manistee	2	2	4	3	5	16	3	14.3
52 Marquette	12	5	10	5	10	42	8	17.0
53 Mason	8	3	3	5	5	24	5	25.1
54 Mecosta	5	9	4	8	3	29	6	33.7
55 Menominee	5	4	5	8	7	29	6	25.1
56 Midland	1		1		2	4	1	5.4
57 Missaukee	1	1				2	0	.....
58 Monroe	4	3	1		3	11	2	5.1
59 Montcalm	1	3	4	4	3	15	3	9.7
60 Montmorency						0	0	.....
61 Muskegon	5	7	12	11	11	46	9	12.8
62 Newaygo	3	3	1	4	1	12	2	11.4
63 Oakland	7	5	11	12	11	46	9	8.8
64 Oceana	1	3	1	1	3	9	2	4.8
65 Ogemaw	3	3	1			7	1	12.7
66 Ontonagon		2			1	3	1	7.2
67 Osceola	2	1		3	4	10	2	13.0
68 Oscoda						0	0	.....
69 Otsego						0	0	.....
70 Ottawa	4	4	5	8	9	30	6	12.3
71 Presque Isle	1					1	0	.....
72 Roscommon						0	0	.....
73 Saginaw	20	11	18	18	25	92	18	17.2
74 Sanilac	7	3	2	7	9	28	6	19.0
75 Schoolcraft		1			1	2	0	.....
76 Shiawassee	3	3	6	4	4	20	4	10.7
77 St. Clair	12	11	7	7	6	43	9	14.8
78 St. Joseph	1	2	2	3	6	14	3	10.8
79 Tuscola	8	5	7	5	8	33	7	20.7
80 Van Buren	4		4	3		11	2	6.4
81 Washtenaw	19	20	13	14	7	73	15	29.0
82 Wayne	182	184	256	240	303	1,165	233	19.0
83 Wexford	6	5	3	10	6	30	6	32.1

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WHISKY

We didn't say much last month regarding the United States Supreme Court decision upon the restriction of "one pint in ten days" prescription. We still feel it's a "hulla-bulu" (whatever that is) about something the profession had better have remained silent upon these past six or more years. Probably we'd better become mum right now. However, the court's decision has created so much medical journalistic comment that we are moved to the recording of the following deductions:

Time was when whisky was employed in medicine as a stimulant, but time has, as it so often does, proven that we can get along without whisky. Turning to hospitals and case reports we find that the morbidity and mortality is no greater in hospitals where liquor or whisky is not prescribed than in hospitals where it is used. Oh, yes, we know about champagne in nausea, sometimes it did do good, but so does a stomach lavage and a little attention to diet. Right down in your heart, you know that if the drugs we possess are ineffectual, whisky won't do much more. While maybe you can cite the case of pneumonia, "flu," diarrhoea or some other acute condition in which you credit whisky for saving the patient, you can't absolutely swear or prove it was whisky that saved the day. After all, aren't we just too stubborn to want to give up whisky, loathe to place it in the discard, just as we were with a number of other pet remedies and formulas which the Council on Pharmacy and Chemistry revealed to us as being inert and useless? Yes, we are aware that eminent doctors testify and assert that whisky is a useful, valuable, therapeutic agent. But we recall also that similar eminent medical men gave testimony too as to the extreme value of strychnine, cactine, aconite, and a dozen other now obsolete drugs and formulas. We have no fear that limitation on whisky prescriptions will increase mortality or intensify suffering.

The point is also made that the Supreme Court ruling invades the practice of medicine, encroaches upon the rights of doctors and institutes control and supervision over individual practice and therapeutic judgment—in other words, state or governmental control of doctors. Yes, in this single instance we grant that argument. Still, we are not inclined to become deeply alarmed, nor do we fear that our individual rights are to be further invaded, or that this is the opening wedge of governmental

control. The members of the Supreme Court are not fools. They can see around the corner and are not lost or deluded by legal verbage. They are familiar with the Constitutional Amendment and the Volstead law. They also know what is going on in daily life, how whisky is being consumed as a beverage though it be obtained on prescription and we can't kid ourselves that any one of the justices was unconcerned as to existing conditions. They sought rather to inhibit the whisky traffic and not tell you what you can not prescribe as a doctor. We do not believe that should the question of chemicals, drugs, or morphine dosage ever be presented to the Supreme Court that that tribunal will ever rule or hand down an opinion that will restrict a doctor in their use or dosage. We are firm in opposition to state medicine or state control of medicine and will fight to the last ditch to defeat such attempts. We do not believe that this decision can be interpreted as a call to arms.

As a profession we will be far better off if we promptly close this whisky episode. If it's booze we want—well—Ontario went wet. Justice is oftentimes tempered with reason—also by conception of what actually is happening. The Supreme Court continues to merit our firm faith and our profession is not going to the dogs because of this ruling. Just let the teapot settle, the tempest can't cause a second flood. No, we haven't a New Year's hangover, either.

ALPENA COUNTY

In response to your request for a history of the Alpena Medical Society the following information is given:

In 1901 the Thunder Bay Medical Society was organized and held regular meetings until 1905, when the new organization of the Michigan State Medical Society went into effect. At that time the requirements for membership were such that several of our local physicians were not able to belong. In 1911, when the requirements were made more liberal, every local physician became a member and we have had a 100 per cent membership ever since. The following have acted as Presidents since that time: 1911, Dr. J. D. Dunlop; 1912, Dr. S. T. Bell; 1913, Dr. J. W. Small; 1914, Dr. D. A. Cameron; 1915, Dr. W. A. Secrist; 1916, Dr. John Purdy; 1917, Dr. F. J. McDaniels; 1918, Dr. Leo Secrist; 1919, Dr. E. E. McKnight; 1920, Dr. W. A. Secrist; 1921, Dr. Geo. Lister; 1922, Dr. D. A. Cameron; 1923, Dr. W. A. Secrist; 1924,

Dr. John Jackson; 1925, Dr. S. T. Bell; 1926, Dr. S. T. Bell. During this period, Dr. C. M. Williams has generally acted as Secretary.

The Society has held regular monthly meetings on the third Thursday of each month. The Society is one of the organizations in the reciprocal exchange of medical programs. In 1912 through their efforts the Alpena Hospital Association was formed which resulted in obtaining a hospital for Alpena. The Society has cooperated with the health authorities in immunizing the public against smallpox, typhoid fever and diphtheria. Much of this immunization has been conducted through our organization without expense to the taxpayers.

Once or twice in every year some organization has been our guests at one of our meetings. These organizations have been the Ministerial Association, the Rotary Club, Nurses, Hospital Association, etc.

Truly yours,
C. M. Williams.

STATE MEDICINE

The doctors have begun to get in their shots to Monday's statement by Surgeon General Cumming of the United States health service, delivered at the public health conference in Lansing, to the effect that medical service should be under state and federal control.

"Such a scheme," declares Dr. Angus McLean of Detroit, "would destroy the scientific and social incentives which have brought the great majority of medical men into the profession, and upon which the advance of medical science must depend. It would be a mistake to reduce all medical service to the type of dead-level and directed routine work typical of a factory. I hope the medical profession has too much strength, pride and dignity, and sees too clearly the service it owes to society, ever to submit to its direction, control and remuneration at the hands of politics."

That is a strong and logical answer from a public-spirited physician. It probably represents the general reaction of physicians throughout the United States to Surgeon General Cumming's proposal, as well as the public point of view, State medicine is medical socialism, and a nation of private enterprises does not react kindly to it.

The bugaboo of physicians in this re-

gard is the case of England, where state medicine on the insurance plan is actually in effect. But the important difference is that Surgeon General Cumming is no Lloyd George. The British plan of contributory insurance for sickness and invalidity was the exclusive achievement of the great little Welshman, who fought it through despite the original opposition of practically the entire British medical fraternity, the Conservative party and most of the British public.

Until somebody with the genius and conviction of Lloyd George rises to make state medicine a crusade there seems to be little danger of its adoption in America. We have accepted federal maternity benefits only with much protest. City clinics for the poor must be circumspect to an almost ridiculous point to avoid censure. Even the plan of state compulsory compensation insurance for automobile accident victims meets the cry of "Socialism!" On the whole it seems rather unlikely that Surgeon General Cumming's views will prevail in the United States. It is true that a large number of "in-between" people, neither destitute nor capable of paying without deprivation the necessarily high fees of modern hospitals, physicians and nurses, are caught in something like a millstone as matters stand. The clinics are often closed to them even if their sense of independence would not reject any resort to charity service. The consequence is a habit of dodging the doctor until the last possible moment, which often is the most expensive plan in the end.

Possibly the answer in America will be a wider popularization of the plan of preventive medicine, the annual health examination, for example, and an increase of private sickness insurance.—Grand Rapids Press.

COMMITTEE ON HISTORY

It is a monumental task and withal a highly important one, that a Committee of the State Medical Society is designated to perform—that of compiling a Medical History of Michigan. This is a work that perhaps should have been begun years ago and carried on in connection with that of the State and County Historical Societies. Through the lapse of time much of the personal and the anecdotal which lend a piquant flavor to a literary undertaking of this sort is necessarily lost. Michigan has been exceptionally favored in physician personnel and the drama of daily doings in which its medical actors

participated during the romantic period of the State's early development, should be a fascinating record. How much material is still available to this end is problematic. It need scarcely be hoped that the present Committee can do more than make a crude beginning but if it should succeed in assembling considerable data of importance for its successors not a little will have been accomplished.

To this end the Committee urgently solicits the membership of the Michigan State Society to co-operate. Records of the lives of pioneer physicians, their trials and hardships, their equipment and their environment, are much desired. Their letters, diaries, prescriptions, the correspondence and newspaper notices concerning them and throwing light upon their doings; their achievements and failures, their personalities and characteristics, their public activities, their social and neighborly values, their political trends, their relationships with one another, the causes they espoused, their methods of treatment, their claims to discoveries and originality—and last of all, the handicaps they encountered in their undertakings. All of this would be of vivid interest from the humanistic as well as professional angle.

Whatever traditions or memoranda have been transmitted concerning medical men, in the company of early explorers, the Jesuits and the missionaries, should be recorded. Already it has been revealed that a medical officer accompanied La Salle but his name is not yet known.

It is hoped to feature Indian medicine and the customs of native tribes in this regard in the Medical History. Anecdotes of old settlers or memoranda concerning these matters would be much appreciated by the Committee.

Devastating epidemics, sporadic diseases, the record of typhoid, "malaria," "ague cake," and "congestive chills," of "inflammation of the bowels," should find place in any account of pioneer medicine in Michigan.

The foregoing and medical journalism and teaching, medical societies and boards, outstanding discoveries, medical politics and controversies, scandals and malpractice suits, hospitals, training schools, and medical institutions, the war records of physicians, public health activities, biographies of distinguished men and noteworthy books and monographs, are all subjects, in the opinion of the Committee deserving treatment.

Asking assistance from all the State Society membership in assembling such material and with thanks in advance, we are

Faithfully yours,

C. B. BURR,
J. H. DEMPSTER,
W. J. KAY,
W. H. SAWYER,
J. D. BROOK,
Committee.

FILE YOUR PROTEST

The 1925 legislature appropriated a half million dollars for a new state tuberculosis sanitarium. Through the political juggling of a previous administration this building appropriation, though collected from the taxpayers, was not available. Within the past month activity, delayed, has resulted in the selection of Ann Arbor as the site for this new sanitarium.

Following this announcement, for political reasons or else fear that the Howell Sanitarium would be abandoned, a bill has been introduced seeking to repeal the law that made this new sanitarium possible. The Council urges that every County Society and member protest against the passage of this repeal bill.

Michigan has far too few beds available for our tuberculous. The Ann Arbor site is extremely desirable for it assures a staff of expert medical men. Howell will still continue and expand. We need this new sanitarium. Convey your views to your senators and representatives. Do it now, and forcefully.

THE CONTROL OF DIPHTHERIA

Notwithstanding the fact that the prevention of diphtheria is engaging the attention of city boards of health and private practitioners throughout the country, and many thousand immunizing treatments have already been given, it will be a long time, we fear, before diphtheria antitoxin goes out of use, or even before the need for it becomes appreciably less than it is now. Much more extended work along the line of prevention will have to be done than has as yet been done, before diphtheria disappears from the list of children's diseases.

The makers of diphtheria antitoxin, therefore, are to be commended for doing their utmost to improve the quality of the antitoxin and the syringe package in which it is put up. Parke, Davis & Co., who began supplying diphtheria antitoxin more than thirty years ago, announce some recent developments in the purification of this product and the concentration of the dose volume. See their advertisement in this issue, "Latest Refinements in Diphtheria Antitoxin."

M O N T H L Y C O M M E N T S

Medical—Economic—Social

Through the combined efforts of Senators Bingham of Connecticut, Reed of Missouri, and Phipps of Colorado, there was presented to the Senate, a few days ago, vigorous opposition to the pending bill to extend for an additional two years the provisions of the Sheppard-Towner law.

January 5, Senator Phipps of Colorado, chairman of the Committee on Education and Labor, presented the protest of the American Medical Association against extension of the Sheppard-Towner Act on the ground that the law is a product of political expediency and is not in the interest of the public welfare; that it is an imported socialistic scheme unsuited to our form of government; that it unjustly and inequitably taxes the people of some of the states for the benefit of people of other states for purposes which are lawful charges only for the people of such other states; that the law does not become operative until the respective states pass enabling legislation.

Senator Bingham read to the Senate the views of President Coolidge in his budget message to Congress, wherein he said:

"I have referred in previous budget messages to the advisability of restricting and curtailing federal subsidies to the states. The Maternity Act offers concrete opportunity to begin this program. The states should now be in a position to walk alone along this highway of helpful endeavor, and I believe it is in the interest of the states and the federal government to give them the opportunity."

Senator Bingham charged the proponents of the Sheppard-Towner Law with inserting in the Congressional Record statements from President Coolidge which did not include the foregoing positive recommendation in opposition to the Sheppard-Towner program.

Senator Bingham also read to the Senate an editorial from the New England Homestead of December 11, 1926, which declared:

"The purpose back of the present effort is to gain time so this form of federal aid may be fastened upon the people as a permanency. Instead of protection for mothers and infants . . . the scheme now blossoms out as a full-fledged public health measure. Not content with seeking to dominate our homes and schools, federal bureaucrats would oust the states from authority over the public health."

In urging that federal bureaus should not be engaged in work of this kind, Senator Reed of Missouri said:

"We have in the United States many wonderful universities at which it is presumed the last word of medical lore is taught to medical students. . . . Nurses are taught in schools and colleges and work immediately under the direction of physicians. The vast machinery exists; and I want to know what a board of five or six officials in Washington can do. I cannot speak now with reference to the present board, for I do not know its personnel; but at the time this bill was here for debate on a previous occasion that board consisted, to all intents and purposes, of one woman

—an unmarried woman—aided by a number of other unmarried women, women who had never been mothers, of course, for they had never been married. They were not learned in medicine. They were not even trained nurses. I want to know what knowledge that kind of a board can contribute to the medical fraternity of the United States, which has open to it all of these avenues of learning to which I have adverted."

There was also read to the Senate an article entitled "Further Falacies of the Sheppard-Towner Propaganda," prepared by Dr. William C. Woodward, executive secretary, Bureau of Legal Medicine and Legislation of the American Medical Association.

Proponents of this legislation are endeavoring to show that the medical profession is not a unit in opposing it and have presented to the Senate a telegram from Dr. Charles H. Mayo of Rochester, Minn., stating that "the Sheppard-Towner Act should be continued because inestimable public good results directly from this expenditure and also indirectly by stimulating individual states to carry on this valuable educational work."

In accordance with the wish of Senator Cope-land of New York, a letter was also presented from Dr. Haven Emerson, professor of public health administration, Columbia University, New York, in which he said in part:

"No one who has the least acquaintance with the facts of maternal and early infant mortality in the United States doubts that the administration of federal and state services under the Sheppard-Towner Act has contributed materially to the saving of lives of the mothers and babies of this country.

To permit the work under this act to lapse for lack of continuing appropriations for at least another period of three years would be to confess that the Congress is incapable of intelligent expenditure of the tax money, and that its members consider lives are less valuable than dollars.

—

Thoughts while in a Chiropodist's Parlor: Corns are pestiferous and soul damning as well as temper busting. Corn plasters and the fifty-seven and one remedies are of slight value. Our own old salicylic acid, cannabin and collodion formula is as effective as any. Course it's poorly fitted shoes but Holy Gee, a shoe clerk ought not to sell you too narrow or too short a shoe. You damn them and nearly everyone else when the corn roars and of course as your paunch protrudes and your knives are dull you wend your way to the footman—oh, excuse, chiropodist—licensed by a state board, diplomas and everything, 'coz we doc's neglected to perfect this type of service. Reception room, small but neatly furnished—all treatments by appointment, hence no crowded waiting room. Treatment room nicely furnished with automatic chair and specially designed foot rest. Instrument tray, sterilizer—glass table and array of solution and ointment bottles. Off come the shoes and socks—a survey of your "dogs." "No wonder—wrong, ill-fitting shoes, distorted toes, twisted metatarsals, rota-

tion of os calcis, six or seven ligaments strained, socks might be bigger—we wear 11's), "You used to do a lot of running"—(We'll say we did and still do to keep out of red at the bank) and a similar line of patter that didn't impress us but which would be impressive to an unknowing public. A compress of alcohol, a slick job of paring, adeptness in cutting some adhesive plasters, a nail trim, dusting with talc—on with the socks and brogans—and, Oh, Boy, what a grand and glorious feeling of relief. How much? Our price is three dollars but give us a buck and we'll call it square. Meditation: Few docs would or could render such service—hence no wonder the public consults us no more for corns, callus or bunions. A chiropodist will excell any doc or surgeon in skill and deftness in strapping toes, arches or ankles. Why did we cease? Moral: It's neglect of the small things, the details and deftness that has caused us to relinquish several of the minor branches, and we'll relinquish major ones, too, if we don't watch out. Six dollars an hour for nine hours is \$54 dollars a day in a warm office. Pretty soft.

The Health Legislative Bureau met for organization at the Hotel Olds, Lansing, Thursday evening, December 16th. Those present were, Doctors Jackson, Olin, Haze, Mac Cracken, Vander Slice, Mr. Werle and Miss Wheeler.

Dr. Haze was chosen chairman and Dr. Vander Slice secretary. Following the organization, questions of general policy of the Bureau were discussed and finally the following general rules were laid down for its guidance:

1. The Bureau shall act as a general coordinating body and shall discuss and pass upon the proposed legislation presented by the several groups represented. Its decisions naturally cannot be definitely binding on any group so far as its program is concerned.
2. Publicity shall be through the individual groups and not through the Bureau.
3. All proposed legislative measures shall first be presented to the Bureau for consideration before publicity be given and before introduction into the legislature.
4. After action on any proposed legislation by the Bureau the result of such action shall be reported back to the participating agencies through their representatives.
5. Any special health legislation if deemed necessary by the Bureau may be assigned to any one of the participating agencies for preparation.
6. The Bureau favors as little legislative action at the coming session of the legislature as may be.

E. R. Vander Slice, Secretary.

Of all the asinine projects, the one advanced in the following telegram leads:

"A movement by prominent business men, physicians and others is being considered under the title of 'Association Against Impure Liquor Incorporated.' The purpose of the association is to discourage the purchase of any liquor from bootleggers but rather where medicinal whisky is required that same be secured through druggists and prescriptions from physicians and to prevail upon all prominent and reputable physi-

cians to take out permits to issue such prescriptions. This movement is in the interest and preservation of public health. Can you consistently approve the idea and may we depend upon your moral support in the launching of the association. Please wire full expression at our expense.

"Charles Capehart, organizer 'Association Against Impure Liquor,' Times Building, New York City."

Our answer is an emphatic NO. The proposition of making the doctors the bartenders of the nation is insulting. Neither do we purpose being made the tool for others. If those wanting liquor cannot bring about the proper legislation to secure it, they certainly will have our endless opposition if they endeavor to obtain whisky in this manner. We presume someone is reaping a lucrative salary as secretary of this, another ridiculous league—of which we have far too many.

A Scotch preacher, engaged by a congregation, on the second Sunday in his new charge preached the same sermon that he did on his first Sunday. This caused some comment. On the third Sunday he again preached the same sermon. After the services the elders interviewed the preacher and told him he had not been engaged to preach one sermon and wanted to know how long he intended preaching that sermon. The hoary preacher replied: "I preaches that sermon till you practice what I preach."

That is somewhat the position in which your Council and officers find themselves. They will continue to preach organized efforts, organized unity and organized achievements everlastingly and till the profession exemplifies complete accomplishment of the purposes that justify our organization. We shall urge local officers and committees to continue along the same lines. The end will not be recorded until every member gives evidence of practicing the principles that organized medicine stands for and aspires.

Anywhere from three to four times a month do we receive a request for a list of Michigan doctors or a list of doctors in one, two or more counties. We are unable to fill the request because our mailing list is on addressograph plates arranged according to railway mail routes and not by towns or counties. Our other list of members is on Kardex filing trays, arranged by Councilor District divisions and to copy such a list would require one person's time for three days. These addresses by state, county or cities, may be obtained from the Directory of the American Medical Association which is accurate and dependable. This directory can be purchased from the A. M. A. by states or for the whole country. We are making this statement for our members information.

There has been evidenced this past year a renewal of interest in the life of Washington and considerable discussion ensued. We are reprinting in this issue, by courtesy of the *Virginia Medical Monthly*, a most interesting narration of the "Last Illness and Death of Washington," by Dr. Walter A. Wells. We were intensely interested in this medical narrative and felt certain it would appeal and please our readers.

This article has created anew a desire to awaken in Michigan a more evidenced interest in

the history of medicine and in the biographies of outstanding leaders who influenced the development of practice. Personally, we have ever been an avid reader of these biographies, research complications and historical narrations. Much pleasure and profit have resulted.

As President Jackson stated at a recent County Meeting—"Every patient coming to you with a history or symptom of blood in their urine or passing blood presents a direct challenge to your diagnostic acumen to ascertain the cause and location of the hemorrhage." To this we would add that no doctor should permit the day to close until he had instituted measures to arrive at a diagnosis. In other words, never trifle, neglect or consider lightly any case of hematuria. Do not temporize with a favorite prescription and do not describe it as the result of a strain. Promptly go carefully into the history, physical examination and arrange for a cystoscopic and X-ray study. The early discovery of the cause will prevent in many instances an eventual fatality.

Evidently our members are busy for we didn't receive many comments upon our new appearance. Probably silence can be construed as approval, still we'd like to hear some shouting. If you can tender additional suggestions we will be grateful for them. We want you to evidence sustained interest in your Journal. Sometimes we feel disposed to temporarily assume a vulnerable attitude upon some subject simply to evoke expressions from our readers—maybe we will if a goodly number fail to proffer their comments and suggestions. It isn't bouquets that we are soliciting—simply your helpful and inspiring cooperation.

Individuals speaking for the first time into the "mike" of a radio station have remarked at the impression of awe that overtook them when they realized that their voice was being carried out upon the vast silences of space and the invisibility of their listening audience. Well, we have time and again experienced the same sensation. We write, or try to. The Journal is mailed and—there is a vast silence. We have requested response—not of praise—but of suggestion. We invite discussion, suggestions and constructive criticism. We want to learn your opinions and desires. That's what our "Open Forum" is for—won't you utilize it?

We trust every member has forwarded his check for 1927 dues to his County Secretary. If you have neglected doing so attend to it today. Your local Secretary will remit your state dues and your state membership certificate will be mailed direct to you. Again do we recommend the displaying of this certificate in your office in order that your patients may perceive that you are affiliated with the recognized medical organization of the state.

A news item reports the death from typhoid fever of a nurse in a city hospital controlled and administered by the local health officer. The

infection was alleged to have been sustained from a bite from a delirious and fighting typhoid patient. A life has been sacrificed because of laxity, for had the health officer insisted that all nurses and employes handling typhoid patients receive typhoid immunizing inoculations the chance is that this nurse would not have contracted typhoid fever. We cite the incident simply to stimulate those who direct hospitals to safe-guard their nurses, internes and orderlies by preventative inoculations.

Haggard, of Tennessee, draws the following observations from his experience with goitre: "When a woman comes complaining of cardiac symptoms, nervousness and weakness, one must show why she has not toxic adenoma. It is rarely necessary to operate on goitre before the age of 20, but if there is an encysted adenoma it should be removed. Parenchymatous enlargement should be left alone and the patient given iodine; if it does not disappear it is probably an adenoma and should be removed. It is a great mistake to give iodine to patients who have had goitre for a long time."

Whoopee—Pepy's Diary is back in "Tonic and Sedatives"—a little docile but amusing. Maybe when the weather becomes real wintry around Chicago and invitations accumulate for medical meetings in localities that boast of summer weather we may be privileged to read and be amused by more of these facetious musings. They are far more entertaining than the "clipped" reproductions that have been cluttering the column. The writer has a vivid imagination and for all that we care he can give it vent without boarding a train.

We repeat in this issue the order blank for the binder and periodical examination blanks. This, we feel, is a compact, convenient outfit that is of value to every doctor. We stress once more your support to this educational movement. Thoroughness is essential. This outfit will materially aid you. Obtain it now by returning the order sheet.

You wonder what you can discuss in our Open Forum? Well here are a few topics we would like to have your opinions upon: "Post-Graduate Instruction," "The Nursing Problem," "District Health Officers," "Our Endowment Foundation," "The Impositions of Insurance Companies." Just open up on these and then we will suggest others.

Attention is called to the editorial in this issue relative to the compilation of a Medical History of Michigan's Profession. This committee, of which Dr. C. B. Burr is Chairman, requires your assistance. Please accord it to the committee.

The Annual Meeting of the Council was held so late in January that we are unable to incorporate the reports and minutes in this issue. They will appear in our March number.

O U R O P E N F O R U M

Affording Opportunity for Personal Expression

Editor of The Journal:

I wish to compliment you on the January, 1927 issue of the Journal. This is a star number in make-up with high standard of content.

You are deserving of congratulations and I have no doubt that you will receive many letters concerning this number.

Very truly yours,
W. L. Babcock, M. D.

Editor of The Journal:

Pleased to receive your thanks for the little part I took in the recent Saginaw meeting. To date I have never rendered any expense for such services, and have no intention of doing so at this time. I was very much pleased to have the opportunity of taking part in such an interesting meeting.

If such post-graduate work is to continue allow me to suggest that some paid consultations afforded the essayists at these conferences would be a great honor. It has been my custom for some time past, whenever a dermatological authority visits Detroit, to have some remunerative consultations for him, primarily for the benefit of the patient and secondarily for his gratification. I am suggesting this only in consideration of the younger men who are so willing to take part in these post-graduate conferences.

Very truly yours,
H. R. Varney, M. D.

Editor of The Journal:

How comes that your statistician gives poor little Oscoda County, soon to be the best county in Michigan, credit for such a high rate of maternal mortality? One death in five years does not mean an average of one a year, nor is it likely that 90 per cent of the number of births caused the deaths of each a mother. I do not know of the case quoted in "21" and my competitor was not here that year, but even at that the figures must be wrong. Nearer an average of *one-fifth* than *one* a year. It would not be surprising if under existing conditions our records showed against us, but as long as it is extremely favorable we want all that is coming to us against what may happen to us later on.

Dr. Keifer ought to make a good health officer. It would be difficult to find a better man.

Dr. Little at the head of the University promises well and pleases those who do not like to see institutionalists destroy the American home.

Physicians are pleased to have Dr. Bruce upon the teaching staff.

R. H. Wood, M. D.

Editor of The Journal:

In reply to your letter of December 10, would you kindly advise me to whom I should write to obtain the Directory of the American Medical Association, and if there is a charge for same?

Now in reply to the second paragraph of your letter, I feel that our work is so appreciated by the medical profession, and because of the fact that physical reconstruction is always stressed as the first step in rehabilitation, that they

would appreciate receiving material from time to time, which material of course places them under no obligation whatsoever. We feel that this mailing list of 3,500 would appreciate very much our means of co-operation.

We do feel that we have something at the present time that merits the attention of the profession, and since you state that you will be glad to accept any such thing for publication in the Journal, I wish you would announce the "Rehabilitation Review," the first issue of which is just off the press. This magazine is devoted to the physical reconstruction and employment of the disabled, and represents all national organizations interested in the welfare of disabled persons. I am sending you my own personal copy which you may retain, since I have a duplicate. You will be interested in looking over its table of contents, and noting especially the article on orthopedic treatment of infantile paralysis cases by Dr. Fred H. Albee.

I am also anxious to secure the list of the 3,500 persons to whom the Journal is sent, since I wish to send them free of charge a bulletin which I have just prepared, entitled "The Rehabilitation of Physically Handicapped People in Michigan." This treats the subject very thoroughly and should be in the hands of every practising physician and surgeon. I am quite sure they would welcome it. With very kind regards, I am,

Very truly yours,
Percy Angove,

State Supervisor of Civilian Rehabilitation.

THE PHYSICIAN'S INCOME TAX—1927

The taxpayer who is required to make a return must do so on or before March 15, unless an extension of time for filing the return has been granted. For cause shown, the collector of revenue for the district in which the taxpayer files his return may grant such an extension, on application filed with him by the taxpayer. This application must contain a full recital of the causes for the delay. Failure to make a return may subject the taxpayer to a penalty of 25 per cent of the amount of the tax due.

The normal rate of tax on individual citizens or residents of the United States, under the Revenue Act of 1926, is 1.5 per cent on the first \$4,000 of net income in excess of the exemptions and credits, 3 per cent on the next \$4,000, and 5 per cent on the remainder.

The following discussion covers matters relating specifically to the physician. Full information concerning questions of general interest may be obtained from the official return blank or from the collectors of internal revenue.

WHO MUST FILE RETURNS

1. Returns must be filed by every person having a gross income of \$5,000 or more, regardless of the amount of his net income or his marital status. If the aggregate gross income of husband and wife, living together, was \$5,000 or more, they must file a joint return or separate returns, regardless of the amounts of their joint or individual net incomes.

2. If gross income was less than \$5,000, returns

must be filed (a) by every unmarried person, and by every person married but not living with husband or wife, whose net income was \$1,500 or more, and (b) by every married person, living with husband or wife, whose net income was \$3,500 or more. If the aggregate net income of husband and wife, living together, was \$3,500 or more, each may make a return or both unite in a joint return.

If the marital status of a taxpayer changed during the tax year, the amount of income necessary to bring him within the class required to make returns should be ascertained by inquiry of the local collector of internal revenue.

As a matter of courtesy only, blanks for returns are sent to taxpayers by the collectors of internal revenue, without request. Failure to receive a blank does not excuse any one from making a return; the taxpayer should obtain one from the local collector of internal revenue.

GROSS AND NET INCOMES: WHAT THEY ARE

Gross Income—A physician's gross income is the total amount of money received by him during the year from professional work, regardless of the time when the services were rendered for which the money was paid, plus such money as he has received as profits from investments and speculation, and as compensation and profits from other sources.

Net Income—Certain professional expenses and of carrying on any enterprise in which the physician may be engaged for gain may be subtracted as "deductions" from the gross income, to determine the net income on which the tax is to be paid. An "exemption" is allowed, the amount depending on the taxpayer's material status during the tax year, as stated above. These matters are fully covered in the instructions on the tax return blanks.

Earned Income—In view of the credit of 25 per cent allowed on earned net income, the physician as distinguished from his receipt from other sources should state accurately the amount of such income sources. Earned income means professional fees, salaries and wages received as compensation for personal services rendered. From this, in the computation of the tax, must be subtracted certain "earned income deductions." The difference is the "earned net income."

The first \$5,000 of an individual's net income from all sources may be claimed, without proof, to be earned net income, whether it was or was not in fact earned within the meaning set forth in the preceding paragraph. Net income in excess of \$5,000 may be claimed as earned if it in fact comes within that category. However, a taxpayer may not claim, as earned, net income in excess of \$20,000.

The conditions relating to the computation of the tax on earned income are too elaborate to be stated here. In case of doubt, physicians should consult collectors of internal revenue.

DEDUCTIONS FOR PROFESSIONAL EXPENSES

A physician is entitled to deduct all current expenses necessary in carrying on his practice. The following statement shows what such deductible expenses are and how they are to be computed:

Office Rent—Office rent is deductible. If a physician rents an office for professional purposes alone, the entire rent may be deducted. If he rents a building or apartment for use as a residence as well as for office purposes, he may deduct a part of the rental proportionate to the amount of space used for professional purposes. If the physician occasionally sees a patient in his dwelling house

or apartment, he may not, however, deduct any part of the rent of such house or apartment as professional expense; to entitle him to such a deduction he must have an office there, with regular office hours. If a physician owns the building in which his office is located, he cannot charge himself with "rent" and deduct amount so charged.

Office Maintenance—Expenditures for office maintenance, as for heating, lighting, telephone service and the services of attendants, are deductible.

Supplies—Payments for supplies for professional use are deductible. Supplies may be fairly described as articles consumed in the using; for instance, dressings, clinical thermometers, drugs and chemicals. Professional journals may be classified as supplies, and the subscription price deducted. Amounts currently expended for books, furniture and professional instruments and equipment, "the useful life of which is short," may be deducted; but if such articles have a more or less permanent value, their purchase price is a capital expenditure and is not deductible.

Equipment—Equipment comprises property of more or less permanent value. It may ultimately be used up, deteriorate, or become obsolete, but it is not in the ordinary sense of the word "consumed in the using"; rather, it wears out.

Payments for equipment or nonexpendable property for professional use cannot be deducted. As property of this class may be named automobiles, office furniture, medical, surgical and laboratory equipment of permanent value, and instruments and appliances constituting a part of the physician's professional outfit and to be used over a considerable period of time. Books of more or less permanent value are regarded as equipment, and the purchase price is therefore not deductible.

Although payments for equipment or nonexpendable articles cannot be deducted, yet from year to year there may be charged off against them reasonable amounts as depreciation. The amounts so charged off should be sufficient only to cover the lessened value of such property through obsolescence, ordinary wear and tear, or accidental injury. If improvement to offset obsolescence and wear and tear or injury has been made, and deduction for the cost claimed elsewhere in the return, claim should not be made for depreciation.

A hard and fast rule cannot be laid down as to the amount deductible each year as depreciation. Everything depends on the nature and extent of the property and on the use to which it is put. Five per cent a year has been suggested as a fair amount for depreciation on an ordinary medical library. Depreciation on an automobile would obviously be much greater. The proper allowance for depreciation of any property is that amount which should be set aside for the tax year in accordance with a reasonably consistent plan, not necessarily at a uniform rate, whereby the aggregate of the amounts so set aside, plus the salvage value, will at the end of the useful life of the property in the business equal the purchase price of the property or, if purchased before March, 1913, its estimated value as of that date or its original cost, whichever may be the greater. The physician must in good faith use his best judgment and make such allowance for depreciation as the facts justify. Physicians who, from year to year, claim deductions for depreciation on nonexpendable property will do well to make annual inventories, as of January 1, each year.

Medical Dues—Dues paid to societies of a strictly professional character are deductible. Dues paid to social organizations, even though their membership is limited to physicians, are personal expenses and not deductible.

Postgraduate Study—The Commissioner of Internal Revenue holds that the expense of postgraduate study is not deductible.

Traveling Expenses—Traveling expenses necessary for professional visits to patients is deductible. The Commissioner of Internal Revenue, however, still holds that traveling expenses incident to attendance at meetings of medical societies are merely personal expenses and therefore not deductible. Physicians who have expended money for traveling expenses to attend meetings of medical societies should not make a deduction for the amount so expended, in computing their income taxes under current schedules. They are advised, however, either to make a memorandum on their income tax returns or to file a memorandum with them, showing in detail the amount so expended. Such a memorandum should show that payment of the tax on that amount has been demanded by the Commissioner of Internal Revenue and is made solely by reason of that demand, under protest and under duress. The physician filing such a memorandum should retain a copy of it. In event of any reversal of the commissioner's ruling, physicians who have made such records can more easily substantiate their claims for repayment. A physician who deducts traveling expenses or the expenses of postgraduate study must expect to have such deduction disallowed. He will then be compelled to pay the tax on the disallowance, with interest, or to appeal to the Board of Tax Appeals and possibly to the courts. If he appeals, he will in the end have to abide by the result.

AUTOMOBILES

Payment for an automobile is a payment for permanent equipment, and is not deductible. The cost of operation and repair includes the cost of gasoline, oil, tires, insurance, repairs, garage rental (when the garage is not owned by the physician), chauffeurs' wages, etc.

Deductible loss through depreciation is the actual diminution in value resulting from obsolescence and use, and from accidental injury against which the physician is not insured. If depreciation is computed on the basis of the average loss during a series of years, the series must extend over the entire estimated life of the car, not merely over the period in which the car is in the possession of the present taxpayer.

If the automobile is used for professional and also for personal purposes—as when used by the physician for recreation, or used by his family—only so much of the expense as arises out of the use for professional purposes may be deducted. A physician doing an exclusive office practice and using his car merely to go to and from his office cannot deduct depreciation or operating expenses; he is regarded as using his car for his personal convenience and not as a means of gaining a livelihood.

What has been said with respect to automobiles applies with equal force to horses and vehicles and the equipment incident to their use.

MISCELLANEOUS

Laboratory Expenses—The deductibility of the expenses of establishing and maintaining laboratories is determined by the same principles that determine the deductibility of other corresponding professional expenses. Laboratory rental and the expenses of laboratory equipment and supplies

and of laboratory assistants are deductible when under corresponding circumstances they would be deductible if they related to a physician's office.

Losses by Fire, etc—Loss of and damage to a physician's equipment by fire, theft or other cause, not compensated by insurance or otherwise recoverable, may be computed as a business expense, and is deductible, provided evidence of such loss or damage can be produced. Such loss or damage is deductible, however, only to the extent it has not been made good by repair and the cost of repair claimed as a deduction.

Insurance Premiums—Premiums paid for insurance against professional losses are deductible. This includes insurance against damages for alleged malpractice, against liability for injuries by a physician's automobile while in use for professional purposes, and against loss from theft of professional equipment, and damage to or loss of professional equipment by fire or otherwise. Under professional equipment is to be included any automobile belonging to the physician and used for strictly professional purposes.

Expense in Defending Malpractice Suits—Expenses incurred in the defense of a suit for malpractice are deductible as business expense. Expenses incurred in the defense of a criminal action, however, are not deductible.

Sale of Spectacles—Oculists who furnish spectacles, etc., may charge as income money received from such sales and deduct as an expense the cost of the article sold. Entries on the physician's account books should in such cases show charges for services separate and apart from charges for spectacles, etc.

CIVIC RELATIONS COMMITTEE REPORT

The Committee on Medical and Civic Relations of the Wayne County Medical Society has studied the hospital situation in Wayne County. Dr. Francis Duffield was detailed and kindly undertook to establish the number of hospital beds in Wayne County. The Committee thinks that the report gives a fair estimate of prevailing conditions, although it is well aware of the fact that changes which take place continuously make it possible to furnish only an approximately correct estimate. Compared with the growth of the City of Detroit, the changes are so pitifully small and the increase in the number of hospital beds is so deplorably insufficient that the survey may well be made a basis of earnest consideration and further action. The survey reads as follows:

Thirty-one hospitals in Wayne County with eight or more beds:

1. Eloise Hospital	3010	beds
2. Herman Kiefer Hospital	700	"
3. Providence Hospital	478	"
4. Harper Hospital	460	"
5. Henry Ford Hospital	425	"
6. Northville Sanitarium	402	"
7. Children's Hospital of Michigan	400	"
8. St. Mary's Hospital	325	"
9. Grace Hospital and Annex.....	400	"
10. St. Joseph's Mercy Hospital.....	160	"
11. Highland Park General Hospital	154	"
12. Evangelical Deaconess's Hospital	132	"
13. Wm. Booth Memorial Hospital....	117	"
14. Detroit Ear, Eye, Nose and Throat Hospital	120	"
15. Woman's Hospital	108	"
16. Delray Industrial Hospital	105	"
17. Wyandotte Osteopathic Hospital..	70	"
18. Detroit Osteopathic Hospital	60	"
19. Jefferson Clinic	50	"
20. Michigan Mutual Hospital	50	"

21. Dunbar Memorial Hospital	42	"
22. Florence Crittendon Home	26	"
23. Lincoln Hospital	25	"
24. Mercey Hospital	25	"
25. Detroit Diagnostic Hospital.....	25	"
26. Cottage Grove Hospital.....	20	"
27. East Side Hospital	20	"
28. Penn Sanitarium	15	"
29. Grosse Point Hospital	14	"
30. Fenwood Hospital	10	"
31. Marr Maternity Hospital	10	"
32. Forrest Hospital	8	"
	<hr/>	
	7851	beds

1. 300 bed addition soon.
2. 350 beds added in next two years.
3. 196 beds contemplated.
4. 22 beds unopened.
5. 25 to 28 beds opened about January, 1927.
6. This hospital varies from 50 to 70 beds.

St. Joseph's Retreat is not included and perhaps several small hospitals for insane and alcoholism. From this number of beds we must take 3,025 beds for the Insane, Infirm, Alcohol and Drug Addicts. This leaves 4,826 beds.

Of this number the Tubercular Patient uses 632 (Northville Sanitarium has 402 beds and Herman Kiefer 239).

There remains 9,194 beds and 419 of these are baskets or cribs, thus:

Herman Kiefer Hospital	65
Woman's Hospital	57
St. Mary's Hospital	30
Grace Hospital	46
Childrens Hospital of Michigan	50
Henry Ford Hospital	48
Providence Hospital	60
Wm. Booth Memorial	25
Evangelical Deaconess's Hospital	20
Detroit Osteopathic Hospital	18
	<hr/>
	419

This 3,775 beds—

The Acute Contagious Diseases uses up 374 beds, thus:

Herman Kiefer Hospital	340
Highland Park General Hospital	26
Woman's Hospital	8
	<hr/>
	374

N. B. Any Hospital taking children must have many beds occupied by isolation cases.

We still have 3,401 beds. We must take 57 beds for so-called Social Service, thus:

Providence Hospital	30
Womans Hospital	27
	<hr/>
	57

N. B. The Wm. Booth Memorial and the Florence Crittendon beds are not counted in the above number.

We have remaining 3,344 beds. Of this number 674 are occupied by children from 2 to 12 years, thus:

Providence Hospital	200
Harper Hospital	30
Grace Hospital	21
St. Joseph's Mercy Hospital	13
Woman's Hospital	6
Highland Park General Hospital	14
Wm. Booth Memorial	20
Children's Hospital of Michigan	350
	<hr/>
	674

This leaves 2,670 beds.

Obstetrics use 458 beds, thus:

Florence Crittendon Home	20
Herman Kiefer Hospital	65
Delray Hospital	5

Evangelical Deaconess's Hospital	20
Detroit Osteopathic Hospital	18
Harper Hospital	60
Grace Hospital	40
St. Mary's Hospital	30
St. Joseph's Mercy Hospital	25
Woman's Hospital	50
Highland Park General Hospital	20
Grosse Point Hospital	15
Wm. Booth Memorial	12
Providence Hospital	40
Wyandotte General Hospital	10
East Side Hospital	10
Lincoln Hospital	9
Marr Maternity Hospital	10
	<hr/>
	458

Of the remaining 2,212 beds some are closed or partly closed to the general practitioner, thus:

Henry Ford Hospital	425
Michigan Mutual Hospital	50
Detroit Diagnostic Hospital	25
Jefferson Clinic	50
	<hr/>
	550

This leaves 1,662 hospital beds available to the General Practitioner. There are no beds for the Chronic Heart nor the Kidney cases. In fact except for the Convalescent Home for crippled children started by the Sigma Gamma Society (25 beds) and about an equal number of beds at the Farmington Branch of the Children's Hospital, there are no other beds available for the Chronic Patient nor for the Convalescent Home. The Northville Sanitarium has a Summer Camp which takes two groups of 100 children each for a period of eight weeks. These children are below par in health.

In consideration of the fact that hospital facilities in the city of Detroit have not kept pace with the increase in population, the Committee on Medical and Civic Relations wish to make the following remarks:

1. It is not within the province of the Medical Profession to establish and maintain hospitals.
2. Donations to hospitals, old and new, and endowments constitute one of the most useful and practical benevolent acts.
3. All people are interested in hospitals. They are necessary and their lack is a grave condition. It results in unnecessary cost of life.
4. All of us should co-operate to ameliorate. We therefore feel that:

1. The existing hospitals should be enlarged.
2. New hospitals should be erected in districts which need them.
3. Emergency stations should be created in outlying districts so that first aid can be given in accident cases, and so that people injured seriously need not be transported many miles until they are helped.
5. The lack of any provision for the care of Chronic Heart and Kidney cases, which are invariably repeaters, causes a loss of untold sums of money and constitutes a great drain on the economic resources of the city.

We suggest that the Board of Commerce appoint a committee, of which no member shall be a trustee of any existing hospital nor a physician, to take steps toward ameliorating the hospital bed situation.

The Committee has been informed that the Detroit Board of Commerce will take up the matter.

Dr. Emil Amberg, Chairman.
 Dr. Francis Duffield, Dr. H. Wellington Yates,
 Dr. A. R. Hackett, Dr. H. H. Bemis, Sec'y.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. Frank Bohn, of the 11th, assumed his seat in Congress with the present session.

Dr. Fred M. Huntley was named Chief of Staff of the Sparrow Hospital, Lansing.

Dr. Earl B. Ritchie has resigned as City physician of Jackson.

Dr. Guy L. Keifer will assume his duties as State Commissioner of Health on February 1st.

Dr. D. Chandler and Miss Josephine Leys of Grand Rapids, were married on January 17.

Dr. Byron E. Briggs has assumed his duties as superintendent of the Hurley Hospital, Flint.

The marriage of Miss Leita Cooley and Dr. Milton Shaw of Lansing, was announced December 21st.

Doctors Dretzka and Hirschman, of Detroit, have been appointed to the State Health Advisory Commission.

Dr. C. C. Sturgis, of Boston, has been appointed as Professor of Medicine in the University Medical Department under Dr. Bruce, who continues as the head of the Department of Internal Medicine.

Re-affirming a friendship and comradeship, Dr. W. T. Dodge entertained at Bridge on Jan. 27. Drs. C. B. Burr of Flint, George L. LeFevre of Muskegon and F. C. Warnshuis of Grand Rapids.

DEATHS

Dr. Herbert M. Rich died at Detroit, December 16, 1926.

Dr. Rich was born at Middleville, Mich., February 12, 1874. He entered the Michigan Agricultural College in 1887, going from there to the University of Michigan where he received the degree of Bachelor of Arts in 1897. His medical training he received at the same school, being made a Doctor of Medicine in 1911. Dr. Rich served an internship in the Boston City Hospital, which he followed with Post-Graduate

study in London, Berlin and Vienna. He began practice in Detroit in 1904, specializing in internal medicine. His attention later was turned to the field of tuberculosis in the study of which disease he remained active.

Dr. Rich was a member of the American Medical Association, Michigan State Medical Society, which later he rendered valuable service as chairman of the Library Committee. He was also a member of the American College of Physicians, the American Climatologists Society and a charter member of the Detroit Tuberculosis Society, serving this society at various times as president, vice president and secretary. He was one of the founders of the Detroit Tuberculosis Sanatorium, where he acted as Attending Physician since 1911.

Commissioner Charles S. Kennedy requested the privilege of the floor, which was granted by the President.

Commissioner Kennedy then moved that the Library Commissioners register their deep sense of loss in the death of Dr. Herbert M. Rich.

Eminent in his profession and honored with responsibilities in the promotion of the standards in medical education and practice, Dr. Rich found time to devote his experience and energy to the development of library service within the field of that science to which he made so many distinguished contributions. As Chairman of the Advisory Library Committee of the Wayne County Medical Society he gave generously of his counsel in clarifying the scope and high usefulness of the Medical Science Department of the Public Library. Largely through his quietly persevering efforts a definite policy and firm foundation have been laid down, insuring for this medical library a fruitful growth and the good will of the medical profession during years to come.

For his genial and stimulating association in our common endeavors, for his high minded efforts to realize the worthy aspirations of our city, we herewith inscribe his name in grateful and honored memory.

So ordered.

As we go to press, newspapers advise us of the deaths of:

J. Everette King, M. D., Detroit, on January 22nd. Dr. King, as Speaker, presided over the last session of our House of Delegates.

Francis Duffield, M. D., Detroit. Died during the week of January 16th, from an acute attack of heart disease.

Extended biographies will appear in our March issue.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

To County Officers:

The following reports attest to the activity of county units. They are splendid and evidence a true spirit of organizational activity. It is by reason of this type of work that our State Society is prosperous, live and achieving. The more intense your local efforts are the further will we progress. We re-iterate again that it is only by planned effort and sustained work that interest of members is maintained. This is the definite responsibility of officers and the obligation that you accept upon assuming office. Therefore we urge that you give much thought and effort to the arrangement of your programs so as to maintain the interest of your members. Then, do not rest content after having provided for your scientific program. Tackle your local interests of your members. Interest the public in your work and promote educational meetings.

Our March issue will contain the announcement of new and expanding undertakings. Right now we are desirous of witnessing a state-wide evidence of County Society enthusiasm that will enable each member to play an active role.

OAKLAND COUNTY

Oakland County Medical Society finished a fairly successful year at its Annual Meeting December 14. Some progress was made toward carrying out the minimum program. The Society invited the Oakland County Bar Association to a joint meeting in April, which was the first of its kind to be held in the county, and in July the Bar Association entertained the Medical Society at the Elizabeth Lake Golf Club. The better understanding and good feeling growing out of these meetings bids fair to be very helpful and enduring.

Two members of the Society have died during the year: Dr. Ellsworth Orton and Dr. Robert Le Baron, Pontiac. Dr. Le Baron had been in practice in Pontiac since August, 1864, and active in medical affairs from that time until his death.

Election of officers for 1927 resulted as follows: President, Dr. Nathan B. Colvin, reelected; Vice President, Dr. Frank Mercer; Secretary, Dr. Fred Baker; Treasurer, Dr. Isaac C. Prevette, reelected. The Board of Directors is composed of Dr. R. Y. Ferguson, Dr. D. G. Costell and Dr. Leon Cobb. The delegates to the State Society are: Dr. Frank Mercer and Dr. Robert Baker. Dr. C. J. Sutherland, of Clarkston, and Dr. A. V. Murtha are alternates.

The Legislative Committee previously appointed

holds over and is composed as follows: Chairman, Dr. N. T. Shaw, Birmingham; Dr. E. V. Howlett, Pontiac, Mich.; Dr. C. J. Sutherland, Clarkston, Mich.; Dr. Fred Baker, Pontiac, Mich., and Dr. Frank Mercer, Pontiac, Mich.

Dr. R. Y. Ferguson continues the Society's representative to the Medical Defense Committee.

Dr. Howard H. Barker was elected to membership by transfer from Washtenaw County. Dr. Bertil T. Larson by transfer from Gogebic County. Dr. H. C. Crissman, 172 W. Nine Mile Road, Ferndale, Mich.; Dr. C. T. Ekelund, 24½ W. Huron Street, Pontiac, Mich.; Dr. Francis J. Bloise, 1st National Bank, Pontiac, Mich., were elected members.

New members elected to the Society during the year include:

Dr. Ruth E. Wagner, Royal Oak, Mich.; Dr. E. A. Martindale, Walled Lake, Mich.; Dr. J. P. McConkie, Birmingham, Mich.; Dr. D. F. Hoyt, Pontiac, Mich.; Dr. Hubert M. Heitsch, Pontiac, Mich.; Dr. Karl Quinn, Pontiac, Mich.; Dr. Alexander Borland, Pontiac, Mich.; Dr. Herbert E. Moore, Birmingham, Mich.

Frank S. Bachelder, Secretary.

This is to inform you that the annual meeting of the Oakland County Medical Society was held at the Board of Commerce, Pontiac, Mich., December 15, 1926. Twenty-three members were present and the following officers were elected for the year of 1927.

President, Dr. Colvin, for the third successive year; Vice-President, Dr. Frank Mercer; Board of Directors, Dr. R. Y. Ferguson, Dr. D. G. Costell and Dr. L. J. Cobb; Treasurer, Dr. I. C. Prevette, and Secretary, Dr. F. A. Baker.

Dr. Colvin was presented with a fountain pen and pencil as recognition of his services for the past two years.

Applications for members in the society were received from Drs. H. C. Crissman, Ferndale; Bertil T. Larson, Pontiac; C. T. Ekelund, Pontiac; H. B. Barker, Pontiac, and Francis Bloise.

Yours very truly,

Frederick A. Baker, Secretary.

HOUGHTON COUNTY

The Houghton County Medical Society held its regular monthly meeting at the Scott Hotel, Hancock, Tuesday, January 4 at 8:30 p. m. after reading of the minutes and allowing of bills the Secretary-Treasurer read his financial report for the year. An auditing committee of Drs. La Bine, Stern and Dodge reported the report, O. K.

During the year 1926, we had a membership of 40, with 100 per cent dues paid.

New members received, Drs. Costeo, McNab, Oler and Holm. Members removed, Drs. Oler and Bicknell.

Deaths—Dr. H. N. T. Nichols.

Total attendance during year 160, for 10 meetings average of 16.

During the year we had the Post Graduate Conference attended by 25 doctors. Health talk at Houghton High School by Dr. A. F. Fischer on Physical Examinations. Picnic at Dr. Harkness cottage. For the past three years as Secretary I have led the state in reports submitted to State Journal.

The application of Dr. G. M. Waldie was received and referred to the Board of Censors.

Dr. G. C. Stewart read a paper on "Ultra-Violet Lamp Therapy."

Dr. Stewart covered the subject in a general way, having used an Alpine Sun Lamp for the past two years in his practice.

Discussion of the subject by Dr. G. M. Waldie full time Tuberculosis Physician at the Houghton County Sanatorium. Dr. Alfred La Bine, County Physician. Dr. W. Scott, Dr. H. M. Joy, Dr. A. C. Messenger, and several others. The fact that several lamps have been purchased here in Houghton County, as well as several Diathermy outfits, shows that Physical Therapy is becoming active here as elsewhere.

The election of officers followed and is as follows: President, Dr. M. D. Roberts, Hancock, Mich.; Vice-President, Dr. W. T. King, Calumet, Mich.; Secretary and Treasurer, Dr. A. B. McNab, Baltic, Mich.; Censor for three years, Dr. W. P. Scott, Houghton, Mich.; Delegate to State Meeting, Dr. A. C. Roche, Calumet, Mich.; Alternate to State Meeting, Dr. M. D. Roberts, Hancock, Mich.

Respectfully,

G. C. Stewart, M. D.

Election of officers, Houghton County Medical Society, Hotel Scott, Hancock, Mich, Tuesday evening, January 4, 1927.

President, Dr. M. D. Roberts, Hancock; Vice-President, Dr. W. T. King, Ameen; Secretary and Treasurer, Dr. Alex B. MacNab, Baltic; Member of Board of Censors for three years, Dr. W. P. Scott, Houghton; Delegate to State Medical Society Meeting, at Mackinac Island, June 16 to 18, 1927, Dr. A. C. Roche, Calumet; Alternate Delegate, Dr. M. D. Roberts, Hancock; Members of Legislative Committee, Dr. J. W. Moore, Chairman, Houghton; Dr. A. D. Aldrich, Houghton; Dr. A. F. Fischer, Hancock; Dr. R. B. Harkness, Houghton, and Dr. W. H. Dodge, Houghton.

An excellent paper upon the use of the Ultra-Violet Lamp was presented by Dr. G. C. Stewart, and was discussed by all members present.

Fourteen members were present and two visitors, Dr. George W. T. Walding and Dr. Clarence W. Messenger.

Alex B. MacNab, Secretary.

SAINT CLAIR COUNTY

The Annual Meeting of Saint Clair County Medical Society was held at the Hotel Harrington, Thursday, Dec. 30, 1926. After the usual dinner and social hour the meeting was called to order at 7:30 p. m. by Vice President W. W. Ryerson.

The following members were present: Drs. Heavenrich, McColl, Waters, Clancy, Patterson, MacKenzie, Treadgold, Smith, La Rue, Ryerson, Kesl, Callery, Burley, Vroman, Bowden and Attridge.

The minutes of the meetings of Nov. 18 and Dec. 9, 1926, read and approved. The minutes

of the meeting of the Public Health Committee of the Society held Dec. 17, 1926 read and approved. A communication from the Port Huron Times-Herald requesting the Society to endorse a plan of educational advertising read and referred to a committee consisting of Drs. Attridge, Burley and MacKenzie, with direction that committee investigate the value of the proposition and report at the next meeting of the Society. A letter from President J. J. Moffet was read by the Secretary. Dr. Moffett thanked the members of the Society for their co-operation during the year and suggested that the Public Health Committee continue to be an active adjunct to the Society, making the statement that the work of this committee deserved unanimous support. The letter concluded with an expression of thanks to the individual members of the Society who gave Dr. Moffett their care during his recent illness. Upon motion adopted by the Society, the letter of Dr. Moffett was ordered incorporated in the records of the organization. A letter from the American Medical Association relative to establishment of home or homes for indigent physicians, with questionnaire for information of that organization upon that subject, was read and the Secretary was directed to reply thereto. The application of Dr. C. F. Thomas for membership in the Society was read and a committee of three, Drs. Clancy, McColl and Heavenrich appointed to take action thereon.

The Society then proceeded to the election of the following officers for the year of 1927:

Dr. W. W. Ryerson, President; Dr. G. Reginald Smith, Vice-President; Dr. George M. Kesl, Secretary-Treasurer; Dr. A. L. Callery, Delegate to the State Society, and Dr. D. W. Patterson, Alternate Delegate.

Following the election short addresses were made by Drs. Ryerson and Smith. It was decided by motion adopted to hold the Annual Banquet of the Society on Thursday evening, Jan. 20, 1927 at the Hotel Harrington, Port Huron, Mich. Dr. Ryerson then appointed a committee of Drs. Heavenrich and MacKenzie to prepare plans for and have supervision of the Banquet Program.

Meeting adjourned at 8:50 p. m.

Respectfully,

George M. Kesl, Secretary-Treasurer.

MUSKEGON COUNTY

December meeting of Muskegon County Medical Society was held at the County Tuberculosis Sanatorium as guests of the Board of Directors.

After a splendid chicken dinner Dr. Bartlett, the new Director of the Sanatorium, gave out the policies of the institution for the coming year.

Application of Dr. Robert Douglas was read and he was elected to membership in the Society. Also Dr. A. G. Burnell was admitted on transfer.

Letter from Dr. R. L. Matteo, of Santa Rosa, California, was read, requesting transfer to Sonoma County, California Medical Society. This was also granted.

President Dr. Thornton brought to the attention of the Society the number of meetings of different organizations taking our time and suggested we have just one meeting each month. This was approved unanimously.

Officers elected for 1927: President, Dr. E. L. Kniskern; Vice President, Dr. C. J. Bloom; Secretary-Treasurer, Dr. H. B. Loughery; Delegate, Dr. F. W. Garber, Sr.; Alternate, Dr. A. F. Harrington.

ton; Medico-Legal Adviser, Dr. Geo. LeFevre; Board of Directors, Doctors A. B. Poppen, R. F. Busard and E. S. Thornton.

Regular January meeting held at Occidental Hotel with 31 members present, including Dr. Burnell and Dr. Wilke of Whitehall and Montague, and Dr. Bradbury who has taken over the practice of Dr. Wood.

Following the dinner Dr. J. B. Youmans of Ann Arbor gave a very interesting lecture on the Clinical Forms of Arthritis including the use of a new drug ammonium-iodory-benzoate in these conditions.

Discussed by Drs. LeFevre, Garber and Harrington.

Treasurer's report for 1926 read and approved.

The present membership of our society is now 58.

Regular meetings will be held on the first Friday of each month.

H. B. Loughery, Secretary.

ALPENA COUNTY

The regular Annual Meeting of the Alpena Medical Society was held December 16th. Dr. F. J. O'Donnell was host to the profession at a dinner served at his home on State Avenue. Dr. V. L. Tupper was the guest of the Society on this occasion. After an enjoyable social hour the meeting was adjourned till eight p. m. at Dr. S. T. Bell's office.

The report of the Secretary shows that the minimum program adopted by the State Medical Society for the year 1926 has been carried out in Alpena. There were held during the year 12 regular meetings on the third Thursday of each month. These regular meetings had an average attendance of seventeen. There were two special meetings held with an average attendance of eight. The Post-Graduate Medical Conference was held in Alpena, May 5th, with a total enrollment of 24 physicians and 24 guests. The Society held reciprocal meetings with the Chippewa, Genesee and Bay County Medical Societies. The Society has entertained the ministers of the city who supplied the program one occasion and entertained the entire Rotary Club on the occasion of the Post-Graduate Medical Conference. Two public lectures on health topics have been delivered during the year. Total number of members reported for the year was 20.

The following were elected officers for the year 1927: President, Dr. F. J. O'Donnell; Vice President, S. T. Bell; Secretary-Treasurer, William Newton; Delegate to the State Medical Society Meeting, C. M. Williams; Alternate, William Newton; Legal Representative, E. L. Foley.

C. M. Williams, Secretary.

SHIAWASSEE COUNTY

The January meeting of Shiawassee County Medical Society was held at Memorial Hospital, Owosso, on January 4 at 7:30 p. m.

Dr. H. A. Hume gave a very instructive paper on Pyelitis which was discussed by G. L. G.

Cramer and Dr. F. A. Watts, after which some general discussion followed.

Dr. LaMotte Bates gave a paper on Skeletal vs. Adhesion traction in fractures of the Femur which was discussed by Dr. W. F. Weinkauff and Dr. A. L. Arnold, Jr. This method was afterward demonstrated in the operating room by Drs. Arnold and Bates on a fracture of the femur in a boy 10 years of age.

A light lunch was served by the hospital management after the meeting.

W. E. Ward, Secretary-Treasurer.

GRATIOT-ISABELLA-CLARE CO.

The annual banquet and business meeting of the G. I. C. was held in the Wright House in Alma, Thursday, December 16, 1924.

At 7:30 nine couples sat down to a very prettily decorated table in the dining room. After all the good things were disposed of a short business session was held, at which Dr. A. E. Huebner was elected to membership and the following officers were elected for 1927: H. F. Kilborn, president; E. L. Street, Vice-President, and E. M. Highfield, Secretary and Treasurer. All then moved to the parlor, where four tables of bridge were played, Mrs. Street winning the prize.

E. M. Highfield, Secretary.

OCEANA COUNTY

On December 16, 1926, the Oceana County Medical Society held its annual meeting at Hart, Mich., and elected the following officers for 1927. President: Dr. J. D. Buskirk, Shelby, Mich.; Vice President, Dr. J. H. Nicholson, Hart, Mich.; Secretary-Treasurer, Dr. F. A. Reetz, Shelby, Mich.

Fred A. Reetz, Secretary.

DETROIT OTO-LARYNGOLOGICAL SOCIETY

The next meeting of the Detroit Oto-Laryngological Society will be held Wednesday, February 16, in the new club rooms of the Wayne County Medical Society in the Maccabees Building. These meetings are open to all members of the State Society.

Dr. Ross H. Skillern of Philadelphia, President of the American Academy of Ophthalmology and Oto-Laryngology, will be speaker at this meeting.

Dr. Skillern is known all over the world for his work on the accessory sinuses of the nose. Many physicians throughout the state will want to hear him.

A testimonial dinner, for which you should make reservation early, will be given the doctor at 6:30 that evening.

Officers for the year 1927: President, Dr. Frank L. Ryerson; Vice President, Dr. Emil Amberg; Secretary-Treasurer, Dr. Wm. Fowler.

Wm. Foyler, Secretary.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

THE NORMAL CHILD—B. Sacks, M. D. Price \$1.50, Paul B. Hoeber, Inc. 76 56th street, New York city.

This is a manual of suggestions for patients, teachers and physicians. It also gives consideration of the influence of psychoanalysis. It is an outspoken, sane, plainly written presentation of facts in understandable terms.

TRANSFUSION OF BLOOD—H. M. Feinblott, M. D. Cloth 137 pp. The MacMillan Co., New York.

A quite satisfactory, simple and detailed discussion of blood transfusion. It outlines procedure and details precautions.

INTERNATIONAL CLINICS—Vol. IV. 36th Series, 1926. J. B. Lippincott Co.

Consistently maintaining the standard of these Clinics. The usual varied and comprehensive discussion of medical and surgical subjects.

THE ITINERARY OF A BREAKFAST—John Harvey Kellogg, M. D. 12 mo. Cloth. 202 pages. Illustrated. \$1.75, net. Funk & Wagnalls Co., New York.

Some of the chapter-headings will give you an inkling of the interesting information which you are given: "The Food Tube," "The Five Food Laboratories," "The Digestive Time Table," "Diagram of the Food Tube," "The Ten Gates," "The Food Blocade in the Colon," "The Crippled Colon," "The Intestinal Flora—What It Is and Why It Must be Changed," "How to Change the Intestinal Flora," etc. In addition, diets are given for crippled colons and colitis and suggestions are made for the relief of other ills.

In this new edition all of the important changes which have resulted from recent research have been carefully noted and explained so that the volume as it now stands is a guide greater than ever to the marvelous bodily functions which have to do with the food we eat.

The illustrations in colors as well as those in black and white graphically present the important points which the author so clearly and entertainingly brings out and especially the progress of a meal through the body—a breakfast which the author takes as an example.

AMERICAN MEDICAL ASSOCIATION

Undoubtedly many members of the State Medical Society and their families are already making plans to attend next Annual Meeting of the American Medical Society to be held in Washington, D. C., May 16-20. That a maximum of travel comfort may be enjoyed enroute, the Pennsylvania Railroad contemplates operating extra cars for exclusive use of members from the state on the "Red Arrow," the only De Luxe All Pullman train, carrying club lounge car and observation car also open section compartment drawing room, sleeping cars and dining car serving the finest meals, between Detroit and Washington, leaving at 3:55 p. m. daily, arriving Washington 8:50 the following morning or, if sufficient number of reservations are secured to so warrant, special train to be an exact counterpart of the "Red Arrow" will be operated. If, for any reason, members find the above schedule inconvenient, through Pullman equipment is also carried in train leav-

ing Detroit 11 p. m., arriving Washington next evening at 7:05.

Reduced rate of fare and one-half for the round trip on the certificate plan has been authorized for the meeting. In order to obtain this reduced fare, members are cautioned to obtain a certificate account this meeting from railroad ticket agent at time of purchasing ticket. One way tickets will be sold and certificates issued from points in the state from May 12th to and including May 18th. Certificates will be validated by Secretary of the American Medical Association in Washington, May 16th to 20th, and will be honored for purchase of return ticket at half fare via same route as used on the going trip, to and including May 24, 1927.

The one way fares from a few of the larger cities to Washington are as follows:

Detroit	\$21.55
Port Huron	24.01
Flint	23.30
Saginaw	24.50
Lansing	23.30
Grand Rapids	25.45
Muskegon	26.89

Members desiring to remain longer in the east than authorized by certificate plan arrangement should consult local ticket agent as to reduced summer tourist fares to Atlantic Coast Resorts.

The one way Pullman fares from Detroit to Washington are as follows:

Lower berth \$6.38, upper \$5.10, compartment \$18.00, drawing room \$22.50.

THE JOURNAL
IS
YOUR FORUM—
WE INVITE YOU
TO UTILIZE
IT FOR THE
EXPRESSION OF
YOUR VIEWS
ON
MEDICAL SUBJECTS

INVITATION

You are personally and cordially invited to be present at and to take part in the discussions of the American Congress on Medical Education, Medical Licensure and Hospitals on February 14, 15 and 16, 1927, in the Red Lacquer Room, Palmer House at State and Monroe streets, Chicago. The program will be as follows:

PROGRAM

First Day, Monday, February 14, 1927

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

Morning Session, 9:30 O'clock

Need of Teaching Medical Ethics,
The Chairman, Dr. Arthur Dean Bevan,
Chicago.

The Trend of Medical Education,
Dr. Charles F. Martin, dean of McGill
University Faculty of Medicine, Mont-
real, Quebec.

Altering the Medical Curriculum,
Dr. Ray Lyman Wilbur, President of
Stanford University, California.

Afternoon Session, 2:00 O'Clock

Teaching of Clinical Work to the Undergraduate,
Dr. Evarts Graham, Bixby Professor of
Surgery, Washington University
School of Medicine, St. Louis.

Medical Education for the General Practitioner,
Dr. William J. Mayo, Rochester, Minn.

Place of Preventive Medicine in the Medical
Curriculum,
Dr. Waller S. Leathers, Professor of
Preventive Medicine, Vanderbilt Uni-
versity School of Medicine, Nashville,
Tenn.

Preliminary Report of the Commission on Medi-
cal Education,
Dr. Willard C. Rappleye, Director of
Study, New Haven, Conn.

Second Day, Tuesday, February 15, 1927

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

Morning Session, 9:30 O'clock

A Hospital Department of Physical Therapy,
Dr. Frank B. Granger, Physician-in-
Chief for Physical Therapy, Boston
City Hospital, Boston.

The Duty of the Hospital Staff to the Intern,
Dr. George E. Follansbee, Chief-of-Staff,
St. Alexis Hospital, Cleveland.

The Hospital Function in Graduate Medical Edu-
cation,
Dr. N. P. Colwell, Secretary of the
Council on Medical Education and Hos-
pitals, Chicago.

Afternoon Session, 2:00 O'clock

Teaching Value of Post-Graduate Clinics and
Programs,
Dr. Walter L. Bierring, Secretary-Treas-
urer, Federation of State Medical
Boards of the United States, Des
Moines, Iowa.

Taking Medical Education to the Practitioner,
Dr. Charles A. Gordon, Chairman of the
Committee on Public Health and Med-
ical Education of the Medical Society
of the State of New York, Brooklyn.

Graduate Medical Education in Europe in 1926,
Dr. Louis B. Dilson, Director of the Mayo
Foundation of Medical Education and
Research, Rochester, Minn.

Third Day, Wednesday, February 16, 1927

FEDERATION OF STATE MEDICAL BOARDS

Morning Session, 9:30 O'clock

Licensure Requirements in Relation to the Teach-
ing of Preventive Medicine,
Dr. Waller S. Leathers, Professor of Pre-
ventive Medicine, Vanderbilt Univer-
sity School of Medicine, Nashville,
Tenn.

Relation of the Quarter System to Medical
Licensure,
Dr. N. P. Colwell, Secretary of the Coun-
cil on Medical Education and Hos-
pitals, Chicago.

Basic Science Law,
Dr. Edward Evans, Chief-of-Staff, St.
Francis Hospital, La Crosse, Wis.

Report of the First Year's Study by the New
Commission on Medical Education,
Dr. Willard C. Rappleye, Director of
Study, New Haven, Conn.

Afternoon Session, 2:00 O'clock

Practical Administration of the Enforcement of
the Law Against Illegal Practitioners,
Dr. Harold Rypins, Secretary of the
Board of Medical Examiners of the
State of New York, Albany, N. Y.

Safeguarding State Board Records,
Dr. Charles B. Pinkham, Secretary of the
California Board of Medical Examin-
ers, Sacramento, Calif.

Enforcement of a Medical Practice Act,
Dr. T. J. Crowe, Secretary of the Texas
Board of Medical Examiners, Dallas,
Texas.

Reciprocity versus Interstate Endorsement,
Dr. G. M. Williamson, Secretary of the
North Dakota Board of Medical Examin-
ers, Grand Forks, N. Dak.

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ORIGINAL ARTICLES

THYMIC PAROXYSM IN CHILDREN AND ITS PREVENTION*

ERNST A. POHLE, M. D.**

ANN ARBOR, MICH.

Ranking first among the undesirable accidents in surgical practice, we consider thymic paroxysm causing the sudden death of a young individual. There is not much one can do after the typical symptoms appear, but fortunately, we have means of preventing thymic death to some extent. Considering the vital importance of that problem, it may seem justified to discuss in this paper, briefly, the pre-operative management of patients in childhood with this point in view.

The thymus, one of the glands of internal secretion, is of considerable size in the fetal period, usually grows during the first two years of life, remains stationary for the following eight years and begins then to change into a fatty body. We do not know much of its function nor has the product of secretion been discovered. It seems, however, that this organ bears some relationship to the regulation of growth and development. In a number of patients, the thymus appears to be enlarged and when analyzing the underlying pathology we may group that abnormality accord to Warthin, as follows:

1. Relative Enlargement. This includes cases in which the thymus did not reduce as is normally expected and remains comparatively large. Adults with a persistent thymus or better called hyperplasia of the thymus represent the majority of this class.

2. Absolute Enlargement. All cases with a thymus larger than normal in any period of life belong to this group. It may occur as an independent condition or with status lymphaticus, hyperplastic constitution, tonsillar hyperplasia, adenoids, rachitis, congenital struma, exophthalmic goitre, myxoedema, cretinism, acromegaly, myasthenia gravis, Addison's disease, epilepsy, congenital syphilis, scorbutus, leukemia, anemia, Hodgkin's disease, anencephaly, and the acute infections. Very seldom a neoplasm is the cause. The type we have mostly to deal with is without doubt that showing a simple lymphoid hyperplasia on microscopic examination.

The enlargement may be discovered accidentally when taking chest films for some other reason, or pressure symptoms draw attention to the thymus. There can be dullness on both sides of the upper part of the sternum. Clinical symptoms are very few and these few may be due to other conditions. The most common symptom is the so-called thymic stridor or difficulty in breathing, and in extreme cases true cyanosis of the face may be observed. In very rare cases death through suffocation caused by pressure of the enlarged gland on the bronchi is possible. Feeding of such a child is also difficult at times. The diagnosis on the roentgenogram is not always easy. There is no typical normal thymus form. The thymus shadow may vary in the same infant; it does considerably so during respiration. Again, enlargement in the anterior-posterior diameter will not show on the usual roent-

* Paper read before the Ann Arbor Session of the American Association of Oral and Plastic Surgeons, Nov. 11, 1926.

** From the Department of Roentgenology, University of Michigan.

genogram, but requires a lateral exposure. In a crying child, the vena cava shows extreme filling. An asymmetrical position (rotation) of the patient when taking the film is also sometimes misleading. As to the frequency of enlarged thymus in young children there are no reliable statistics available. Some authors give as an average 50%; it is undoubtedly higher in countries with endemic goitre.

Aside from the extreme cases where disturbance of breathing and feeding necessitates therapy, the clinical importance of the enlarged thymus lies in the fact that such patients present, as sad experience has taught us, an increased surgical risk. The question arises, what can be done for the prevention of undesirable accidents before, during, or after an operation, and what are the indications to be followed. I would like to say right here that surgical removal or reduction of the thymus has been given up entirely, and since we know that thymus tissue is one of the tissues most sensitive to radiation, radiation therapy in the form of roentgen rays or radium is the method of choice. The writer prefers roentgen rays although there are roentgenologists who use radium. They argue that radium application does not require fixation of the patient and does not introduce the possibility of a shock. We have, however, never seen a bad result due to the excitement that is always connected with the administration of roentgen ray treatment to babies with an enlarged thymus. The usual technique as given in literature is 100 to 130 KV, 3.0 to 4.0 aluminum, giving a dose of 20 to 30% of the erythema dose. This may be repeated if necessary in one month. We use a filter of .25 mm. copper plus 1 mm. aluminum giving only 10% of the erythema dose in a single exposure. We can safely repeat this dose six times if indicated in short intervals without even reaching the skin tolerance. One must realize that the cells in a young growing organism are more susceptible to radiation than those in an adult. We have, therefore, to try to bring about the desired effect with the minimum amount of roentgen energy. A result may be expected in favorable cases after 24 to 48 hours. As to the possible danger of impaired function, one must remember that in animal experiments, a complete regeneration of the glandular tissue following radiation has been observed. Cases of toxemia following radiation of the thymus with fatal outcome are also on record; the

occurrence seems to be especially rare and quite unexplained.

It is our impression that irradiation of an enlarged thymus in cases of thymicolymphatic constitution cannot have a curative effect; it is hard to believe that a constitution may be changed by roentgen ray exposure. We advise, however, to treat such a case before an attempted operation. If an accident occurs, there is no reproach that everything has not been done to prevent it.

Regarding patients with goitre accompanied by an enlarged thymus, it is interesting to know that Kocher, the famous Swiss goitre surgeon has advocated a prophylactic X-ray treatment to the thymus before thyroidectomy. Some investigators treat as a routine the thymus whenever subjecting a case of goitre to radiation therapy.

Our indications for treatment of simple hyperplasia of the thymus have been worked out on the following basis. In all suspected cases stereoscopic films of the chest are made before the first therapeutic exposure; if the films show enlargement, treatment is given and the patient re-examined by roentgen rays after one month unless alarming clinical symptoms require treatment before that time; if the films are negative, and if there are no clinical symptoms, the patient is discharged; in a case with clinical symptoms but negative X-ray findings, we also advise roentgenotherapy and repeat treatments in monthly intervals until the symptoms have cleared up. In Table I, we report the thymus

TABLE I.

Total	Cleft Palate, Hare Lip or Both	Symptoms Only	Symptoms and X-Ray	X-Ray Only	Preoperative Prophylaxis
88	17	12	24	50	2

cases which we treated in our department over a period of one year. They are classified according to the indication for treatment, i. e. treated on the basis of symptoms only, of positive X-ray findings, of positive X-ray findings plus clinical symptoms, and pre-operative exposure only for prophylaxis. Another column shows the number of enlarged thymus patients who had cleft palate or hare-lip or both. In all cases which responded to the treatment, an average of two treatments was required. A few typical cases will be illustrated here.

Case X 5589—This is a definitely enlarged thymus which responded promptly to one treatment. (Fig. 1 and 2).



Figure 1



Figure 2

Case X 5208—Three treatments were required in this patient to reduce the thymus to normal size but it finally responded and cleared up. (Fig. 3 and 4)*.

* Fig. 3-10 will not be reproduced, as they show practically the same changes.

Case X 5466—The thymus in this patient did not respond at all to roentgen ray exposure although six treatments over a period of five months were given. (Fig. 5 and 6).

Cases X 5780 and X 5744—The next two roentgenograms are interesting because they are taken of twins; one (Fig. 7 and 8) shows prompt response, the other (Fig. 9 and 10) is still persistent.

We lost one case through thymic paroxysm although several treatments had been given. The history follows:

Case X 5694—Girl one week old, admitted with a diagnosis of club feet, unilateral hare-lip and bilateral cleft palate, on July 26, 1926. Stereoscopic films of the chest taken on July 7, before admission showed enlarged thymus. Treatment was given on July 29, 1926. Chest films taken on August 13, did not show any change in the size of the thymus. Another treatment was, therefore, administered the same day. Check up films made on August 26 and 28, still showed evidence of thymic enlargement. Another X-ray treatment was given on August 30, 1926. On September 14, X-ray examination revealed the thymus decreased in size. The following day the patient was given 100 c.c. Ringers solution at 8:30 a. m.; taken to O.R. at 10:30 a. m.; returned and condition appeared good except for slightly labored breathing. Oxygen advised. At 1:30 the nurse reported sudden rise in temperature and very shallow breathing. Caffeine and adrenalin were given without marked effect. Artificial respiration and forced oxygen were also useless and at 2 o'clock respiration ceased. The patient felt extremely hot and color was ashen when seen at 1:30. The impression was that of a thymic paroxysm post-operative. Autopsy confirmed this clinical diagnosis.

From our observations, we conclude that it is impossible to tell before-hand whether an enlarged thymus will yield to treatment or not, and whether this treated thymus will later continue to be the cause of surgical shock. There is also no way to exclude the possibility of surgical shock even if the roentgenogram does not show enlargement of the upper mediastinum. Although we do not want to go on record and state that for this reason it is necessary to give all patients in the early stage of life a prophylactic treatment, we cannot criticize any surgeon who insists on such a procedure. He may rightfully reason that prevention is better and easier than cure or repair. There is no doubt, however, that roentgen examination of the chest of all young individuals before undergoing an operation seems to be advisable.

SUMMARY

1. Various types of thymic enlargement and their importance in surgical cases are discussed.

2. The technique of preoperative roentgenotherapy as used in the Department of Roentgenology, University Hospital, Ann Arbor, Mich., is given.

3. Preoperative roentgen ray treatment of the thymus should be administered, at least, in all positive and doubtful cases of thymic enlargement, the diagnosis being based on clinical or roentgen ray findings.

4. Routine preoperative roentgen examination of the chest of young individuals is recommended.

TREATMENT AND PROPHYLAXIS OF SCARLET FEVER

H. E. BAGLEY, M. D.
DETROIT, MICH.

I do not propose to deal with the old-established methods of treating the disease, but, will attempt to outline results obtained at the Herman Kiefer Hospital, Detroit, in the treatment and prophylaxis of scarlet fever with some of the comparatively new toxin and antitoxin serums, commercial products now on the market. I shall also touch briefly on work done with human convalescent serum and also with a bacteriophage the work of Dr. R. W. Preyer of the City of Detroit Laboratory.

I have dealt with my subject under the following headings:

1. What the serums are and how obtained.
2. Uses of the serums.
3. Experiments at Herman Kiefer Hospital with these serums and their results.

Of the commercial products there is a toxin and antitoxin.

Scarlet fever toxin is obtained from filtrates of fresh live virulent cultures taken from the throats of patients suffering from scarlet fever in the severe form. This is the toxin the same toxin that is used for the Dick Test.

The antitoxin is obtained by treating horses with gradually increasing doses of the toxin until an immunity is established by the horse. The horse's serum then contains antitoxic and antibacterial properties. Some pharmaceutical companies claim that their products contain both antitoxic and antibacterial properties whereas other companies only mention the antitoxic properties.

The serums are concentrated, purified and tested as to sterility and antitoxic potency before being put on the market.

At the Herman Kiefer Hospital last year experiments were made with serums put out by the following pharmaceutical com-

panies: Park Davis, Dick serum made by Squibbs, Dick serum made at their own laboratory, Lilly and a very few cases with Lederle serum.

Apart from the above serums human convalescent serum was also used. However, this method of treatment is, properly speaking, not new for it has been used with very good results at the Herman Kiefer Hospital for several years.

This human convalescent serum is obtained as follows. Adult male scarlet fever patients are given a Wassermann test. If this be negative, and if the patient can be persuaded to give it, about three or four hundred c.c. of blood are taken. This is done a few days before the patient is dismissed. The serum from this blood, which is roughly about half the volume of blood taken, is then tested for sterility and a preservative added in the form of $\frac{1}{4}$ of 1% phenol. This serum may be kept in an ice chest for several months without apparent loss of potency.

The usual dosage of this human convalescent serum is 30 c.c. given intramuscularly. To my mind this serum offers the very best means of combatting the disease, but, it is of course hard to obtain and is really only an institutional measure.

BACTERIOPHAGE

Some very interesting and profitable work was done with a bacteriophage prepared by Dr. R. W. Preyer of the City of Detroit Laboratory.

Dr. Preyer contends that other bacteria as well as the streptococcus are the cause of the disease. Also, that the streptococci may under varying condition mutate and become staphylococci or colon in form thus accounting for many of the complications.

He proposes to combat the disease by injecting intramuscularly bacteriophage which literally eats up and destroys the bacteria.

There is no doubt about the ability of this substance to destroy bacteria in a test tube, and, from results obtained in a number of cases of scarlet fever in which it was tried it would appear that it had exercised the same power in the human body.

USES OF THE COMMERCIAL SERUMS

The toxin is used in carrying out the Dick Test for determining the susceptibility to scarlet fever. Either one or two skin test doses of the toxin are used for this test. This must be given intradermally, for, if injected too deeply, a positive result will not be obtained, even in those

susceptible to the disease. We found that the test should be read after 24 hours, not 48 hours as with the Schick Test.

The toxin is also used for the active immunization of susceptibles. For this active immunization gradually increasing doses of the toxin are employed. The amount of toxin given and the number of injections given vary with the products of the different pharmaceutical companies. One company advises four subcutaneous injections of one c.c. each at intervals of from five to seven days. The dose is the same for children as for adults.

Dose One	250	Skin Test	Doses
Dose Two	500	Skin Test	Doses
Dose Three	1000	Skin Test	Doses
Dose Four	2000	Skin Test	Doses

This active immunization should not be attempted if the person has already been exposed to the disease, for it does not afford protection until the last dose of the series is given, and this of course is about four weeks after the first injection. In dealing with such a case the proper procedure would be passive immunization, which I shall discuss later.

This active immunization was not carried out at the hospital.

USES OF THE ANTITOXIN

The antitoxin may be used for two purposes—passive immunization and treatment.

A small amount of the antitoxin (about 2½ c.c.) given intramuscularly at time of exposure to the disease confers a passive immunization which appears to last about two weeks. Wonderful results were obtained at the hospital with this passive immunization. For, during the course of the year, a number of patients with the wrong diagnosis were inadvertently admitted to the scarlet fever ward, where they remained over night. On discovery of the mistake the following morning they would be removed from the ward and given 2½ c.c. of scarlet fever antitoxin. Not one of these patients came down with the disease. Early in the year these patients were kept in a private room in a different part of the hospital for one week after the exposure before dismissal. Later, we became so sure of the immunity conferred by the antitoxin that the patients were given the serum and sent home at once.

On other occasions scarlet fever broke out in our diphtheria and measles wards. In these cases the scarlet fever patient would be immediately removed and all the

other patients would be given the Dick Test. Those who were positive would be given 2½ c.c. of antitoxin and again almost perfect results were obtained.

From the above results it will be seen that scarlet fever antitoxin affords a valuable means of securing passive immunization. It is of great value to the practitioner in guarding against the spread of scarlet fever in the home if the patient can be completely removed from contact with other members of the household, and the other members who have not previously had the disease, given 2½ c.c. of the antitoxin at once. In this case I think that the serum should be administered at once without waiting to give the Dick Test. It must be remembered that the immunity conferred by this antitoxin will probably not last the whole 28 days or more of the disease. That is why segregation of patient from susceptibles, especially of children, is advisable.

TREATMENT OF THE DISEASE WITH THE ANTITOXIN

The greatest stress is of course laid by the pharmaceutical companies on the use of the antitoxin in the treatment of the disease itself. The standard dose for treatment is 10 c.c. given intramuscularly. This should be given as early as possible. If the case is not doing well after 24 hours it should be repeated. This dosage is the same for children as for adults.

The results obtained by us would in some respects tend to show that the companies had over-estimated the value of the serum in this direction, yet, these same results clearly indicate, that, if a patient were quite sick the antitoxin should be given. It will be almost sure to reduce fever and toxic condition to quite a marked degree within 12 to 24 hours. There is a drawback due to the fact that after perhaps a week or so he may suffer somewhat from serum sickness. This is, of course, due to the fact that the serum is obtained from the horse. However, at the time when this reaction usually occurs the patient should be well enough to stand it easily. Then again he may escape the complication altogether. At the Herman Kiefer Hospital serums were only given to the more severe cases, because the milder ones would probably be all better in a few days anyway, and then again there was not enough material for it to be given to every case. All patients, who on admission had a temperature of about 102.6 or over and who gave other evidence of being quite ill

were given serum of some sort. It must be remembered that patients are practically always sick for about two days before coming to hospital. A few would be cases who had been sick for several days and probably only came to hospital because they were going bad.

An effort was made to find out which commercial serum was the most efficient and a comparison was made between the serums which I have already mentioned. But, as 128 cases were treated with Park Davis' Serum, and only 19 cases with Squibb's Serum, 14 cases with Dick's Serum, 11 cases with Lilly and 3 or 4 cases with Lederle's Serum, it will be seen that the number of cases treated with the various serums was so unequal, that, although results were charted separately, it was hardly a fair comparison. Therefore, it would not be just to give these separate results here. Instead of this I will give results as recorded in the combined charts of the various serums.

Average temperature of cases which received some variety of commercial serum was 102.6 at time of administration. After five days the average temperature was 99.4. The greatest drop was usually within the first 24 hours after giving the serum. Temperature is of course only one factor to consider. The truth of the matter is that very good results were obtained in combatting toxemia. That is to say, if a patient were admitted with a very bright heavy rash, severe sore throat, high fever, rapid pulse and perhaps showing signs of delirium, there would practically always be marked abatement of these symptoms within a few hours after the giving of 10 c.c. of commercial serum.

On the other hand rather poor results were obtained in combatting complications of the disease. Later, in the course of the disease if a patient, who may or may not have had the serum, developed complications serum appeared to have no effect on them. That is to say running ears, septic sore throat, threatening mastoiditis, nephritis, adenitis, etc. are not affected by the giving of serum. However, it is quite possible, even probable, that if the serum be given early many of the usual complications are warded off because of the general improvement in the condition of the patient.

One hundred and seventy-two cases received commercial serum. These cases suffered the following complications:

Cervical Adenitis.....	19%
Arthritis	19%
Otitis Media.....	11%
Rhinitis	12%
Albuminuria	10%
Real Nephritis	2%
Endocarditis	5%
Mastoiditis	6%

There were seven deaths.

It must be remembered that all these cases were severely ill on admission.

The serum nearly always caused some urticaria. Sometimes this was quite bothersome. Some cases suffered from joint pains for a few days. None of these symptoms were alarming except in the case of one little boy who got a severe reaction almost at once. This was easily controlled by the giving of adrenalin.

CONCLUSIONS

Commercial antitoxin is excellent for temporary immunity.

Human convalescent serum is perhaps the best treatment for scarlet fever, but, is hard to obtain and is really only a hospital measure.

Commercial antitoxins are good to combat toxemia. They have no apparent effect on complications that have already become established.

The experimental work, which I have briefly dealt with, was done under the direct supervision of Dr. Guy L. Kiefer, chief of hospital staff.

He was assisted by the following men who were resident physicians at the time: Dr. Gordon Knapp, Dr. A. B. Winograd, Dr. D. E. Cohn, Dr. E. Martner and by Dr. B. Bernbaum, who is one of the visiting physicians of the hospital. I was chief resident physician.

All the commercial serum was furnished free of charge by the different pharmaceutical companies. That from Squibbs and from the Dick Laboratories was obtained through the courtesy of Dr. C. C. Young, director of the Michigan State Laboratories.

VARIABLE FACTORS IN LACTIC ACID MILK FEEDING

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The popularization of concentrated foods in the feedings of infants represents a significant trend in recent pediatrics practise. True, for many years past, the use of buttermilk re-enforced by the

addition of flour and sugar has been common practice. There followed the introduction of the high caloric malt soups, albumin milk, butter flour mixtures, the various acidified milks, particularly lactic acid milk, and others. The use of concentrated food approaches nature's own method of feeding. The milk the baby takes from its mother's breast is undiluted and unmodified. The methods of diluting and adding to cow's milk to enable it to approximate the effects of mother's milk have paralleled our changing views in regard to the etiology, physiology and pathology of the processes of nutrition and metabolism. In a recent visit to several of the more important European Clinics, milk dilutions were found largely out of vogue except in the form of butter flour mixtures. To meet certain indications, Finkelstein was employing a nearly doubly concentrated albumin milk containing 20% sugar addition. Properly balanced milk dilutions have, however, undergone a prolonged and thorough going clinical test and should remain the method of choice in the routine feeding of healthy infants. However, concentrated foods have an exceeding value when prescribed to meet certain indications and it behooves us to give consideration to certain factors involved in the most commonly used of these.

The most recent step in infant feeding has been the introduction and wide spread use of lactic acid milk. In this we find a food not only concentrated in form, but of a buffer content, approximating that of mother's milk, with the consequent offsetting of the inhibiting action of the cow's milk and the facilitating of the whole subsequent digestive and nutritional cycle. We are thoroughly indebted to Marriott for his emphasis on this important principle.

There has been an over enthusiastic and unlimited adoption of lactic acid milk in routine feeding in some quarters, an unnecessary aloofness in others. In fact, our whole experience is too recent to enable one to define exactly the limitations, the indications and contraindications of its use. Faber has recently set forth fairly accurately the present status of the question. However, in determining our attitudes, it must be remembered that lactic acid feeding does not represent a standardized method, that there are variable factors in its use which determine the clinical results obtained, and it is purpose of this paper briefly to discuss several of these more im-

portant variables—namely, the fat, the sugar and the acid itself.

Infants in general tolerate whole milk when it is properly acidified. However, certain conditions arise in which a diminution of fat is indicated—notably in the feeding of new born infants and in vomiting conditions and in celiac disease. Administration of the fat sometimes influences favorably a constipated condition, although a hard, dry stool is, to my mind, a contraindication to the continued use of lactic acid milk. Lactic acid milk meets one of its most valuable indications in the feeding of the new born either as complementary or supplemental feeding or as complete feeding when mother's milk is not available whatsoever. For the first few days of the infant's life, fat free milk is indicated—within a few days, one-half skimmed milk is well tolerated, and in the average healthy baby, whole milk may be employed within the very early weeks.

A word of warning may not be out of place here in regard to skimmed milk feeding, whether in the acidified or non-acidified state. Skimmed milk suffice only for temporary feeding. Its long continued use deprives the infant of an indispensable essential to its diet. A long deprivation of fat results in lessened deposit of body fat, lessened tone and turgor of the body tissues, and lessened immunity and resistance possibly due to the diminution of the essential fat soluble vitamin substance. Besides, an extraordinary volume of food is required merely to cover the child's caloric need. An added gravity is added to the fault when the skimmed milk is prescribed diluted. Clinical conditions apparently calling for this type of management can be met in more rational and logical ways.

It must be remembered always when full lactic acid milk mixtures are employed that carbohydrate must be added to permit the proper metabolism of the fat present. Fat is burned in the body in a fuel of carbohydrate—and always an adequate amount of fuel must be prescribed to permit the burning of the fat in the mixture. The tendency in general is to prescribe inadequate amounts of sugar. Remember that the sugar content of cow's milk is approximately 4.75%, and that of mother's milk is 7%. Enough sugar must be added to the whole milk mixture to bring the total sugar content to approximately this latter figure. Sugar in general may be administered with a greater sense of security than feeding practice in recent years

has apparently found warranted. In the presence of high protein and fat as in the concentrated formulas under discussion, the laxative tendency of sugar is not very manifest. However, the use of excessive quantities also is not indicated. In my experience, four tablespoonfuls per quart of corn syrup is the optimum dosage. Smaller quantities are indicated at the beginning of feeding of the new born and in undue looseness of the bowels. The opposite extreme is also to be avoided. The seven tablespoonfuls used by some is excessive dosage. If this quantity seems necessary because of constipation, the remedy lies in milk dilutions and not in over-concentrated feeding.

The greatest lack of uniformity of method, however, is shown in the quantity of lactic acid prescribed by various individuals. Marriott has recommended the employment of 8 gm. per liter of milk. This quantity no doubt accomplishes a complete debuffering of the milk—a situation which most observers apparently agree is not necessary to bring about. Faber emphasizes the danger inherent in administering completely debuffed milk. The experiments of Klotz are fairly conclusive that beyond 4 gm. per day—and even at this figure—a negative calcium balance may be brought about in the infant organism.

A recent informal survey of a considerable group of pediatricians proved interesting in regard to the quantity of lactic acid prescribed by each. The quantities varied from 30 drops per quart to 240. Higher amounts were employed by very few, and the largest number averaged about 90 per quart or 3 drops per ounce. Some individuals varied the amount employed—reducing as the clinical condition of the patient improved. Others did not prescribe by drops but employed a visual method giving instructions to add lactic acid until a curd producing a definite consistency of the milk was attained. Practically all prescribed a dosage measured in drops rather than in minims or cubic centimeters. It must always be remembered in discussing the dosage of lactic acid that drops and minims do not coincide—that one dram of lactic acid contains ca. 120 drops. Also, the drops themselves vary in size, depending upon the opening of the pipette employed—a jagged or flanged pipette delivering a larger drop than the straight cut, pointed eye dropper commonly employed. Lactic acid also may vary in its pharmacopeal strength between 85%

and 90%. Furthermore, it takes up moisture readily and the acid may become, if improperly stoppered, more dilute and weaker. However, when milk is only partially debuffed, the size of the drops and the variation in number within small limits is negligible as to effect.

In my own opinion, and apparently in the opinion of most of the local confreres, partially debuffed milk meets routine requirements—and higher acidities are to be employed only in the more severe conditions and for short periods only—with gradual reduction of the strength employed. Probably 4 gm. or roughly 120 drops per quart represent the maximum dosage for routine cases, and the optimum is possibly somewhat less than this figure. When used in limited dosage in properly balanced mixtures, lactic acid may be given over considerable periods of time. When the baby who has hitherto been taking the sour milk well and thriving on it ceases to gain or evinces a distaste for the milk or develops hard, dry stools, the continuance of the use of lactic acid milk is contraindicated.

While lactic acid milk on account of its sterility and its value under certain conditions of deranged nutrition would seem of increased value and practicability during the summer months, the onset of the hot weather this year found many mothers unable to prepare satisfactorily the milk which there had previously been experienced no difficulty. The apparent reason was that owing to increased temperature a partial lactic acid fermentation had occurred in the milk previous to, during or subsequent to its delivery, so that the milk would not carry, so to speak, the customary quantity of lactic acid. In an attempt to answer this question the aid of the Walker Gordon Laboratory in Detroit was asked, and thanks to its courtesy and the interested efforts of its bacteriologist, Mr. Farr, a large number of specimens of milk—certified, pasteurized, ordinary, boiled, milk which had been properly kept, and milk which had been allowed to stand at room temperature for varying intervals, were tested as to hydrogen ion concentration; as to the amount of lactic acid necessary to bring it to a ph. of 3.7; as to its titrable acidity in terms of lactic acid; and as to the quantitative bacteriological content. This investigation is still under way and it is still too soon to report the findings. However, the results obtained to date are largely negative and tend to show that within limitations, the ageing of the

milk and the number of bacteria present per se have no important bearing on its hydrogen ion concentration, the determining factor being more likely the type of bacteria, i. e., acid producing organisms—present. There is a fairly constant initial hydrogen ion concentration in milk kept under average conditions and the range of lactic acid necessary to bring 10 c.c. of the various milks to a ph. of 3.7 varied within narrow limits. In a further interesting series with control of mother's milk, the amount of lactic acid necessary to bring the cow's milk to a ph. of 3.7 varied between 2 to 3 times as much as was necessary to bring mother's milk to the same point instead of three times as stated by Marriott and Davidson. If these latter figures are confirmed, they will furnish added authority for the use of the smaller quantities of lactic acid.

If one may draw any conclusions from these observations, one may infer that the acidity of milk of various origins and kept under approximately normal conditions is fairly constant and that the quantity of lactic acid necessary to bring it to a definite hydrogen ion concentration varies only slightly in proportion.

It is not within the scope of this paper to discuss the acidification of milk by other acids—such as hydrochloric, citric and acetic—or the employment of cultured milk, but merely to emphasize the variable factors that must enter into consideration to permit a fair estimate of the indication, contraindications and limitations of the use of milk to which lactic acid as such is added.

THE TUBERCULOSIS PREVENTORIUM*

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The methods in use for the prevention of tuberculosis have been widely discussed, so that the subject is far from new. However, there is sufficient interest being taken in such work to warrant frequent publications upon the subject.

Preventorium work has been carried out at Spring Hills Sanatorium for the past five years. So far, this has been on a comparatively small scale, considering the population which is cared for by the Sanatorium. The method in use here has been to maintain a "summer camp" for four months of the year; that is, from June to

the first of October. Each year groups of children are selected partly from homes where open cases of tuberculosis were found, partly from amongst the children of the open-air schools, and partly from homes visited by the nurses of the Detroit Department of Health.

In 1920, this work was first undertaken here, and for that summer tents were used to house the children. Since the camp is continued until the first of October, tents were not found satisfactory during the latter part of the time. Partly for this reason and partly in order to establish a permanent place in which to carry out the work, the present group of buildings was constructed in 1923. These are stucco-finished buildings, containing in the center a dining room and kitchen, with living quarters for the nurses on the second floor, and on either side a ward building containing 50 beds in each ward, thus providing accommodations for a total of one-hundred children. A store room, and a recreation, or play room, is also provided.

In all previous years the groups were made up of half boys and half girls. This year, with the intention of making "heliotherapy," part of the camp routine, the groups were separated—the first group composed altogether of girls, the second group of boys. This gave the girls the two better months, June and July, so that the benefit from the heliotherapy, in so far as result could be estimated from the degree of tanning, was better in the girls.

This year also, the groups were composed of children taken almost wholly from families where there were known cases of tuberculosis, five parents being patients in the main buildings, three of the children having brother or sister in the children's unit.

On admission all children, as formerly, had a complete physical examination, X-ray, and dental, and their weights charted. The following gives some idea of the findings:

	Girls	Boys
X-Ray (increased hilum or parenchymal shadows)	35%	6%
Hypertrichosis	31%	18%
D'Espines	25%	23%
Cervical	16%	61%
Tonsils	36%	31%
Scapulae	not done	Winged.....21%
		Concave.....12%
		Winged and Concave.....28%
Other physical signs.....	9%	4%

In addition, three of the girls and two of the boys were found to have signs sug-

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gestive of active tuberculosis and were transferred to the children's division of the Sanatorium for treatment.

During the stay here interdermal tuberculin tests were made on all of the children, starting with 1/10 c.c. of a one in 100,000 dilution of O. T. and increasing by 10 times the dose every week up to a dilution of one in 10. The very dilute dosage gave so very few reactions in the girls that it was decided to drop that dilution in the boys and start with the one in 10,000. In the girls, the time did not allow carrying the tests up to the full strength of one in 10 and the tests were stopped at one in 100 dilution. The boys were given the higher strength. Of the girls 36 per cent gave a positive reaction, and 12 per cent a questionable result; that is, less than a 5 m.m. erythema at the point of injection. In no case was an elevation in temperature noted which could be interpreted as resulting from the Tuberculin. The boys gave a positive reaction in 55 per cent and questionable in 15 per cent. In addition those boys which did not react to interdermal tuberculin were given the Von Pirquet cutaneous test. Not one reacted to this test. In the different age groups (taken by years from 5 to 14) the 12 year olds seem to be the most sensitive, all of the girls in the age group giving either a positive (84 per cent) or a questionable (16 per cent) reaction, and 73 per cent of the boys (47 per cent positive and 26 per cent questionable).

Malnutrition was estimated upon the percentage of normal weight. All 8 per cent or more under normal being checked as being in this group. Forty-nine per cent of the girls and 69 per cent of the boys on admission fell into this classification. On discharge 8 per cent of the girls and 9 per cent of the boys were still in this class, although in every case great gains were made. The average gain in this class amongst the boys being 7.2 pounds and girls 5.8 pounds. Failure to gain can perhaps be attributed to some one or more of the following physical and other signs: X-ray (7), tonsils (6), cervical glands (6), positive D'Espines (4), asthma (1). In one case the child was watched from the admission to the camp to its close before being transferred to the Sanatorium. This child is also included in the malnutrition group.

On admission to the camp 16 of the girls showed some physical signs on chest examination, which were not considered due to tuberculosis. All of these cleared up be-

fore discharge. Of the boys, only four showed abnormal signs, which also cleared.

There has been some discussion whether the shape and position of the scapulae have any bearing on the physical condition. Of the boys (and the boys only were examined in this case) all that could be deducted was that concave or winged scapulae were frequently associated with malnutrition but were not to be considered of any definite diagnostic value. Hypertrichosis also is to be considered of the same practical value. The percentage for both of the above were given earlier.

On the whole number of children admitted this year (205) the average gain has been 5.71 pounds. This average gain has been exceeded only once, (1923; 5.8 pounds). Heliotherapy was made such extensive use of this year that it was the expectation that the average gain would be much less than previously, whereas, on the contrary, the gain is well up in the average for the five years of the camp.

This ends the fifth year of preventorium camp work at this Sanatorium, in compiling our figures, a stay of less than three weeks has not been considered as sufficient time to give any result. In the case of the boys who came to the camp in the latter months, several vacancies occurred during the term of camp owing to removal of the boys for school and such reasons. These vacancies were, in most part, filled from the Children's division of the Sanatorium, and in such cases the child going to the camp had had several months treatment in the Sanatorium and was considered in such physical condition as to be able to return home. Such being the case it is not to be expected that these boys would show any very great gains in the camp, and for that reason the average gains are perhaps a little lower than they might otherwise have been. During this year, no child lost weight. One child gained 24 percent in weight.

As a summary of the past five years:

Year	No. of Children	Average Gain
1922	100	4.2 lbs.
1923	208	5.8 lbs.
1924	204	5.7 lbs.
1925	205	4.8 lbs.
1926	205	5.71 lbs.
5-year record	922	5.24 lbs.

Each year two or three children are found in the groups who are in need of Sanatorium care. This year, as has been said, five were transferred from camp to unit. During the time that the preventorium has been in operation, only 10 children

have been found amongst the total of 922, to have developed active pulmonary tuberculosis, that is about 1 per cent.

As each group leaves the preventorium, recommendations are made to the Board of Health concerning their physical condition and their follow-up treatment. As an indication of this work may be quoted the recommendations of this year:

Twenty-one boys and eight girls were recommended for tonsilectomy.

Sixteen boys and 19 girls noted as having enlarged tonsils but not requiring immediate removal.

Nine girls and three boys recommended for future examination to see whether the gains made at the camp were held.

Two girls were recommended to have ears treated.

Two girls were recommended for medical treatment for asthmatic conditions.

Seven girls and 10 boys were considered to have a D'Espine's sign suggestive of a possible infection and were recommended for frequent re-examinations.

Thirty-five boys and 13 girls had sufficient reaction to interdermal tuberculin to warrant future examination.

The fact that so great a number of recommendations were necessary, and so many showed indications that they may later develop active disease, leads to the conclusion that preventorium work must be carried out more fully in the future and if possible, a permanent preventorium be established to give longer observation to such cases, and also to those cases which are constantly presenting themselves to the Children's Unit, in whom, while no definite disease can be demonstrated, still have sufficient indefinite indications and suggestive symptoms to warrant observation, but for whom there are not sufficient Sanatorium beds to provide institutional care.

PROSTATIC NODES—THEIR CLINICAL SIGNIFICANCE

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Upon rectal examination the normal prostate imparts a uniformly smooth and even surface in both lobes and isthmus. It encroaches upon the rectal lumen, so that a perceptible projection is readily distinguished, but not enough to suggest an actual ridge or crest. Exceptions to this gross anatomical rule do occur, but in the

majority of cases the above delineation holds true.

Diseases, such as gonorrhoea, tuberculosis and malignancy may give rise to alterations in the anatomical contour of the gland. Without underestimating the gravity and importance of the latter two, I shall dwell mainly upon the former as an etiologic factor of moment in the causation of nodular formations in the prostate. It may be stated with certainty that 75 per cent of all cases of prostatic nodes are the result of gonococcal invasion, and form no inconsiderable contingent to the type of so-called "chronic gonorrhoea." Unhappily our medical nomenclature for centuries has been responsible for the ambiguity that still clings to the various descriptive terms, such as chronic gonorrhoea, chronic urethritis, etc. A chronic gonorrhoea or urethritis is not always a chronic involvement of the urethral canal, particularly so when induced by gonococcal prostatic infection or spermato cystitis of the same origin; it should be termed gonococcal prostatitis or prostatic gonorrhoea and gonorrhoeal spermato cystitis respectively. When the gonococci gain entrance into the ducts and crypts of the prostate through the process of extension, proliferation of the parenchymatous tissue takes place with a concomitant plastic exudate into the stroma of the gland, so that in the course of time nodes may develop in the substance of the prostate, particularly so in its lobes. Very rarely, if ever, do we find the isthmus implicated. When such a prostate is examined—and for a proper and thorough examination, we must use very thin finger cots if possible, so as not to blunt the sense of touch to any inconsiderable degree—instead of detecting a smooth and even surface, the finger readily recognizes elevations in the substance of the gland, prominences here and there, separated by normal prostatic tissue. If pressure is brought to bear upon these nodes—as they may be termed—one of two kinds can be readily discerned: soft, elastic and yielding prominences, the so-called *soft nodes*; or indurated, resisting and plastic ones—*hard nodes*.

The former are accompanied by a more or less copious discharge of prostatic fluid at the meatus, the latter yield very little or no secretion. The prostatic secretion thus obtained harbors numerous cocci, among which the gonococci are easily detected. It is often very difficult to obtain secretion for microscopic examination from the hard nodes.

Urethroscopic examination, both anterior and posterior is negative, and the only apparent evidence of gonococci infection, therefore, is in the prostate. The urine of the patient suffering from soft prostatic nodes, upon a three or five glass test, may show flocculi and filaments in the second and third tube (with preliminary irrigation), and in the fourth and fifth tube upon prostatic massage. In those suffering from indurated nodes, the urine presents a negative character, so that little dependence is to be placed in such a case upon a three-or five glass test. Ascitic-agar cultures frequently yield colonies from the prostatic fluid expressed from the soft nodes.

The clinical significance of these nodes is obvious. While the patient may be entirely free from a urethral gonorrhoea and the urethroscope fail to elicit any positive evidence of infection, the prostate is the organ that bears the brunt of the infection. This may continue indefinitely for years, with frequent recrudescences in the form of an acute specific urethritis, a potent source of infection to others and a menace to the individual's health. That there is a constant absorption of gonotoxin, has been proved by many observers, the effects of which manifest themselves in the form of different myalgias and arthralgias with no appreciable alterations in the muscles and joints affected. Other vague symptoms are complained of by the patient, which I believe have their origin in the prostatic lesions. Hence nodular involvement of this organ should always be considered a sequela of moment, and not lightly dealt with. Our conception of gonococcal infection in general may change radically within a decade or two. It is to be no longer regarded as a local infection only, but as a systemic disease of far-reaching importance.

It has long been determined that the seminal secretion without the admixture of the prostatic fluid loses one of its essential elements in the process of impregnation. The spermatozoa without this auxiliary function of the secretion of the prostate are inactive. A pathological secretion of the prostate, therefore, is unable to activate the seminal fluid and sterility may thus be the outcome. Another function of the prostatic secretion that has not been universally recognized is its influence upon virility. While in a great measure the prostatic fluid is eliminated by ejaculation and unconsciously escapes with the urinary stream, and occasionally appears at the meatus, some of it is also absorbed and

has a powerful effect upon the sexual potency, not unlike that of the testicular hormone which has long been known to materially influence it. An absence or pathologic modification of the prostatic secretion, either qualitatively or quantitatively, induced by gross morbid conditions of the gland will in time give rise to partial or complete impotence, aside from the biodynamic role the prostatic fluid plays in activating the seminal secretion. Hence the clinical significance of prostatic nodes the result of gonorrhoeal infection, will become apparent to the practitioner at a glance, if he bears in mind the organic and functional disturbances they may create in the sexual sphere.

The treatment is unsatisfactory. If once the process has become localized in the prostate as foci and nodes, it is very difficult to eradicate it. Medicating the posterior urethra has been recommended with little, if any success. Likewise, massage has proven futile in the majority of cases. Vaccinotherapy perhaps holds out some hope, if used early and systematically. Of late diathermy has been tried, but with indifferent results.

Of late operative interference has been advanced by some as a rational measure, and yet, there are cases where *prostatic drainage* has availed but little and the patient has returned with the same gonorrhoeal discharge and the nodes still persisting after operation. Enucleation of the gland perhaps is the only logical measure. And yet there are objections even to that, if one bear in mind the functions of the prostate. No man desires to submit to an artificial impotence and sterility, even if the former be only partial in character; in short, he does not want to be unsexed. If we let the process continue unabated, its chronicity may be instrumental in causing enlargement of the gland in advanced middle age, when operation eventually becomes imperative. The treatment is problematical at its best. But if the process tends through its chronicity to induce enlargement of the gland later in life, enucleation is the only alternative.

SUMMARY

1. Gonorrhoea is the most common cause of prostatic nodes.
2. By reason of the latter the prostate is altered, both structurally and functionally.
3. The prostatic secretion produced under these circumstances is no longer a normal and physiological secretion.

4. As such it can no longer activate the spermatic fluid and the result may be sterility.

5. Furthermore, the normal prostatic secretion exerts a powerful influence upon virility, and if pathologically altered it may thus cause partial or complete impotence.

6. The prostatic nodes are sources of toxin absorption and responsible for the subsequent train of symptoms thus engendered.

7. The treatment is unsatisfactory and problematical.

THE MICHIGAN STATE MEDICAL SOCIETY—ITS ACTIVITIES AND METHODS

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The Officers and Council of the Michigan State Medical Society recognize two general, outstanding purposes and obligations: The Education of the Public as to the truths of scientific medicine and what it can accomplish in the prevention and treatment of disease; and, the providing of our members with the opportunity of remaining abreast with medical progress, exemplifying it in their daily practice and enhancing their individual interests.

To attain realization of these purposes the Officers and Committees of the Society have created a group of movements and efforts that develop and institute methods so directed as to fulfill these two general fundamental purposes. Because of numerous inquiries we are presenting these under their designated departments and briefly outline their scope.

JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION

The object of this Committee is set forth in the following declaration:

“The function of the Joint Committee is to present to the public the fundamental facts of modern scientific medicine for the purpose of building up sound public opinion relative to the questions of public and private health. It is concerned in bringing the truth to the people, not in supporting or attacking any school, sect, or theory of medical practice. It will send out teachers, not advocates.

The Committee is constituted from four representatives of the State Society, four from the University of Michigan and one each from the following state organizations: Detroit College of Medicine and Surgery, Dental Society, Nurses Associations, Department of Health, Tuberculosis

Associations, Welfare Association, Board of Registration in Medicine, Wayne County Medical Society, Hospital Association, with President C. C. Little of our University as the active Chairman of the Committee.

A corps of some 300 speakers are enrolled, each is assigned from one to three medical subjects that form the basis for his public address.

Bookings are made by the Extension division of the University. Meetings are sponsored by Parent-Teachers Associations, Luncheon Clubs, Granges and similar lay organizations.

During the past year 480 public meetings were conducted and attended by 184,000 laymen. This work has been continued for the past five years. At times the demand for speakers is greater than the supply. No charge is made to the sponsoring organization for a meeting. The State Society defrays one-half of the actual traveling expense of the speaker.

It must be apparent that this is an achieving form of public education.

LEGISLATIVE BUREAU

In conjunction with all other medical organizations we approached each session of the legislature with some trepidation. There is some wholesome legislation that is greatly to be desired and also pernicious legislation to be opposed. In the past each organization in the state concerned with health, medicine and sanitation submitted its own desires and opposition independently.

This past year, the State Society called a conference to which each organization in the state that dealt with matters pertaining to health, preventive medicine, sanitation and actual practice were invited to send representatives.

Some hundred individuals attended this conference. It was pointed out that cooperative unity and support from these combined organizations whose interests and objects intermeshed would simplify our legislative work as well as strengthen our appeals, representations and opposition.

As a result of this Conference a Legislative Bureau was constituted from representatives of the following state bodies: State Medical Society, University, Detroit College of Medicine and Surgery, Department of Health, Hospital Association, Dental Society, Nurses Society, Welfare Department, Tuberculosis Society, Pharmacists, Crippled Children, and State Board of Registration in Medicine. Dr. Haze,

chairman of our Legislative Committee and Dr. J. Vanderslice were elected Chairman and Secretary of the Bureau. The policy adopted was that each organization proposing legislative bills should submit them to the Bureau for review and approval. Second that the combined membership strength of all organizations constituting the Bureau would be utilized at legislative hearings. It is quite apparent that the Bureau will reflect a potent influence in medical and health legislation and be in a position to arrest impressively the acts of our legislators.

POST-GRADUATE CLINICAL CONFERENCES

For the past 12 years the State Society has been concerned with the scientific programs of our county units and sought to cause them to provide for the individual members opportunity to remain abreast with medical progress. Clinical teams were organized and made available for County programs. District Councilor meetings were conducted. In 1925, the Secretary's office was directed to conduct two, one-day Post-Graduate Clinical Conferences in the fourteen Councilor Districts of the state.

These programs opened at 9:00 a. m. on the designated day and are carried through into the evening. The topics were prearranged and included the entire field of medicine. Thirty minutes were allowed to each speaker who was selected because of his teaching ability and experiences. At noon an hour and a half was devoted to a get-together luncheon and discussion of organizational work of the district. Arrangements were also made for one or two speakers to address the local high school students. In the evening a Public Health Education meeting was conducted.

During 1926 fourteen such conferences were held and forty-four speakers participated in these programs.

In November, 1926, with the aid of our University Hospital Staff a two and one-half days Clinic was conducted at the University Hospital. Some 600 members registered.

In 1927 it is purposed to continue these District Conferences and in addition to extend them to counties. We believe we have demonstrated the need of a Post Graduate School and are now urging its organization so that our members can pursue post-graduate study, and by interrupted attendance pursue a definite course during a given year.

The State Secretary's office also undertakes to meet requests from county societies for speakers for their local programs.

Several of our larger hospital staffs are being supported in conducting stated Clinical Days for the benefit of all physicians in their immediate vicinity.

It is along these lines that we are affording our members means for acquiring practical knowledge to remain abreast of progress and to exemplify that knowledge in their daily practice. Expenses are born by the State Society. There are no additional fees.

ENDOWMENT FOUNDATION

Mindful of our educational obligation and realizing that the coming years must witness still greater extended efforts, on January 1st, 1927, trust agreements were entered into creating an Endowment Foundation. Its purpose is indicated by the following paragraph of the agreements.:

The purposes of this trust are to pay the net income of the fund or funds held in trust on the written order of the Executive Committee of the Council of The Michigan State Medical Society, for the purpose of providing post-graduate instruction without fee for those designated by said Executive Committee, to conduct clinics and courses of instruction without fee in hospitals and medical schools in the State of Michigan, and to provide funds either by gift or loan to sustain such persons as designated by said Executive Committee, during the period of attendance on said post-graduate instruction or said clinics.

MINIMUM PROGRAM FOR COUNTY SOCIETIES

For a number of years we have noted that County Societies varied in their activity influenced by the election of new officers. They manifested excellent scientific work and concentrated upon it, eliminating other obligations as well as neglecting opportunities of community education and economic advancement.

To overcome such seemingly haphazard undirected policies a minimum program for County Societies was formulated as follows:

A MINIMUM PROGRAM FOR COUNTY MEDICAL SOCIETIES

Section 1. *Scientific*—

(a) Ten meetings are to be held during the year. Local speakers are to appear before three meetings with definite planned discussions.

(b) A program of physical examinations shall be instituted in which all physician members shall agree to have a complete physical examination themselves and each shall agree to secure at least five patients who will agree to have complete physical examinations.

Section 2. *Social and Informal Activities*—

Each Society is to have at least three dinner meetings. The speakers for these meetings shall be public speakers, educators, financiers, but not medical men. At least one picnic shall be held. At least one social evening, in co-operation with

members of closely related organizations shall be arranged.

Section 3. *Scientific Teams*—

Each Society shall have a group of two or three members who will prepare a program and give it on request before at least three other societies.

Section 4. *Public Health Information and Education*—

Each Society shall plan to have at least one Public Health lecture group which shall give at least five lectures in cities and communities outside of their resident communities or cities. Adjoining counties are to be included. Each Society shall co-operate and assist other organizations so that the following public lectures may be held. (Co-operation shall be established with the Extension Department of the University of Michigan, and the Joint Committee on Public Health).

- 1 Lecture for each High School.
- 1 Lecture for each Parent-Teacher Ass.
- 1 Lecture for each Luncheon Club.
- 1 Lecture for each Woman's Club.
- 1 Lecture for each Association of Commerce.

Section 5. *Publicity*.

Each meeting, scientific or public, shall be reported to the local newspapers in such form that at least one important point of value can be read by the reader.

The Secretary shall report each month to the State Medical Society the complete record of all activities and accomplishments.

During 1926 fifty-one of our County Societies adopted and carried out this program. In 1927 we hope to record 100 per cent observance of this program.

At the present time there is in the course of compilation a manual for County Society Guidance that will impart plans and policies of Committee Activity. By means of this manual we hope to stimulate greater achievements through standing committees and by reason of committee memberships to enroll more of our members in the ranks of actual organizational workers.

COUNCIL CONFERENCES

During the stated meetings of our Council, one evening is devoted to a Conference Dinner. By way of illustrating the purposes of such dinners the minutes of the last dinner is briefed. The Council invited as its guests representatives of our Medical Schools, Board of Registration in Medicine and State Health Commission; some forty-five members attended. Designated speakers discussed Medical Education, Hospital Internships and Medical Practice laws. Existing problems were cited, intimate information imparted and policies of co-operative support and purpose was outlined.

These Conference Dinners are bringing about clearer conceptions of existing conditions while they also create a spirit of inter-related responsibility. A harmonious

relationship ensues. Much benefit and profit accrues from these get-together discussions.

HIGH SCHOOL LECTURES

To extend our public health education, and also seeking to cause the coming generation to have a basis of sound knowledge as to scientific medicine, the State joins with the Extension Division of the State University in conducting during each year a series of lectures before high school students. The Extension Division arranges for the dates of these High School Assemblies in eight of our larger cities. Each school has from 5 to 10 lecture hours during the school year. The State Society with the local county society provide the speakers and formulate a synopsis of the talks scheduled. In the City of Detroit, the Wayne Medical Society has assumed this work. The number of high schools where these lectures are given is being increased each year. This year we are making a trial in two so-called rural counties in order to make observations with a view of statewide extension for this educational movement.

PERIODICAL PHYSICAL EXAMINATIONS

As indicated in our Minimum Program, this national movement is sponsored, applied and directed in our State.

The American Medical Association Manual was not distributed by mail. A special or regular County Society meeting was designated. One or two speakers were then sent to the meeting to discuss Periodic Physical Examination and to demonstrate upon an adult the actual method of conducting a thorough examination. The Manual was then given to each member in attendance and as these meetings were featured by special notices a good attendance ensued. It has been found that it was more effectual than utilizing the mail where the possibility exists of a doctor never opening the envelope.

We also arranged with a Stationary supply house for a leather loose leaf binder, indexed, and 100 examination blanks properly perforated and with a more suitable heading at a low net cost. These we send to members ordering. In this manner we have provided a suitable filing system overcoming an objection that was frequently raised. Incidentally at our last annual meeting a member took us outside and showed us a standard \$1,800.00 sedan that he had recently purchased from the fees obtained from conducting these examinations among his practice—illustrative of what may be accomplished.

CONFERENCE OF COUNTY SECRETARIES

We recognize the responsibility of County Secretaries and the importance of that office. Annually all our County Secretaries meet for a days Conference. These Secretaries' Meetings enable the Council and officers to outline more effectively our ideals and policies as well as to indicate methods of work for their attainment. We have felt the value of these contacts. The travel expense is paid by the County Society and the local hotels and meals are provided from state funds.

MEDICO-LEGAL DEFENSE

For some 17 years, legal defense against mal-practice has been a membership benefit. Two dollars from the annual dues is appropriated for this work. At no time has there been a yearly deficit. On January 1, 1927, this fund had a reserve balance of \$9,300.00. Our results and splendid service is due to the functioning of the Chairman of our Defense Committee, Dr. F. B. Tibbals of Detroit who has served in that capacity from the inception of this legal protection.

We pay no judgments. We defray all court expense and attorney fees.

DUES

Our Annual Dues are \$10.00 per year. There can be no extra assessments. Our membership total is 3,065. On January 1, 1927, our net worth was \$24,052.41. The monthly State Journal subscription is included in the dues.

The Secretary-Editor receives an annual salary and is supplied with required stenographic service, office rent, light and telephone. Councilors receive actual travel, hotel expense for all but the Annual Meeting. Expense of all committees and committee members are defrayed. Our annual meeting expense is paid from State funds. Two years ago we discontinued exhibits at the annual meeting. Our income is derived solely from dues, advertisements and interest earnings from invested funds.

THE JOURNAL

The past year witnessed the completion of the twenty-fifth volume—a quarter of a century of publication life for our State Medical Journal. It is sent to every member in good standing. The average monthly issue is 3,300 copies—averaging 90 pages per issue. Cost of publication in 1926 was \$14,128.32, the subscriptions and advertisements yielded \$16,106.40, thereby establishing a Journal profit of \$1,978.08 for the year.

INVESTIGATION OF LAW INFRACTIONS

During the past year we undertook to investigate illegal practitioners. The Council felt that it was germane to also concern ourselves with the economic interests of our members and to inquire into the violations of our medical laws. An appropriation was made; a special investigator has been employed and is now engaged in this work.

SURVEY OF THE STATE

During 1926 a survey of the State was made to determine the location of doctors in relation to the population and the public need. The findings have been published in the Bulletin of the American Medical Association.

TRAINING FOR LABORATORY TECHNICIANS

During 1926, as the results of several conferences with the President and Faculty of our Michigan State College at Lansing, a college training course was incorporated in the educational program of that College for students desiring to become laboratory technicians. A need was felt for such a course in order that our hospitals and clinics be supplied with trained workers. During this, the first year, twelve students are enrolled in this three year course. As far as we know this is the first college in the country proffering such training.

WOMEN'S AUXILIARY

We have not been unmindful of the possibilities to be derived from a Woman's Auxiliary. Up to the present time it was felt that our problems required so much supervision that it would be wise to postpone the formation of a Woman's Auxiliary. We feel that the time has now arrived to undertake perfecting such an auxiliary. Consequently during 1927 we are hopeful of instituting a Woman's Auxiliary in every county and are now engaged in its accomplishment.

SURVEY OF MEDICAL CHARITY

In Michigan as well as in all other states abuse of medical charity is not only palpable but increasing. Especially is that true in regard to Hospitals. In order that intelligent consideration may ensue and a policy be adopted, a special committee has been appointed and assigned to make a critical survey and study of medical charity. The further instructions to the Committee are that they shall bring in recommendations as to policy in order that our State Society may go to our Hospital Boards and Clinics with a workable plan

that will minimize this abuse and socialistic trend. The committee is to present its report at our Annual meeting in June 1927.

MORTALITY RECORDS OF THE STATE

In as much as mortality rates reflect to a degree types and efficiency of medical service and practice we interested ourselves in the compilation of these mortality rates by counties. Splendid assistance was rendered by our Health Commission's Vital Statistics Department and death rates were obtained on pneumonia, typhoid fever, cardio-renal disease, heart diseases, diabetes, maternity, still births, puerperal fever, hernia, infant, appendicitis and intestinal obstruction. Some very interesting figures were secured. These were referred to county societies with the recommendation that they review them together with surveying local factors in order that the required steps be taken to reduce these mortality rates. This information also enables us to better determine subjects to be assigned to essayists appearing upon county programs. We consider this project as exemplifying constructive assistance for the elevation of medical practice and efficiency on the part of our members.

STANDING COMMITTEES

Time was when we had a host of committees—some worth while and others existing in name only. As we progressed in our centralization of executive activity many of these committees were gradually eliminated. At present we have the following Standing Committees:

Public Health:

Cooperating with State and Local Health agencies.

Legislation and Public Policy:

All Legislation.

Tuberculosis:

Uniting with and advising the State Anti-Tuberculosis Society.

Venereal Prophylaxis:

Ready to be abolished as its function is now assumed by the Health Authorities.

Civic and Industrial Relations:

Object is apparent from its title.

Joint Committee on Nursing Education:

Associated with similar appointees from Hospital and Nurses organization for study of nursing problem.

Medical Education:

Complying with the function of American Medical Association Council on Education.

Medical History:

Compiling a medical history of the State.

Medico-Legal:

Providing Defense in mal-practice suits.

Hospital and Charity Survey:

Study of the problem of abuse of medical charity.

ANNUAL MEETING

Our annual meeting is held as a rule in September. The session is of three days duration. The first day is consumed by the deliberations of the House of Delegates that completes its work in three sessions presided over by a Speaker. The remaining two days are consumed by the scientific program of section meetings, of which there are five, and general meetings. All the expenses of the annual meeting are defrayed by State funds relieving the entertaining county society of financial burdens.

COUNCIL AND EXECUTIVE COMMITTEE

Our state is divided into fourteen councilor districts, thereby creating a State Council of fourteen members with the President, Treasurer and Secretary-Editor as ex-officio—. The entire Council meets in two regular sessions during the year and sometimes a special session. In previous years, up to 1925, in the interim, the entire executive administration responsibility rested upon the Secretary. In 1925 we recommended the creation of an Executive Committee which was adopted, thereby creating an Executive Committee of the Council, composed of the Chairmen of the Council's Standing Committees—Finance, County Society and Publication—together with the Chairman of the Council and the Secretary-Editor.

This Executive Committee of five members meets monthly. Problems arising from the administration of our general program are discussed and procedures determined. This plan has proven to be a very wise one and a material factor in the recording of that which has been accomplished. Minutes of the Executive meetings are mailed to each Councilor for approval and when indicated mail votes are obtained.

MISCELLANEOUS AND SECRETARIAL DUTIES

We iterate and re-iterate that the Secretary's office is for service at all times to our members. We invite and encourage submission of inquiries and problems as well as expression of opinions. We en-

deavor to impart requested information or refer them to authoritative sources. Consequent to this policy the Secretary's office finds a growing correspondence that is considered salutary in as much as it enables us to maintain an intimate contact with our members that permits us to sense their wishes and meet their desires. Our central offices strives also to maintain close liason with all state organizations concerned with health and medicine and foster the spirit of their looking and appealing to our State Medical Society in all matters pertaining to our profession in this State.

Lastly, our records, correspondence and financial interests are kept in accurate condition and subjected to annual audit by certified accountants.

CONCLUSION

The foregoing narrative is not to be construed, or appraised as being perfect or the last word. Our methods are imparted for the information of our members and Sister State Societies. It is hoped that other states may do likewise in order that all may gain ideas from such an interchange of information. We are frank to admit that there is opportunity for criticism and improvement. We have not reached the ultimate of perfectness—there is still much remaining to be done and additional service to be rendered. While minor details have been omitted, still on the whole this is a fairly complete description as to how the Michigan State Medical Society is justifying its existence and the objects that govern its organizational activity.

PITUITARY GLAND

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This article represents the present status of our knowledge of the pituitary gland as gleaned from the literature on the subject. An effort has been made to include all that is probably established, seen from the clinical, not the academic aspect.

Discussion of the embryology and anatomy is omitted, as this is easily obtained in any text book on the subject.

PHARMACOLOGY

1. *Anterior Lobe*—A concentrated substance known as tethelin has been isolated from the anterior lobe. This has all the physiological properties of the whole anterior lobe, but is probably not a chemical

compound, rather a mixture. Either tethelin or the whole anterior lobe, if fed to young animals, accelerates growth but decreases ovulation. It gives rise to sexual precocity. These two statements seem somewhat conflicting, but this is possibly due to the fact that we are dealing with both internal and external secretions in the sex glands. Tethelin also stimulates the growth of carcinoma cells and tissue repair.

2. *Posterior Lobe*—The solution known as Pituitrin contains the active substance or substances from the posterior lobe. Authorities are still divided on the question of whether there is one single substance or whether there may be as many as four distinct chemical compounds.

(a) *Action on Muscle*—Pituitrin contracts all non-striated muscles with apparently a few exceptions. These exceptions are what prevent us from making the statement that the action of pituitrin is evidently on smooth muscles and not on nerve fibers. The outstanding exceptions are that it slows and strengthens the heart muscle, dilates the pulmonary arteries, probably dilates or at least does not contract the renal arteries and also has a slight mydriatic action. Its action is not consistent with that of sympathetic stimulation because it constricts the bronchioles as it does most other non-striated muscles whereas stimulation of the sympathetic fibers causes dilatation of the bronchioles.

(b) *Action on the Kidneys*—It has both a diuretic and an antidiuretic action. The former appears to be through a direct action on the kidney cells. The antidiuretic action is said to be mediated through the sympathetic fibers. This is supposed to be the mode of action of pituitrin in preventing the enormous output of urine in diabetes insipidus.

(c) *Action on the Respiration*—Its action on the respiration is merely caused by its action on the bronchioles, diminishing respiration through constriction of the bronchioles.

(d) *Metabolism*—Pituitrin stimulates glycogenolysis through its action on the liver and antagonizes the action of insulin. Injection of insulin increases the secretion of pituitrin. The pituitary may thus come to the rescue in case of insulin overdose.

PHYSIOLOGY

The physiology has been extremely difficult to determine due to the minute size of the intermediate lobe and tuberalis.

Even the functions of the anterior and posterior lobes, however, have not been entirely determined. The authorities, in general, agree that the anterior lobe controls the skeletal development and has a great influence on the sexual functions. Also that the posterior lobe has considerable influence on the blood pressure, metabolism and glucose tolerance. There are other points which have not been assigned definitely to any particular lobe, but are ascribed to the pituitary in general; such as temperature, adiposity, general strength, wakefulness, drowsiness, heart rate, etc. Harvey G. Beck, writing in "Endocrinology and Metabolism," in 1922, states that in dystrophia adiposo genitalis, the deficiency of the anterior lobe causes skeletal hypoplasia, genital hypoplasia, hypothermia, adiposity and cachexia, and that the posterior lobe deficiency causes increased glucose tolerance, lowered metabolism, hypotension and asthenia. Cushing, on the other hand, ascribes adiposity to posterior lobe deficiency. Animal experiments it seems will give rise to adiposity after partial ablation of the anterior lobe. In 1924 Englebach, of St. Louis, summed up the situation as follows:

"There is, however, a great deal of contention regarding the etiology of adiposity. Professor Arthur Biedl, of Prague, is much inclined to attribute these obesities to a cerebral or hippocampal lesion. B. A. Houssay, of Buenos Aires, is more inclined to believe that he has proven experimentally that the lesion is located in the interpeduncular neighborhood of the pituitary gland, but not in the hypophysis itself. Aschner, of Switzerland, claims that lesions of the tuber cinereum have produced this classical type of adiposity in animals. Bremer, of Antwerp, and Baily, of Boston, also are inclined to attribute these obesities, as well as other so-called hypophyseal signs, to extra-pituitary lesions of the hippocampal region. The French school, led by Camus and Roussay have maintained for many years that lesion of the hypophysis does not account for this type of adiposity nor for some of the other symptomatology attributed to the pituitary gland, and relate them to perihypophyseal lesions. Professor Julius Bauer, of Vienna, gives to the primary inherent gamete and zygote cells the property produced by chromosomal deficiency, the etiological factor in the production of adiposity. He claims that if the individual cells producing this panniculus were dissected off one portion of the body, the hips,

for instance, in the pituitary case, and engrafted upon the back of hand or the supraclavicular region, they would continue with the overgrowth and production of the adiposity.

"Contrary to all this contention and, for the most part, physiological proof in animals, we have continued to believe that the majority of these juvenile obesities are due to internal secretory disturbance and that the adiposity in these particular cases is caused by deficiency of the posterior lobe of the pituitary gland. It cannot be disproved, however, that the function of this portion of the gland may not be influenced by lesions or nervous impulses coming from various portions of the brain, hippocampal gyrus interpeduncular region, tuber cinereum, etc."

PATHOLOGY

Malformation of the pituitary is not at all uncommon. These malformations appear to affect the anterior lobe more than the posterior, due to the peculiar embryology of the anterior lobe. On account of its central situation, the sella turcica is frequently damaged by trauma to the head in general. After the age of forty, circumscribed adenomatous growths are common within the anterior lobe. These do not necessarily give rise to acromegaly. Hemorrhage into tumors of the pituitary is common. Infarcts are fairly common and cause the usual hypofunction syndromes. These of course, affect the anterior lobe more than the posterior, but an anterior lobe lesion practically always affects in some way the posterior lobe. It has usually been found that the hypophysis enlarges in cretinism and myxedema. Experimental removal of the thyroid causes enlargement.

Castration causes an over action of the pituitary with the usual hyperpituitary symptoms. The pituitary is influenced by lesions in other glands of internal secretion in general. These are not definite enough to be outlined dogmatically.

ACROMEGALY

Acromegaly means large extremities. The disease was so named because the obvious pathology affects mostly the sharp edges of the terminals; that is, prominent features of the head, and the hands and feet.

1. *Etiology*—Acute infection seems to predispose to hyperactivity of the pituitary, and as the gland enlarges in pregnancy, some authors claim that pregnancy is etiological. Heredity, trauma and fright,

all have been blamed, but probably play no role.

2. *Pathology*—The fundamental pathology is a proliferation, usually adenomatous, of the acid staining cells of the anterior lobe. There is, however, much accessory pathology, the most outstanding of which affects the periosteal osteoblastic cells at the site of insertion of the muscles. This is of great importance in understanding the osseous pathology of acromegaly. The bones increase where muscles are inserted and, in general, do not increase at other points. Thus the superciliary ridges are enlarged at the site of insertion of the frontalis muscle, the lower jaw is large at the sites of insertion of the masseter muscles and the nose is broadened due to the insertion of the muscles at the angle of the nose. The soft tissues also increase very definitely in size. In all this increase, there is a tendency toward masculinity. The skin becomes thick, hairy, greasy and pigmented. The genital effects are toward masculinity; that is, the clitoris is enlarged, amenorrhea ensues.

3. *Symptoms*—The symptoms are divisible into three stages; an active stage, a so-called characteristic second stage, and the stage of hypopituitarism.

(a) *Active Stage*—This is the stage at which a diagnosis should be made if possible, as this is the golden opportunity for treatment. This stage may last only a few weeks or several months. It is characterized by pituitary headaches which are intermittent in character and usually located by the patient in the head bitemporally or at the top, somewhere deep in the head, and not frequently is related to meal times, in this way, that the headache is apt to disappear after a full meal. There is increased libido. Males find themselves impelled by a force not under their control and find it extremely difficult to suppress the sexual desire. There is increased strength commensurate with the increased irritation at the sites of insertion of the muscles. There is frequently glycosuria and polyuria. A characteristic complaint is pain in the face. This pain may be burning, scalding or neuralgic in nature and persistent. It is described by patients as though the eyes were too large for their sockets, as though the muscles were being pulled. As only two of these symptoms, the pituitary headaches and pain in the face are symptoms of which the patient will complain, it is obvious that those complaints should arouse suspicion of the onset of acromegaly. Right treatment at

this point may prevent the entire syndrome from reaching any further stage of development.

(b) *Second Stage*. 1. *Osseous*—This is the stage in which the characteristic symptoms are evident and in which a diagnosis is possible on inspection. Practically all the bones, but especially those in the extremities where muscles are attached, increase in size; not in length, but in thickness. The jaw presents the most striking feature, becoming very prominent and undershot. This gives rise to a separation of the teeth as the jaw proliferates while the teeth do not. The nose becomes very broad, the larynx large, giving rise to a deep voice. The sternum and upper chest increase, causing barrel chest and kyphosis. The hands and feet increase especially in breadth.

2. *Soft Parts*—In general, here again, there is a masculine conformity. And while the muscles are enlarged, the patient becomes feeble as the strength does not continue to be commensurate with the increase in size. The lips become very thick. The genitals atrophy. Muscles of the hands and feet are large in size, but weak. The tongue becomes thick and broad. The heart and blood vessels increase in size to keep up with the increase in general build.

3. *Skin*—The dermis, epidermis and subcutaneous tissue all increase. Sweat glands proliferate. The skin thus becomes greasy and lies in folds. There is a general increase in hair over the body. In the female this is especially noticeable, hair extending up over the abdomen in the midline and over the chest; the skin becomes dark and perspires.

4. *Genitalia*—In this stage are found impotence, sterility and amenorrhea.

5. *Metabolism*—There is a low sugar tolerance though not necessarily glycosuria. There may be a high blood pressure. There is retention of nitrogen and phosphorous in the blood.

6. *Nervous System*—The symptoms referable to the nervous system are those in general of a neurasthenic state; photophobia, lassitude, depression, loss of interest, lack of concentration, indecision, irritability and distrust are common.

(c) *Third Stage*—The third stage is characterized by the hypopituitary syndrome and sometimes by cachexia. The cachexia consists of tremors, twitchings, insensitiveness, slow pulse, low blood pressure, low temperature, apathy, even coma and death. The hypopituitary syndrome

is that of dystrophia adiposogenitalis and will be discussed under that heading.

DYSTROPHIA ADIPOSOGENITALIS

The striking features of this syndrome are adiposity, especially of the girdle type, and hypoplasia of the genitalia. There are a number of possible causes for this condition. As it is the terminal stage of acromegaly, this should be considered in the etiology. Other causes are syphilis, brain tumors, hydrocephalus from any cause, hemorrhage and infarcts into the pituitary, many non-specific lesions, such as injuries, and there is a large idiopathic group.

SYMPTOMATOLOGY

The symptomatology is characteristically toward feminism, no matter which sex the patient may be.

1. *Osseous System*—Referable to the osseous system occur broad pelvis, lordosis, genu valgum, slightly tapering fingers, skeletal underdevelopment in general, prognathism, feminine voice, small head, small interpupillary distance, broad and malformed teeth.

2. *Metabolic*—Under the general head of metabolism are found a lowered basal metabolism, pelvic girdle type of adiposity and high glucose tolerance.

3. *Genito-Urinary* — We find hypoplasia, impotence, sterility, amenorrhea, loss of libido, feminine breasts, polyuria, the diabetes insipidus syndrome and vesicle irritability.

4. *Skin*—The skin is dry, thin, transparent. It has been called the peaches and cream complexion. The crescents on the nails disappear and there is a generalized hypotrichosis.

5. *Nervous System*—Subnormal mentality is the rule. Mild psychosis or convulsive seizures, inability to concentrate and impairment of memory are found.

6. *Miscellaneous Items*—There are a few miscellaneous items as low blood pressure, constipation, polydipsia and drowsiness.

TUMORS

While tumors may be the cause of acromegaly or dystrophia adiposogenitalis, a discussion of these has been omitted under those syndromes because when there are symptoms of tumor, that is, persistent neighborhood or pressure symptoms, the case becomes one of tumor to be treated as such rather than a mere syndrome. The symptoms of increased intracranial pressure will sooner or later occur in all of these; namely, dizziness, headache, vomit-

ing, disturbance of pulse, choked discs and stupor. Symptoms due to the anatomical location of the tumor occur as visual disturbances, especially bitemporal hemianopsia or any form of field distortion, optic atrophy, anosmia, exophthalmos, eye palsies, uncinat fits, pyramidal tract symptoms and, peculiarly, epileptiform seizures. This group of symptoms may then complete many of the well known syndromes or may appear to be the primary difficulty.

MIXED SYNDROMES

While most space is allotted to the characteristic syndromes described, there is no doubt that the number of cases of mixed dystrophy of a much milder character are far more numerous than those of classical syndromes. We merely say less about them because they are partial syndromes, difficult to diagnose or difficult to treat. Timme of New York, who has done a great deal of work in this field, outlines three definite syndromes referable to the pituitary in which he finds therapy especially valuable. They are:

1. Deficiency secondary to other glandular difficulties, castration, puberty, menopause or oophorectomy.

2. A compensatory syndrome group characterized by hypoadrenalism or status thymico-lymphaticus.

3. In the goitre belt, thyroid insufficiency.

One symptom is also said to respond well—the pituitary headaches when not based on tumor.

DIABETES INSIPIDUS

In view of what has already been said about the anatomical location and the influence of the tuber cinereum in pituitary syndromes, very little need be said about diabetes insipidus. This syndrome is known to be easily producible by a lesion of the hypothalamic region as well as by a lesion of the posterior lobe of the pituitary.

THERAPY

In acromegaly the hyperactivity of the pituitary in the primary stage very definitely contraindicates glandular therapy. It is possible that a little relief may be obtained in the third stage when a hypopituitary syndrome has become established. This, however, would give the patient but little relief.

In the adiposogenitalis syndrome, the concensus of opinion is that both lobes are involved and therefore whole gland administration is indicated. Strange to say,

thyroid administration seems to be of even more importance than pituitary in the treatment of this syndrome.

In the above three groups ??????? by Timme the whole gland is given in dosage from 1/10 to 1/4 of a grain once a day or twice a day, omitting it if headache results and every fourth or fifth day in any event. In administering pituitary substance it seems to be the concensus of opinion that results may be obtained by administering anterior lobe by mouth, preferably on an empty stomach, that is, before meals. Posterior lobe extracts have very little effect by mouth and should be given by hypodermic administration.

There is no need in discussing here the various surgical approaches as this is always left to the particular surgeon who may be called upon to operate.

X-ray treatment in the active stage of acromegaly is of definite value, also in other carcinomatous or adenomatous growths. Decompression to aid X-ray penetration is practiced. The usual discussion arises as to the preference for surgery or X-ray treatment in malignant growths.

SOME PSYCHOLOGIC PROBLEMS IN OTO-LARYNGOLOGY*

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Psychology as applied to the every day affairs of life is constructive or destructive. When the latter variety is in the overwhelming majority an analysis is required to turn the tide back to the place where it rightly belongs in the medical profession.

We can be satisfied in our specialty with nothing less than 95 per cent constructive psychology. As a factor in the recovery of our patients it stands out pre-eminently in the front rank and as a promotor of harmony and good will nothing can supplant the constructive and optimistic mental state. It must be taken for granted that ordinary skill or better is exercised at all times.

The facts of the importance of constructive psychology in contra-distinction to those of the destructive variety are well recognized by each man who gives the matter consideration, but is it not true that the exercise and application of this wonderful spirit of support, co-operation,

and loyalty, to the cause is in a state of slumber in some of our medical centers.

It is my belief that this Society stands out preeminently advocating and practicing this spirit of good fellowship, harmony and earnest scientific endeavor. Honest criticism has its place and value and may offer much along lines that are upbuilding and uplifting but hypercriticism of the methods of hospitals and specialists in the presence of the laity is far reaching and often misinterpreted. If we have nothing good to say of an operation, a result or a criticism, silence was never more golden. The art of the management of the patient is second only to the art of oto-laryngology.

The literature of our specialty is profuse in a splendid scientific story of the progress and achievements of surgery. Numerous operations with a refined technic, tons of highly specialized instruments, often with slight modification, with or without value adorn our offices and silently speak of the enthusiasm of a creditable inventive genius that is in our midst.

Yet the great psychologic field of therapeutic endeavor that so greatly influences the results of our practice is given comparatively little attention in medical education or post-graduate instruction. For this reason alone that sufficient interest and study are not given to the management of the patient and consideration of his mental state, the cults of Christian Science, Osteopathy, and the like are sought in response to a longing for someone to lean on who will give a responsive ear and the requisite sympathy to a tale of woe.

Those of us who were trained through the field of general practice, who made calls with a preceptor and who studied the state of mind in the home and family, learned many things about sick people that apply to the art of oto-laryngology and that no highly technical training in college or post-graduate school can entirely supply.

We have always recognized psychologically different types of patients. Those treated in the home and the hospital; the clinic and the private patient. The referred cases and those not. The American and the foreigner. The so-called aristocrat and the pauper. The educated and the ignorant. In addition might be mentioned the conscientious objector who objects to any or all treatment not recommended by himself. Races and creeds have

*Read at the Annual Meeting of the Eastern Section of the American Laryngological, Rhinological and Otological Society, January 8, 1927, Brooklyn, New York.

their peculiarities of management and treatment. Just as the lunger becomes a mental type requiring special mental treatment, so certain classes of chronic deaf, the ozena or hay-fever patients, become mentally peculiar and demand special additional mental treatment.

This is the age of the aeroplane, the automobile, the transcontinental flyer, the ocean greyhound, the auto-bandit, and the movie. This is the age of vibration and storm, the quick lunch and the short sleep. The short skirt and short hair are the rage. A gentle question may receive a burst of anger. A simple request to perform some simple duty may be met with the ultimatum to get some one else. The public and the profession will not wait. The explanation is that the world is irritable, restless, and perhaps less honorable.

We have a psychology before and since the war that is quite changed. Twenty million soldiers learned a state of mind and developed an idea that the cute thing to do in all cases was to shift responsibility or work. In other words, to "pass the buck" was the delight of the soldier and the lowest private carries the burden. I believe this is reflected today on the great American public and has much to do with a lack of responsibility.

At Chicago in 1908 there were present at the American Medical Association meeting 6200. Of this number more than 1,200 were registered in Eye, Ear, Nose and Throat work.

It was estimated by the Medical Department of the Regular Army that 200 beds in a thousand bed hospital should be reserved in time of war for head diseases and injury. In my own hospital, in France, of 3000 beds with 15,824 sick and wounded treated, 27.3 per cent were operated or observed by the head department.

It is fair to assume that one-quarter to one-fifth of disease and injury falls into the domain of head surgery, is it not fair to demand qualifications of high grade.

Another psychological phase of our problem deals with the medical profession as a whole and our specialty in particular. It is thoroughly recognized that the otolaryngologist must be a well trained surgeon. He must be called on for brain surgery, the removal of a goitre, or ligation of the carotid if he wishes to extend his field, but is it not essential that he should be a physician so familiar with diseases of the chest and internal medicine that he will not operate oto-laryngologic

lesions with active pulmonary tuberculosis under ether, and that he will be constantly alert to the fact that more than one-half of all special problems of oto-laryngology that are not referred cases, are attended by some associated problem in internal medicine or neurology. The non-referred cases should be more carefully classified by the oto-laryngologist and referred to the proper treatment for the systemic condition.

I believe that under the stress and strain of the constantly increasing high pressure of life with diseases of the tubing increasing 67 per cent in a decade, that a corresponding increase is seen in neuroses, psychoses, and functional disorders in our field of work.

Has the furor of tonsillectomy, focal infection, the crooked septum, and the hunt for sinus disease, obscured a consideration of the ever-present unstable nervous system. Our patients are classified into those with real and imaginative disease.

Is the specialist a tyro who has the courage to sit down and spray the throat of the globus hystericus, apply a galvanic current and with carefully worded suggestion relieve and remove the symptoms that belong in the sub-conscious? Or is the hero, the surgeon who removes the non-pathologic tonsils of such a case, increases the instability of the nervous system and finds them soon in the hands of the osteopath.

If the vast and increasing army of neurotics are to be given relief which they seek first from the regular profession, they must receive more careful consideration and study of the psychic state involved and fewer operations at our hands. By a failure to manage these cases we are rapidly increasing the ranks of charlatanism and the cults. If we have not the time, patience, personal interest and magnetism, to manage this class of ear, nose and throat cases, it is essential that they may be referred to the neurologist with the proper qualifications.

Probably our greatest psychologic error at the present time is the curious state of mind that exists among the profession and the laity with reference to tonsil remnants. Nothing has shaken the confidence of the public in the oto-laryngologist more than the radical attitude of some of our non-diplomatic brothers toward the continuous and recurring secondary tertiary and more operations for tonsil remnants. The absurdity and seriousness of this procedure

psychologically is best illustrated by one of my cases.

I removed the tonsils and adenoids of a five-year old child belonging to a well-to-do neurotic family of a race given to accentuated symptoms. The operation was entirely satisfactory to the family and myself, and strange to relate the fee was also satisfactory. A year later, an interne, student and friend of mine, said he would like to tell me about Dr. A.B.E., who had removed the tonsils and adenoids a second time on the above case and had reported to the family what a wonderful job he had done for a fee equal to the first operation. My interne friend had taken the remnant tissue of the second operation to an expert pathologist and he had found no tonsil tissue present.

Offending tonsil tissue must be removed but the management must be diplomatic, the conversation guarded, and the necessity face evident.

The scientific progress of special surgery in the last two decades has been so rapid and expansive that together with the evolution and revolution of social medicine and the world war it has been imperative that the individual adjust or succumb. Those of us who were satisfied with the methods of prebellum days have adopted the newer classification of our work.

It is true that the laity need instruction and leadership. It is true that prophylactic oto-laryngology and medicine, public health, and hygiene have made marvelous scientific advancement. It is true that medical education and hospitals, under the laws of standardization, have progressed for the benefit of the medical student and the patient, yet State Medicine must not achieve an organization and arbitrary power that sweeps aside the fundamentals and essentials of medical practice, namely altruism, humanitarianism, individualism, the psychology of bedside medicine, the counselor to the mind diseased and distressed. We must beware of too many guinea pig hospitals. A few are sufficient. We must establish and maintain a balance between ultra-specialism, specialism, and general practice, and we must not forget that the practical doctor for the past decades with his time honored preceptor has made, established, maintained, and sustained the honor and glory of the American Medical Profession for more than a century.

The newer surgical method and discovery, the latest invention, in instruments, the fad, fancy, fashion, of some brilliant

dreamer does not always prove the winning success that its spectacular literature would lead us to believe.

Those of us who have lived a quarter of a century in the practice of medicine, know the storms we have encountered. We have been tossed on the seas of radicalism and conservatism. We have been criticized and abused and when we landed, shook ourselves, and found both feet on the ground, we learned to know that the land of health and happiness is pierced by a middle road that we now delight to travel.

The flowers of our profession, the general practitioners, may wither and fade while medical education and ultra-specialism with higher and higher standards are creating demands for luxury, diminished labor, less responsibility, more money and amusement.

There are many dangers in this rapidly changing system that will soon surround the medical profession with grave and difficult problems. Competition is keen. Unjust and hypercriticism are fashionable and the unkind, restless, nervous, spirit of war is yet among the people.

A marvelous change has come over the armamentarium of the laryngologist of two or three decades ago. A laryngoscope, a galvanocautery, a Matthews tonsillotome, a Jarvis snare, and a few spray bottles would make a busy specialist. He is now a department. Scientific progress and public demand have required the nurse, the assistant specialist, the special hospital and laboratory, and the physio-therapist. It is rare indeed, in our large cities that tonsillectomy, mastoidectomy, or many minor operations are performed without operating room facilities. This is as it should be.

We must realize that the modern patient is impatient, hypercritical, unstable, and changeable. The doctor of today is not his of tomorrow. The law of obligation, the mere matter of appointments at the office or for operation, are more often broken, bills are more frequently returned with the postmaster's notation—"left no address." Appreciation of professional service has diminished and the wise counsel of the experienced practitioner is turned aside for the fad of the osteopath. The fashionable clique change their doctor for one more fashionable. The fault is within ourselves.

To meet this new and strange psychology we must establish a remedy that will hold a stampeding, panic-stricken, sick

public until adjustment takes place. Standardization of medical colleges, hospitals and specialists, is great and glorious work, but it is too slow a remedy.

It is true that State, Industrial and Co-operative Medicine have come to stay as definite divisions of medical practice. Their progress is rapid and ominous. The might organizations of State Medicine are rapidly classifying and extending their work. They are building and overbuilding great hospitals with a lavish expenditure of the people's money. They are employing and controlling a mighty army of doctors and nurses. Theirs is a good and noble work, but unless some counteracting force will limit the extravagance and wastage, unless the great medico-political machine will curtail and regulate the wholesale treatment and encouragement of people well able to pay the physician and surgeon, the general practitioner will suddenly awake to the fact that the state competition of clinics, hospitals and consultations, in his own town, supported by his taxes, has deprived him of a chance to live and support his family.

When the boards of health go beyond the police function for which they were originally intended, build pay hospitals and collect for nursing and service they compete with the profession.

With an unswerving optimism and enduring appreciation we look to the younger oto-laryngologist to balance his wonderful training as a skilled technician with the older school of conservatism and bedside psychology, and realize that judgment, experience, intuition, and the art of oto-laryngology, are estimable qualities, attained by long years of toil and mistakes in the operating room and at the bed-side. They are entitled to respect and consideration. Why should the assistant not bide his time? Why should he over-value his services? Why should he expect to attain the position of Chief of Service until experience, judgment, and a few fatal cases, had mellowed a gigantic nerve, an over-estimated ability and a dream of One Thousand Dollar Tonsillectomies and Mastoids.

A young man applied to me for the position of assistant some time ago and I asked him two questions. First—What can you do? Second—What is the value of your services? He quickly replied—"I can do any operation and I would require Six Thousand Dollars a year to begin. I have just finished six months in a New York Post-Graduate School, and I have performed seven radical mastoids and am

prepared to do major surgery. I would not be interested in minor operations. I have passed all that." I told him I was delighted to hear he was so well qualified and that if he would leave his address, when I retired I might send for him.

As a younger man it seemed to me that veneration, loyalty, love, respect, and appreciation for the chief were essentials of proper co-operation. In the mad rush for money is our psychology changing with that of the patient? Are we losing some of the finer attributes of a success, and if so, can we not call them back? Can we not mingle some of the venerated qualities of the dear old family practitioner, kindness, humanitarianism and martyrdom, with the wonderful scientific and educational attainments of the modern oto-laryngologist?

The most renowned and learned professor of the knife is helpless to cure without his patient. The research scholar is useless without his human material. The specialist must have his ear, nose and throat to demonstrate his new operations.

To apply the remedy give us a better psychology to manage, satisfy, and control, the whim, fad and fancy, of the patient. He is our ideal. Our interest, our labor, our thought. Our life is wrapped in his welfare. If he sees more clearly, if he hears more acutely, if he tastes more keenly, if he smells more luxuriously, the pleasure and privilege are ours.

Our oto-laryngologic road may be strewn with myriads of tonsils and septal and mastoid bones but if we conscientiously believe them to be abnormal ones, removed skillfully at a conscientious price, why should we or the world worry?

OCULAR MANIFESTATIONS OF SYSTEMIC DISEASES

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The eye is often affected by general systemic diseases, often taking a prominent part in the general process.

Syphilis is very prone to affect the eyes in all of its stages. The primary sore may occur on the eyelids or conjunctiva. In the secondary stage there are generally acute inflammatory affections of the anterior segment of the eye of which iritis occurs in at least 25 per cent of the cases. Inherited syphilis is responsible for the great majority of cases of interstitial keratitis.

In the later stages of secondary syphilis

the posterior segment of the eye becomes affected such as chorioiditis, optic atrophy, neuro-retinitis, choked disc; opacities of the vitreous, atrophy of retina, iris, choroid, etc.

In the tertiary stage may have gummata deposited in iris, ciliary body, periosteum of orbital wall, diffuse opacity of vitreous.

Palsy of extra and intra ocular muscles are quite common and the typical syphilitic pupil of the eye characterized by inequality, irregularity and immobility or the Argyll-Robertson pupil found in neurosyphilis.

Tuberculosis the last few years has been found to be a frequent cause of eye disease. In the so-called scrofulous or strumous diathesis, presenting a well known clinical picture but indefinite pathology and association with the tuberculous state, there is a predisposition to many common diseases of the anterior portion of the eye, namely, phlyctenular conjunctivitis and keratitis, blepharitis, and interstitial keratitis. Inequality of the pupils are often seen in pulmonary tuberculosis. Tuberculosis is often the cause of affections of iris, ciliary body, choroid and sclera. And in general miliary tuberculosis it is not uncommon to find small tubercle deposits scattered over the fundus.

Brights disease nearly always produces ocular conditions particularly distinctive of it alone.

Puffiness of eyelids upon rising in the morning is regarded as an early symptom of renal dropsy.

Albuminuric retinitis is an early and very characteristic symptom of the condition. It is found in the interstitial variety, also frequently nephritis due to scarlet fever and pregnancy.

Loss of vision complete or partial, may be uremic in character, characterized by its sudden onset, pupils are dilated but react, may or may not have ophthalmoscopic changes.

Exophthalmos is often seen in later stages of nephritis.

DIABETES

The most common manifestations of diabetes in the eye are cataract and hemorrhages in the retina. Diabetics occasionally present sudden and marked changes in the state of refraction of the eye, especially myopia, but also hyperopia accompanying an increase in the amount of sugar in the urine.

Less frequently have retinitis, retrobulbar neuritis, iritis. Sudden amaurosis sim-

ilar as in uremia, may occur, and in a few cases have paresis of muscles, optic atrophy and paralysis of muscle of accommodation.

Rheumatism is very prone to produce an iritis but may be a factor in producing other ocular conditions such as episcleritis and tenonitis, and palsies of extrinsic ocular muscles.

HEADACHES

Headaches are frequently caused by errors of refraction, anomalies of extrinsic ocular muscles, less often presbyopia and accommodation weakness. The error of refraction most commonly responsible being astigmatism even if only a small amount, but also hyperopia. If the person is in a debilitated condition he will often need glasses which will be unnecessary when health is regained.

Chronic intoxications that affect the eye include alcohol, tobacco, quinine, lead, methyl alcohol, etc., all of which induce chronic retrobulbar neuritis and consequent alterations in the vision especially the fields of vision.

Infectious diseases are nearly all accompanied by their characteristic eye changes. Influenza is nearly always accompanied by congestion of the conjunctiva, often having pain in and back of eyeballs, infrequent complications are corneal ulcers, retrobulbar neuritis, optic nerve atrophy and paresis of ocular muscles, also weakness of accommodation and asthenopia due to the depression following the disease. Measles is regularly accompanied by a catarrhal conjunctivitis with subjective symptoms varying severity.

Frequently have a blepharitis, hordeola, superficial corneal ulcerations and asthenopia. Scarlet fever seldom affects the eye early but in later stages corneal ulcerations and inflammations aren't infrequent. If there are renal changes, there are the characteristic eye changes also.

Diphtheria is not infrequently attended by a diphtheritic inflammation of the conjunctiva, but may later have paralysis of one or more of extrinsic muscles of the eye, and paralysis of accommodation.

Whooping Cough is often attended by a subacute conjunctivitis, and a sudden hemorrhage may occur in conjunctiva as a result of severe paroxysms of coughing.

Septicemia and Pyemia display a tendency to retinal hemorrhages and lodgment of septic emboli in the choroid or retina with resulting suppuration of the eye.

Gonorrhoea is responsible for purulent

conjunctivitis in adults and ophthalmia neonatorum in the new born. As a result of toxins have a form of iritis resembling rheumatic iritis in some of the chronic gonorrhoea cases.

DISEASES OF DIGESTIVE TRACT

Dental affections provoke ocular troubles by (1) Inflammation or irritation of trigeminal nerve causing reflex troubles.

(2) Extension of an inflammatory process of the dental root toward the maxillary sinus, thence toward the orbit by continuity and contiguity of structure.

(3) Absorption of septic material from diseased teeth as in pyorrhea alveolaris. Some of the other conditions associated with diseased teeth are conjunctival congestion, iritis, keratitis, cyclitis, choroiditis, asthenopia, weakness of accommodation, etc.

Blepharospasm and chronic contractions of orbicularis muscle occur as a reflex through the facial nerve.

STOMACH AND INTESTINES

Affections of the stomach and intestines may affect the eyes in four different ways.

1. By general weakness, causing lack of nutrition and alteration of the blood.

2. By absorption of the toxic elements the result of improper digestion and assimilation of food products.

3. By congestion of the brain and organs of vision, induced by circulatory troubles consecutive to abdominal plethora.

4. By reflex irritation of the sympathetic intra intestinal plexus (plexuses of auerbach and Meissner) affecting the organs of vision.

These conditions may cause asthenopia, weakness of accommodation, iridocyclitis, choroiditis.

Hemorrhages in stomach and intestines may cause amblyopia with anemia of retina.

Liver—Jaundice is often first seen in the sclera and conjunctiva in liver conditions.

Respiratory tract—Following serious catarrhal affections of the respiratory mucous membrane often have herpes of cornea especially in pneumonias which may lead to ulceration of cornea.

CONCLUSIONS

All patients with cardio-vascular renal disease, arterial hypertension, diabetes, diseases of blood, skin, tuberculosis and pregnancy should have both external and ophthalmoscopic examination as we often

find disturbances in the eye before we have the general symptoms of the condition present.

There should be close cooperation between the ophthalmologist and other branches of medicine and surgery, as most of the diseases have their characteristic eye conditions and often may lead to an early diagnosis.

SURGICAL—DISEASES OF THE GALL BLADDER

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In the last 25 years many advances have been made in surgery, and probably no organ has received more attention than the gall bladder. Formerly it was thought necessary for the patient to suffer months or years from so-called indigestion or neuralgia of the stomach, before he was considered sick enough to have a careful examination. On account of this delay, diseases of the gall bladder and liver, with associated duct and pancreatic disease were often very far advanced before receiving proper treatment.

DIAGNOSIS

While disease of the gall bladder is most common after the age of 40, it is quite common in the second and third decade. We have operated on 20 patients in the last 11 years under 20, the youngest one 14, with a history of gall bladder disease since the age of eight. Gall stones have been found at autopsy in infants. The subjective symptoms of gall bladder disease are often quite characteristic. The earliest symptom is gas distention occurring irregularly without reference to qualitative or quantitative food intake. It is quite common for the symptoms to occur at night several hours after a meal, at times causing enough distress to waken the patient out of a sound sleep. Usually the symptoms noticed early are heartburn occurring for a day or two at a time, and then a lapse of perhaps weeks or months without a return; Usually there is no pain aside from slight distress, but as the disease progresses and the gall bladder becomes distended, and the ducts become blocked with mucous or stones, slight pain or soreness is noticed depending upon the character and amount of the infection present. The pain is usually referred to the scapular region, often mid-scapular, and quite frequently to the left. At the

time of the referred pain, if the patient is carefully examined, usually slight tenderness will be found over the gall bladder. Constipation is a common symptom asso-

marked danger in long continued treatment with the duodenal tube, and it seems to us dangerous to persist in such treatment unless the patient's relief is very evi-



Figure 1
Two sutures are placed and tied lightly around cystic duct

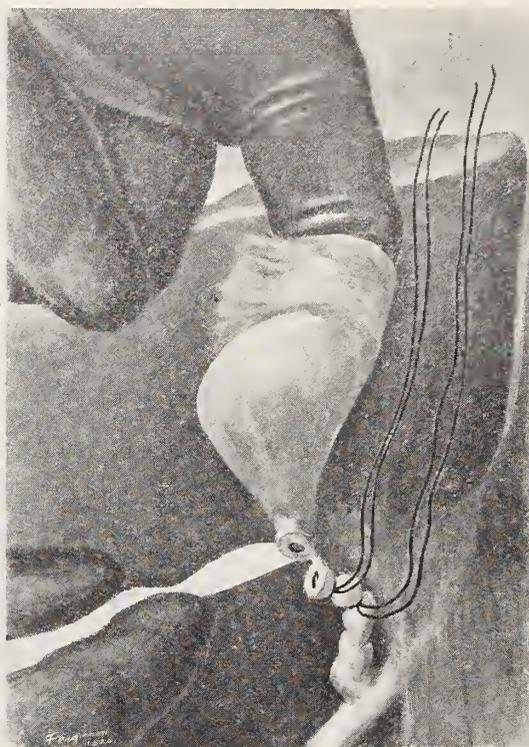


Figure 2
Finger is placed within gall-bladder and flexed, putting tension on cystic duct which is divided above sutures.



Figure 3
Soft rubber drain is placed below stump of duct and tied lightly in place with ends of lower suture which was tied around duct.

ciated with gall bladder disease. It is quite likely that cholecystitis and hepatitis are present months or years before gall stones develop in most cases, in others, patients have had none of the above symptoms but have a classical attack of gall stone colic, which is the first evidence that they have had a disordered function of this organ.

It has not been felt in surgical fields that the Lyon duodenal drainage is of great importance as a diagnostic feature. Its use, we believe, should be left for those cases in which a moderate cholecystitis may be present, combining its use with dietetic and other medical treatment. We believe that the chief value of this duodenal drainage (Lyon) is as a valuable adjunct after both cholecystostomy and cholecystectomy in certain cases. It would seem to be of especial value in those cases of hepatic cirrhosis with biliary obstruction or from common duct obstruction following operation. We have thought it of distinct value, at times, in preparing patients for operation, but we also note a

dent. We feel it should not be used excepting to prepare a patient for operation, as early as convenient in cases associated with marked tenderness in the gall bladder area, fever, chills, and the typical gall stone colic, the gall bladder drainage by means of the duodenal tube is distinctly contra-indicated.

In differential diagnosis, ulcer of the stomach and duodenum, and appendicitis causing pylorospasm and disease of the pancreas should be carefully considered.

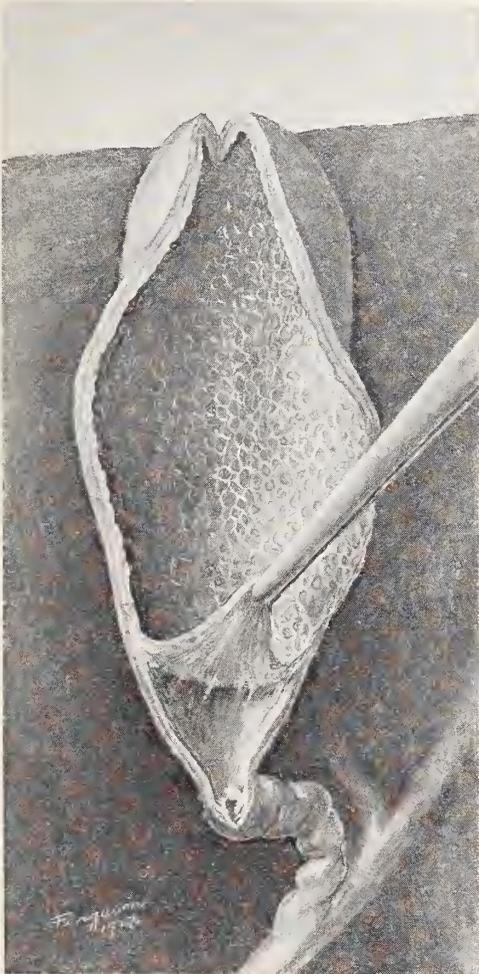
It is of definite value to note that after cholecystitis is well established that neither qualitative or quantitative food intake appears to have much influence over the character and time of the attacks. Chronic pancreatitis, we believe to be generally a direct result of chronic cholecystitis, which makes it evident that patients should not be allowed to go a long time without surgical intervention, after a correct diagnosis has been made. Whenever possible, routine blood count and blood clotting time should be estimated, and a Wassermann test made, not forgetting

that a patient with a positive Wassermann can also have cholecystitis, cholangitis and gall stones. A study of the gastric contents may be of value in differential diag-

tion elsewhere, carried in the form of emboli.

The writer saw three cases within ten days of acute gangrenous gall bladder, following acute streptococic tonsilitis. Experiments have also shown that cholecystitis can be definitely produced by injections in the blood of animals by bacteria obtained from an infected gall bladder.

This is one of the reasons why we believe that the appendix should be removed routinely as a part of the gall bladder op-



Cholecystectomy in acute cases. Where the gall-bladder wall is edematous or gangrenous, the gall-bladder is incised down to the cystic duct and the mucosa is peeled out.

nosis, but as a rule we believe it is no particular value as a diagnostic aid in cholecystitis.

In medical treatment, it is highly important that all foci of infection such as diseased and devitalized teeth or root abscesses, with diseased tonsils, sinus infections and colonic stasis should be carefully eliminated or treated. We consider it very important that all such factors should be eliminated early in the course of medical treatment. Gall bladder operation should not be performed until at least a month or longer has expired after focus of infection has been removed.

There are various routes of infection in the gall bladder and biliary tract. We believe the most important one is the hematogenous route, secondary to focal infec-



Non-opaque single gall-stone seen as negative shadow in dye-filled gall-bladder. Operative confirmation.

eration, as it is quite often a primary factor in the cauzation of cholecystitis and associated biliary infections.

Infections of the gall bladder can also take place through the lymphatics or through the portal circulation or by direct extension. We believe however, that the incidence of infection following either lymphatic invasion or direct extension is much less frequent than that caused by hematogenous infection.

We think this applies to ulcer of the stomach and duodenum as well, as they



Moderate sized opaque gall-stones.

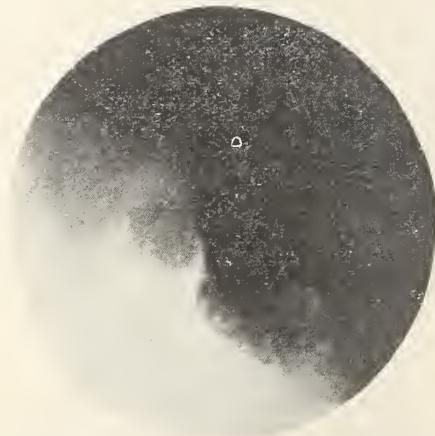
are frequently found complicating cholecystitis.

We believe it to be of the utmost importance that medical care should eliminate every possible avenue of infection.

Roentgen study usually gives us valuable information in gall bladder disease; it should include several films of the gall bladder region, which may show gall stone shadows; a careful gastro-intestinal examination will, in the majority of instances eliminate the possibility of gastric or duodenal ulcer.

Radiographic examination of the gall-bladder after the method of Graham and Cole is essentially a test of the function of this organ. In addition the size, shape and position of the gall-bladder is determined and its power to expand and contract is seen. Emptying function is nicely demonstrated in normal cases after taking foods rich in fat. Non-opaque gall stones are sometimes shown as negative shadows in the otherwise opaque gall bladder and distortion of the organ by adhesions is occasionally seen. Differentiation of kidney stones from gall stones is also made possible. Sodium tetraiodophenolphthalein is administered either orally or intra-venously and after a sufficient time is concentrated in the gall bladder, rendering it opaque to the X-Ray.

Our method to date has been the oral one. After supper the night before the



Gall-bladder packed with many small faceted stones.

X-Ray is to be taken, the patient takes 5 grains of the dye for each 20 pounds of body weight, the 5 grain capsules are coated with salol or keratin to resist the acid of the stomach and dissolve readily in the alkaline reaction of the intestine. No food is taken after ingestion of the capsules and no breakfast is allowed in the morning. The first films are made at 9:30

a. m. and at 1 p. m. others are taken with the patient still fasting. This allows any change in density or size of the shadow to be observed. If no shadow is obtained or if the shadow is very faint, it is considered that the gall bladder is pathological, and the examination is complete. If



Gall-stones plus duodenal ulcer. Operative confirmation.

a good shadow is present, the patient is instructed to eat a glass of half milk and half cream, buttered toast and an egg. One and one-half hours after this meal another examination is made. If the gall-bladder is empty or very nearly empty it is considered to be normal. If the reduction in size is not marked, poor emptying function is demonstrated and the gall-bladder thought to be pathological. It is very important that a large film be taken in the morning to observe if the capsules have been well absorbed. In only six cases out of 227 have we found it necessary to repeat the examination on account of poor solution of the capsules. Reaction is not a disturbing factor, only 17 having vomited, practically in all of these after the capsules have reached the intestine, so as not to interfere with the test. Diarrhoea occurred in about one-sixth of the cases. In 63 cases coming to operation our percentage of error has been approximately 10 per cent. We feel that with the further experience with the method this can be materially diminished. Recently Zink of St. Louis has reported no error in 65 cases coming to operation. He uses the intravenous method and his results would seem to indicate that this has a considerable advantage over the oral administration.

Occasionally single or multiple cholesterol stones may be present in the gall bladder and show little disease present. Another most important factor is that when the X-Ray is made, two or three weeks after a typical gall stone colic, the

findings will point toward a normal gall bladder, whereas an X-ray taken during or a few days after the attack of cholecystitis with or without gall stones would show disease of the organ. This does not lessen the value of this test, and it is highly important that surgical judgment be

TYPE OF OPERATION

The surgeon of experience will usually not decided what type of operation is to be performed until he sees the extent of pathology at the operating table. It is of the utmost importance to know the essential details of the patient's history, especially regarding jaundice, loss of weight, urinary and blood findings, which should always include blood clotting time. The anesthetic and anesthesiologist should also be carefully chosen.

Operations upon the gall bladder as emergency should be avoided when possible by earlier diagnosis. Patients can often be brought from a serious condition to a very much improved condition by hours or a few days of judicious pre-operative treatment.

This treatment would include a large amount of saline by hypodermoclysis, glucose and calcium chloride intravenously and digitalization in some cases. Digitalization is especially important in the long standing cases of cholecystitis in the obese. There are so many complications that may arise in gall bladder operations that they



Pathological gall-bladder. Note that the film on the right shows little reduction in size of gall-bladder 1½ hours after fat meal. Operative confirmation.

used with the X-Ray Department, and they should have the facts of the clinical history in order to carefully correlate their findings. The X-Ray department should be considered in consultation in all such problems and not just as mere technicians.

TREATMENT

Many of the serious complications of gall bladder disease are caused by delay in proper treatment. Patients are often not advised regarding the importance of early surgery, even after repeated attacks of biliary colic, at times associated with muscular rigidity, chills, fever and even empyema of the gall bladder.

Ninety-nine per cent of the mortality, and almost all of the morbidity follow complications. Carcinoma of the gall bladder is nearly always associated with gall stones of many years duration.

Many patients come to the operating room with severe degenerative heart and liver complications, that might have been avoided by early operation.



Pathological gall-bladder. Note that film on right shows only slight reduction in size of gall-bladder 1½ hours after fat meal. Operative confirmation.

should not be performed except by the most experienced and trained surgeons, associated with well qualified assistants, as there are always factors during the operation, and in the post-operative treatment where this team work is most important.

The thought of the safety of the patient should be constant, and not doing some particular type of operation.

It is generally conceded that the operation of cholecystectomy is preferable to chelecystostomy in the larger series of cases, but both operations have their place, and there can be no hard and fast rule. The surgeon should decide at the time of the operation the proper type to be used.

At times the operation which can be performed the easiest for the patient will be the safest, on account of serious complications, such as jaundice or secondary to accompanying serious illness, such as typhoid fever, acute streptococcic infection of the throat or in general septicemia.

In some cases of empyema of the gall bladder accompanied by hepatitis, especially in the aged or obese, cholecystostomy is often the best method. In biliary cirrhosis cholecystostomy is the method of choice, and it is of especial importance that medical treatment should not be prolonged, as the liver will be greatly damaged by even what is considered a relatively short period of jaundice.



Pathological fiall bladder. Film on right shows no reduction in size of gall-bladder 1½ hours after fat meal. Operative confirmation.

It has been customary to treat all cases of jaundice by medical treatment, which sometimes is pro-longed and often unsatisfactory. A great deal of damage may

be done to the liver by such treatment, and operation for drainage should not be omitted when the symptoms are not relieved in a short time.

Cholecystostomy is to be preferred when there is a question of hepatic or common



Normal gall-bladder. Note complete disappearance of shadow 1½ hours after ingestion of meal rich in fats. Operative confirmation.

duct obstruction, unless at the time of operation we have performed a choledochotomy, as in the secondary operations for common duct or hepatic duct obstruction, the gall bladder is usually a good guide and may be utilized in cholecystogastrotomy or cholecystoduodenostomy. In cases of pancreatitis, whether moderate or severe, cholecystostomy is a preferable method, and in biliary cirrhosis it is the method of choice. There are other conditions where ostomy should be preferred, but time will not permit a detailed enumeration.

Cholecystectomy is to be preferred rather than cholecystostomy in most cases primarily on account of the frequent recurrence of stones after cholecystostomy and secondarily the relief of symptoms is often of short duration after cholecystostomy, because the infection is usually not alone in the gall bladder cavity, but in the mucous membrane of the gall bladder and ducts; and thirdly cholecystectomy is to be preferred on account of the obstruction of the cystic duct whether from infection or stones, and fourthly, gangrenous gall

bladders should be ectomized, and in many cases a choledochostomy should be performed at the same operation.

Removal of the gall bladder is indicated in contracted or non-functioning gall bladders, secondary to chronic cholecystitis. Patients are often seen by both the physician and surgeon where there is question regarding cancer of the bile ducts and pancreas, and they should be very careful in making a diagnosis, as many cases which are supposed to be cancer are cases of common duct stone accompanied by obstruction. In nearly all of these cases, there is a secondary pancreatitis, which may lead the physician to make a mistake in diagnosis. When time is available the VanDenBurg test for biliary function should be performed, and while it is not always reliable, it will become more and more valuable, by more frequent use, and patients should be given the benefit of any diagnostic aid which will help in his treatment.

THE VAN DEN BURG TEST—DIRECT AND INDIRECT

(A) *Purpose*—To differentiate obstructive from hemolytic jaundice.

(B) *Principle*—Based on Ehrlich's Diazo Reaction. Bilirubin when dissolved in chloroform or alcohol gives with diazonium salts, a reddish color in acid solutions. Normal serum contains bilirubin in dilutions of 1-400,000 to 1-250,000. No other substance will give the reaction.

(C) *Technic*—The blood is taken from the vein in the usual way, and allowed to clot. 3 c.c. blood serum, Ehrlich's Diazo Reagent:—

(1) Sulphanilic Acid, 1 c.c.; Concentrated HCL, 15 c.c.; Distilled water, 1000 c.c.

(2) Sodium Nitrate, .05 gram; Distilled water, 1000 c.c.

Reagent is a mixture of (1) and (2):

25 c.c. of 1.; 0.75c. of 2.

Direct Test—1 c.c. of blood serum plus 0.25 c.c. of fresh Diazo reagent. May get any one of three positive reactions.

1. Immediate reaction begins at once and is maximal in 10 to 30 seconds, bluish-violet color with intensity depending upon amount of bilirubin present.

2. Delayed Reaction. 1 to 15 minutes giving a violet-red color.

3. Bi-Phasic Reaction. Reddish at once becoming violet in 10 to 30 seconds.

Indirect Test—(1) 1 c.c. of serum. (2) 2 c.c. 96 per cent alcohol. (3) Centrifuge until clear yellow supernatant fluid is obtained. (4) 1 c.c. supernatant fluid. (5) 0.25 c.c. Ehrlich's Diazo reagent.

If positive gives a violet-red color of maximal intensity at once.

(D) *Interpretation*—

1. If reaction is immediate or direct, i.e., if direct is positive it means an Obstructive Jaundice.

2. If Indirect is positive then the Jaundice can be inferred to be: (a) Hemolytic or, (b) dependent upon some functional derangement of liver cells without obstruction.

Serums that give a positive Direct will also give a positive Indirect, but the converse is not true.

By this simple test a distinction can be drawn between icterus due to obstruction of the main bile ducts from gall-stones, tumors, hepatic dirrhosis and icterus of hemolytic, infective or functional origin.

One seldom sees cases of malignancy of the ducts or pancreas in which the loss of weight and anorexia is not rapid and progressive.

In operations upon patients in which cancer of the pancreas or gall bladder, is found at the time of operation, the patient is usually more comfortable if the wound is closed and no operation is performed excepting what has been necessary to make an exact diagnosis by exploratory incision. It is of the utmost importance that the surgeon must view the subject of biliary surgery with broad vision. There should be no conflict between cholecystostomy and cholecystectomy, the most important factor is to know the vital resistance of the patient, and then consider the correct surgical procedure for the case at hand with these complications.

Mortality after operation in cases in which the diagnosis is correct and the treatment not neglected, is so small that it need not be considered. Morbidity of these cases will be in direct ratio as to the length of time and the character of the infection, and the complications before the proper procedure is instituted. It is often important to do the gall bladder operation upon a patient upon whom it is planned to perform another operation at the same time, like myomectomy or hysterectomy. After a carefully taken history, and a probable diagnosis of associated gall bladder disease made, it is important that instruments and assistants be prepared so that the gall bladder operation can be performed after the pelvic operation, provided the patient's condition is satisfactory.

It is well to wait until the first operation has been finished and the inventory of the patient's condition and resistance carefully considered, before deciding to do the gall bladder operation. Routinely we advise examination of the gall bladder prior to any operation on the pelvic organs excepting those performed for acute conditions, in which any further operation than the primary one is not to be considered.

It is by making these preliminary examinations that we determine first the presence of gall stones or cholecystitis, and the need of this operation so that prepara-

tions may be made for such while proceeding with planned pelvic operation.

We have always considered removal of the appendix routinely a safe and sound surgical procedure when the patient's condition is satisfactory and other pathology does not contra-indicate such. In the obese or aged, in patients not in very good condition it is not advisable, as a rule to perform a gall bladder operation at the same sitting as another operation in the pelvis. In young people or those in good condition, both operations can be performed with safety, with very little additional risk. In these cases from the preliminary examination and palpation one knows whether the gall bladder operation will be difficult or not depending upon adhesions, manner of taking anesthetic, and other conditions at the time. The gall bladder operation takes only a few minutes when preparations have been made before hand. We have routinely performed this as above in a large number of cases, with no mortality.

One should never advise double operation, unless conditions for post-operative care are ideal. It is of importance that the proper instruments, retractors, etc., are available in gall bladder surgery. The anesthetic and incision are of the utmost importance, one cannot expect to perform a satisfactory operation through an unsatisfactory incision. Good exposure goes hand in hand with good surgery.

In impacted stone in the cystic or common duct, we have found it extremely satisfactory to bisect (show photo here), the gall bladder into and through the cystic duct.

We usually prefer to explore the common duct before removal of the gall bladder if such is planned as the method of procedure, as it is only after making the common duct examination that we can determine whether or not the gall bladder should be removed. At times with low obstruction of the common duct, a transduodenal incision should be used, combined at times with incision in some portion of the common duct. The incisions in the common duct and duodenum should always be closed with every fine chronic cat-gut sutures threaded on a fine needle. Great care should be used in opening the common duct, a clean cut incision should be made to avoid unnecessary trauma. If a tube is placed in the common duct it should be small, not over one-half the size of the common duct. A "T" tube is often best, one arm extending toward the liver,

and one toward the duodenum. Fine sutures like 00 should be used in suturing the common duct, as the tube will usually be ready to be removed at the time the sutures are absorbed.

In long standing obstruction of the common duct, the bile should not be allowed to escape too freely through the tube as dehydration, on account of the sudden relief of back pressure in common duct will occur. The tube should be clamped off, and only used as a safety valve, allowing the bile to escape through the duct into the duodenum where it belongs. At times this tube can be used to introduce fluids into the duodenum where it belongs. At times this tube can be used to introduce fluids into the duodenum, saline or glucose, and it is often better instead of instituting external drainage to introduce a small tube after the method of Sullivan into the common duct and allow it to remain there. This will often be the case when there has been a previous operation with perhaps an injury to the common duct at the time. This small tube can be very satisfactorily used, also in the operation cholecystenterostomy and cholecystogastrostomy.

DRAINAGE

Some surgeons perform as a matter of routine, cholecystectomy and operations on the ducts without drainage. We have felt that it was somewhat safer in most cases to institute drainage. We believe however, that this should not be a drainage tube or gauze, or a combination of either, but best a small strip of rubber tissue. This soft rubber tissue is not as likely to cause adhesions or fistulae.

A post-operative drain into the Morrison's pouch through a stab incision as advocated by Crile, and is probably the best method of drainage. It very much lessens the danger of post-operative hernia, which is a considerable danger, especially in the obese. When a drainage is used, it is usually not disturbed for seven or eight days.

Our records show that there is biliary drainage to some degree, after our cholecystectomies, in one case in thirty. We think that there is much less biliary drainage after cholecystectomy if clamps are not used on the cystic duct, and tied with heavy cat-gut sutures. Small suture material should be used like No. 0 or No. 1 with fine needles. This operation presupposed, of course, that cholecystectomy is performed from the duct upwards, which is usually our method of choice. We have

come to consider that operation through the gall bladder biliary tract is one of the safest in surgery, provided that the patient is in fair condition at the time of operation. It cannot be expected that good results will be obtained in moribund cases. Even if they do not die on account of the delay, the morbidity and complications secondary to hepatitis, cholangitis and pancreatitis are often serious and permanent.

We urge therefore, that after a diagnosis has been made of cholecystitis, with or without stones, that only a reasonable time should be allowed before surgical intervention. In some cases a few days or weeks might be a reasonable time, in others that are serious or associated with vomiting, chills or fever, medical treatment may be advisable for a longer period of time. We question very much whether the gall bladder functions normally after a well marked attack or following a number of lesser attacks of cholecystitis.

POST-OPERATIVE TREATMENT

Cases that have been seriously ill for a few days can often be improved by saline solution immediately before the operation, and on the operating table. In cases associated with jaundice, one or two blood transfusions, with small amounts of from 100 to 200 c.c., one given the last 24 hours before the operation will be of great benefit to the patient. In serious and jaundiced cases, immediately after the operation, patient should have a blood transfusion, if possible from the same donor, as he had before the operation. Saline should be given by hypodermoclysis or intravenously. The rectal method is unreliable for such patients. The intravenous method should be continued with or without glucose solution for a period of many days after the operation. The head of the bed is usually raised six or eight inches, and the patient is usually allowed to have two or three pillows. This gives him an extreme amount of comfort, which can never be obtained by lying flat in bed. A pillow under the knees and one at the feet will also aid him to use his abdominal muscles and favors peristalsis.

Patient is kept warm at the time of the operation with hot water bags or electric pads over the liver and back, and over the abdomen and thighs. Often a combined local anesthetic with gas will be the most satisfactory. Spinal anesthesia, combined with block over the area of incision or ether also have their proper places.

TYPE OF OPERATION	Acute Chronic	
	Cases	Cases
Cholecystectomy with soft rubber drain down to site of operation	2	243
Cholecystectomy with drainage of cystic duct	73	147
Partial Cholecystectomy with drainage of cystic duct	29	18
Cholecystostomy	71	96
Choledochotomy and removal of stones from common or hepatic ducts	0	8
Choleduodenostomy	0	1

MORTALITY IN ACUTE CASES.....5.1%

- 4 cases with acute hemorrhagic pancreatitis.
- 4 cases with acute gangrenous cholecystitis.
- 1 case of empyema of gall bladder with cardiac embolus.

MORTALITY IN CHRONIC CASES.....1.7%

- 4 cases with severe jaundice.
- 1 case with intestinal obstruction.
- 1 case with bile peritonitis.
- 1 case with pneumonia.
- 2 cases with peritonitis and septicaemia.

RESUME OF 688 CASES OF BILIARY DISEASE OPERATED ON DURING THE LAST 8 YEARS

Male patients	176
Female patients	512
Youngest patient	19
Oldest patient	86
Average age	39
Average duration of symptoms	4½ yrs.
Average days in hospital	15 days

ACUTE CASES 175—INCLUDING

Empyemas	115
Gangrenous cases	58
Perforated cases	8
Cases with local peritonitis, cholangitis and pancreatitis	137
Cases with acute hemorrhagic pancreatitis	5
Cases with jaundice at time of operation	28
Cases with stones	164
Cases without stones	11

CHRONIC CASES 513—INCLUDING

Cases with stones	354
Chronic infected or strawberry type	159
Cases with cirrhosis	16
Cases with septa	12
Cases with jaundice at time of operation	15
Cases with stones in common or hepatic ducts	8
Cases of carcinoma of gall bladder	2

GANGRENOUS APPENDIX IN FEMORAL HERNIA

JAMES A. MacMILLAN, M. D.
F. B. MacMILLAN, M. D.

DETROIT, MICHIGAN

An interesting case of strangulated hernia came under our observation. Patient gave a history of a lump in the right femoral region for the past 22 years which would appear with any straining of the abdominal muscles. This at first was very small but for past three years had become larger. It gave no trouble and would often disappear. One week previous to our call the patient was taken with sudden pain over lump which would not disappear. When home remedies failed for eight days, the doctor was called. Patient stated the above history and added that she had felt nauseated, though had not vomited during the past week. Her bowel movements had been exceedingly sluggish. The pain was sharp and steady in character.

Examination—Female patient, aged 54 years. Apparently acutely ill. Chest and abdomen were normal. Examination of femoral region of right side disclosed a lump the size of an egg which was reddened and painful to touch. This could not be reduced by palpation or manipulation. Diagnosis of strangulated femoral hernia was made and operation was advised. A Bassini incision was made and the sac exposed. This contained several clear cysts within its walls; was single, and dark in color. The contents were examined and found to be the vermiform appendix, gangrenous, and tightly constricted $3\frac{1}{2}$ inches from the proximal end by the femoral ring. This was freed by enlargement of the ring. Appendectomy was performed by drawing the appendix downward to expose the base. Closure was completed in the usual manner.

Strangulated femoral hernia of the vermiform appendix is a rare condition. Watson collected 512 cases of hernia of the appendix. Of these, 269 were inguinal, 217 femoral and 2 obturator. In 24, the site of the hernia was not stated. Thus, about 42 per cent of appendiceal hernia are femoral in type. Because the femoral ring is not as constant, nor as large as the inguinal ring, femoral hernia of the appendix is less frequent than inguinal hernia of the appendix.

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A CASE OF CORYMBRIFORM SYPHILID TWO OR THREE WEEKS AFTER THE INITIAL LESION

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The following case is presented because of the comparative rarity of the corymbiform syphilid, appearing so soon after the initial lesion and accompanied by slight pruritus:

The patient, C. L., a Negro, aged 29, came into the Dermatological Clinic, Buhl Memorial, Harper Hospital, January 17, 1927. He had had a penile chancre five or six weeks previously. He presented a generalized eruption of one month's duration, together with headaches and general malaise.

In the left coronal sulcus of the penis there was a scar marking the site of a recent ulceration, probably the initial lesion. On the forehead and chin there was an eruption of large brownish-red infiltrated papules, with superficial excoriations about both alar nasi. On the upper lip were four fairly large nodules. A generalized small papular eruption was present, and especially on the trunk the lesions were follicular and grouped in coin-sized patches (corymbiform arrangement). The lesions on the thighs, arms, and forearms were mainly large papules, with faint scaling; some were follicular. The palms and soles were not involved. There were a few papules on the shaft of the penis, but no moist papules on the scrotum or in the perineum. (See photographs). On the right anterior faucial pillar there were two or three mucous patches.

All of the groups of superficial lymph nodes were palpable, especially the inguinal.

The Wassermann reaction of the blood was strongly positive.

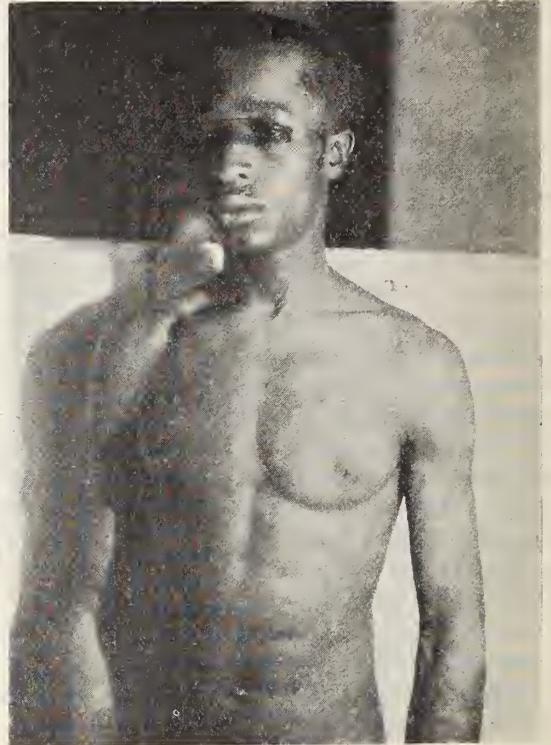


Photo by Russlander.

C. L., Negro, aged 29—This photograph shows faintly the lesions on forehead and chin, nodules on upper lip and front view of generalized papulo follicular eruption.



Photo by Russlander.

C. L., Negro, aged 29—This photograph shows the follicular lesions and grouped coin sized papules (corymbiform arrangement).

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

SMALLPOX

The smallpox situation in the state, while not alarming, is a matter of no little concern. During October, November and December 1925 there were 106 cases reported while during this period in 1926 there were 205 cases. For the first 29 days in January 93 cases were reported in 1925, while in 1926 the number has jumped to 164.

At the present time smallpox is prevalent in several counties. Mason County reported 42 cases during January, Oceana 12, Lapeer 28, Genesee 25, Van Buren 20, and Isabella 4. In Mason County most of the cases occurred in the city of Ludington. Five cases have been reported from Berrien, 3 from Kalamazoo, 3 from Dickinson, and 1 from Marquette, while Calhoun, Oakland, Tuscola, Midland, Allegan, Muskegon and Antrim reported one case each in January.

The cases are with few exceptions of a very mild form, a type difficult to control from the public health standpoint since many of them are diagnosed chickenpox or are entirely unrecognized.

In each instance in the counties where the disease is at present prevalent the first cases were diagnosed chickenpox and were not quarantined. In this way the infection was spread throughout the community before the real nature of the condition was recognized. In many instances the symptoms have been so mild that a physician has not been called. Investigation in one community revealed the fact that this mild type of smallpox had been present in one school district for about two months during which time it had been called chickenpox and in no instance had a physician been called.

The early symptoms of headache, backache and nausea have frequently been diagnosed "flu" or LaGrippe by the attending physician at his first and only visit. With the relief of symptoms at the time of the occurrence of the eruption a few days later the patient has gone back to school or to work spreading the infection wherever he went.

The following points are important aids in the diagnosis of smallpox:

The absence of any history of having had smallpox or a successful vaccination within the past five years.

The occurrence of the eruption in one crop only, all lesions having the same appearance at any given time. There may be not more than 5 or 10 pustules over the entire body or the body may be covered with the eruption, yet the lesions do not show the various stages at one time as seen in chickenpox.

The pustules develop more plentifully on the face and extremities than on the body, as in chickenpox.

The lesions of chickenpox are quite superficial and are easily broken while in smallpox they are deeper and feel firm and resemble split shot in the skin.

The early diagnosis and strict quarantine of these cases as well as the widespread use of vaccination are most effective measures in the control of this disease.

Successful vaccination within a period of five years definitely protects an individual against smallpox and it is only because of failure or refusal to be vaccinated that this loathsome disease is allowed to spread. In a state like Massachusetts where vaccination is compulsory, smallpox is rarely ever seen.

The following letter has just recently been sent out to all physicians and health officers of the state:

"Smallpox in a mild type is somewhat prevalent, being widely scattered throughout Michigan at the present time. The reason the disease is gaining a foothold is because these mild cases are frequently diagnosed as chickenpox or even cuban itch and are not quarantined.

The time to prevent an epidemic is before it starts. It is well for us to remember that the mild type of smallpox has frequently been found at the beginning of an epidemic which later developed into an outbreak of malignant smallpox.

This is the time to urge people to become vaccinated and revaccinated. Let us see to it that everyone in our communities who has not been successfully vaccinated within five years becomes vaccinated at this time; also let us be careful in our diagnosis of any case resembling smallpox and see to it that the mild cases are reported and quarantined.

There is no reason why we should have a repetition of some of the epidemics that we have seen in Michigan in the past and with the co-

operation of the physicians and health officers this cannot happen."

Very truly yours,

Guy L. Kiefer, M. D.,
Commissioner, Collaborating Epidemiologist,
U. S. Public Health Service.

VIOLENT DEATHS IN MICHIGAN IN 1926

Violence of all forms has always been an important factor in the death rate but since the advent of the automobile it is becoming increasingly so. In 1926 the automobile was by far the most important cause of violent deaths, there being 1,177 deaths assigned to this cause, including other accidents in which the automobile was a factor such as a collision with a railroad train or street car. This is an increase of almost 10 per cent over the preceding year.

To have a cause assume such enormous proportions in 15 years is a sad commentary on our civilization. We are putting automobiles, which are as dangerous as 155 mm. guns, in the hands of reckless and careless individuals some of whom are really morons, and letting them go on their death-dealing way without interruption. No law or traffic regulation is going to make a careful driver of a reckless fool.

The next most important cause in the group is accidental falls. In 1926 there were 633 deaths from this cause as compared to 602 in 1925. This is only about half the number of deaths due to automobiles.

Third in the group comes suicides of which there were 565 as compared to 495 in 1925.

Then fourth in the list is homicides. There were 446 persons murdered in Michigan in 1926, an increase of more than a third over 1925 when there were 313.

It will be noticed that all these important causes showed an increase over the preceding year.

The next item, drowning was more satisfactory. There were 294 deaths from this cause as compared with 324 during 1925.

Sixth on the list comes burns of which there were 245 as compared with 230 in 1925. These are burns and scalds but do not include conflagrations.

Relatively few years ago railroad accidents were the most important of the causes of violent deaths. The very excellent work that is being done by the railroad companies has reduced this from first to seventh place. There were 183 deaths reported in 1926 as compared to 180 reported in 1925. It is believed that this fac-

tor can be further reduced and it is hoped that railroads will continue to extend the good work already accomplished. This figure does not include the deaths due to collision of automobile with train which are included in the automobile deaths.

The next important causes of death are the two items of suffocation and absorption of gases which caused a loss of 147 lives in 1926 as compared with 112 in 1925. It will be observed, however, that this item does not include suicide by gas, these being counted under suicide deaths.

Food poisoning and other acute accidental poisonings were responsible for 106 deaths as compared with 94 in 1925.

Conflagrations, that is, burning buildings, were responsible for 94 deaths, more than double the figures for 1925 when there were only 43 deaths.

The next item showed an enormous increase for deaths in mines and quarries. There were 93 deaths assigned to this cause as compared with 39 in 1925. This item includes the 51 deaths that were caused in Ishpeming by the flooding of a mine. Omitting this item it will be found that the figures were only slightly in excess of the 1925 figures. Catastrophies of this kind, of course, make an enormous difference in the rate when they do occur.

The next important item is that of street car accidents which took the lives of 92 Michigan during 1926. This is compared with 67 in 1925.

Traumatism by machinery follows next with 89 deaths. This is a reduction of 3 from the figures of 1925 when there were 92 deaths from this cause.

Accidents with firearms caused 74 deaths in 1926 as compared with 75 in the preceding year.

The next item which covers other vehicles and other crushings has 65 deaths as compared with 118 in 1925. These were divided as follows: Motorcycles, 9; Aeroplanes, 6; other vehicles, 20; Landslides and other crushing, 30.

Electricity caused 50 deaths in 1926 as compared with 51 in 1925. This does not include lightning.

Injury by animals for the next item caused 33 deaths as compared with 39 in 1925.

It is evident that the summer was not as hot as the preceding year as there were only 25 deaths due to heat prostration as compared with 53 during the preceding year.

Twenty persons were frozen to death or died as a result of exposure during 1926.

This was exactly the same number as died from this cause in 1925.

The next item on the list is that of lightning. Six persons were struck by lightning in 1926 as compared with 10 in 1925.

As stated above, violence is becoming a more and more important factor in our death rate and this little review does not include a large number of deaths in which the cause of death was stated as "fracture" but the cause of the fracture was not stated, and consequently it was necessary to assign these to the indefinite violence list.

SCARLET FEVER

As evidence by correspondence received by the Michigan Department of Health from physicians throughout the State, a subject of timely interest is that of scarlet fever prophylaxis and therapeutics.

The Biologic Products Division of the Department of Health is now prepared to distribute Dick toxin for skin testing and scarlet fever streptococcus toxin for active immunization. When a physician or health officer wishes to immunize a group, he should notify the Department of Health how many he wishes to immunize. Dick toxin will then be sent to him for testing the number of susceptibles in the group. The first dose of scarlet fever streptococcus toxin will then be forwarded for immunizing the susceptibles. Ten days later the second dose will be forwarded, and ten days later the third.

To illustrate the procedure followed and also the results which may be expected the Michigan Department of Health Dick toxin and scarlet fever streptococcus toxin there is given below a series of extracts from correspondence with G. E. Frank, M. D., health officer of Harbor Springs, Mich.

Dr. Frank writes, "I received the consignment of scarlet fever serum last evening. I will now need the same amount of the 5000 unit strength for the second injection which I wish to receive about January 3 and toxin of the 30000 unit strength about January 18. We are very grateful to you for the prompt care you have given us in our epidemic."

After the third dose had been given, the Michigan Department of Health wrote to Dr. Frank: "Do you anticipate using the Dick test on the people you have immunized with scarlet fever streptococcus toxin? We would be pleased to have you write, giving your experience in the use of this product, also advise how many children you have treated with the first, second and third doses of scarlet fever toxin.

We are having a misunderstanding among physicians. Many of them are attempting to use scarlet fever anti-toxin in place of scarlet fever toxin and vice versa which necessarily is forcing us to put restrictions on the distribution of this product."

Dr. Frank made the following answers to the above questions. "I anticipate using the Dick test on children who have been immunized the past few weeks but not before school closes in the spring as I feel that a test given too soon after the injections is not of much value. I gave the first dose to 318, the second to 316 and the third to 256. This is the first general immunization ever attempted in this town and I feel that we have had a wonderful response from the people. I had been educating them toward this end for some time. I had a few rashes of a day's duration after the first dose. After the second there was a fair number that was quite sick and showed a marked picture of anaphylactic phenomena. This did not surprise me after my experience with other serums, but made a pronounced impression on some of the children and parents and was the cause of the decrease in the number taking the third injection. Now, almost daily, however, there are some persons coming to have the third dose, after changing their minds about it, since among the children who took the third injection there was scarcely one who had a reaction to speak about."

Our reply to Dr. Frank is given in conclusion. "You will find that immunity is acquired rather more rapidly with scarlet fever toxin than with diphtheria toxin-antitoxin mixture, so that if you wish to reDick in 30 days you may do so. We only suggest this so that you may keep it before your people."

PRENATAL PROGRAMS

A demonstration prenatal program was started in Emmet County January 1, under supervision of the local physicians. Katharine Kreizenbeck, R. N., of the staff of the Bureau of Child Hygiene and Public Health Nursing, has charge of the work and during January she called on 44 new prenatal cases with the consent of the attending physicians and made 174 other visits in connection with the program.

Osceola County has a similar prenatal program already in operation, under Bertha Karkau, R. N. Miss Karkau reported 11 new prenatal cases during December and 22 in January. She also made 319 calls during that time, 47 of them on the physicians supervising the program.

DIPHThERIA PROTECTION

The diphtheria protection unit of the department worked in Cass and Kent counties during December and January. In 15 clinics in Cass County 1,062 persons were Schick tested, completing the Cass County schedule, and in 36 clinics held thus far in Kent County 3,241 persons have been given the test. Results are read a week after the test is given.

TEACHING INFANT CARE IN SCHOOLS

Saginaw County's reception of the series of Little Mothers' League Classes conducted by Martha Giltner, R. N., of the staff of the Bureau of Child Hygiene and Public Health Nursing, is well set forth in an article in a Saginaw daily paper.

"One of the most popular courses in the county's rural schools is that offered by the State Health Department in the care of children through the organization of Little Mothers' Leagues for girls between 11 and 16 years of age. More than 600 girls are enrolled in the work, in the 20 schools where leagues have been organized.

The work deals entirely with the care, proper feeding, dressing, required sleep needed and all the things necessary to know to bring up healthy children. The classes are being instructed by Miss Martha Giltner, of the State Health Department, who spends one hour a day each week at the 20 schools.

"I have never been so enthusiastically received as I have been in Saginaw county" Miss Giltner stated Monday, "and many of the parents have expressed their appreciation to me for the things they have learned through their children in the care of infants."

Miss Giltner told of a home where a child had been sickly and a girl taking the course volunteered her services in helping care for the baby.

The Little Mothers' Leagues were organized in the fall by Miss Esther Nash of the State Health Department and Miss Mabel L. Morgan, county school nurse. The department then sent Miss Giltner to give the course that is of 10 weeks duration, and is given free of charge. School credit is given to all girls taking the work. The leagues are part of a statewide program of the State Health Department.

In Kalamazoo County, Gertrude Linsell, R. N., has an enrollment of 422 girls in Little Mothers' Leagues in 12 schools.

Montcalm County has ten schools giving Little Mothers' League work under Catherine Eoll, R. N., with an enrollment of 713 girls.

Annette Fox, R. N., in St. Joseph County, has 394 girls in 9 schools, and Bertha Cooper, R. N., in Barry County has an enrollment of 462 in 9 schools.

St. Clair County has just begun Little Mothers' League work under Nella Hummer, R. N.

The demand for instructors for Little Mothers' League classes has far exceeded the number available on the department staff, and many communities have been disappointed.

PREVALENCE OF DISEASE

	January-Report Cases Reported		January 1926	Av 5 years
	December 1926	January 1927		
Pneumonia	523	661	864	795
Tuberculosis	297	647	329	352
Typhoid Fever	24	26	39	49
Diphtheria	592	499	403	760
Whooping Cough	502	560	1,030	566
Scarlet Fever	1,224	1,438	1,453	1,440
Measles	413	523	4,837	1,840
Meningitis	7	10	7	16
Poliomyelitis	5	8	1	3
Syphilis	1,058	1,083	1,288	919
Gonorrhea	772	713	725	808
Chancroid	3	7	10	14

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health
January, 1927

	+	-	+ -	Total
Throat Swabs for Diphtheria				1088
Diagnosis	26	359		
Release	112	207		
Carrier	17	337		
Virulence Tests	12	8		
Throat Swabs for Hemolytic Streptococci				644
Diagnosis	109	203		
Carrier	43	309		
Throat Swabs for Vincent's	17	379		396
Syphilis				5070
Wassermann		1		
Kahn	786	4207	74	
Darkfield		2		
Examination for Gonococci	132	1146		1278
B. Tuberculosis				354
Sputum	60	259		
Animal Inoculations	2	33		
Typhoid				88
Feces	8	37		
Blood Cultures	1	16		
Widal	7	15		
Urine	1	3		
Dysintery				31
Intestinal Parasites				30
Transudates and Exudates				274
Blood Examinations (not clas- sified)				743
Urine Examinations (not clas- sified)				333
Water and Sewage Exam- inations				399
Milk Examinations				105
Toxicological Examinations				5
Autogenous Vaccines				7
Supplementary Examinations				216
Unclassified Examinations				641
Total for the Month				11722
Cumulative Total (fiscal year)				90957
Decrease over this month last year				4349
Outfits Mailed Out				12866
Media Manufactured, cc. (In- cludes 68,360 cc. special media)				195960
Typhoid Vaccine Distributed, c.c.				1150
Toxin Antitoxin Distributed, c.c.				28470
Diphtheria Antitoxin Distrib- uted, units				39932000
Silver Nitrate Ampules Dis- tributed				5980
Examinations Made by Houghton Laboratory				1467
Examinations Made by Grand Rapids Laboratory				5101

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

IDEALS AND CO-OPERATION

EDITOR'S NOTE: The following is the address made by President Jackson at the Council's Conference Dinner, held in Ann Arbor, January 24th. It indicates anew your Society's ideals and activities.

It is fitting on an occasion like this that one should speak briefly of some of the ideals of our State Medical Society, especially as these ideals may be related to the other organizations represented here tonight. After several years of more or less active interest in state medical organization one is privileged to form some conclusions as to what our society should have before it as its objectives.

It seems to me that as an organization we should be looked to for leadership in all things that may be instrumental in bringing about preservation of health and improvement in the case of the sick. It is our job to bring about co-operation of all agencies which are striving for these ends.

The public health work carried on by the state through its council and the commission of health is a matter of vital interest to the State Medical organization. So, too, is the work of all public health officials. Public health work is the child of organized medicine. It is due to our efforts that the great value of such work has been recognized by all progressive states and municipalities. There has been some tendency in these later years for criticism, on the part of the profession, of public health officials because of the fear of the bringing in of state medicine. Health officers have criticized doctors for failure to co-operate with them. It seems that many of these causes of friction might be done away with if we could get together and talk things over before hand. In my opinion there is no real reason why organized medicine and public health officials should have any real trouble. We are all interested in the same object, the prevention of disease and the proper care of the sick. I submit that as a class, doctors are more interested and more altruistically interested in this than any other

body of citizens. It seems reasonable for public health officials and organized medicine to really co-operate in what they do rather than to each to proceed independently and then indulge in indiscriminate and foolish criticism of each other. As president of our State Society I wish at this time to assure our commissioner of health that we stand ready to co-operate with him in his efforts to give the State of Michigan the very best possible in public health administration. Our Journal has already given over a section of each issue for the purpose of keeping members of our profession aware of what is going on in the state department of health. Our Council and its executive committee desires the privilege of giving its influence and co-operation in bringing about the very best things in public health activities.

The state board of registration is organized to protect those who call upon men engaged in the healing art to care for them when they are sick. Members of this board are chosen from the ranks of the members of our State Society. They thus represent our State Society in carrying out a particular work which is one of the objectives of organized medicine. Since such is the case it is manifestly the plain duty of the State Society to offer to this board every possible assistance in making its work efficient. Whatever influence we may have should be put solidly behind the efforts of this board in its efforts to eliminate incompetence and quackery in the care of the sick. We should be glad to have the Board of Registration feel that they do represent organized medicine in their work and that they should look to us, not only for support but for council and suggestion. The work of the board has been somewhat hindered by a lack of sufficient funds to do the most that is possible. There should be a full time executive secretary of this board paid an adequate salary. It has seemed to some of us that the work of this board should not be confined to merely licensing to practice but should be extended to investigating and prosecuting those who are practicing without license and proper qualifications.

It also sometimes occurs that those to whom license has been given in the course of a few years demonstrate that they are quite unfit to care for the sick. Those who are guilty of gross malpractice should have their license revoked. To thus extend its work the board must have proper financial support.

Our State Society is most intensely interested in the work of Medical Education. The future of our profession depends upon the character and training of the men turned out each year from our medical schools. Every clean, intelligent, well educated young doctor added to the profession makes it easier for the rest of us to live up to our ideals of medical practice. We need such recruits with which to carry on. Every poorly educated, unprincipled doctor turned out to practice in our state makes the practice of medicine more difficult and more unsatisfactory. Such men discredit us with the public. Who then should be more interested in the proper selection and training of the undergraduate in medicine, than those already engaged in medical practice. The A. M. A. has done much for the advancement of medical education in the United States. The Michigan State Medical Society as a component member of the A. M. A. is interested in medical education and particularly with that conducted within our state. We welcome any opportunity to be of service in carrying on this work. The Dean of the University Medical School has recently proposed a plan of preceptorship during the summer months. I am quite sure that if the plan is worked out, the members of our Society will be only too glad to do their part. To me, the plan seems to have a two-fold advantage—the student will learn about the practice of medicine and the doctor will learn something about the University. To me both the objects seem desirable.

We are also much interested in the securing of opportunities for Post-Graduate work in our Great University Hospital. It seems to me that in post-graduate instruction, the State Medical Society and the University Medical School are particularly drawn together. The improvement of the standards of medical practice is the ideal for which both organizations are existing.

The profession in Michigan is equally interested with the University in developing here, not only an increasingly fine under-graduate school of medicine and an effective Post-Graduate School, but also departments of research which shall make

it possible for Michigan to have some appropriate part in the development of medical science. The vision which President Little gave us in October, of the possibilities along this line, is a glorious vision. The Michigan State Medical Society pledges its support in doing everything within its power in helping to bring about the realization of this plan.

The location of our new State Tuberculosis Sanitarium in Ann Arbor should be an opportunity for some real research work in tuberculosis. It seems that there is a real need for such research. There can be no doubt that there is a real need for more undergraduate and post-graduate instruction in what is already known about tuberculosis.

We have learned that an effort is being made to repeal the bill that makes possible the building of this building here at Ann Arbor. The State Society will do everything in its power to defeat this repeal.

In conclusion, let me say that my purpose in this brief talk is to express some of our ideals in medical organization, especially as these ideals are related to the work of the other organizations represented here today. We have already quarreled about some of these matters. This never would have occurred had these matters not been matters of *mutual* interest. Since they are matters of *mutual* interest, it is much better to work things out together. We shall not always agree about methods, but so long as we are working together for the same ideals, there can be no serious differences.

USE OF HIGH FORCEPS IN OBSTETRIC CASES

1. High forceps should never be applied unless their use is concurred in by competent consultation.

2. Forceps should not be applied in median or deep transverse arrest until sufficient time has elapsed for proper molding of the head to have taken place usually one and one-half to two hours, providing there are firm uterine contractions.

3. When the head is on the perineum, a period of one to two hours should elapse before the application of forceps is made. The fetal heart rate must be watched and in case of marked increase, or an unusual slowing, the application of low forceps should be considered. If retardation is due to a rigid perineum in the absence of uterine inertia, episiotomy should take precedence over the application of forceps.

4. In persistent occiput posterior posi-

tions where the uterine contractions are becoming weak with no evidence of spontaneous rotation and the head is firmly engaged, forceps should be applied according to Scanzoni maneuver.

5. In breech deliveries where there is difficulty in delivering the aftercoming head forceps should be used in preference to unrestricted traction on the neck, after the Smellie-Veit maneuver.

6. In general, face presentations contraindicate the use of forceps.

7. Contracted pelvis contraindicate the use of forceps unless sufficient molding has been allowed to take place, and it is evident that slight traction by forceps will suffice to deliver the head.

A. Careful detail should be given to the preparation of the patient and the same strict aseptic technic as for any major surgical operation should be carried out in minute detail. The patient should be completely anesthetized and in case of slight disproportion between the diameters of the head and the pelvis, the modified Walcher position should be utilized. The patient should be catheterized.

B. Accurate diagnosis of the position of the fetus should be made. The forceps blades should be applied over the parietal bosses in all cases. If the forceps blades are properly applied they will lock in position without the use of force.

C. After forceps are applied traction should be made gently at intervals of about one minute. In the interim the forceps should be unlocked. When traction is being applied it should always be in such a manner that the curve described by the blades corresponds to the curve of the pelvic canal, thereby preventing damage to the maternal soft parts.

The above are recommendations made by a Special Committee of the Staff of Grace Hospital, Detroit. While they outline the policy and practice of that hospital, our members in their private practice may well be governed by them. Other hospitals can well formulate a similar policy if they have not already done so.

It is very palpable and apparent that there is much meddlesome obstetrical interference. There is a pronounced tendency toward operative deliveries. There are far too many Cesaerean sections—75 per cent of sections done are unnecessary. There are too many so-called obstetrical specialists, who have nerve to charge large fees and very little real ability to justify those fees. There are too many doctors attending deliveries who are quite ignor-

ant of the physiology and mechanics of labor. A halt, an about face and better service is needed. These rules will help if you observe them.

A SHORT HISTORY OF THE WAYNE COUNTY MEDICAL SOCIETY

JAMES E. DAVIS, A.M.M.D.,

(Chairman Board of Trustees, Wayne County Medical Society.)

Two hundred and twenty-six years ago Dr. Antoine Forrestier came from France with Cadillac to be the first white man to practice medicine in Detroit from 1701 to 1716. Eight years after Dr. Forrestier's death in 1716, Dr. Joseph Lovell became the first Surgeon General of the United States. He had been interested in some problems of the digestive tract and in 1824 a letter was sent to Dr. William Beaumont, Army Surgeon, stationed at Fort Mackinac, asking whether the stomach digested articles of food one at a time or one after another, disposing of beef first, then potatoes, and next fish, cabbage, and finally pudding. Beaumont's answer was given to the Medical Recorder (1825) for publication and was credited to Surgeon General Lovell, but the error in authorship was soon after corrected. The answer set forth the fundamental principles of gastric digestion about as we know them today.

The studies of Beaumont upon Alexis St. Martin's fistulous stomach were so accurate that the reliability of his work withstands the test of time.

The first organization to recognize Beaumont's researches was the Medical Society of the Territory of Michigan, and March 3, 1825, on motion of Dr. Pilcher, the epoch making work of Dr. Beaumont was recognized by unanimously electing him to honorary membership in the Society. The record of this election at Detroit and the notification was made by Dr. John S. Whiting, Secretary.

The first medical organization of the City of Detroit was formed in 1846 and it was named the Sydenham Society.

In 1849 was formed the first organization named the Wayne County Medical Society.

In 1853 there was formed the Detroit Medical Society but this disbanded in 1858. From 1858 to 1866 there appears to have been no society capable of leaving a record of existence. But in 1866 Wayne County Medical Society number two appears in the record but whether as a resuscitation or a creation I have been unable

to ascertain. Its activities appear to have ceased in 1876. In 1902 Wayne County Medical Society, number three was formed and incorporated. The meetings were held in the Griswold Hotel at Griswold and State streets.

In this period there was also the Detroit Medical and Library Association, a vigorous and aspiring society with a fair sized small library. Its meetings were held directly across Gratiot avenue to the south of the old public library or on the site of what is now the Crowley Milner Company building. After a period of spirited courtship these two societies were wedded and took the name of Wayne County Medical Society. From this period forward to the present the organization has steadily progressed.

The meetings of the Society after union of the two branches were held in the Stevens Building, Washington Boulevard. Then in the County Building.

In 1909 a permanent home was purchased at 33 High street, East, and five years later a new auditorium was added to the building. The first meeting in the new and at that time commodious quarters was held February 2, 1914. In this fine old residence and hall the society meetings were held weekly and here many attractive cub features were developed. In the past eighteen years a new spirit of fraternity and mutual respect has influenced the Detroit profession; proving, that to know a man better, is to respect him more.

Among the society's many stalwart, vigorous leaders who are now dead, may be mentioned McGraw and Wyman, presidents of the two rival medical schools. Donald MacLean and Frothingham who had recently come as belligerents from the University of Michigan faculty. There were H. Keifer, E. W. Jenks, H. O. Walker, H. Longyear, J. J. Mulheron, L. Connors, J. H. Carstens, E. L. Shurly, David Inglis, E. A. Chapaton, and others—excellent debators, impressionistic and abiding personalities.

H. L. Obetz and R. C. Olin, were the advocates of the Homeopathic viewpoint.

There have been other Detroit societies with limited memberships, functioning for many years. Among these may be mentioned the Detroit Academy of Medicine, (1868-1927), the Detroit Medical Club, (1906-1927), etc.

In 1906 the Defense League became an integral part of the County Society. In 1910 incorporation was accomplished and

later library privileges were added and a trained librarian was employed.

During the World War more than 30 per cent of the members gave military services and two, Doctors Post and Vaughan, gave the supreme sacrifice of life. As a permanent memorial to the men who gave service at home and abroad the residue of the society's war fund was placed at interest to be used perpetually as a Beaumont Lectureship Foundation Fund by which a series of three lectures have and will be given annually by distinguished members of the profession. These lectures have been published annually in book form. This fund stimulated gifts for other foundations and one of the society's active members by a gift of \$5,000 has endowed an Orthopaedic Lectureship Foundation. Other gifts and some bequests have also been made.

Within the past three years the society's membership has numbered over 1,200 and in 1926 was approximately 1,400, obviously the old home had been outgrown.

For some years owing to judicious and careful business methods a strong and commendable financial condition had been developed making possible the acquirement of a very attractive and appropriate home with a beautiful assembly hall in the magnificent new Maccabees Building at Woodward avenue and the Art Center. It has been said that there is no club or other professional society in Detroit more favorably situated and attractively homey. The future history of the society should record events of outstanding significance to Detroit and its medical profession. The first meeting was held in the new home January 4, 1927.

POST-GRADUATE MEDICAL SCHOOL

For the past year a special committee has been investigating and studying the need for providing opportunity for Michigan doctors to pursue post-graduate study. The committee has very thoroughly studied existing conditions and submits its findings in the following report:

Your Committee on Graduate Study for Physicians herewith submits its report:

NEEDS AND DEMANDS FOR POST-GRADUATE STUDY

The conscientious and progressive physician recognizes the fact that the study of medicine is a continuous and strenuous process which begins directly with his freshman year in the medical school and ends only with his retirement from prac-

tice or with his death. The four years of under-graduate instruction in medicine may be regarded as only the foundation of the physician's training. Upon this basic foundation must be builded a subsequent life-time of earnest, intelligent and diligent study. The reasons for this are obvious. Medicine is in its infancy. Its growth and development are rapid, indeed. Through research and investigation new knowledge is being added almost daily to medicine and its specialties. Therefore, the accepted practices of yesterday may be discarded for newer practices of today based upon newer knowledge. The medical profession is keenly cognizant of this fact and realizes that it must apply itself incessantly to the painstaking study of these newer contributions which mark the daily advancement of medicine. Furthermore, the earnest practitioner of today realizes that it is essential for him to continually brush up on the well established and more permanent facts and practices of medicine. Generally, his daily routine in the practice of medicine is of such a nature that it tends to disconnect him with other facts and practices which are of the very greatest importance.

Again, physicians in general practice frequently decide to specialize along some particular line of medicine. With a view, then, of keeping up with the advancement of medicine and applying newer knowledge of medicine; with a view of brushing up on the well established practices of medicine which are closely interwoven with the daily more or less circumscribed interests and practices of the physician; and with a view of specializing along certain lines that appeal to the practitioner, physicians in general feel that their schooling processes must continue incessantly after graduation from the medical school. Furthermore, they feel that adequate facilities should be maintained whereat this post-graduate study can be done most efficiently. In a very small measure such needs have been met by the establishment of courses either in under-graduate medical schools or in the so-called post-graduate schools of medicine located in the larger cities of our country. Such institutions have, for the most part, not adequately met the problem which confronts the practitioner in his endeavor to keep up to date. *At this time, therefore, there seems to be a real demand on the part of the medical profession for some form of graduate instruction which could enable him to keep abreast of the times or to devote additional time to the*

pursuit of such subjects in which their practice has shown them to be deficient. As far as is possible it is obvious that the establishment of centers where such instruction might be given should be geographically central and in connection with institutions which control and see sufficient material to make the courses profitable. It is perhaps but natural for the graduate of a certain institution to turn instinctively to his Alma Mater, or to that institution most closely at hand for the continuance of his medical education.

The large attendance of physicians at the two or three day clinics conducted during the past year at the University Hospital is sufficient attestation to the fact that the medical profession of the State of Michigan is keenly alive to the needs for post-graduate study and of observation, *and that there is a genuine demand on the part of the profession for opportunities and facilities for post-graduate work.*

THE UNIVERSITY OF MICHIGAN'S OBLIGATION IN OFFERING POST-GRADUATE STUDY IN MEDICINE

Experience has conclusively demonstrated that medical schools flourish best as integral parts of Universities. The very fact that scientific medicine is deeply rooted in the sciences of biology, chemistry and physics make it almost imperative that a medical school be a part of a university where these fundamental sciences are maintained. Furthermore, medicine is so closely inter-related with sociology, psychology, in fact with so many of the other departments and professional schools of the university that it is almost mandatory that the teaching of medicine be conducted in the atmosphere of a university. Since the objectives, methods and other procedures for conducting post-graduate work are essentially similar to under-graduate medical teaching and to university teaching in general, arguments need not be presented here to maintain the statement that post-graduate work can be conducted most efficiently in a university's medical school. Furthermore, the teaching of post-graduate clinical medicine can be best done in a teaching hospital connected with the university's medical school. This does not mean that all post-graduate medical study should be conducted at the University's medical school and hospital. There are many centers in this state and nation distinguished for special attainments in the various departments of medicine which should be made accessible for post-graduate study, and to which physi-

icians should be recommended and sent for advanced and special work. The University Medical School in which post-graduate study in medicine is offered and administered should seek and maintain the very closest co-operation with these extra-mural centers with a view of utilizing their facilities. Physicians in these centers who have distinguished themselves might be invited to become extra-mural members of the faculty of post-graduate medical instruction.

Your committee, therefore, recommends that the University of Michigan establishes regular post-graduate courses in medicine. It feels that by virtue of the University's function as head of the educational machineries of the state; by virtue of its medical school and hospital, which are especially organized and equipped for the teaching of medicine, both under graduate and post-graduate; and by virtue of the fact that libraries and many departments of instruction in the university closely related to medicine and which must be utilized in post-graduate study are readily accessible.

In making this recommendation your committee feels that the University of Michigan has an important obligation to the State of Michigan. Society has a right to demand the latest and most scientific practices in both preventive and curative medicine. Unless regular post-graduate study in medicine is provided for, then society loses. It is, therefore, not enough for the state to provide for under-graduate instruction in medicine. The university should see to it that every physician in the state is given an opportunity and is encouraged to keep abreast of the newer contributions to medicine. This is essential in order that Society will be the recipient of the highest quality of medical service.

The advantages to the profession and to the citizens of the state at large should not blind us to the obvious benefits post-graduate development will bring to the medical school and university itself in added reputation and prestige. Michigan, one of the oldest state universities, has engaged the attention and held the respect of the medical world, even through those lean years which the last decade of rapid advancement has not caused to be forgotten. Dean Vaughan for many years advocated affiliations between the medical school and the hospitals of the state, with the view of the establishment of a community interest that he hoped would result in better work in outlying hospitals and

increased interest in progressive medicine on the part of the profession. This was really the beginning of the broader plan of increasing contacts that the adventures of other schools and our own experience have made feasible. The agency that brings about such worth-while results assumes quite naturally a very enviable position.

The University of Michigan need not engage in competition, but it should not allow itself to be placed in a position in which it would suffer by comparison. The presence of graduate students will greatly stimulate the teachers of this institution. The best reputation that any teacher can have is through the quality of his students. The potential leaders of medicine are the men whose ambitions and ideals have led them back to the university for a fuller and more complete knowledge.

TYPES OF POST-GRADUATE STUDY

Your committee recommends that in general two types of post-graduate study be arranged. First, short-term courses, especially designed to aid the physician in brushing up on well established medical practices; to help him to become familiar with the very latest contributions to our knowledge and practice of medicine; and to introduce him into some particular specialty in which he may be interested.

Depending on the time that the physician can spare for these courses, they may be arranged in two groups:

(a) Physician's days. One to two day clinics to be given at the University Hospital or at other hospitals in the state. These clinics to be so arranged that well organized and intensive studies can be made of certain phases of medicine, for which there is particular interest and demand. These short periods should be offered monthly.

(b) Four-week programs of study wherein physicians are given an opportunity to cover fairly well one or more subjects in general medicine, or its various specialties. These programs should be offered at least once and possibly twice a year.

Second, long-term graduate study. The second type of post-graduate study for which your committee recommends that provision be made is the long-term—one or two years of graduate study. This type of study and instruction should be similar in methods and contents to that required by the university for advanced degrees. Your committee is of the opinion that facilities already exist in the clinical depart-

ments of the medical school whereby, with the proper organization and direction, programs of study leading to the Master of Science degree may be readily arranged with but little additional expense to the university. The objectives of the long term of graduate study should be to turn out research workers, teachers and clinicians of the very highest order, men who by virtue of this long training should be capable in every respect of advancing medicine and its specialties. They should be able to establish genuine leadership in their chosen fields. For the present at least, this type of graduate work should be correlated with, and should meet with the fullest co-operation of the graduate school of the University of Michigan. Higher degrees, such as the Master of Science and Doctor of Science and Philosophy, should be conferred on candidates after the completion of prescribed work. This work should be equivalent in every respect to that required for advanced degrees in the Graduate School.

Your committee is of the opinion that both the Medical School and the profession at large will be benefitted immeasurably as the result of the establishment of this genuine graduate work. It should attract many students to the University of Michigan who will in time contribute much to the advancement of medicine.

ORGANIZATION AND ADMINISTRATION OF GRADUATE STUDY IN MEDICINE

In order that this graduate work in both short-term and long-term courses may be provided for in the near future and administered with the greatest possible facility, your committee recommends that the President of the University and the Board of Regents appoint at an early date a Director, whose duties shall be to organize and direct graduate medical instruction in the University of Michigan. Furthermore, it recommends that a budget be provided whereby graduate instruction may be initiated and maintained. It is obviously difficult at this juncture to state just how much money should be included in the first budget. It should be sufficient, however, to pay the salary of a Director, his administration associate, and necessary expenses. Your Committee, therefore, recommends that a Director be appointed first, and that he in conjunction with those concerned prepare a preliminary budget with a view of beginning this work.

In making these recommendations your Committee has purposely refrained from presenting in this report many of the

problems and points of view relative to the details of organization and administration of post-graduate teaching of medicine. For example, should an independent faculty and administration be constituted for graduate instruction, as at the University of Pennsylvania, or should it be organized as a part of the Graduate School, as at the University of Minnesota, is an interesting question for discussion. Again, what term should be applied to the short-period courses? Should we designate them as extension courses in medicine, or should the term "post-graduate" be applied to them? Should the caption "graduate study" be limited to the long-term courses which leads to advanced degrees? There are many such details which present themselves. Your Committee feels that these matters and details of organization can be and will be straightened out only after a beginning in organized post-graduate instruction in medicine has been made. It, therefore, earnestly recommends that a start be made along the unpretentious lines recommended in this report. Your Committee is confident that as post-graduate work in medicine grows and develops at the University of Michigan, the more or less complicated matters and details of policies, organization and administration will be worked out satisfactorily to all concerned.

Respectfully submitted,

Douglas Donald, Carl D. Camp,
James D. Bruce.

ENDOWMENT FOUNDATION

In our January issue announcement was made of the formation of The Michigan State Medical Society Endowment Foundation. The articles creating such a Foundation imparted its objects, purposes and administration. These articles having been legally executed it is now purposed to solicit subscriptions so as to obtain the necessary funds. Our attorneys have supplied us with the following forms:

I give and bequeath (or devise in case of Real Estate to the Grand Rapids Trust company, *In Trust* for the purposes of the Michigan State Medical Society Foundation as expressed in the Trust Agreement dated January 1, 1927.

I hereby agree to pay Dollars to the Grand Rapids Trust company, (in installments Dollars each) *In Trust*, however, for the purposes of the Michigan State Medical Society Foundation as expressed in the Trust Agreement dated January 1, 1927.

In compliance with the above we are now requesting our members and friends to tender their subscriptions. They may be in any amount from \$25.00 to \$25,000.00, payable in cash payments or by will. Our goal is a Quarter Million Dollar Fund and later a Half Million Dollar Fund. There is opportunity for all: it is desired that every member will have some interest and will have made some contribution.

You who have prospered or who have been fortunate and have attained financial independence—from you we hope that contributions will be forthcoming in goodly amounts. You who labor constantly and whose financial resources are limited—from you we hope to receive as you are able to give. Send your subscriptions to: Michigan State Medical Society, 1508 G. R. National Bank Building, Grand Rapids, Mich.

And why should you give? We answer by quoting the following paragraph from the articles:

(a) The purposes of this trust are to pay from the net income of the fund or funds held in trust or order of Executive Committee of the Council of The Michigan State Medical Society, for the purpose of providing post-graduate instruction without fee for those designated by said executive committee, to conduct clinics and courses of instruction without fee in hospitals and medical schools in the State of Michigan, and to provide funds either by gift or loan to sustain such persons as are designated by said Executive Committee, during the period of attendance on said post-graduate instruction or said clinics.

Remember that you can specify special or specific purposes as: Lectures or Clinics in Surgery, Medical, Gynecology, Eye Ear Nose and Throat, or any special subject or branch of these general divisions. Remember also that these funds will benefit Michigan Doctors for *all time*, and that your contributions will remain intact for it is only the investment earnings that are to be expended. And so to summarize, you should contribute because:

1. The Foundation provides funds for post-graduate education of Michigan doctors for all time.
2. The Foundation will enable your State Society to aid Michigan doctors to remain abreast of medical progress.
3. Better medical service will be available for the people of Michigan.
4. Our doctors will receive assistance so as to render their work less arduous, and productive of returns that will enhance their material comforts.
5. We will contribute for all time to mankind's welfare.

Our appeal is before you. We await your answer.

WOMAN'S AUXILIARY

The House of Delegates directed that a Woman's Auxiliary be organized in Michigan, complying with the plan and principles of the National Auxiliary of the A. M. A.

President Jackson has appointed the following Organizational Committee:

Mrs. Caroline B. Crane, Kalamazoo, Chairman; Mrs. L. J. Hirschman, Detroit; Mrs. Theo. Kolvoord, Battle Creek.

In due course communications will be directed to County Officers as to the organization of County Auxiliaries. Barry County has completed its organization with Mrs. Keller as its President.

In succeeding issues we purpose outlining the plan of Auxiliary work and the progress reports of the Organizational Committee.

THE MICHIGAN STATE MEDICAL SOCIETY'S ORGANIZED FIGHT AGAINST CANCER

REUBEN PETERSON, M. D.,

Chairman for Michigan, American Society for the Control of Cancer

ANN ARBOR, MICHIGAN

The medical profession of Michigan is organizing for a determined fight against cancer. The reasons for undertaking this fight are well set forth in Dr. Soper's article in this same issue.

Cancer in Michigan, as elsewhere in the world, is increasing. It now stands fourth in the order of the most frequent causes of death, being exceeded only by heart disease, pneumonia and cerebral hemorrhage. Over 100,000 persons are succumbing to cancer annually in the United States and probably over 300,000 have the disease at the present time.

There are two principal reasons why the fight against cancer has not been as vigorous as in the case of tuberculosis. First, because of pessimism. The tuberculous patient is always cheerful and optimistic. On the contrary, the cancer sufferer is despondent, thinks there is no hope, easily gives up. Second, in spite of what has been said during the past 15 years, the medical profession itself is pessimistic about the successful treatment of cancer. One is not sold to a proposition unless the salesman believes heart and soul in what he is setting forth. The medical profession here, as elsewhere, has not put the cancer proposition across with the public because it has been doubtful itself.

Why has it been doubtful? Because it has been too impressed with the fatal re-

sults of cancer. There has been too much confusion, running around in circles, chasing after false gods so far as cures are concerned.

Yet the problem is a simple one after all. Early recognition and treatment of cancer, no matter where located, means cure and no return of the disease. Late treatment means the reverse, failure and death. Exceptions, yes, but let these go. General principles must be kept in mind, if we are to retain our enthusiasm and convince others.

To be successful in any health campaign, careful planning and much devoted work are required. It is only through organization that the fight will be won and the Council of the State Society at its annual meeting held at Ann Arbor January 24, 1927, voted to be responsible for and undertake this work, and carry it to a successful conclusion, with the aid of the entire medical profession of the State.

The general plan will be as follows. Each Councilor will organize his own district. He will start with the County Society as a nucleus and ask each County Society in his district to have an active cancer committee appointed which shall aid him in his work. Where an active public health committee already exists, there will be no necessity for the appointment of a special cancer committee unless the County Society so desires.

The County committee will be responsible for the organization of its County in the fight against cancer. It should call to its aid all agencies which have proved themselves of value in various health movements, local Boards of Health, Boards of Commerce, Rotary and Kiwanis Clubs, Womens' Clubs, Nurses' organizations, etc.

With the organization perfected, it is proposed to make the fight against cancer continuous throughout the year, always keeping uppermost in mind that the public should be taught that early recognition of the disease means a cure. However, as a demonstration of what can be done by early examination of those who suspect they have cancer, there will be held in each County in the early part of May next Cancer Clinics, modelled after those so successfully conducted in Detroit under the direction of the Wayne County Medical Society and the Detroit Board of Health.

The staffs of the Hospitals in which these free Cancer Clinics will be held, will be asked to co-operate with the County Cancer Committee and the Councilor of the

district whereby the greatest number of persons suspecting they may have cancer, can be carefully examined and advised.

During the week of the Cancer Clinics, talks about cancer will be given before local and lay organizations. These can be arranged for by the County Committee and their local sub-committees.

Supervised publicity will be arranged for through the Publicity Committee of Public Health Educational Committee. It is assumed that the State Board of Health will be heart and soul behind the movement to lower the cancer death rate and that it will furnish cancer statistics, as it has in the past, showing what inroads the disease is making in the different Counties of the State.

It is proposed that careful records be kept of patients examined at the various cancer clinics, during the week of demonstration in May. These records will be sent to a central bureau where they will be compiled and the results tabulated.

Such in brief is the plan of the cancer work undertaken by the Council of the State Society. The Council does not expect to accomplish wonders the first year. It fully realizes that the fight against cancer has only just begun and that to be effective it must be long and persistently continued. It asks the members of the State Society for full hearted co-operation in this movement. If this support be given, it has no fear of the outcome, but will look forward with confidence to the opportunity of demonstrating what can be accomplished in a fight against a common enemy, conducted by an united State medical profession.

COUNCIL DINNER CONFERENCE

In conformity to a policy adopted the Council invited to a dinner conference, representatives from our medical colleges, State Board of Health, State Board of Registration and our standing committees. This was held in Ann Arbor at the Michigan Union on the evening of January 24th.

The following is a copy of long hand notes taken and reflect to a measure the expressions that were made. They are imparted to indicate to our members the trend of thought that resulted.

Dr. Stone, in opening the meeting, said:

Last year closely identified interests met for the first time to discuss common problems. Representatives from the State Medical Society, the Board of Health, University of Michigan, and the Detroit Med-

ical College were represented and an enthusiastic meeting was held.

Doctors Cabot, Jackson and Darling emphasized the need for closer co-operation. Dr. Cabot told of the need for a closer relationship between the public, the profession and medical schools. Dr. Biddle, of Detroit, stated that the time had arrived when the University should recognize its obligation to provide postgraduate work. As a result of this meeting and these comments a committee was appointed representing the University of Michigan, the Detroit College of Medicine and the State Medical Society, and this committee is to report this evening.

In addition to the consideration of this post-graduate report, the program this evening will take up the operation of the State Board of Registration with reference to the Medical Practice Acts. Before considering either of these questions, I shall call upon Dr. Jackson, President of the State Society.

Dr. Jackson—(Dr. Jackson's report was read—see Editorial in this issue).

Dr. Stone—This report has given us much food for thought and it is my hope that every one present will render an opinion upon the subjects taken up by Dr. Jackson. I shall now call upon Dr. Warnshuis to discuss the Medical Practice Acts.

Dr. Warnshuis—Organized medicine exemplifies both an individual and collective service to the people and to the profession. It embodies two ideals. First, service to the lay public which includes education as to the truths of science and as to the increase of longevity and efficiency. Second, continued interest in the doctor's progress from the day he leaves the medical school and throughout his practice. The tendency of doctors is one of stagnation. There is great danger that he will succumb to the desire for physical comforts. Organized medicine must make men render that type of service to which the public is entitled. The Medical Society has found a weak spot in the State Board of Registration in medicine. As the Board now functions, it is only a formal affair holding three examinations yearly.

We should cause the Board to be more than an examining body. It should have a full time officer as administrator of the Board's affairs. There should be a censor of men in practice. There should be exercised both an educational and mandatory influence which will result in facilities for education and see to it that men in the field will use these facilities to re-prepare them-

selves in certain cases for practice. The Legislature and the Governor are sympathetic. If proper representation is made standards will be brought to a high level and the people will be rendered service.

Dr. Stone—We will now listen to the report of the Committee on Post-Graduate Education of which Dr. Bruce is chairman.

Dr. Bruce—The information used in compiling this report was derived from a number of sources. These include the Council on Graduate Instruction of the American Medical Association, the Faculty of the University, and through discussion with various members of the profession throughout the state.

Questions were sent out covering the problems under discussion. The following are the conclusions drawn by your Committee:

(Dr. Bruce read the Committee's report—See Editorial).

Dr. Stone—We have listened to a very interesting report from the Committee on Post-Graduate Work. This Committee includes Dr. Bruce, Dr. Douglas Donald, and Dr. Camp. All of us are interested in what Dr. Little has to offer with reference to this report.

President Little—There is no question but what the report has shown the need for graduate work. I feel that you are right in suggesting that a qualified man be put upon this problem during its formative stages. This man should travel and get the views of those in the state.

The report should be put up to the Regents for the purpose of familiarizing them with its contents and for discussion. The question of graduate study is one which should be approached with extreme caution. If successful, it will be one of the greatest contributions. But if it fails, it will cause a rupture between the medical men and the higher institutions of learning in the state.

The short term course will function to brush up the doctor's knowledge and the long term course will function to change his point of view. The long term courses are the important ones since they are the means of bringing the gap between medical science and the basic sciences such as chemistry, physics and biology. The man taking the long term course comes in with a record of service to humanity and gives a strong note to research in chemistry, physics and biology, thereby strengthening such research.

We will better learn how to train under-

graduates through the training of graduates.

The idea of the advanced degree is excellent. Too few men have gone into pure science from medicine or have gone into medicine from pure science.

The Simpson Memorial is another agency whereby the above groups will meet on common ground to solve the problem of pernicious anemia.

Graduate work is a tacit admission of the inter-relationship of one science with another. I shall give this work consideration and hope to make some provision in the budget.

Dean Cabot—I am entirely in sympathy with this type of work. None of the difficulties are insuperable.

Much machinery now exists in the graduate school, but too few men have been taking the work in medicine. Dean Lloyd is familiar with our problems and is very cordial to this work.

The shorter courses offer more difficulty than the long term course. It is not always true that the undergraduate teacher is a good graduate teacher. More men are suited to give graduate instruction.

It is a strain to give both types of instruction. The point of view is different. In the future we may find it necessary to add extra-mural teachers for two reasons: First, so that the present teachers will not be overloaded, and second, to give the graduate students the advantage and benefits of different views. In Boston, often the popular undergraduate teacher proved to be a failure in graduate work. While it is true that the separate faculty policy is ultimately sound, it should be reserved for a considerably future time. We must go forward slowly until we have had more experience.

Dr. Camp—Dean Cabot is correct in his statements with regard to a separate faculty. Instruction should be given by men of mature experience.

The most desirable post-graduate student is a comparatively young man who has been in practice four or five years. Such a man for various reasons usually objects to the expense. Therefore, the fees should be kept at a very minimum or fellowships granted or they should be allowed to pay for the course by assistance.

Dean McCracken—No one can disagree with the report. Two questions arise. First, the question as to the long term of course. It is the function of the University and no one lese to carry on graduate or

long term work. The Detroit Medical College does not do it. I am in favor of a school of post-graduate medicine at the University in which advanced degrees will be given after three years' work. Whatever is in the Detroit Medical College is at the disposal of the University. Any material or equipment is the University's. The question of the short course is different. I hesitate to call them post-graduate courses. Generally they are only review courses or courses which men who graduated twenty or twenty-five years ago did not get. The applications at the Detroit Medical College show that men asking for review courses don't know what they want. They show an insatiable appetite for gross anatomy and morbid histology. Many have never had histological training.

I am unable to see why the man who practices internal medicine and obstetrics as a side line should make a dissection during a short course. I wouldn't survive the shock if one of the applicants asked for a course in pharmacology and therapeutics. Others want to come into the clinics and acquire all of the medical knowledge of the last few years in the short course.

The Detroit College is unable to meet the demand for review courses. As a result, an organization not connected with the College has been formed in Detroit to develop review work. The Secretary of that organization, Dr. Bemis, is here to-night and I hope you will call upon him.

Dr. Sundwall—Approves report.

Dr. Wile—I have little to add. There is a good deal of graduate instruction now going on in the Medical School, but it is not recognized because it lacks organization. Many departments now have graduate students and the first duty is to organize these groups so that they may be more closely related.

A modest beginning is more likely to bring the greatest success. Those doing undergraduate teaching should not be burdened with graduate work. Ultimately, we can look forward to a graduate school in medicine. Such a school is inadvisable now.

Extra mural teaching would appeal and assure success. There are many men in the state who are particularly gifted and who have achieved distinction in their fields. Such teaching would meet with a sympathetic response.

A full time administrator is necessary if proper supervision is to be given to both the instructors and the graduate students.

Dr. Sturgis—Post-graduate work should

be begun modestly so that it might be well done. The key note is good organization. The man selected to carry on this work must have an understanding of community needs. The whole work may fail if the administrator has not gained an understanding of community needs through general practice.

The University can function better in its service to the community through post-graduate work of this type.

Dr. Bemis—We are not equipped in Detroit to carry on the long term course. I do not agree with the statement that men out of school four or five years will return for this work.

The response to the review courses has been from the general practitioner in Detroit who finds himself drifting towards a certain specialty and wants to improve himself in that speciality. He is not willing to give up practice entirely, but he is willing to give up a half or three-fourths of his day.

The out-of-town men attracted by these courses have come as a result of specific courses being given by certain men.

I agree with Dr. Cabot that most undergraduate teachers cannot do graduate teaching.

Dr. Warthin—There is an enormous amount of postgraduate work not recognized now by the University. There are many students carried in my department, Dr. Novy's department and Dr. Huber's department. At the present time I am giving a half to one hour daily to a pathologist from Ironwood. Others from Grand Rapids and Detroit have also been given our time. This work takes bloody sweat.

Those who come to us do not count as students. They are not mentioned in the catalog. They come free or pay only a small fee. Some come for long periods, and others for only two days to get the spirochete stain.

There is a great demand from all parts of the country. At the present time I have two Rockefeller students and one-third of my laboratory budget is being expended in post-graduate work. This is a most costly type of work. There has never been any budget for it, and while there has been much discussion of this subject, there has never been any action. It has never been attacked from any practical standpoint.

Much of what is today called post-graduate work is nothing more than post-graduate recreation.

Dr. Corbus—All pathologists run to Dr.

Warthin. Some opportunity is needed for men in other fields. I am urging that the man in the country be given an opportunity to get what is new in medicine.

Dr. Cowie—I am thoroughly in sympathy with the report of the Committee.

Dr. Canfield—It is apparent that this body is unanimously in favor of post-graduate work. The plans are now nebulous as they should be in the beginning. Work of this type will never be self-supporting and for that reason must have a generous budget.

It is time that the state provided adequate instruction for all graduates in medicine. However, we must be sure that the brush-up courses will not supply half-baked specialists.

Dean Cabot—I do not agree with Dr. Bemis in his statement that men out of school five or so years are not willing to return for graduate work on a full time basis. At present I have five men who have come back after a period of three to fifteen years in private practice. Four more applications have been received and I feel that this tends to show that they will come back.

Dr. Ricker—I am interested in the post-graduate course for the sake of the smaller hospital. There is greater harmony now between the University and the general practitioner than ever before.

The general practitioner is now demanding the best. The University of Michigan Medical School cannot exist without the support of the practitioner and the practitioner cannot exist without the support of the University Medical School. People are beginning to recognize the half-baked specialist and are demanding better service. The doctors must give this better service and they can only give it through the co-operation of the University.

Many patients will not go to a hospital. They want to stay home and the general practitioner must know how to handle them at home. Further, we need medical students in our small hospitals so that there might be an exchange of ideas, we getting from them the latest information in the field of medicine, and they getting from us the results of our practical experience.

Dr. Stone—I am going to say something with reference to the State Board of Registration. I am not going to try to justify the work of this Board in any way. I have been a member for the last three years and during that time, nothing constructive has been done. It is time that it should be.

The makeup of the personnel and the financial conditions have prevented progress. We are unable to pay a full time Secretary and something must be done so that the Legislature will provide more funds. While I have not interviewed Governor Green, it is my understanding that he is favorable to medical education.

The lack of enforcement is very evident but I do not feel that the question of enforcement and policy is one to take up at the present moment without further information.

I shall now call upon Mr. Werle, Secretary of the State Tuberculosis Association, to tell us of the new tuberculosis sanitarium proposed for Ann Arbor.

Mr. Werle—The last Legislature provided a half-million dollars for a new tuberculosis sanitarium. A site has been chosen in Ann Arbor next to the University Hospital. The newspapers and people approved of this site, but there seems to be some trouble ahead. Objections are arising from some sources to the placing of the tuberculosis hospital here. One Senator has introduced a measure before the Legislature to repeal the half-million dollar provision. If this provision is repealed, it will mean of course that no hospital will be constructed. In addition, the people of Howell are afraid that if this hospital is constructed in Ann Arbor, the present institution in that city will be closed.

We average 2,800 deaths from tuberculosis annually in Michigan. Since the standard for hospital beds is one bed for each death annually, that would mean that 2,800 hospital beds are needed in Michigan for the proper hospitalization of tuberculosis. The total number of beds now in Michigan is 2,200. There is no reason, therefore, since the proposed sanitarium will provide about 200 beds, for the abandonment of the sanitarium at Howell. There is a need, it is very evident, for two such hospitals in this state.

The weight of sense lies in putting the new institution in Ann Arbor. The advantages which will accrue from placing the institution here far outweigh any possible disadvantages. We have a site in Ann Arbor, light and heat are available, no buildings need to be wrecked before construction can be started, and, through such a hospital, the opportunity will be given to train undergraduates in the handling of tuberculosis. Dean Cabot assures me that such opportunity is lacking in all Medical Schools, and if the proposed sanitarium is constructed here, this Med-

ical School will be the first to have proper facilities for instruction in the care and treatment of tuberculosis. Let me say again, however, that I see no need for wrecking Howell.

Dr. Stone—This afternoon the Council went on record as being against the bill to appeal the appropriation. The Council will do everything in its power to defeat this bill.

Dr. Warnshius—I move that this body endorse the report of Dr. Bruce and his Committee and that this report be referred to the Board of Regents for further action.

(Motion passed)

Dr. Jackson—I had a talk with the Kalamazoo representative in the Legislature concerning the bill which provides a half-million dollars for the tuberculosis sanitarium.

The Committee appointed to choose the site was given full power and made their selection of Ann Arbor.

This selection is unwelcome to the people of Howell. What is more important, the Speaker of the House represents Howell in the Legislature. There is some danger that the bill may be passed repealing the appropriation. Every man here should use his influence with his Representative and Senator so that the tuberculosis sanitarium will not become a political football.

Dean McCracken—Mr. Chairman, I would like to have brought up the subject of preceptors for medical students.

Dr. Stone called upon Dr. Cabot to briefly discuss this question.

Dean Cabot—As medical education now stands, the student tends to lose touch between the means and the end toward which he looks. It seems that the schools are not in a position to present the problems of ordinary medical practice. These problems have their economic, sociological, and ethical phases. The close association with older men in disappearing.

I feel that it is not wise to substitute such contact and teaching for courses being given. However, the student often derives little benefit from his summer vacation. Some of the students do work in hospitals doing perhaps the same thing that we do in the University Hospital, but the majority never get in touch, during their years of training, with medical practice in its broad sense.

A committee has been appointed to study this subject. The object is to begin the student's association with the practicing physician between the third and fourth

year. Later, we hope to begin this association after the student has completed his sophomore year.

Dean McCracken may doubt whether we can obtain any great number of preceptors. In this respect I may be an optimist but I feel that Dean McCracken is a pessimist. I would have the students go to the small community of two or three thousand. Their association there would shed important light upon their characters and this to me is one of the most important phases of the preceptor idea.

Few things that we could do would bring the profession closer together and improve it. We could use the profession within an area of 250 miles, not limiting ourselves to Michigan alone but going across the line into other states as well as Ontario.

We can begin this plan in a rather small way. I am perfectly willing to be the goat in trying it out.

Dr. Bruce—Through the preceptor plan, we hope to give the student a little foretaste of his work as a practitioner. In principle, the plan is correct. No material change should be contemplated now in the students training.

The questionnaire which we mailed out in regard to post-graduate work showed some enthusiastic answers with reference to the preceptor plan. All the replies showed an interest and the majority who replied to this questionnaire volunteered to take students. Some were already doing it, and stated that they looked forward to taking students in the summer.

Concerning the question as to whether there are enough practicing physicians in Michigan to take care of the needs, I can assure you that there are enough now to take the whole graduating class from this University with ease.

Dr. Wile—In connection with the preceptor plan, a most important phase has not been discussed. It appears to me that this plan is the only answer to the problem of getting students to go back to country practice. Many communities today are without medical practitioners. They are being cared for through the extra medical cults due to the fact that the student looks without approval upon country practice or practice in a small town.

Dean McCracken—My experience has had to do only with large city practitioners. I feel that students should not be farmed to specialists. The results of our requests that the internists in a large city take students were very unsatisfactory. The in-

ternists would not be bothered with students or they took their vacation at the time when students could take work with them or some other reason arose which prevented their acting as preceptors. It is my experience that the country practitioner never does take a vacation.

Dr. McKenzie—One great advantage of the preceptor plan is seen in connection with the psychology of medical practice. All of us have seen the howling success in medicine who is not up to the latest medical science. Through the preceptor plan, the young man will learn about how to handle people.

It is well to talk about elevating medical practice but don't forget about the man who is in practice.

Dr. Cowie—I would like to have Dean Cabot tell us what other states are doing with the preceptor plan.

Dean Cabot—In California some of the seniors are sent out for a month with a preceptor. Good results have been obtained through this plan, and the practical work is very valuable to the student. If they learn no medicine at all, they at least get valuable experience through their contacts.

Dr. Stone adjourned the meeting.

THE JOURNAL
IS
YOUR FORUM—
WE INVITE YOU
TO UTILIZE
IT FOR THE
EXPRESSION OF
YOUR VIEWS
ON
MEDICAL SUBJECTS

MONTHLY COMMENTS

Medical—Economic—Social

It's a trite saying—but things do move and times change with exceeding rapidity. The present generation has witnessed greater progress than have all the preceding generations since the creation of man. We ourselves witness greater progress, the application and perfection of more new facts in one year than did our fathers in a life time. If you think and do as today a year hence—you are slipping! Think that over. A year hence there will be many new things, new facts, new applications and unless you remain informed as to what they are you will be behind and a back number—slipping and slipping fast. That is why we urge and urge that you remain abreast of progress—attend your medical meetings, go to clinics and schools, read your Journals and remain abreast for if you do not a year hence you will be thinking and doing as you are today—you will be behind and—slipping fast. Think it over.

And now comes a limited visioned individual from the bureau of industrial hygiene of the New York state department of labor who recommends: "State Physicians" for small industrial plants. He goes on to state that: Thousands of small factories have no physicians or nurses. The economic struggle is so intense that the services of a physician seems a waste of money. "Where then, he asks, shall the small manufacturer obtain such advice and counsel, if not from the states?" Ye Gods! But why stop there? Why not have the state supply electricity, water, telephone, shower baths, and clean clothing?

This is but another illustration of a doctor, holding a state job, bursting out with a recommendation that exudes paternalism. He is so limited in vision, narrow in perception, void of all other sense of social justice that we pity his condition. We wager he never attended a county, state or national medical meeting.

This issue contains a large amount of detailed information regarding organizational work. It answers the question as to what your State Society is doing. It is well worth your time to familiarize yourself with these reports. We also direct attention to the editorials on Post-Graduate School, Endowment Foundation and Ideals and all the other editorials. Next month we will tell you about our Annual Meeting and our District and County Conferences. We are happy to be able to demonstrate that you belong to a live, going State Society that is continuously concerned with the enhancement of your personal interests. May we have your reaction?

The Council on Physical Therapy of the American Medical Association, on the basis of the present available evidence, is convinced that the sale of generators of ultraviolet energy to the public for self-treatment is without justification. The Council bases its condemnation of the sale of such apparatus for this purpose on the following grounds:

1. The uninformed public could not take the proper precautions in administering treatments

and, as a result, severe general burns or grave injury to the eyes might ensue.

2. Those not familiar with the possibilities of such apparatus would be led to place unwarranted confidence in the therapeutic value of such treatment by the claims that might be made in the literature advertising such generators, and to undertake to treat serious conditions not amenable to such treatment.

3. The unrestricted possession of such therapeutic means would tend to deprive people of expert diagnosis by encouraging them to make self-diagnoses.

4. Such practice would encourage the sale of useless and fraudulent lamps which would be advertised as generators of ultraviolet rays, since the public would have no means at its disposal to determine the quality or quantity of the radiant energy emitted by such lamps.

For the foregoing reasons, the Council on Physical Therapy considers as detrimental to public welfare the sale or advertising for sale, directly to the public, of a generator of ultraviolet energy. Under rule 11 of its Official Rules, the Council will declare inadmissible for inclusion in its list of accepted devices for physical therapy apparatus manufactured by a firm whose policy is in this matter detrimental to public welfare.

Of course you noted the green border on your 1927 membership certificates. Somewhere we recall green as being used for the piping of gowns and tassels of caps worn by students graduating in medicine. We desired to ascertain the basis for this color hoping thereby to further justify the use of this color. Consequently we wrote to what has as a rule been an unflinching fount of authentic information. Our hopes are shattered by the following letter. Can anyone else help us?

"We have searched through all of the available literature in this office, but have been unable to find anything that would be of value to you on the subject of green trimming on doctorate gowns. We find that scarlet, lilac blossom, pink, cherry, crimson, blue, purple, brown, gold and white are used for various trimmings, but search as we will, we are unable to discover the slightest trace of green.

"I am inclined to suggest that you admit at once to your Michigan colleagues that the borders were chosen merely because green is the sign of spring, when everything begins to grow again, and that they were chosen with the symbolical idea that they represent the renewed youth of the Michigan State Medical Society under its present management. Beyond that, there is only the old riddle: "What first turns green in the spring," with the answer, "Christmas jewelry."

"With best wishes, I am

"Very truly yours,

Morris Fishbein, M. D."

Beauty parlors—they seem to spring up overnight. In fact we believe there were more beauty parlors opened up last year than gasoline filling stations. In New York city they have now secured a listing in the telephone books as "Der-

matologists." They'll be demanding the same thing in Michigan ere long. Detroit has an inspector—what we need is a state regulation. They are doing business and selling all kinds of junk—skin foods, tonics, creams and what not. Note well the next time you are called to attend a habitue of these parlors and perceive the litter of bottles and jars on the dresser or in the bathroom cabinet—reminds one of the days when doctors believed in poly-pharmacy. Guess it's time we exposed this American graft that is deceiving our women in the same degree as gland transplants delude our senile men.

Barry County has twenty-two doctors. Twenty are members of the County Society. Monthly meetings are held and start with a 6:30 dinner to which the doctors bring their wives. This fall a special assessment was made to raise \$150 to defray a weekly advertisement published in the local paper giving the following information: "Names of officers of the Barry County Medical Society and statement of affiliation with the State and A.M.A. organizations." This advertisement, run each week, has made reading space available and it is used by the Society for imparting each week a 500 word article that is educational and deals with medical topics that impart splendid information for the laity. We cite these two activities for they reflect what may be accomplished. Attendance is good by reason of the presence of the ladies who urge their husbands to go; the publicity is nurturing a growing sentiment of public interest and friendliness. Other counties may well emulate Barry's example.

Recently we commented upon the Surgical Science—a subject that merits consideration by our profession and our hospitals. We again invite attention to the problem and submit a recent communication from Dr. Dean Bevan:

"I understand that at a recent meeting of the Board of Trustees of the American Medical Association a motion was passed, requesting the Council on Medical Education to emphasize the need of teaching medical ethics to our medical students. I am very glad that this was done. I have, personally, been very much interested in this subject for a number of years and have felt that there is a great need to emphasize the importance of the proper medical conduct in the practice of medicine. I feel that we should teach not only the medical students but we should carry on a continuous propaganda bringing to the medical profession throughout the country the great importance of this subject; at the next Conference on Medical Education I shall present this matter in the Chairman's Address.

"Ten years ago I presented one phase of this subject which had impressed itself very forcibly upon me; in fact, almost haunted me in my everyday work, namely: the subject of Unnecessary Operations and of Incompetent Surgeons. I am mailing you a copy. I wish you would read it and give me your impression of the best method of presenting this subject of medical ethics to the profession.

"With best wishes, I am

"Very truly yours,

Arthur Dean Bevan."

Official Minutes—Mid-Winter Session of the Council

The Council of the Michigan State Medical Society convened at Ann Arbor at 2:30 p. m. on January 24, 1927. The meeting was called to order by the Chairman, Dr. R. C. Stone, with the following Councillors present:

Doctors Stone, Charters, Burke, Powers, Bruce, Boys, Corbus, Cook, Green, Ricker and Mackenzie.

President J. B. Jackson, Treasurer, John R. Rogers, Chairman of the Medical Legal Committee, F. B. Tibbals, and Secretary—

1. The Secretary-Editor present the following as his Annual Report for the year 1926:

SECRETARY-EDITOR'S 1926 ANNUAL REPORT

To the Council

Michigan State Medical Society.

Gentlemen:—

Your Secretary-Editor tenders to you, and through the Council to our members, this Annual Report of our Society's status and activity for the year 1926. For clarity and summarization this report is made to

consist of four sections: Financial, Journal, Society and Executive Activities.

FINANCIAL

The following report from the auditors imparts our financial condition:

January 5, 1927

To the Council of the Michigan State

Medical Society,

Dr. F. C. Warnshuis, Secretary,

Grand Rapids, Mich.

Gentlemen:

Pursuant to request, we have audited the books of account and record of the *Michigan State Medical Society* for the period from December 27, 1925 to December 29, 1926 and submit herewith our report.

The scope of our examination included a verification of the assets and liabilities of the Society as of December 29, 1926, and a comprehensive test check of the recorded cash transactions, operating accounts and other records for the period, as commented upon more fully throughout the text of this report. Although we did not make a complete detailed check of all transactions and entries, the tests made were, in our opinion, sufficient to determine the general accuracy of the records.

The assets and liabilities at December 29, 1926

are compared with those at December 26, 1925 in the following summary:

ASSETS			
	December 29, 1926	December 25, 1925	Increase* *Decrease
Cash	\$ 550.61	\$ 386.00	\$ 164.61
Accounts Receivable	1,155.05	1,600.34	445.39*
Securities Owned	22,387.00	8,750.00	13,637.00
Unclipped Bond Coupons	180.00		180.00
	<u>\$24,272.66</u>	<u>\$10,736.34</u>	<u>\$13,536.32</u>
LIABILITIES			
Accounts Payable	\$	\$ 102.17	\$ 102.17*
Advance Payments	220.25	397.05	176.80*
Due to Defense Fund		31.00	31.00*
Reserve for Legal Defense	9,298.07		9,298.07
Net Worth—General	14,754.34	10,206.12	4,548.22
	<u>\$24,272.66</u>	<u>\$10,736.34</u>	<u>\$13,535.32</u>

During the year, the cash and bonds in the Legal Defense Fund, formerly held separately by the Fund Treasurer, were combined with those belonging to the Society, and the operation of that fund placed under the Council's control.

A statement setting forth the assets and liabilities of the Society at December 29, 1926 is included in this report subject to the following comments.

Cash on deposit was verified by direct correspondence with the depository banks and the balances reported were found to be in agreement with those shown by the books of the Society. The recorded cash receipts for the period were traced directly to the bank accounts as shown by bank statements on file and a thorough test check was made of the disbursements therefrom. Such disbursements, were with a few minor exceptions, found to be properly supported with officially signed, cancelled bank checks, invoices or other data.

Accounts Receivable, represented by members' and advertisers' accounts, were proved by trial balance of the individual accounts, although we did not correspond with the recorded debtors to further verify the accuracy of the book records. However, we analyzed the unpaid accounts as to date of charge and have classified them as follows:

Month of Charge	Amount	Per Cent of Total
December 1926	\$ 688.04	60%
November 1926	45.00	4
October 1926	51.36	4
September 1926	10.00	1
August 1926	10.00	1
July 1926	29.85	3
January to July 1926	68.25	6
Prior to January 1, 1926	252.55	21
	<u>\$1,155.05</u>	<u>100%</u>

Securities owned were verified by inspection and are shown at par less an allowance to reduce to cost.

Full provision has been made, as far as we could ascertain, for all known liabilities of the Society at December 29, 1926.

In accordance with the usual policy of the Society, the furniture and fixtures purchased during the period were charged to Society Expense.

We have prepared and include as a part of this report a Statement of Income and Expense for the fiscal period ended December 29, 1926. In addition thereto, we have included a Statement of Cash Receipts and Disbursements of the Legal Defense Fund for the period from March 1, 1926, when the fund was combined with the general fund to December 29, 1926. The balance in the Legal Defense Fund at December 29, 1926 was \$9,298.07 as compared with \$9,336.80 at March 1,

1926, the difference being the net excess of expenses over income for the period.

We Hereby Certify, that we have audited the books of account and record of the *Michigan State Medical Society*, for the period from December 27, 1925 to December 29, 1926, as herein outlined, and that, in our opinion, based upon the records examined and information obtained, the accompanying Statement of Assets and Liabilities is drawn up so as to set forth the correct financial condition of the Society at the date named and that the relative operating statement is correct.

Very truly yours,
Ernst & Ernst.

STATEMENT OF ASSETS AND LIABILITIES
Michigan State Medical Society
At the close of business December 29, 1926:

ASSETS			
CASH			
On Deposit:			
Grand Rapids National Bank	\$	458.82	
The Old National Bank		91.79	
			\$ 550.61
ACCOUNTS RECEIVABLE			
Members' and Advertisers' Accounts			1,155.05
SECURITIES OWNED			
Par Value		\$23,000.00	
Less: Allowance to Reduce to Cost		613.00	
			<u>\$22,387.00</u>
UNCLIPPED BOND COUPONS			180.00
			<u>\$24,272.56</u>
LIABILITIES			
ADVANCE PAYMENTS			
Members' and Advertisers' Payments	\$	220.25	
RESERVE			
For Legal Defense			9,298.07
NET WORTH			
Balance—December 27, 1925		\$10,206.12	
Net Income for the Fiscal Year			
Ended December 29, 1926		4,548.22	14,754.34
			<u>\$24,272.66</u>

INCOME AND EXPENSE
Michigan State Medical Society
For the Period from December 27, 1925 to
December 29, 1926:

INCOME			
Membership Dues		\$16,628.55	
Advertising Sales		8,415.70	
Journal Subscriptions		7,690.70	
Reprint Sales		1,464.68	
Interest on Investments		918.50	
Profit on Sale of Securities		76.75	
			<u>\$35,194.88</u>
EXPENSE			
Salary—Executive Secretary	\$	5,500.00	
Salary—Editor		3,000.00	
Salary—Stenographer		1,622.50	
Journal Expense		11,128.32	
Reprint Expense		1,418.36	
Post Graduate Medical Conferences		2,660.48	
Annual Meeting		1,640.55	
Society Expense		1,578.65	
Council Expense		504.26	
Delegates A. M. A.		495.87	
Office Rental and Telephone		715.97	
Postage and Printing		380.70	30,646.66
NET INCOME			<u>\$ 4,548.22</u>

SECURITIES OWNED
Michigan State Medical Society
December 29, 1926:

	Rate	Maturity	Par Value	Cost
National Electric Power Company	6%	1945	\$ 5,000.00	\$ 4,810.00
General Motors Acceptance Corp.	5	1931	5,000.00	4,892.00
Community Power & Light Company	6½	1933	3,000.00	3,000.00
Pennsylvania Gas & Electric Company	6	1940	3,000.00	2,850.00
Michigan Fuel & Light Company	6	1950	3,000.00	2,985.00

United Light & Power Company	5½	1959	2,000.00	1,850.00
Federated Utilities Company	6	1945	2,000.00	2,000.00
TOTAL			\$23,000.00	\$22,387.00

I am also submitting an itemization of the expenditures incurred against each departmental fund complying with the Budget appropriation adopted by the Council. This supplemental itemization is for the added information of your Committee on Finance.

Attention may well be drawn to the following facts:

1. Our Present Worth is \$14,754.34 invested in approved bonds, in comparison to \$10,206.12—a gain of \$4,548.22.
2. The Medico-Legal Committee has a reserve fund of \$9,298.07.
3. The Treasurer and Secretary are under bond to the Society.
4. Funds from dues and for advertising space are received in the form of checks or drafts. These are deposited in the bank. Disbursements are made by voucher signed by the Chairman, Treasurer, and Secretary. At no time is actual currency or coin received, handled or disbursed. This procedure therefore makes positive accurate record of all receipts and disbursements.
5. Following action of the Council the funds of the Medico Legal Committee were deposited and invested with the general funds of the Society. This made possible a larger security investment and greater interest earnings. Disbursements of this special fund are made by voucher signed by the Chairman of the Committee, Chairman of the Council, and the Secretary. The reserve balance is shown in the Auditor's report.

6. The following Budget is submitted for approval for 1927:

PROPOSED BUDGET—1927

Estimated Income:			
3,000 members at \$10.00.....		\$30,000.00	
Interest on Bonds.....		1,200.00	
		<hr/>	\$31,200.00
Expenditures:			
Medical Legal Committee 3,000 members at \$2.00.....	\$	6,000.00	
Journal subscriptions 3,000 members at \$2.50.....		7,500.00	
Rent, Light, Telephone.....		1,200.00	
Annual Meeting.....		1,000.00	
Post Graduate Conferences.....		3,500.00	
Investigations.....		2,000.00	
Committee Expense.....		500.00	
Printing and Postage.....		300.00	
Council Expense.....		1,000.00	
Delegates to American Medical Association.....		500.00	
Stenographic Service.....		2,800.00	
Joint Committee on Public Health.....		200.00	
*Contingent Fund.....		4,700.00	
		<hr/>	\$31,200.00
			\$31,200.00

* No appropriation for Secretary.

JOURNAL BUDGET

Income:			
3,000 Subscriptions.....	\$	7,500.00	
Advertising Sales.....		8,000.00	
		<hr/>	\$15,500.00
Expense:			
Printing and Mailing.....		\$12,000.00	
Wrappers.....		225.00	
*Reserve.....		3,275.00	
		<hr/>	\$15,500.00
			\$15,500.00

* No appropriation for Editor's Salary.

DUES

Frequently the query reaches us as to what return does a member obtain for his dues. We have invariably answered by imparting the features of our Society's activities and also urged that if the member would but read The Journal he would from month to month obtain enlightenment as to what was being accomplished. This report is purposely made specific and detailed so as to summarize our reply to such a query. It is hoped that the Councilors will call this report to the attention of County Secretaries in their district urging that it be read at the next meeting of their County Society. In modesty, do we remind our members that what has been wrought was only possible because of the sacrifice of time, contributions of thought and the expenditure of labor on the part of Officers, Councilors and Committees that were unrewarded by money. Had these services been paid for our dues would have been wholly inadequate. If a member will but carefully analyze this report he will perceive that his dues are yielding a handsome annual return that conserves his personal interests.

SUMMARY EXPENSES 1926

Account	Total	Budget	Over	Balance
Ex. Secretary.....	\$ 5,000.00	\$ 5,000.00	.....	.....
Editor's Salary.....	3,000.00	3,000.00	.....	.....
Stenog.	\$1,622.50			
Half Chg. to Jour.....	1,017.50			
	<hr/>			
	2,640.00	2,500.00	\$ 140.00	.....
Postage & Printing..	380.70	300.00	80.70	.....
Office Rental and Phone.....	716.97	750.00		\$ 33.03
Annual Meeting.....	1,640.55	500.00	1,140.55	.....
Council Expense.....	504.25	1,000.00		495.74
Delegate's Expense..	495.87	350.00	145.87	.....
Journal Expense.....	14,128.32	15,000.00		871.67
Post Graduate Exp....	2,660.48	3,500.00		839.52
Society Expense.....	1,578.65	1,600.00		21.35
Ex. Secy. Expense.....	892.65	500.00	392.65	.....

EXPENSES—1926

	Ex. Secy.	Editor	Stenog.	Postage and Printing	Reprint Exp.	Office Rental and Phone
January—	\$ 400.00	\$ 250.00	\$ 112.50	\$ 10.00	.....	\$ 36.97
February—	516.00	250.00	117.50	25.00	\$ 386.34	40.00
March—	458.00	250.00	117.50	46.00	50.80	40.00
April—	516.00	250.00	105.00	25.00	138.25	40.00
May—	400.00	250.00	125.00	30.00	229.89	40.00

POST GRADUATE CONFERENCE EXPENSES—1926

Budget	\$3,500.00	
January—		
H. G. Smith	\$ 26.00	
C. R. Elwood	11.10	
W. F. English	5.80	
C. G. Grulee	16.00	
Phil L. March	10.00	
W. H. Marshall	2.50	
A. Raymond Moon	6.00	
Stationery	10.25	
		\$ 87.65
February—		
H. G. Smith	46.70	
Hotel Bancroft	8.50	
L. F. Foster	23.25	
G. Van Amber Brown	14.02	
F. A. Collier	16.39	
F. C. Kidner	22.48	
J. Youmans	12.85	
		144.19
March—		
H. G. Smith	28.11	
L. D. Calls	1.15	
J. B. Jackson	4.00	
A. P. Johnson Co.	10.25	
E. G. Martin	14.02	
P. F. Morse	53.40	
Supplies	3.50	
		114.43
April—		
H. G. Smith	39.50	
Manuals	209.30	
C. A. Elliott	11.00	
C. F. McClintic	7.16	
J. B. Youmans	8.84	
Telegrams	4.55	
		280.45
May—		
H. G. Smith	156.71	
F. C. Warnshuis	7.04	
W. H. Marshall	24.84	
C. M. Williams	15.60	
Telegrams	16.69	
A. L. McWhorter	18.15	
B. R. Corbus	19.25	
Stamps	20.00	
		278.28
June—		
H. G. Smith	82.00	
F. C. Warnshuis	14.70	
G. J. Curry	18.00	
L. J. Goulet	18.08	
		132.78
June—		
W. H. MacCraken	27.29	
J. B. Marsh	2.50	
A. P. Johnson Co.	25.95	
Telegrams	3.66	
		59.40
July—		
B. R. Corbus	45.60	
Carl W. Eberbach	30.00	
Geo. E. McKean	22.00	
		97.60
August—		
H. G. Smith	115.00	
R. S. Cron	75.00	
M. H. Draper	6.25	
J. L. Garvey	110.00	
W. H. Marshall	250.00	
Max Peet	100.00	
		656.25
September—		
A. M. Campbell	10.00	
Geo. L. Le Fevre	5.60	
G. W. Moll	27.25	
Camera Shop	3.60	
A. P. Johnson Co.	8.75	
		55.20
October—		
H. G. Smith	168.90	
C. G. Carling	100.00	
W. J. O'Reilly	4.00	
F. C. Warnshuis	10.60	
Telegrams	5.92	
		289.42

November—

H. G. Smith	58.00
B. R. Corbus	38.00
L. E. McCaffrey	33.24
Forbes Stamp Co.	3.30
A. P. Johnson Co.	55.55

188.09

December—

H. G. Smith	120.00
F. C. Warnshuis	50.50
L. J. Hirschman	7.18
J. B. Jackson	6.85
L. D. Calls	15.75
Supplies .....	.80
U. of M. Union	117.00
Telegrams	2.55
Davis and Ohlinger	3.75

324.38

1,670.34

\$2,708.12

47.64

\$2,650.48

Credits

SOCIETY EXPENSE—1926

January—

L. D. Calls	\$.70
Insurance	6.60
Transfer	4.84
Kardex	466.61
Insurance	55.00
Office Furniture and Supplies ..	60.65
Telegrams	7.59
A. P. Johnson Co.	92.70

\$694.69

February—

Supplies	8.41	8.41
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March—

Supplies	1.35
Manuals	2.50
H. G. Smith	5.50

9.35

April—

Supplies	2.25
Hondelink & Luther	60.00
Hotel Rowe	51.75
A. P. Johnson Co.	25.30
Supplies	1.00

140.30

May—

Audit	145.00
Supplies	3.65
A. P. Johnson Co.	13.10

161.75

June—

L. D. Calls	4.50
Supplies	14.70

19.20

July—

Dunham & Cholette	75.00	75.00
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August—

Supplies	3.85	3.85
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September—

Supplies	25.95
Ward-Schopps	5.75

31.70

October—

Supplies	2.29	2.29
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November—

L. D. Calls	7.55
Supplies	9.23
A. P. Johnson Co.	143.00
Ward-Schopps	66.50

226.28

December—

Supplies	7.78
F. C. Warnshuis	20.00
Clipping Service	2.20
G. R. Insurance Agency	125.00
A. P. Johnson Co.	102.35

257.33

Credits

\$1,630.15

51.50

\$1,578.65

THE JOURNAL

The year 1926 witnessed the completion of the Twenty-fifth Volume of The Journal—a quarter of a century of publication.

This last volume consisted of 684 pages of reading matter, approximately 408 pages of advertising and index of 8 pages or a total of 1,100 pages. The monthly circulation has averaged 3,250 copies.

With the approval of the Executive Committee a change in style, cover, type and arrangement was effected with the beginning of our present volume. Your Editor spent much time and experimentation in this re-arrangement and feels that the present form enhances the appearance of our publication and reflects to our Society's credit.

The total cost for the year was \$14,128.32. Subscriptions and Advertising earnings were \$16,106.40. A profit of \$1,978.08 must therefor be credited for the Journal.

Your Editor is not purposing to comment upon the intrinsic merits of The Journal. Such comments and appraisals must be forthcoming from the Council and our individual members. Our editorial ideals and aims have been and are: To afford a medium for the publication of scientific articles and the recording of scientific progress; the imparting of public health measures and achievements; editorial discussion of scientific advancement, organizational policies and problems, fields of Society endeavor supplemented by comments upon social, economic, and individualistic events, happenings and achievements. The effort was always to interweave a spirit of enthusiasm and increased individual activity on the part of our members to foster fraternalism and the quest for the attainment of better, extended and greater end results that proclaim progress while at the same time commendably acquitting ourselves of the implied responsibilities that warrant our Society's existence and justify its activities; lastly, to cause The Journal to record county and individual effort thereby creating a historical record.

The degree with which these purposes have been attained is not for your editor to appraise. The verdict must emanate from our members. It has also been our desire and purpose to awaken and maintain personal interest by providing an open forum wherein members may voice opinions and suggestions as well as requests and constructive criticisms. In

brief we have sought to cause The Journal in full degree to be the official organ of our Society. We may justly point with pride to the sustained interest that has made possible the realization of a worthwhile publication that creditably reflects our Society's progressiveness.

The Editorial duties are not inconsiderable, on the contrary they consume an increasing amount of time. With expansion in size and form additional hours are demanded in editorial preparation of articles, copy, proof reading and contact with our advertisers. Our mailing problem is one that demands close and constant attention occasioned by a large number of change of addresses. Problems that involve policy or that effect individuals or groups are always submitted to the Publication Committee. I record my expression of appreciation for this valued assistance in the editorial direction of the Journal.

SOCIETY

It may be confidently stated that this past year has witnessed our Society recording the attainment of increased organizational activity and achievement. This has been reflected, with a few exceptions, in every component County unit. It is difficult to record in words, that actually visualize the results, all that has been accomplished. From month to month the Journal has contained records and comments on the year's work. In the Annual Report to the House of Delegates further reports were made. It is germane at this time to enumerate the inclusive scope of the year's record of work.

MEMBERSHIPS

On December 31, 1925 our total membership was 3,013. On December 31, 1926 our membership was 3,065 a gain of 52 members. This numerical strength is represented by the enrollment of the following county Societies:

County	1925	1926	Loss	Gain	Deaths
Alpena	20	19	1	.....	1
Antrim, Charlevoix, Emmet, Cheboygan	17	13	4	.....	.....
Bay	61	63	.....	2	.....
Barry	13	18	.....	5	.....
Benzie	1	.....	1	.....	.....
Berrien	32	37	.....	5	1
Calhoun	102	102	.....	.....	.....
Branch	12	14	.....	2	.....
Cass	8	8	.....	.....	.....
Chippewa-Luce Mackinac	21	21	.....	.....	1
Clinton	13	14	.....	1	.....
Delta	24	21	3	.....	.....
Dickinson-Iron	15	17	.....	2	.....
Eaton	23	20	3	.....	.....
Genesee	110	110	.....	.....	.....
Gogebie	22	27	.....	5	1
Grand Traverse-Leelanau	24	26	.....	2	.....
Gratiot-Isabella-Clare	27	28	.....	1	.....
Hillsdale	21	21	.....	.....	2
Houghton	40	41	.....	1	1
Huron	11	8	3	.....	.....
Ingham	92	86	6	.....	.....

Ionia-Montcalm	31	32	1	
Jackson	75	65	11	
Kalamazoo	111	111		1
Kent	183	190	7	2
Lapeer	21	23		
Lenawee	31	29	2	
Macomb	33	31	2	
Manistee	10	8	2	1
Marquette-Alger	35	33	2	
Mason	8	10	2	
Mecosta	19	19		
Menominee	10	11	1	
Midland	7	7		
Monroe	25	26	1	1
Muskegon	55	61	6	1
Oceana	7	8	1	
Newaygo	9	8	1	
Oakland	74	79	5	3
O. M. C. O. R. O.	7	10	3	
Ontonagon	7	6	1	
Osceola-Lake		1	1	
Ottawa	29	28	1	
Saginaw	61	57	4	
Sanilac	13	11	2	
Schoolcraft	5	5		
Shiawassee	29	27	2	
St. Clair	49	47	2	
St. Joseph	19	21	2	
Tri	18	19	1	
Tuscola	24	22	2	
Washtenaw	110	118	8	
Wayne	1,188	1,228	40	9
Total	3,013	3,065	55	107
		3,013		26
Gain		52		52

DEATHS

Official notice has been received of the deaths during 1926 of the following members:

Name	County	City
McDaniels, F. J.	Alpena	Alpena
Gowdy, Frank M.	Berrien	St. Joseph
Bennie, R.	Chippewa-Luce-Mackinac	Sault Ste Marie
Burch, George	Gogebic	Watermeet
Wheeler, A. R.	Gratiot-Isabella-Clare	St. Louis
Bell, T. H. E.	Hillsdale	Reading
Oliver, W. A.	Hillsdale	Camden
Nichols, H. N. T.	Houghton	Ahmeek
Davey, B. M.	Ingham	Lansing
Hamilton, Isiah E.	Kalamazoo	Lawton
Eaton, Daniel R.	Kalamazoo	Kalamazoo
De Vore, James A.	Kent	Grand Rapids
O'Brien, Stephen L.	Kent	Grand Rapids
Welsh, D. E.	Kent	Grand Rapids
Goeke, J. F.	Manistee	Manistee
Horbogen, H. J.	Marquette	Marquette
Southworth, C. T.	Monroe	Monroe
Barnard, J. H.	Muskegon	Whitehall
Bradshaw, B. C.	Oakland	Royal Oak
Le Baron, Robert	Oakland	Pontiac
Orton, Ellsworth	Oakland	Pontiac
James, Wm. B.	St. Clair	Fort Huron
Ross, Geo. A.	St. Clair	Capac
Smith, S. K.	St. Clair	Port Huron
Wilson, Purvis S.	Shiawassee	Owosso
Miller, C. E.	Tri	Cadillac
Fleming, W. E.	Wayne	Detroit
Kay, Alex D. W.	Wayne	Detroit
Kenney, George W.	Wayne	Detroit
Mooney, E. W.	Wayne	Detroit
Oakman, Charles H.	Wayne	Detroit
Rich, H. M.	Wayne	Detroit
Seager, Geo. B. M.	Wayne	Detroit
Shaffer, John R.	Wayne	Detroit
Sullivan, D. B.	Wayne	Detroit
Williamson, Hedley	Wayne	Detroit

The passing of a fellow member to that unknown bourne ever records the termination of a life that has been concerned and devoted to mankind. No doctor, great or small, but what sometime or other during the labors of the day performs some human service, contributing thereby to mankind's welfare. Far too frequently do his services of love go unsung and unrecorded. Finally when his day of labor

is over, he is laid in his last resting place and none but his immediate family and relatives retain the sacred memories of his life of devotion. It is the irony of fate. As we officially record their deaths, the thought is ever recurrent that we as a profession might well erect a lasting tribute to our fellow members by placing in our Capitol City or on our University Campus a monument, enduring for all time, to our deceased members. In so doing we perpetuate the lives and labors of fellow doctors of medicine who gave of self that all life in our Commonwealth might be enhanced and pursued, safeguarded by the ministrations of scientific medicine.

POST GRADUATE CONFERENCES

Following is a list of Post Graduate Conferences conducted during 1926:

District No.	City	Date
2	Jackson	May 25
4	Kalamazoo	March 16
6	Owosso	December 1
7	Port Huron	December 10
8	Saginaw	December 9
9	Manistee	November
10	Bay City	January 26
11	Fremont	June 2
12	Escanaba	July 27
12	Marquette	July 28
12	Houghton	July 29
12	Ironwood	July 30
13	Cheboygan	June 9
14	Adrian	March 9

It is quite apparent that this feature of education commands the approval of our members as testified to by their enthusiastic support. It is also quite apparent that a continuance of these Conferences is indicated during the coming year. The recommendation is however, that they be limited to one for each Councilor District. Second, that these be supplemented by three Clinical meetings of two or three days duration conducted at the University Hospital, Detroit, Flint and Grand Rapids. Third, that County Societies be requested and induced to hold three or four such Conferences of a whole or half day and that this office arrange a corp of speakers for such county meetings which will be for county members. It is apparent that such a plan will achieve better results, be further reaching and will enhance County Society activity. The need existent is that these Clinical Meetings be extended to the County unit instead of a district.

ANNUAL MEETING

A conference between Section officers and the Executive Committee was held on December 9, 1926. Plans for our Annual Meeting were formulated and the dates of June 16, 17 and 18th were selected. Full details as to program, features and ar-

rangements will be published in The Journal.

LEGISLATIVE BUREAU

One of the outstanding accomplishments of the year was the Legislative Conference held in Lansing in November. For the first time in our history representatives from all organizations in the state concerned with medical practice, education, public health and social agencies met to discuss their individual and inter-related legislative problems. The formation of a Legislative Bureau composed of one representative from each organization resulted. It must be apparent that from this association there will emanate a unity of expression and action upon all legislation pertaining to medicine, health and public welfare.

ENDOWMENT FOUNDATION

Following instructions from the House of Delegates your Secretary entered into negotiations with the Grand Rapids Trust Company. As the result of numerous conferences articles of incorporation were drawn up and executed.

The Foundation having been created your Secretary purposes, with the Council's assistance, to solicit bequests and contributions.

RED CROSS EMERGENCY RELIEF

Conforming to the action of our House of Delegates the American Medical Association Red Cross plan of Emergency Medical Relief has been presented to all our component units, and local teams are under the direction of the Secretary and President of County Societies.

The foregoing together with the reports that were made at our Annual Meeting impart the essentials of the year's attainments. In recapitulation they may be enumerated as:

1. Joint Committee on Public Health Education.
2. Creation of a Women's Auxillary.
3. Post Graduate Conferences in Councilor Districts.
4. Post-Graduate Clinic at the University.
5. American Medical Association plan of Emergency Medical Relief.
6. Periodic Physical Examinations—Distribution of the Manual and Examination Blank File System.
7. Creation of a Legislative Bureau constituted from all State Organizations concerned with Medical and Public Health Work.
8. Creation of an Endowment Founda-

tion for Medical Educational Extension work among our members.

9. Instituting the Compilation of a Medical History of Michigan.

10. Conducting a Hospital Survey seeking solution of the problem of Medical Charity.

11. Instituting Investigations of Violations of our Medical Laws.

12. Providing Clinical Instructors for County Programs.

13. Completing a Survey of the Distribution of Doctors throughout the State.

14. Imparting by Counties, existing mortality in the more common diseases preliminary to County surveys of local conditions and instituting measures to reduce this mortality rate.

15. Formulation of a Minimum Program of County Society work.

16. Annual Conference of County Secretaries.

17. Medico Legal Defense for members.

18. The Journal.

19. Our Annual Meeting.

20. Consideration of a Plan and the feasibility of establishing a Post-Graduate all year Medical School.

21. Co-operation with the State Department of Health.

22. Providing Speakers for High School Health Lectures.

23. Correspondence.

This tabulation, especially when one scrutinizes the intrinsic scope of each undertaking, answers in no indefinite terms, the "whats and whys" of our Society's existence, the value of memberships and the year's attainments. Words or figures will never set forth the time devoted to the direction and supervision of the host of attendant details. They do however, set forth the Council's acquittal of the trust reposed.

The progress recorded does not permit us to lessen our functions or limit future building. We have a two fold obligation that is definite in its scope. The education of the Public in regard to scientific medicine and all that it holds for their physical welfare and increased longevity; Second, the education of doctors in order that they may remain abreast of our scientific progress, exhibiting an individual capability so as to render to the public the highest type of efficient service. These two outstanding fundamentals must ever be foremost in our thoughts, deliberations and enactments. They must dominate our policies and direct our undertakings. They supply the ideal and indicate the summit toward which our efforts are to be cen-

tered. In accordance with which I tender the following recommendations:

RECOMMENDATIONS

1. That existing policies regarding our Annual Meeting, Publication of The Journal, Medico-Legal protection, Legislation and scope of committee activity be continued.

2. That one, and in some districts, possibly two, Councilor District Post-Graduate Conferences be conducted in accordance with the details disclosed by the Executive Committee.

3. That modified programs be arranged for County Societies for which this office will arrange for speakers.

4. That the County Societies be urged to continue functioning under the Minimum Program plan and that each Councilor shall present this program to each County Society during the next sixty days.

5. That a continuance of endeavor be evidenced to attain the founding of a Post-Graduate Medical School.

From these general policies there will in course emanate those concurrent executive labors that characterize this administrative work.

COUNTY SECRETARIES CONFERENCE

By reason of the value recorded in previous Secretaries' Conferences, it is recommended that the Executive Committee be authorized to arrange for a Secretaries' Conference during the year 1927.

CONCLUSION

I have purposely with-held the injection into this report of extended comment or recommendation. Our objective and manner of attainment is definitely established. The methods of accomplishment quite naturally develop and confront us as advancement is recorded. Under the advice and guidance of the Executive Committee the details are enacted and procedure defined as each problem or situation is encountered. This is a most satisfactory arrangement assuring supervision that reflects the judgment of five officials, thereby minimizing error in omission as well as commission.

By way of criticism and general appraisal my contact with our work calls up one general conclusion and observation. We have, as indicated, a definite objective. We have the requisite organizational machinery. Our numerical strength is well nigh 100 per cent. Component units, by reason of excellent work on the part of a few in each County Society, are in a

healthy state. But notwithstanding there is a palpable lack of what I term, "the will" to do, for intensive realization. The spirit is palpable but "the will" to enact the spirit is feeble and often times of negative potentiality. We therefore plead for a wholesome development of willingness in order that our State Society may be greater, stronger and broader in value and function.

Lastly, I desire to express and record my personal feelings of appreciation for having been permitted to complete another year of service. The confidence manifested has ever been a source of inspiration. My appreciation is voiced in the efforts expended and the labor that stands recorded.

Respectfully submitted,

F. C. Warnshuis,
Secretary-Editor.

2. The several sections of the Secretary-Editor's report were referred to the Standing Committees of the Council.

3. The Treasurer, John R. Rogers, submitted his Annual Report of the funds of the Society in his possession, confirming the report of the auditors. On Motion of Dr. Corbus, supported by Dr. Powers, the policy of conferring with the Chairman of the Finance Committee and the Treasurer in the investment of surplus funds of the Society was recommended.

4. Dr. F. B. Tibbals, Chairman of the Medical Legal Committee submitted the following as his Annual Report:

Detroit, Mich.,
January 19th, 1927.

To The Council,
Michigan State Medical Society.

The year just past closes seventeen years' work for this Committee with two of the original members still interested in the work and the same trial lawyer.

A brief resume may interest the Council and the profession. In these seventeen years, there have been reported to this Committee 439 cases of alleged malpractice, in 216 of which suit has been started and about 50 per cent of the latter were actually called for trial.

But two cases handled entirely by us have resulted in final adverse verdicts and these were tried by high-grade local attorneys, since which time Mr. Barbour has tried all our out of town cases. Several cases defended jointly by ourselves and some Insurance Company have had judgments finally paid by the Insurance Company. There have also been a number of

cash settlements during trial by the Insurance Company and a number of small cash settlements before trial, mostly by the uninsured doctor, either with or without our advice. The largest Insurance Company settlement was \$2,100.00. The largest settlement by a doctor was at \$1,000.00. The largest verdict rendered was for \$15,000.00, the case being still in appeal. The largest judgment paid by an Insurance Company was for \$7,500.00. There is a distinct tendency toward larger verdicts and also an increasing percentage of these malpractice threats and suits.

There has been much improvement the past 10 years in the attitude of the profession toward these suits with an increasing unwillingness to mix in a purely legal matter as a witness against a brother practitioner. Medical experts are necessary for the plaintiff to make out a case and in those communities where no local doctor will testify for the plaintiff the suit is seldom tried. A subpoena can force any doctor to testify to fact but not as an expert. In theory the rights of the public might seem jeopardized were every doctor to refuse to testify for the plaintiff in a malpractice suit. But actually the percentage of real malpractice from the medical viewpoint is so exceedingly small that a possible injustice in one just case would be offset by positive justice in 99 other cases. It is a conclusive fact based on the non-success of almost all these suits that almost all of them are essentially blackmail.

As an evidence of the success of our protection, we might mention the statement of the Insurance Company having the largest number of policyholders in Michigan that the cost of defense is lower in Michigan than anywhere else because of the cooperation of the Medical profession. It is our aim to extend protection to our members, even outside of strictly civil malpractice in so far as our funds permit and we have handled with success a number of cases outside the strict malpractice field.

It should always be remembered, however, that statements which cannot be proven, in court if need be, should not be made regarding the character or ethics of another practitioner. Our bank balance seems ample to meet all necessary demand in this and succeeding years.

Respectfully submitted,

F. B. Tibbals, Chairman.
 Angus McLean.
 W. J. Stapleton, Jr.
 James D. Bruce.

5. On motion of Councilor Green, supported by Councilor Cook, the minutes of the Executive Committee as published and the actions therein recorded were approved and made part of the regular minutes of the Council.

6. Dr. Reuben Peterson, State Director of the American Association for the Control of Cancer, addressed the Council on Cancer Propaganda and Methods of Public Education for the State. He made the request that the Council assume direction and control of this educational work in Michigan. The matter was referred, after some discussion, to the Council's Committee on County Societies to report at the Tuesday morning session of the Council.

7. Mr. Werle, Secretary of the State Tuberculosis Society addressed the Council upon the question of the repeal of the bill introduced in our State Legislature providing for a new Sanatorium for tuberculosis in connection with the University Hospital at Ann Arbor. On motion of Councilor Charters, supported by Councilor Burke, the following resolution was adopted:

"That the Council of the Michigan State Medical Society, representing the organized medical profession of Michigan, vigorously protest against any and all attempts that are being made to cause the repeal of this bill thereby preventing the construction of this much needed Tuberculosis Sanatorium.

The Tuberculosis Committee and the Michigan Legislative Bureau shall promptly and vigorously institute such proper representation before our Legislature for the purpose of securing the defeating of the bill that seeks to repeal provisions previously enacted for the erection of this sanatorium.

"The Council further directs that the Secretary shall present this matter to the several component County Societies requesting them through their representative committees to file similar protest with Representatives and Senators at Lansing." Carried.

7. Communications were presented by the Secretary from Dr. W. A. Chapman and Dr. Ferdinand Cox. These communications were accepted and ordered filed.

The First Session adjourned at 5:00 p.m.

SECOND SESSION

The Council convened in second session at 9:00 a. m., January 25, 1927, with Chairman, Dr. R. C. Stone, presiding and the following Councilors present:

Doctors Stone, Charters, Burke, Powers,

Boys, Corbus, Cook, Green, Ricker, MacKenzie, President J. B. Jackson, Treasurer John R. Rogers, and Secretary-Editor F. C. Warnshuis.

1. Dr. B. R. Corbus, Chairman of the Committee on County Societies, reported as follows:

"Your Committee recommends that the plan for the conducting of District Clinical Conferences and County Society Post-Graduate Conferences, as outlined by the Secretary-Editor in his Annual Report, be approved and inaugurated; we further recommend the approval of the other organizational activities as outlined by the Secretary in his Annual Report.

"In regard to the program of activity for the education of the public in the matter of cancer and early detection of cancer, your Committee recommends in general, that this program be endorsed; that the Council further go on record as endorsing the plan for Michigan as outlined by Dr. Reuben Peterson with the provision that all activities shall be under the direct control of the Council through the Councilor of each district, and that all publicity and supervision of clinics shall be under the direct control of each Councilor for his district."

On motion of Councilor Charters, supported by Ricker, the above report was adopted.

PUBLICATION COMMITTEE

2. The Publication Committee made the following report:

"To the Council of the Michigan State Medical Society: Your Committee wishes to register their appreciation of the excellent condition in which the Journal of the Michigan State Medical Society is today, not only for the gratifying financial profit for the last fiscal year but for the general improvement in quality and interest of the Scientific articles, reports of public health measures and achievements, medical news and editorial comments.

"The Committee approve the change in cover, style, type and arrangement of the last number and recommends its continuance in future issues.

"The Committee also feel that the splendid condition of The Journal is due to the untiring energy and unusual ability of the Editor and take this means of expressing their satisfaction and approval.

Dr. J. D. Bruce,
Dr. B. F. Green,
Dr. Henry Cook."

On motion of Councilor Boys, supported by Powers, the report was adopted.

FINANCE COMMITTEE

3. The Finance Committee recommends the adoption of the budget for 1927 as outlined in the Secretary-Editor's report, and in view of the fact that the budget made no provision for the salary of the Secretary-Editor, this having been left open for the decision of the Council, on motion of Councilor Powers, supported by Boys, the Council fixed the salary of the Secretary-Editor as \$3,000 as Editor of the Journal and \$1,000 as Secretary of the Society.

On motion of Councilor Corbus, supported by Boys, the budget with the above addition was adopted.

4. On motion of Councilor Bruce, supported by Powers, the Council approved and endorsed the recommendations made by J. D. Bruce and his Committee for the institution of a Post-Graduate School in connection with the University of Michigan Department and directed that the Secretary transmit this report to the President and the Regents of the University with the request that early action be taken to institute the recommendations therein contained.

Carried.

ELECTION

5. On motion of Councilor Charters, supported by several, the Chairman of the Council was requested to cast the ballot of the Council for Dr. F. C. Warnshuis as Secretary-Editor for the ensuing year. The Chairman did so cast and declared Dr. Warnshuis elected.

On motion of Councilor Corbus, supported by Ricker, the Secretary was directed to cast the ballot of the Council for John R. Rogers as Treasurer for the ensuing year. The Secretary did so cast and the Chairman declared Dr. Rogers elected Treasurer.

On motion of Councilor Cook, supported by MacKenzie, the Secretary was directed to cast the ballot of the Council for all the members of the Medical Legal Committee whose terms expired January 1, 1927. The Secretary did so cast and the Chairman declared the following elected as members of the Medical Legal Committee:

F. W. Tibbals, Detroit; E. C. Taylor, Jackson; Angus McLean, Detroit; W. J. Stapleton, Detroit.

There being no further business the Council adjourned at 11:00 A. M.

Frederick C. Warnshuis,
Secretary-Editor.

O U R O P E N F O R U M

Affording Opportunity for Personal Expression

WISCONSIN MEETING

Editor of The Journal:

Just a note to advise you that the dates for our next meeting at Eau Claire, Wisconsin, are as follows:

House of Delegates—Tuesday evening, September 20th.

General Sessions—Wednesday, Thursday and Friday, September 21, 22 and 23.

Cordially yours,

J. G. Crownhart, Secretary.

COLLEGE OF SURGEONS

Editor of The Journal:

The American College of Surgeons will hold its 1927 convocation and clinical congress in Detroit and Ann Arbor from Monday, October 3rd, 1927 to Friday, October 7th, 1927. The headquarters will be at the Book-Cadillac and Statler hotels.

The following is the Committee on Arrangements:

Alexander W. Blain, Chairman; Angus McLean, Walter Parker, Harry Torrey, Louis J. Hirschman, Reuben Peterson, Harry Plaggemeyer, Max Ballin, Harper Hospital; Roy D. McClure, Henry Ford Hospital; Hugh Cabot, University Hospital, Ann Arbor; Herbert W. Hewitt, Grace Hospital; Frederick C. Kidner, Children's Hospital; Leo Dretzka, Detroit General Hospital; Walter Hackett, St. Mary's Hospital; Wm. J. Seymour, Providence Hospital; Frank C. Witter, Highland Park General Hospital; Hollister Judd, Woman's Hospital; Ira G. Downer, Jefferson Clinic & Diagnostic Hospital; Joseph Andries, St. Joseph's Hospital; Grover Penberthy, Michigan Mutual Hospital; E. C. Baumgarten, Deaconess Hospital; Burt R. Shurley, Detroit Eye, Ear, Nose and Throat Hospital.

Sub-Committee on Eye, Ear, Nose and Throat:

Burt R. Shurley, Chairman; Don M. Campbell, Walter Parker.

Sincerely yours,

A. W. Blain, Chairman.

Editor of The Journal

I am not writing this for publication as I dislike publicity—but I want to tell you personally what I think of the January number of The Journal of the State Society. I have always valued it. Enjoy reading every copy and get much benefit from it. No doctor in Michigan can afford to be without it. The January copy is even better. Not only is the cover attractive, but the subject matter, both papers and editorials, of much value. I wish to congratulate you and feel that the State Society has reason to be proud.

As I am convalescing from a very serious operation done on me only four weeks ago and am

not very strong, my writing is poor and I have no secretary at home, but I want you to know personally that I value and appreciate your efforts. I expect to be at the Battle Creek Sanitarium this Saturday night—for a few days—just how long I don't know. But if you happen to be near Battle Creek, I would like to see you. With kindest personal regards, I am

Very sincerely yours,

W. K. West.

Editor of The Journal:

I am enclosing report of January meeting and the questionnaire you sent me some time ago.

Your letter in answer to my questions regarding the use of the Society dues and your opinion of the formation of the Adrian Medical Society, will be very helpful to me this year. I have also heard from Dr. Bruce and hope to have him attend one of our meetings in the future, in order that he can talk to our members personally. I am also sending him a list of non-members.

In anticipation of the State Meeting at Mackinac Island in June, Dr. S. J. Rubley, of Monroe, and myself, wish to issue a challenge to any member or members of the State Society to a contest on the golf course, we to use the bow and arrow and the golfer to use the tools of his sport in a regular round of 18 holes. We also challenge any other archers who may be there to shoot with us in whatever manner may be best suited at the time.

Hoping this challenge will be directed in the proper channels, I remain,

Sincerely yours,

R. G. B. Marsh,

Secretary Lenawee County.

Editor of The Journal:

The new cover on your January issue is very attractive; but we cannot altogether agree with the theory that it is unethical to put advertising on the front cover, which is the natural inference when advertisements no longer appear there. Your Journal has many excellent features, such as good paper, good print, with the matter segregated under proper headings, such as "Monthly Comments," "County Society Reports," etc. You know just where to find what you want. But we miss the "Council Reports" sent out each month by the Secretary of the Council on Pharmacy and Chemistry. About 50 per cent of the members of your State Society are not Fellows of the A.M.A. and, therefore, have no means of seeing the Council reports unless you print them. Medical Journals which do not have the Council's standards could not afford to print the reports as these reports would often be directed against their own advertisers. The State Journal is the only publication in which all the members of the State Society can secure this information. If the reports take up too much space, would it not be feasible

to give the substance of them under "Monthly Comments?"

You have a good Journal, but may be some of the things we suggest would help to improve it still more.

Very truly yours,

Co-Operative Medical Advertising Bureau,
E. W. Mattson, Manager.

January 29, 1926.

Mr. E. W. Mattson,
Co-Operative Advertising Bureau,
Chicago, Illinois.

Dear Mattson:—

I have your letter of the 28th and note your comments regarding the cover page of our Journal. We did not withdraw the advertisements from the cover page for any ethical reason. It was simply typographical appearance and from the issue that has gone forth we have nothing but 100 per cent of comments and approval.

I note what you say regarding the reports of the Council on Pharmacy. For a number of years I ran these comments, but it just seemed to me that they were of no interest or at least very little interest to our members and were issued in a form and style that was not inducive to their being read. Inquiry established the fact that they were not being read and consequently we have omitted them.

It would seem to me that the Council might, with a little thought and study, adopt a different style of presentation for their reports so as to make them easy reading matter and cause them to arrest the attention of our members. When that is done I will be glad to reinstate them in our Journal.

Yours very truly,
Secretary-Editor.

WASHINGTON ARTICLE IN THE FEBRUARY ISSUE

The following are a few of the comments received:

"Enjoyed the Washington article."—O. L. Ricker, Cadillac.

"The Washington article was fine and interesting."—Woodburne, Hastings.

"Give us more articles like the Washington article in the February Journal."—Marsh, Tecumseh.

Note—We are pleased that the article in question afforded our members so much pleasure. Sure, we will publish more of them provided members will write them—send on your manuscripts.—Editor.

Editor of The Journal:

Since having been elected last fall an honorary member of the Michigan State Medical Society, I have been in regular receipt of that Society's Medical Journal.

At this rather late hour I wish to say that I appreciate this distinct favor and sincerely thank you for it. But owing to failing eyesight due to progressive opacity of the lens, I have been able to give it only a partial or imperfect reading—very much to my regret.

I want also to say that judging from this im-

perfect reading, you are issuing a fine, up-to-date and progressively scientific Journal, one that is not only an honor to the State Medical Society but to progressive medicine anywhere.

In view of my increasing blindness I feel that I can hardly encourage you to continue your trouble and expense in sending me the Journal. I wish also to congratulate you for the good work you are doing in conducting this outstanding Medical Journal.

Most Sincerely Yours,

John P. Stoddard, M. D.

Editor of The Journal:

Just a line to again thank you for your visit last night. The fellows were all much pleased with the talk you gave us.

The ladies organized an auxiliary with officers as follows: Mrs. Kellar, president; Mrs. Woodburne, secretary; Mrs. Swift, treasurer.

I enclose one or two samples of our medical publicity matter. The roster of names cost us \$125 for a year. The health talks are inserted gratis.

Yours most sincerely,

A. W. Woodburne, M. D.

Editor of The Journal:

On March 8th, the Calhoun County Medical Society anticipates entertaining Dr. Elliott P. Joslin of Boston. The Sanitarium is extending a complimentary banquet to all physicians attending the meeting. This banquet will be given here at the Sanitarium dining room at 7 p. m., Eastern Standard time.

We wish you would extend the invitation to all of the members of your county society to attend this meeting. In fact, I think it would be well to put a notice in the Journal. It will be necessary for the doctors who plan to attend the banquet to notify us in order that we may have places reserved for them, otherwise there is apt to be some disappointments. Dr. Joslin's lecture will be given immediately following the banquet. I would be very happy if you could be here in person and bring as many of your friends along as possible.

We also anticipate being entertained by Dr. F. H. Albee of the New York Post-Graduate school with a lecture illustrated by stereopticon and moving picture films. This will be held at the Kellogg Toasted Corn Flake company here. At the same time the Kellogg company anticipates putting on a demonstration of their method and system of caring for their industrial surgical cases. This will be a very interesting meeting and we would also extend the same invitation to members of other county societies to be present. This meeting will be held April 5, 7:30 p. m. Eastern Standard time.

Sincerely yours,

W. F. Martin, M. D.

Editor of The Journal:

Word has come to us that Dr. Joslin, of Boston, Mass., is coming to Battle Creek to speak before our Society on March 8, 1927. His subject will be "The Diabetes of Today." On account of the reputation of Dr. Joslin, as an authority on this

subject, we are extending an invitation to the medical profession in the State to attend this meeting, and owing to the number which are likely to be present it will be well for those expecting to attend to let us know in advance.

It will be an evening meeting preceded by a dinner. Details may be had by writing us.

We also have Dr. Fred H. Albee, of New York city, scheduled for our April meeting, when he will talk to us on ununited fractures.

The Michigan Society for Crippled Children expects to put on a Clinic in this county, at Albion, sometime during the month of May. The preliminary survey of crippled children in this county is now going on.

Yours very truly,

Harry B. Knapp, Secretary.

Editor of The Journal:

I will consider it a courtesy if you will publish this letter in your Journals, as I am anxious to come in correspondence with pathologists and surgeons interested in the immediate examination, by frozen section, of tissue in the operating room and the immediate cover-slip studies of smears from all fluids and pus.

Microscopic examination of stained frozen sections has been possible for more than a quarter of a century. The staining of unfixed frozen sections with polychrome methylene blue and other stains is a well-established procedure. In many operating rooms in university and other large and small surgical clinics, provisions for these immediate diagnostic studies have not only been available, but have been in practical use for years. While, unfortunately, on the other side, this diagnostic part of the operating room is conspicuous by its absence in many clinics.

Before 1915 it was rarely necessary for a surgeon well trained in gross pathology to need a frozen section to help him in diagnosis at the operating table. Since 1915, and especially since 1922, the public has become so enlightened that malignant disease formally easily recognized either clinically or in the gross, now appears in our operating rooms devoid of its easily reorganized clinical and gross appearance and can only be properly discovered by an immediate frozen section. The majority of operating rooms are not equipped or prepared for this new diagnostic test.

The first essential part for this diagnosis is the technician—one to cut and stain the frozen section, or to make and stain the smear. The second is a pathologist trained to interpret it. It is possible for the surgeon to be all three in himself, and some young surgeons are so equipped. In others it is a dual combination—surgeon and pathologist in one, and the technician. More frequently it is three—operator, technician and pathologist. It makes little difference whether it is one, two or three individuals, providing each has the equipment and training for this most difficult diagnostic test.

In the address as chairman of the surgical section of the Southern Medical Association, I dis-

cussed biopsy, and this paper has been published in the Southern Medical Journal for January 1927 (Vol XX, page 18). A report of this paper will be sent to anyone on request. The chief object of this letter is to come in contact with surgeons and pathologists who are sufficiently interested in this problem to discuss it either by correspondence, or by attending a matter in the surgical pathological laboratory of the Johns Hopkins Hospital, either the Monday before, or the Friday after the meeting of the American Medical Association in Washington.

Schools for technicians may have to be established in different sections of the country, and the surgical pathological laboratories of the medical schools and the larger surgical clinics should offer courses in this tissue diagnosis, so that surgeons may learn to become their own pathologists, or pathologists learn the particular needs of the surgeon in tissue diagnosis in the operating room.

It is quite true that when the majority of the public are fully enlightened, the surgeon will see lesions of the skin and oral cavity and the majority of subcutaneous tumors when they are so small that their complete excision is not only indicated, but possible without any mutilation. The chief danger here will be a surgical mistake—the incomplete removal of an apparently innocent tumor. There is no necessity here for biopsy. If a proper local excision is done, no matter what the microscope reveals, that local operation should be sufficient. But when lesions of the skin, oral cavity and soft parts are extensive and their complete radical removal mutilating, then there must be biopsy to establish the exact pathology.

In tumors of the breast and disease of bone, for years, the diagnosis could be made clinically, or from the gross appearances at exploration. But now, an increasing number of cases, the breast tumor must be explored, and the gross pathology of this earlier stage is not sufficiently differentiated to allow a positive diagnosis. Immediate frozen sections are essential to indicate when the complete operation should be done. The same is true of the earlier states of lesions of bone. The X-rays no longer make a positive differentiation between many of the benign and malignant diseases, for example, sclerosing osteomyelitis and sclerosing osteosarcoma.

We must not only specialize in tissue diagnosis, but we must organize this department so it will function properly in as many operating rooms as possible in this country.

Then there is a final and most difficult question to consider. I doubt if it can be settled. What shall be done in those operating rooms in which there is no technician to make the sections and no one trained to interpret the microscopic picture? How can a piece be excised or a tumor removed, for example, from the breast, and this tissue sent to some laboratory for diagnosis without incurring the risk of the delay to the patient. I have discussed this point in my paper on biopsy.

Joseph Colt Bloodgood,

Surgical Pathological Laboratory,

Johns Hopkins Hospital.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. J. D. Bruce spent three weeks of February in Florida.

Dr. Burt R. Shurly was elected president of the Detroit Tuberculosis Sanitarium at the January meeting of the board of trustees.

We are in receipt of a card from Dr. Van Leuven of Petoskey stating that he is getting some splendid work in the Clinics of London. The doctor will return the first of June.

Remember the dates of the American Medical Association meeting in Washington, D. C.—the week of May 16th. Make your hotel reservations early.

A news item states that a St. Louis physician was shot because he declined to make a night call. It has been noted since that doctors are now promptly responding to their night calls—because who wants to be shot.

Attention is called to the correspondence column where a communication from the Calhoun County Society announce that Dr. Joslin of Boston will address their meeting on March 8th. The profession is invited.

As a testimonial of esteem and appreciation for the service rendered and time contributed to the work of our State Society, the Council presented a handsome traveling bag to President J. B. Jackson. The presentation was made at the January meeting of the Council.

The following examination dates have been assigned by the American Board of Otolaryngology:

Washington, D. C.—Episcopal Eye, Ear and Throat Hospital, Monday, May 16, 1927 at 9 o'clock.

Spokane, Washington—Saturday, June 4, 1927 at 9 o'clock.

The Board of Trustees, Butterworth Hospital appointed the following Executive Committee for a period of two years: R. B. Corbus, Chief of Staff; F. C. Warnshuis, Vice-Chief; A. J. Baker, Chief of Medicine, R. W. Webb, Chief of Surgery; J. R. Rogers, Chief of E. E. T.; Fred Larned, Chief of Pediatrics; H. S. Collisi, Chief of Obstetrics. James Brotherhood, Vice in Medicine, and A. B. Smith, Vice in Surgery.

At the last annual meeting of the Port Huron Hospital, Drs. R. K. Wheeler and George Waters were elected to the board of Trustees.

Dr. R. K. Wheeler was elected Medical Director in my place. I resigned after completing 25 years of service in that capacity.

The hospital during the past two years has done everything required by the American College of Surgeons to place it on the recognized list of hospitals.

Dr. William Derck, Chief of Staff; Dr. A. McKenzie, Chief of Surgical Section; Dr. D. J. McColl, Chief of Obstetrical Division; Dr. D. Patterson, Chief of Urology; Dr. T. Heavenrich, Chief of Medicine, and Dr. George M. Kesl, Chief of Dermatology.

Members of the new medical board of the Woman's hospital of Saginaw, were chosen Monday at a luncheon of the visiting staff of the hospital. The members of the board are Dr. J. H. Powers, Dr. Ralph S. Jiroch, Dr. T. M. Williamson and Dr. H. B. McCrory to serve for three years; Dr. A. R. McKinney, Dr. A. H. Leitch, Dr. F. W. Freeman and Dr. L. C. Harvie, for two years; Dr. Martha Longstreet, Dr. B. B. Rowe, Dr. A. R. Ernst and Dr. G. H. Ferguson, for one year.

Officers selected by the board are: President, Dr. J. H. Powers; vice-president, Dr. G. H. Ferguson; secretary, Dr. H. B. McCrory. Staff meetings will take place either monthly or semi-monthly, with luncheon to be served before the meetings.

DEATHS

Doctor G. W. MacKinnon of Oxford died suddenly Friday morning, January 21, at Lakeland, Florida, where he had gone for a much needed vacation. Dr. MacKinnon was born October 4, 1859 in Port Burwell, Ontario. He graduated from the Bellevue Medical College, New York City in 1890, and practiced in Detroit and Northville and also at Granite, Montana. He also practiced at Orion and from there returned to Detroit, but in 1896 he located at Oxford and for 30 years has been prominently identified with the affairs of Oxford, not only as a physician but as a bank president. During the World War Dr. MacKinnon served as Captain and was a most efficient officer. He was a member of the Oakland County Medical Society, Michigan State Medical Society, American Medical Association and the Military Surgeons of the U. S., and also various Fraternal Orders.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

To County Officers:

During February a letter was addressed to each County Secretary requesting information for our 1927 Post-Graduate Conferences and Clinical Programs for County Meetings. We urge that the information sought be promptly supplied in order that we may formulate these programs and arrange for speakers.

Dues—Members whose dues are unpaid by the end of March are placed on the suspended list. Please make an effort to get these dues in by March 28th.

Reports—This issue again contains some splendid reports. These County organizations are justifying their existence. Some secretaries fail to send in a report of their meetings—won't every Secretary keep us and their sister units informed as to what they are doing? Please supply us with a report of every meeting.

Secretaries Conference—The Council has directed that we arrange for a 1927 Secretaries Conference to be attended by all County Secretaries and Presidents. We are asking that you write and tell us when and where you want this Conference held. Please express your preference and any suggestions you may have.

JACKSON COUNTY

Officers for 1927 elected December, 1926: President, Corwin S. Clark, M. D., Jackson; Vice-President, James J. O'Meara, M. D., Jackson; Secretary, D. Burr Marsh, M. D., Jackson; Treasurer, F. Gerald Ransom, M. D., Jackson; Delegate, Harold L. Hurley, M. D., Jackson; Alternate, Corwin S. Clark, M. D., Jackson.

D. B. Marsh, Secretary.

CHIPPEWA, LUCE AND MACKINAW COUNTY

At last meeting of Chippewa, Luce and Mackinaw Medical Society the following doctors were elected as officers for 1927: President, C. J. Ennis; Vice-President, E. H. Webster; Secretary-Treasurer, I. V. Yale; Delegate State Meeting, C. J. Ennis, and Alternate, G. A. Conrad.

Very truly yours,

I. Victor Yale, Secretary.

ALPENA COUNTY

On December 16, 1926 at the Annual business meeting of The Alpena County Medical Society

the following officers were elected: President, Dr. F. J. O'Donnell, Alpena; Secretary, D. W. B. Newton, Alpena; Delegate, Dr. C. M. Williams, Alpena.

I am giving you this for your files and for revision of your list of officers of county societies.

W. B. Newton, Secretary.

GRATIOT-ISABELLA-CLARE CO.

We had one of the most interesting meetings we have had, January 27. When Dr. M. J. Budge talked from notes on how he advised, and treated his pregnant patient from the time she first visited his office on through her confinement and puerperium. The doctor presented the subject in such an interesting way that nearly every one present had something to say in the discussion.

E. M. Highfield, M. D. Secretary.

BERRIEN COUNTY

Newly elected officers for 1927 are: President, R. B. Howard, Benton Harbor; First Vice-President, Orville Curtis, Buchanan; Second Vice-President, H. G. Bartlett, St. Joseph, and Secretary-Treasurer, W. C. Ellett, Benton Harbor.

Have you any more good speakers, that we can get to come down here this year.

We are off with a bang for 1927. January meeting largest in several years.

Give me some help and we will make this territory known for other things than King Ben and fruit.

W. C. Ellet, M. D., Secretary.

SCHOOLCRAFT COUNTY

The Schoolcraft County Medical Society met on evening of January 17, and elected the following officers: President, Dr. J. W. Saunders, and Secretary-Treasurer, Dr. S. Stevens, both of Manistique.

Dr. W. K. Wright was expelled from membership on account of his conviction here in Circuit Court of manslaughter. I will enclose newspaper reports.

I was instructed to bring this matter to the attention of the Board of Registration. How is this done, can it be done from your office?

Yours truly,

S. Stevens, Secretary.

SHIAWASSEE COUNTY

The February meeting of Shiawassee County Medical Society was held at Memorial Hospital, Owosso, on February 1, at 8 p. m. Dr. John Garven, of Ann Arbor addressed the society on "Essentials of Neurological Examinations."

Several cases were presented for examination, to illustrate the subject which was treated in a very instructive manner.

A very good attendance was present from the county and seemed well pleased with the doctor's address.

The nurses' staff served hot coffee and doughnuts at the close of the meeting.

W. E. Ward, Secretary-Treasurer.

BAY COUNTY

A regular meeting with 35 members present was held at the Grotto club Monday evening, January 31. It was addressed by Dr. Burns Amberson, Tuberculosis Consultant, of Detroit. Dr. Amberson gave a most interesting illustrated talk on the "Diagnosis and Treatment of Pulmonary T. B."

Dr. Charles Groomes, F. A. C. S., of Elkins, W. Va., was received into membership.

The society will hold the Tri-County (Saginaw, Flint, Bay City) medical meeting in Bay City, Wednesday, April 27. The speaker will be Dr. Chevalier Jackson, Philadelphia.

L. Fernald Foster, M. D., Secretary.

BARRY COUNTY

We were favored in having our State Secretary with us at our monthly meeting held January 10, Dr. Warnshuis outlined the State Society's program in its varied activities for this year as well as its wider outlook for future years.

The members were very well satisfied with the progress that is being made in the newer fields of activities of our State Society.

The question of free clinics was brought up and discussed. The unanimous opinion of the members present was that the clinical material that shall be brought in, as well as the place and time of holding these clinics, shall be controlled by our County Medical Society.

G. C. Keller, Secretary.

ST. JOSEPH COUNTY

At its annual meeting in January the St. Joseph County Medical Society elected the following officers: President, Dr. C. G. Morris of Three Rivers; Vice-President, D. C. C. Fenstermacher, Three Rivers; secretary-treasurer, Dr. Inez R. Wisdom, Sturgis.

The society meetings for the year were for the most part enthusiastic and the attendance quite satisfactory. Six tri-county meetings were held with the societies of Hillsdale and Branch county and these with one exception were addressed by speakers sent from the faculty of the medical school of the University of Michigan. It is planned to continue these tri-county meetings this year.

Inez R. Wisdom, Secretary.

MACOMB COUNTY

I am writing a report of the doings of the Macomb County Medical Society. The officers for the ensuing year are: President R. W. Ullrich, M. D., Mt. Clemens; Vice-President, W. J. Kane, M. D., Mt. Clemens; Secretary, G. F. Moore, M. D., Richmond, and Treasurer, W. H. Norton, M. D. Mt. Clemens.

Our last meeting was January 3, 1927, at which

time we had a very interesting address by Dr. Hugo Freund of Detroit on the subject of Intestinal Diverticula. This address was supplemented by X-ray films and specimens. The attendance, based on the number who paid their dues in 1926, was 70 per cent.

Our next meeting is February 7 at which time we shall have for our speaker, Dr. Charles S. Kennedy of Detroit, on the Surgical Aspect of Skull Fracture with reference to the extra-dural clot.

We are making an active campaign to liven up our society—get all the eligible doctors out.

Very truly yours,

G. F. Moore, M. D., Secretary.

MUSKEGON COUNTY

Regular monthly meeting of the Muskegon County Medical Society was held at the Occidental hotel 6:30 p. m., February 4, 1927.

This was a public meeting attended by members of the Muskegon County Dental Society, Muskegon County Bar Association, and Muskegon Pastors Conference.

Dr. Guy Kiefer, our new state health commissioner gave a very interesting talk on the relation of the state department of health to the physician of the state. He also outlined the amount and kinds of laboratory examinations being done at the state laboratories. Discussed value of Tuberculosis, Pre-natal and Infant Welfare clinics.

Dr. Marie Kielin, who has just returned from post-graduate study in Europe, was welcomed back into the society.

The society went on record as being opposed to the repeal of the bill establishing a new tuberculosis hospital at Ann Arbor. A copy of this resolution was sent to the senator and representatives from this district.

H. B. Loughery, M. D., Secretary.

OAKLAND COUNTY

A meeting of the Oakland County Society was held at the Board of Commerce, Pontiac, Mich., January 20, 1927. The papers of the evening comprised a symposium on "Backache" led by Drs. R. H. Baker, A. V. Murtha of Pontiac, and Dr. Erwin H. Neff of Birmingham. Much interest was shown by the fact that nearly everyone of the 26 present engaged in discussion.

Three new members were accepted into the society, Drs. Ernest A. Cook, F. A. Fitzpatrick and C. H. Benning.

A new committee on Public Health Legislation was appointed by President Colbin as follows: Chairman, Dr. Shaw of Birmingham, Sutherland of Clarkston. Mercer, Howlett and F. A. Baker of Pontiac.

The matter of Medical Relief in Disaster adopted by the A. M. A. in co-operation with the American Red Cross was discussed and the proposition adopted.

Committees were appointed to write condolences on the deaths of Drs. LeBaron of Pontiac and Bradshaw of Royal Oak.

Following a few brief announcements by the president the meeting was adjourned. The next meeting of the society will be held in the early

part of February, a definite announcement will be made later.

Fred A. Baker, Secretary.

LENAWEE COUNTY

The January meeting of the Lenawee County Medical Society was held at the residence of Dr. H. H. Hammel in Tecumseh.

The meeting was called to order by President Hammel. There were 21 members present. Minutes of last meeting and financial report of the year 1926 were accepted and read.

A motion was made by Dr. C. H. Heffron of Adrian that the Legislative Committee be assigned to the work of gathering all data possible on the status of illegal practitioners in the county and that copies of the state law governing same be obtained and reported on at the next meeting. Carried.

The name of Dr. George Williamsons of Durfield was favorably voted on for transfer from Monroe County Medical Society.

A history of the Lenawee County Society was read by Dr. F. E. Andrews.

This history of the society will be sent in for publication in the Journal at a later date.

The annual election of officers was as follows:

President, H. H. Hammel, (re-elected), Tecumseh; Vice-President, C. H. Heffron, Adrian; Secretary-Treasurer, R. G. B. Marsh (re-elected), Tecumseh, new members of Board of Trustees, C. H. Heffron, Adrian; Delegate to State Society Meeting, H. H. Hammel, Tecumseh; Alternate, R. G. B. Marsh, Tecumseh.

Motion made by Dr. W. S. MacKenzie, that the annual state and county dues of the Secretary be paid from the Society Treasury. Carried.

Meeting adjourned.

R. G. B. Marsh, Secretary.

GOGEBIC COUNTY

The Gogebic County Medical Society listened to an interesting address by Dr. A. J. O'Brien of Ironwood in its January meeting. Dr. O'Brien spoke on his experiences during a recent extended visit in medical centers in Europe, particularly in Vienna. Dr. W. E. Tew was elected delegate to the state convention with Dr. Louis Dorpat alternate. President P. R. Lieberthal appointed the following committees: Constitution, Drs. W. J. Pinkerton, Pierpont, Draper and Lindbohm; membership, Drs. Conley, Madajesky, P. R. Lieberthal, and Harnos; public health, Drs. Prout, W. J. Pinkerton, Dorpat, Hambley, and Hansen; program, Drs. Anderson, O'Brien, Prout, Stebbins, and Tew; social affairs, Drs. Stevens, Maccani, H. A. Pinkerton, and M. J. Lieberthal; periodic health examinations, Drs. Ringo, Urquhart, Tressel, Weaver, and Postle; legislation and prosecutions, Drs. Houghten, Crosby, Krumpelbeck; medical defense, Dr. Pierpont.

In the February meeting, which will be held in Grand View Hospital, Dr. P. G. Dick of Chicago will give an illustrated lecture on "Diseases of the Gall Bladder."

Louis Dorpat, Secretary.

Dr. P. G. Dick of Chicago gave a lecture before the Gogebic County Medical Society on February 5 on conditions of the gall bladder. The

lecture was illustrated with slides and motion pictures showing X-ray work the lecture.

In the March meeting the principal discussion will be on the value of periodic health examinations. A practical demonstration will probably be given by the committee on periodic health examinations of which Dr. H. F. Ringo is chairman. The committee on constitution of which Dr. W. J. Pickerton is chairman will submit a new constitution for adoption.

Louis Dorpat, Secretary.

HILLSDALE COUNTY

The Annual Meeting of the Hillsdale County Medical Society was held January 28, with election of officers for 1927 as follows:

President, Dr. H. C. Miller, Hillsdale, Mich.

Vice President, Dr. E. C. Bechtol, Montgomery, Mich.

Secretary-Treasurer, D. W. Fenton, Reading, Mich.

Delegate to State Society, Dr. W. H. Sawyer, Hillsdale, Mich.

Alternate, Dr. G. R. Hanke, Ransom, Mich.

Only three members were found willing to undertake educational work—Doctors Sawyer, Green and Frankhouser, of Hillsdale, who each gave an address before High Schools during the month and are scheduled to do the same next month and succeeding months. Reports on dues will appear in the report for February.

D. W. Fenton, Secretary.

The Annual Meeting of the Hillsdale County Medical Society was held at the Mitchell Library on Friday evening, January 28th at 7:00 p. m., the Vice President, Dr. H. C. Miller, in the chair.

Minutes of last meeting read and approved.

The Chairman then introduced Dr. A. C. Furstenburg of the University of Michigan who addressed the society on—"Throat Infection."

Dr. Furstenburg's address was replete with most valuable information for the general practitioner. Eminently technical, it was at the same time most practical along the lines of prophylaxis, diagnosis and treatment and was listened to with profound attention by the few members present. General discussion and questions followed, all of which were answered by Dr. Furstenburg.

The Chairman in behalf of the Society warmly thanked Dr. Furstenburg for his most valuable address.

The Society then proceeded to the election of officers for 1927. Result as follows:

President, Dr. H. C. Miller, Hillsdale; Vice-President, Dr. E. C. Bechtol, Montgomery; Secretary-Treasurer, Dr. D. W. Fenton, Reading; Delegate to State Society, Dr. W. H. Sawyer, Hillsdale, with Dr. G. R. Hanke or Ransom as alternate.

The Society then adjourned until the joint meeting with St. Joseph and Branch counties.

D. W. Fenton, Secretary-Treasurer.

ST. CLAIR COUNTY

A regular meeting of St. Clair County Medical Society was held at the Hotel Harrington, Port

Huron, Mich., January 20, 1927. After the usual supper and social hour the meeting was called to order by President W. W. Ryerson. The following members were present: Doctors Heavenrich, Callery, MacKenzie, Burley, Patterson, Ard, Vroman, Morris, Derck, Kesl, Wheeler, Waters, Treadgold and Cooper. The minutes of the two preceeding meetings were read and approved. The committee appointed for the purpose reported unfavorably upon the educational advertising plan offered the Society by the local daily. The Banquet committee reported an indefinite postponement of the Annual Banquet until such a time as the roads permitted a full attendance by the rural members. Applications of Drs. L. W. Grice and J. F. Waltz were read and referred to committee. The president appointed a committee of Drs. Wheeler, Vroman and Windham to act with the Free Clinic Association and the Community Chest Organization in the management of the local free clinic now being maintained by these organizations. A general discussion of the clinics now being held and those being proposed, followed. This discussion was led by Drs. Derck, Heavenrich and Treadgold. Dr. Ryerson announced future programs for the meetings of February, March and April. Meeting adjourned at 8:50 p. m.

George M. Kesl, Secretary-Treasurer.

A regular meeting of St. Clair County Medical Society was held at Hotel Harrington, Port Huron, Mich., February 3, 1927. After the usual supper and social hour the meeting was called to order by President W. W. Ryerson. Twenty-one members present. The following guests were present: Dr. Robert Owen of Detroit; Drs. Sykes and Meredith formerly of the Staff of the Henry Ford Hospital; Miss Lucille Roach, Technician in Charge of the St. Clair County Laboratory. Minutes of the preceeding meeting read and approved. Drs. C. F. Thomas, L. W. Grice and J. F. Waltz were elected to membership in the Society. Letter of Secretary Warnshuis relative to legislative action purposing to repeal the Act passed at the last legislature for the erection of a Tuberculosis Sanitarium at Ann Arbor, was read to the Society and the Secretary was instructed to communicate with the Senator and Representatives from this District asking them to defect the Act repealing the erection of this badly needed sanitarium. Letter from Secretary Warnshuis relative to proposed program of the State Society for 1927, was read and referred to Dr. A. J. MacKenzie, Counsellor for the Seventh District.

Dr. Robert Owen of Detroit then read a very interesting paper upon "Blood Chemistry." The speaker covered the following constituents of the blood: Non-protein nitrogen, Urea nitrogen, Uric Acid, Creatinine Chlorides, Cholesterol, CO₂ combining power, Sugar, Acetone bodies, Calcium and Bile Pigments. The subject of sugar tolerance was also covered. The paper was discussed by Dr. D. W. Patterson who stressed the fact that while we were taking advantage of some findings in Blood Chemistry we should do so much more frequently. Dr. Owen closed his paper in the usual manner. The Society gave a rising vote of thanks to the speaker for his splendid paper.

Meeting adjourned at 9:00 p. m.

George M. Kesl, Secretary-Treasurer.

KALAMAZOO COUNTY

The forty-third annual meeting of the Kalamazoo Academy of Medicine was held as an all day session December 21, 1926.

The forenoon was devoted to a clinic at New Borgess Hospital held by Dr. G. C. Pemberthy of Detroit. Twelve cases of different types were shown and discussed by Dr. Pemberthy.

The afternoon session held in the Academy room was called to order by the president, Dr. McNair. The secretary's report was read and approved as printed in the bulletin.

Dr. Gregg reporting for the social committee reviewed the work done during the past year and the preparations made for future meetings. He felt that the society was greatly indebted to the Upjohn Company who have so generously fitted up the kitchenette in the Academy rooms, fully equipped the same and supplied all necessary dining room equipment to hold dinners in our own quarters. He suggested that resolutions expressing our appreciation be drawn and sent to the Upjohn Company.

A motion was made, seconded and carried that the report of the social committee be accepted. A motion was also made, supported and carried that resolutions of appreciation be drawn and sent to the Upjohn Company for their kindly interest in, and generous donation to the Academy. The secretary was instructed by the president to draw up and forward such resolutions.

Dr. Shillito reported on the activities of the membership committee and called attention to the new members taken into the society during the past year. He made a motion which was seconded and carried that Dr. Dobson and the staff of the United States Veterans Hospital No. 100 be made honorary members of the society.

Dr. Adams, chairman of the clinical program committee reported two clinics during the past year at New Borgess Hospital. The first, with an attendance of forty, was presented by Dr. Wells of Grand Rapids who showed ten cases. The second held the forenoon of the present meeting with an attendance of thirty, at which time Dr. Pemberthy showed twelve cases.

Dr. Shillito, chairman of the legislative committee, reported on the meeting at Lansing called by the state secretary. It was planned that a joint central committee be appointed to look after the interests of the profession.

Dr. Jackson called the attention of the society to the purpose of the legislative committees of the various county societies. He also stated that a central legislative bureau had been organized with the purpose of co-ordinating all organizations interested in medical matters.

Dr. Shepard, speaking for the anti-tuberculosis committee called attention to the joint meeting held with the Trudeau Society and the efforts made to co-operate with local and state clinics.

Dr. Thompson called attention to the action of the county board authorizing the employment of a nurse to follow up tubercular patients.

A communication was read from Dr. Case relative to his receipt of the bulletin.

Dr. J. E. Maxwell of Decatur spoke about emergency cases which he had brought to Kalamazoo and which he thought had died for lack of blood transfusions. He thought that some standardized provision should be made in the various hospitals to care for patients suffering from shock and hemorrhage. He recommended that a com-

mittee be appointed to look up data on transfusions and provide for donors.

A motion was made, seconded and carried that the president appoint a committee to investigate the status of blood transfusion and report with recommendations.

The chair appointed on this committee:

The Secretary, Dr. R. U. Adams and Dr. R. J. Hubbell.

As no further business was brought before the society, it proceeded to the election of officers for the ensuing year. The chair appointed Drs. Vaughn, Crowell, Squires and Huyser as tellers.

Dr. Crane obtained the floor and after an address of eulogy nominated Dr. C. A. Bartholomew as president of the society. The nomination was promptly seconded by Dr. J. Howard Van Ness.

No further nominations were made and Dr. Collins made a motion that the secretary be instructed to cast one ballot unanimously electing Dr. Bartholomew as president of the society for the ensuing year. Seconded and carried.

Dr. Bartholomew was called upon and gave a few brief words expressing his appreciation of the honor conferred upon him, in particular because of the high standing of the Kalamazoo Academy of Medicine throughout the state.

Dr. Bennett submitted the following report of the nominating committee which was adopted as read.

First Vice-President, Ward E. Collins; Second Vice-President, Norman D. Murphy; Treasurer, R. J. Hubbell; Librarian, A. E. Pullon; Censors, William C. Huyser, R. D. Thompson; Delegates to State Society, Walter den Bleyker and William E. Shackleton; Alternates to State Society, Sherman Gregg and O. D. Hudnutt.

Motion made by Dr. Crane that five dollars be returned to Dr. Case was lost for lack of a second.

The policy of accepting money from non-members was discussed by Drs. Rockwell, Shillito and Bennett. It seemed the consensus of opinion that many men who were not members of the society felt that they would like to contribute something to the support of the society that they might feel free to accept its hospitality. Dr. Bennett said that while he was treasurer it was his custom to report these men as associates.

The scientific program was carried out as printed in the bulletin, Dr. Pemberthy reading papers on "Appendicitis in Children" and "Acute Osteomyelitis." Both papers were freely discussed and much enjoyed.

At the close of the scientific program Dr. Jackson made a motion which was seconded and carried that the society express its thanks to Dr. Pemberthy for his contribution to our program throughout the day.

The meeting was adjourned until 6:30 p. m. at which time members and friends of the Academy, together with their ladies, met in the recreation rooms of the Upjohn Company where the society enjoyed their hospitality.

Following the sumptuous banquet Dr. Light was called by the president to act as toastmaster.

The exaugural address, "The Truth, the Whole Truth, and Nothing but the Truth," was presented by Dr. McNair.

Mr. A. P. Johnson, of Grand Rapids talked on "Doctors from the Viewpoint of a Layman."

Thus closed the full and profitable day of the forty-third annual meeting.

THE PHYSICIAN'S RESPONSIBILITY IN PREVENTIVE MEDICINE

Practicing physicians are not infrequently criticized by public health officers, welfare workers, publicists and others because of their alleged neglect of anti-smallpox vaccination, antityphoid vaccination, antidiphtheria inoculation, and other practices calculated to prevent disease. The accusation is a challenge to the medical profession. However, the general practitioner should not accept the full responsibility for all these sins of omission. Many of those who now criticize have for some years been "educating" the public to the belief that the public health clinics, health centers, voluntary health bodies and what-not were anxious to render these services "free" to rich and poor alike and that "free" meant both the cost of materials and medical service. Is it not logical to charge part of the disturbing conditions to the error in "education" of the public; to the inadequacy of the free service and materials; to the indifference of an "educated" public?

The physician who has spent thousands of dollars and eight or ten years of his life above high school for his education, who pays his license fees, federal, state, county and municipal and his other taxes, who must spend additional thousands for essential equipment and transportation facilities, who must serve free the poor among his clients, and who must live as other citizens, cannot be expected to compete with "free" services. True, the dispensers of "free" money do, in some places, help the private physician out by supplying some of the materials for some of the services, provided the physician cares to comply with the red tape required to explain the disposition of these supplies, including a certificate that his patient was indigent. These are a few of the many reasons that influence many private physicians in declining to continue in competition with government and voluntary organizations in the rendering of services that every one of our 120 million people needs periodically, and for which those who are able should pay.

Formerly, protective inoculations and similar forms of medical practice were a responsibility of the physician to his clients, with government and other charity-serving organizations looking after the poor. Although most of the controllable infections were among the poor, organizations, government and otherwise, decided to extend their charity to rich and poor alike. After promoting this effort with every means of publicity, some now criticize physicians because many of them discontinued the practice of preventive medicine in the face of such competition.

What the outcome will be of a problem of which this is but one phase, it is impossible to foresee. If only the welfare of 150,000 physicians were at stake, they and their methods might be sacrificed to the common good. But one should be positive that he is on the road to permanent betterment of all the people before proceeding to damage irreparably the existing order. A relationship that would prove mutually helpful to personal physicians and to public health officials and of incalculable benefit to all the people ought to be feasible.—*Jour. A. M. A.*, February 12, 1927.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

A MANUAL IN PRELIMINARY DIETETICS—Maude A. Perry. Price \$1.25. C. V. Mosley Company, St. Louis.

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What is a pharmacy? The story is locked up in ancient tomes and forgotten volumes. When we unravel the tapestry into which the picture of pharmacy is woven we find intermingled in the warp and woof the glowing history of an important art, embellished with the golden threads of romance, the black threads of mystery and occultism, and the vari-colored fibres of many allied arts and sciences. The picture is one of which any pharmacist may be proud. In it he will find priest and philosopher, poet and painter, king and pope, knave and charlatan, as practitioners of the art in centuries gone by. Fascinating bypaths leading to forgotten treasures of curious lore await him who strays along the highway of this famous quest, for the search for a panacea, a catholicon, a veritable elixir of life which should cure all ills as if by magic,

was the animating motive in the evolution of pharmacy. Astrology and magic also play their parts, and before our eyes alchemy blossoms into chemistry. This fascinating work is the outgrowth of more than 10 years' experience among the advanced students of the Philadelphia College of Pharmacy who have shown interest in knowing more of these "quaint and curious volumes of forgotten lore."

An extremely interesting and instructive recital for which we are all indebted to the author.

SOUTH AMERICA—A guide book for lay and professional travelers, by Franklin H. Martin, C.M.G., M.D., F.A.C.S., in collaboration with William J. Mayo, M.D., Francis P. Corrigan, M.D., and Edward I. Salisbury, M.D. Price, \$3.00. Fleming H. Revell Company, publishers, 158 Fifth Avenue, New York City.

The Frontispiece is of the President of the United States, Calvin Coolidge; there is an introduction by Dr. William J. Mayo, and the detailed itineraries which were followed by the contributors to the volume.

First edition, published in 1923, has been completely revised, and amplified to include all of the Latin American Countries. Section I of the book contains a chapter on each of the Latin American countries, with a full and complete description and many illustrations.

Section II contains a summary of the relation of the American College of Surgeons to the Latin American countries.

Section III deals extensively with the Surgeons and the Medical Institutions of Latin America, and is profusely illustrated. Any medical man who contemplates a trip to any of the Latin American countries will find "South America" invaluable.

Section IV contains a complete summary of facts, Historical Geographical, Political, Social and Industrial. In this portion of the book may be found a summary of all information that may be of interest either to the traveler or to the historian.

Section V contains an English-Spanish and English-Portuguese vocabulary which would be most helpful and almost invaluable to anyone contemplating a voyage to Latin America, and both vocabularies are a splendid basis for the study of Spanish or Portuguese.

Section VI contains tables of weights and measures, both the standard and metric systems, and a comparison of the two.

Section VII is a complete index of "South America."

A MANUAL OF PHARMACOLOGY AND ITS APPLICATION TO THERAPEUTICS AND TOXICOLOGY—Thorald Sollmann, M. D., Professor of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland. Third Edition; entirely reset. 1184 pages. Cloth, 7.50 net. W. B. Saunders Company, Philadelphia and London.

It has been the dominant object of this Manual to furnish medical students—including interested

practitioners—an outline of the current conceptions of the actions of drugs, especially from the point of view of their practical importance in medicine. Even with this restriction, the data of pharmacology comprise so many details, that it appeared advisable to make a definite distinction in the text, presenting in ordinary type a fairly concise and connected story of the facts and explanations that deserve study for their direct bearing on medical practice, or for a sound understanding of the subject; and relegating to smaller type the data of less frequent use, or of less immediate importance, which would only be consulted as special occasions arise. This arrangement is facilitated by the paragraph headings. The authors' references and bibliography are also designed to guide the inquirer to further information, rather than for the assignment of credit; although in matters of importance the discoverer is usually cited. Throughout these devices, the Manual was designed to serve as a reference-book as well as text. The author believes that the thoughtful student may be benefitted by feeling that he is in position to confirm and form an independent judgment of the citations; that the practitioner may be helped toward additional information which he may need; and that the investigator may sometimes be saved time and effort.

Since the second edition of the Manual, pharmacologic investigation has continued or rather accelerated its pace. Essentially new drugs have appeared, such as insulin, ethylene, parathyroid hormone, etc. In many subjects, such as the autonomic system, chemotherapy, lead poisoning, etc., new conceptions have come to the front. The changes were so numerous that it appeared advisable to rewrite perhaps the greater part of the important matter. It was practically impossible and appeared scarcely necessary to mention all the newer work along lines that appear at present of minor importance; but the attempt was made to eliminate or revise all parts as were contradicted by more recent data. As it is, some twelve hundred titles have been added to the bibliography.

The appearance of the new (tenth) revision of the United States Pharmacopoeia necessitated a thorough review of the preparations, which have been made to conform with this standard. The nomenclature and spelling have been changed accordingly, including the final "e" for organic bases, halloids, "vitamine," etc.

A NOVEL PROGRAM OF A MEDICAL SOCIETY MEETING

How to conduct an effective scientific program of a meeting of a medical society was beautifully demonstrated on January 29 by the Associated Physicians of Long Island when it carried out a varied program of 18 papers in 90 minutes.

To carry out this program required preparation. The speakers were members of the staff of the Methodist Episcopal Hospital, Brooklyn, where the session was held. Each speaker was required to write his paper within a limit of 600 words. The Chairman appointed a timekeeper who started an alarm clock set for five minutes, and it did not go off once, for every speaker completed his remarks ahead of time.

The program carried this announcement:

"The whole story of creation is told in the Bible

in 600 words. Anyone who has a real message to give can do it in five minutes. The presiding officer will be asked to use his gavel if any of the speakers on this program exceeds his time."

The effect of the program was most happy. The one hundred or more physicians who were present gained a wealth of new ideas, and every moment of the time was interesting.

What kind of program was carried out by the meeting? Just such a program as is prepared for an average county medical society. Here it is just as it was printed:

"Subacute and Chronic Sinusitis in Children,"
Kenneth E. Millan.

Frequency of its occurrence and variety of conditions proceeding from it.

"Gangrene of the Uterus Due to Tortion," Henry
T. Hagstrom.

Operation. Case report. Natural color photographic lantern slides.

"Blood Transfusion," Seymour G. Clark.

Indications. Contraindications. Discussion of abuse of the method with illustrative reports and fatalities.

"The Relation Between the Preparation and the Morbidity in Obstetrics," Harry W. Mayes.

Statistics showing effect on morbidity of shaving and cleansing of the external genitalia before using the mercurochrome preparation.

"The Use of the Bronchoscope," Einar A. Sunde.

Indications, contraindications and results in abscess of the lung.

"Exhibition of Interesting Cases," Eugene S. Dalton.

From the medical ward.

"Bone Cysts in Children," Harold K. Bell.

Report of two cases. Lantern slides.

"Manikin Demonstration. The delivery of a face."
G. Hamilton Davis.

Presentation with the chin posterior.

"Hare Lip and Cleft Palate," Roger Durham.

When and how to operate. Lantern slide demonstration.

"Umbilical Hernia in the New Born," Ralph M. Beach.

Operation. Case report. Lantern slides.

"Phosphatic Cast of the Bladder," Howard T. Langworthy.

Case report. Discussion of the difficulties in the treatment of alkaline urine. Measures that have been tried. Results.

"Appendicitis Complicating Pregnancy, Labor and the Puerperium," Robert A. Wilson.

Tabloid case reports. Frequency and prognosis and, especially, the treatment.

"Electro-cardiograms," Alexis T. Mays.

Lantern slide demonstration illustrating their

definite value in diagnosis, prognosis and treatment.

"The Use of Radium at the M. E. Hospital," John C. Graham.

Five years' experience. Indications. Contraindications. Results.

"The Kahn Precipitation Test for Syphilis," Esmonde B. Smith.

Experiences in 800 cases at the M. E. Hospital. Conclusions.

"The Use of Numoquin in Pneumonia," Frank B. Cross.

Analysis of results in 200 cases.

"Caudal Anaesthesia for Rectal Operations," Henry F. Graham.

Difficulties. Unpleasant reactions and how to avoid them. Brief statistical review.

"Early X-ray Diagnosis of Infections of the Lung," William H. Wallace.

Lantern slides.

The quality most needed in a medical program is conciseness, in contrast with the prolixity which is often in evidence. To make and carry out a program such as has been described requires only a single essential—that of accurate preparation. Every county medical society has the talent and the clinical cases readily available as the basis for an hour's program consisting of twelve five-minute papers.

TRYPARSAMIDE IN TREATMENT OF GENERAL PARALYSIS

Encouraging results have been obtained by Samuel B. Hadden and George Wilson, Philadelphia (Journal A. M. A., February 12, 1927), in the treatment of general paralysis with tryparsamide, greater than any that they have seen with the use of other arsenicals, mercury or bismuth. Of fifty-two cases, twenty-two patients, with whom contact has been established, can be said to be in fairly good mental and physical condition. The clinical results far surpass the serologic improvement, which takes place only after very prolonged treatment. One of the best results from the use of tryparsamide is the great improvement in the physical state of the patient, who usually gains weight and appears to be in better general health. The tremor of the face, tongue and lips, and, as a result, the speech defect, is usually considerably bettered. Patients who have been treated with tryparsamide and later have to be institutionalized do not have such a marked tendency toward the formation of trophic cores as those who have not received the drug. The bad effects noted have been small; there were two cases of jaundice, one of dermatitis and two of Herxheimer's reaction, and two patients have shown serious visual defects as the result of treatment. The authors feel that the danger as far as vision is concerned has been overemphasized. Two cases of retinochoroiditis have been treated successfully in this series. The dose of tryparsamide given was 3 Gm., in 10 cc. of distilled water, weekly for ten doses followed by a six weeks' rest.

TOXEMIAS OF PREGNANCY AND TREATMENT OF ECLAMPSIA

J. Whitridge Williams, Baltimore (Journal A. M. A., February 12, 1927), is an ardent advocate of the conservative treatment of eclampsia. He says that in mild as well as severe cases of eclampsia, the results are better under conservative than under radical treatment. In mild cases, a modified Stroganoff technic gives almost ideal results. In severe cases, such treatment gives twice as good results as more radical treatment, but is still followed by a mortality so high as urgently to demand improvement. It appears that all the generally used anesthetics superimpose an additional toxemia on that associated with the disease. Consequently, the operative treatment of severe eclampsia will probably not show better results until some nontoxic anesthetic is discovered. It appears that, after accouchment force, cesarean section performed under the usual general anesthetics is the worst treatment for eclampsia. The necessity for still greater extension of prenatal care is the most efficient means for the prevention of eclampsia. It is necessary to realize that toxemia of pregnancy is a vague general term, and that we have to deal with several types and not with a single one. The treatment of eclampsia must remain empiric and relatively unsatisfactory until the actual cause of the disease is discovered.

CASE OF MATERNAL TETANY RELIEVED BY PARATHYROID EXTRACT-COLLIP

The case reported by Hans Lisser, R. Knight Smith and H. Clare Shepardson, San Francisco (Journal A. M. A., February 12, 1927), seems to be the first one of maternal tetany to be treated with this new extract. The observations and the results obtained justify the assumption that at least certain of the cases of maternal tetany result from an impaired parathyroid activity rather than from an actual paucity of calcium within the maternal organism. The prompt administration of active parathyroid hormone-Collip in adequate dosage, without the aid of any other therapeutic agent, even calcium, relieved the hyperexcitability of the nervous system and caused the calcium content of the blood serum to return to normal (from 7.5 to 9.7 mg. per hundred cubic centimeters).

IS THERE A STANDARD SUPRARENAL EXTRACT?

The pressor principle of the adrenal medulla is best known by its original name—Adrenalin—the name given it by its discoverers in 1900. A variety of other names have been invented to describe this active principle as offered in commercial form by other houses; but when the term "Adrenalin" appears in print it is associated in the reader's mind with the house of Parke, Davis & Co.

Adrenalin is not made by synthetic means; it is the natural product derived from suprarenal glands, and the natural product is levoratory. Parke, Davis & Co. stress the fact that their manufacturing process not only yields the levoratory (active) extract, but also that the process is so designed as to keep that extract in its active levoratory condition.

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ORIGINAL ARTICLES

A BRIEF REVIEW OF SOME PHASES OF LOCAL ANESTHESIA

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ROCHESTER, MINNESOTA

Attempts have been made since ancient times to produce anesthesia by local or regional means, as well as by general narcosis. Probably the oldest method used was that of compression of nerve trunks which accomplished its purpose to a certain extent, and by means of it amputation was performed with little pain. This means of anesthesia was abandoned because of the actual pain of the pressure, the time required to produce it, and its serious after effects².

Long after compression fell into disuse, cold applications were used for local anesthesia. This method produces anesthesia by blocking the conduction of sensation, but it is of brief duration, and has only a limited use. It is accomplished at the expense of pain, and the return of the tissues to their natural state is also painful.

Drugs known to have narcotic properties were used in efforts to produce local anesthesia, as it was believed that they would have the same effects if applied to the skin. The electric current was used in this connection in the attempt to aid the absorption of the drugs. Probably the only effect of electricity was that of suggestion.

The introduction of the hypodermic syringe by Alexander Wood in 1853 was an important step in the history of local anesthesia, as it afforded a new means of getting solutions of drugs into closer contact with the nerve supply. Other sub-

stances were injected with the hypodermic syringe, but none was satisfactory until the discovery of cocain, which gave a new stimulus to the subject of local anesthesia. The great toxicity of cocain was early recognized, and the efficacy of dilute solutions emphasized. The addition of epinephrin to cocain seemed to be another step forward,

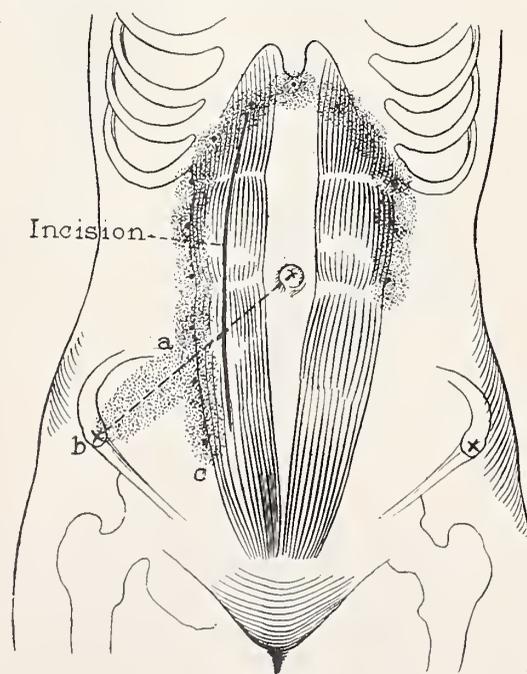


Figure 1.

Abdominal-wall block for laparotomy is executed along the curved dotted line running through "ac" and immediately below the xiphoid process. For herniotomy, the abdominal wall is blocked on a line drawn through the umbilicus to the anterior superior spine (the broken line passing through "ab" and to the umbilicus). This as well as any part of the abdominal wall is blocked as described in Figure 2.

*Read before the Detroit Academy of Medicine and Surgery, Detroit, Michigan, January 24, 1927.

since by hindering absorption this seemed to afford a safeguard against poisoning. Less toxic substitutes for cocain have been introduced, chief among them being procain.

Since the discovery of suitable anesthetic agents has been quite recent, the field of modern local anesthesia is comparatively new and offers many possibilities for further development. Modern notable contributions to the development of local anesthesia have been made by Crile, Allen, Labat, Farr, Braun, Harris, Hertzler, and others. The use of modern anesthetic agents is well illustrated by the following tabulation:¹¹

AGENTS USED DURING FOUR YEARS IN THE MAYO CLINIC

	1925 Per- cent	1924 Per- cent	1923 Per- cent	1922 Per- cent
Anesthetic				
Ether	20.3	25.8	40.8	44.9
Local agents	45.0	43.2	42.2	42.2
Local agents and ether.....	1.7	1.4	1.1	8.6
Local agents and gases.....	4.1	0.9		
Gases	28.4	27.6	15.4	3.8
Chloroform	0.09	0.08	0.1	
Ethyl chlorid	0.1	0.2		
Oil-ether (colonic)	0.01			
Spinal agents		0.01	0.04	0.4

According to the foregoing data the popularity of local anesthesia has remained statistically the same in the last four years. Nevertheless, due to an increase in the total number of cases in 1925, over 1924, there has been an actual increase in the number of cases of local anesthesia in 1925. The cases of local anesthesia, either alone or combined with general anesthesia, constituted slightly more than 50 per cent of the total for 1925. In some cases in which local anesthesia was induced, it was intentionally combined with general anesthesia to insure completely satisfactory results.

There has been a tendency to use what I like to term "balanced anesthesia," which is the combination of moderate amounts of preliminary hypnosis and general and local anesthesia. This should be a popular form of anesthesia, since at the present time there is no one anesthetic agent that can be considered ideal in all cases. The satisfactory results attending balanced anesthesia from the stand-points of the sur-

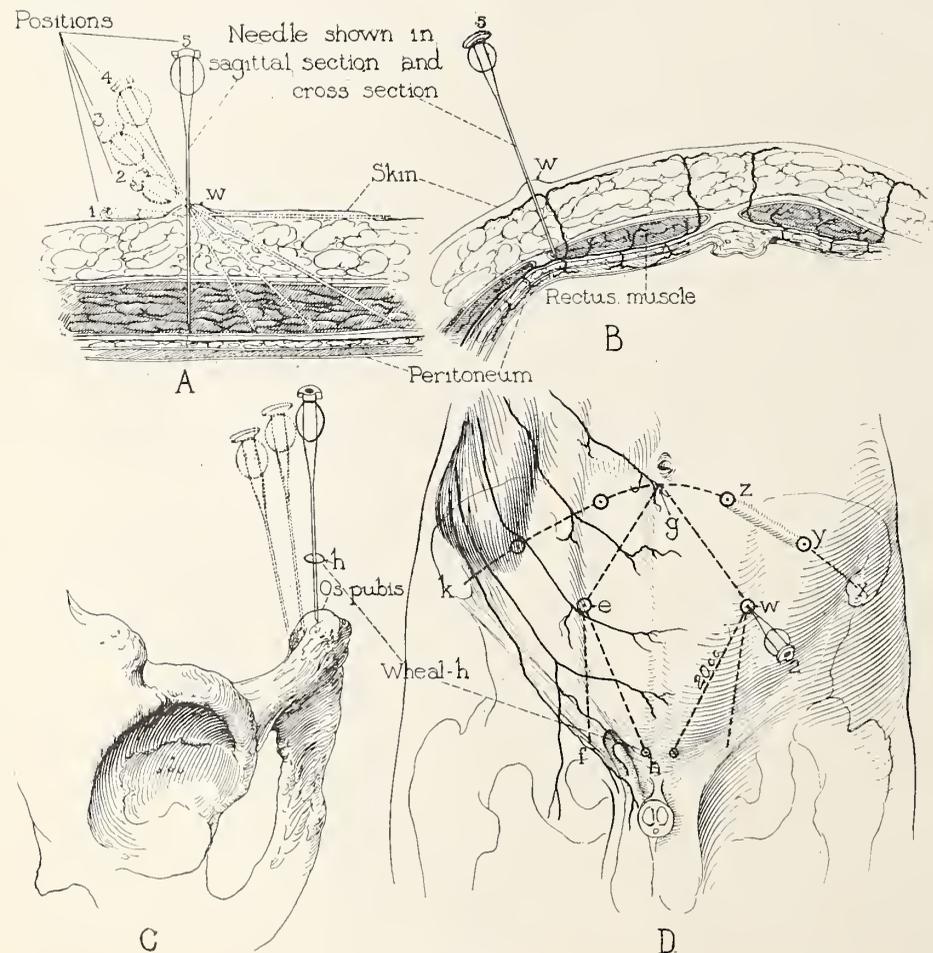


Figure 2

Abdominal-wall block for cystostomy. The injection consists of 100 c.c. of 0.5 per cent procain solution at body temperature with 6 minims of 1:1000 epinephrin (1 c.c. ampule, 1:2600). Anesthesia is induced in ten minutes and lasts for one hour. The three zones of injection are shown in D. In order of the frequency of use they are: "e" to "f" and "e" to "g" (no hernia present); "e" to "h" and "e" to "g" (reducible hernia present); "k" to "g" (irreducible hernia present). All are bilateral. The blocks "e" to "f", "e" to "g", and "e" to "h" are done from wheal "w", as shown in A, B, and D. The space of Retzius is injected from wheal "h" (C and D), 10 c.c. on each side. Wheal "w" is shown in sagittal section in A, in cross section in B, and from in front in D; it is placed in the skin at the border of the rectus muscle midway between the umbilicus and pubes. In D the appearance of the skin is shown after a solution has been injected from "y" to "z" through the needle in A in first position. In B and D, the nerves to be blocked are shown in heavy black lines. In A the needle is shown in five positions in each of which 2 c.c. of solution is used. Thus a 10 c.c. syringe contains enough solution to block a brick-shaped area, a lateral view of which is shown in A. Such blocks, like blocks under various arrangements, result in various types of abdominal-wall block shown. In D, the lines "ef", "eg", and "eh" each traverse the ventral face of a "brick" of anesthetized tissue. In the average case two injections of 10 c.c. each are made into each brick; the second reinforces the first one.

geon, anesthetist, and patient warrant the use of this method in an increasing number of cases. The factors determining the anesthetic to be used do not always per-

complished by deliberate and unhurried technic, and by moderation in the dose of the anesthetic agent. The concentration and quantity of the anesthetic solution used must be considered in regional anesthesia, as well as that of the epinephrin solution, if it is also used. At this point I wish to call attention again to certain important factors in the use of procain. These are the concentration, the amount of solution, the time consumed by its injection, the pulse, blood pressure and the size and age of the patient. I have attempted to arrange them in an equation, which in a general way in regional anesthesia⁸ indicates the dose of procain without unto-



Figure 3.

Posterior splanchnic block. This figure shows the needle for posterior splanchnic block and the patient in a prone position with pillow under the abdomen.

mit a choice, and therefore balanced anesthesia will probably not be employed in all cases in which it might otherwise be used to advantage.

Regional anesthesia has been extended to practically all parts of the body, but this does not imply that it is to be preferred to general anesthesia in all cases. It is also difficult and unfair to make a comparison between local and general anesthesia, for the procedures and results of each are based on different principles and each has its particular merits. One of the objections to regional anesthesia is the frequency of marked untoward drug reactions. However, the number of untoward reactions to procain at the Mayo Clinic has been reduced to an average of about 2 per cent. This result has been ac-

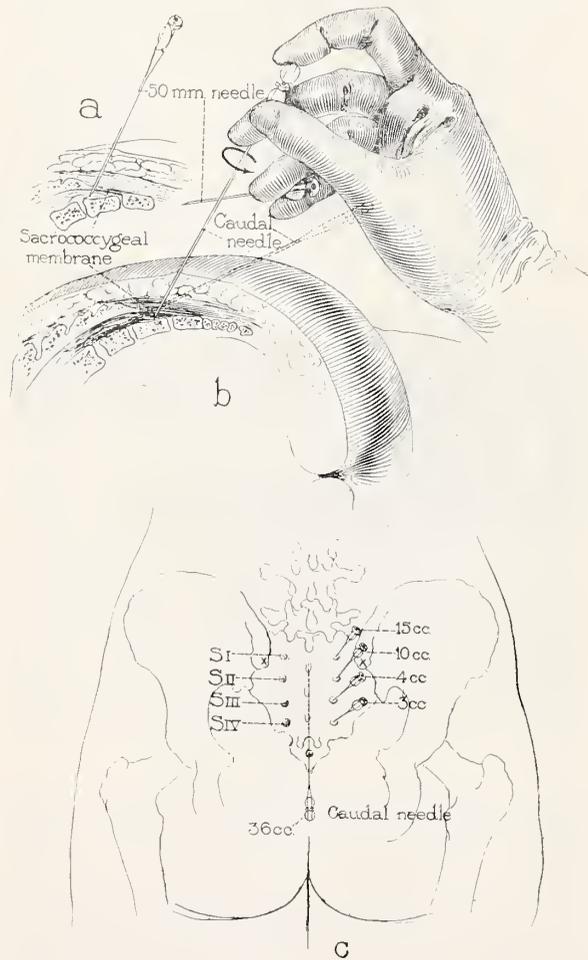


Figure 5.

Sacral nerve block. The injection consists of 100 c.c. of 1 per cent procain solution at body temperature with 6 minims of 1:1000 epinephrin solution (1 c.c. ampule, 1:2600). Patient in the prone position, pillow beneath pelvis. Anesthesia induced in fifteen minutes after injection and lasts for an hour or more. "a", A 50 mm. needle is inserted through a wheal in the sacrococcygeal membrane into the tip of the caudal canal and 5 c.c. of solution injected to make painless the insertion of the caudal needle; "b", the 50 mm. needle is withdrawn and the caudal needle inserted in its stead and advanced into the caudal canal, after being rotated so that the bevel rests on bone; "c", dorsal view of sacrum with caudal needle in position as well as those in SI, II, III, and IV (that is the first, second, third, and fourth sacral foramina). A total of 36 c.c. of solution is placed in the caudal canal in the average case. The average amount of solution for each foramen on each side is shown. The sacral nerves are thus blocked; the patient is then turned on his back and the abdominal wall is blocked.

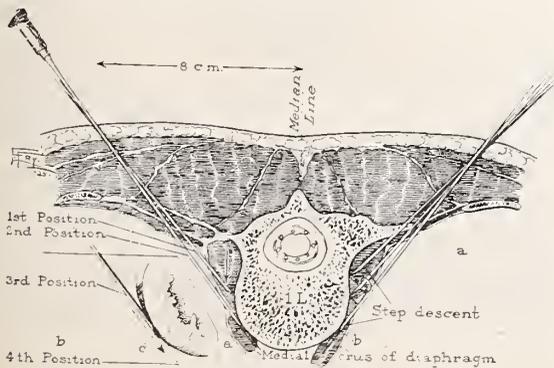


Figure 4

"a" shows the descent of the point of the needle along the lateral surface of the body of the first lumbar vertebra. Insert "b" shows the point of the needle resting at "c", its last bony contact before being advanced into the paravertebral region or fourth position.

ward reaction. The preparation of the procain solution has been described previously and is well known⁶. I base my use of epinephrin on the amount, not the strength, of solution, that is, 6 minims of a 1:1000 solution of epinephrin to each 100 c.c. of procain solution. However, the condition of the individual patient and an untoward reaction following the injection of the first part of the solution may contraindicate its application.

There are many textbooks on regional and local anesthesia available at the present time, wherein one may find descriptions of various technics to be followed in producing anesthesia for operations in various parts of the body. I shall not attempt to discuss other than the types of block more commonly induced. For operations on the head one may consult the textbooks. For operations on the region of the neck, I have found a modification of the method of Meeker and Hundling very satisfactory, especially for such operations as laryngectomy, thyroidectomy, and the removal of lymph nodes from the



Figure 6.

Patient on table; nurse palpating pulse. The caudal needle is being inserted, the 50 mm. needle is still between the small and ring fingers of the anesthetist's right hand. The fingers of his left hand depress the point of the caudal needle.

neck. At the same time no objection can be raised to the infiltration of the soft parts of the neck with a dilute solution of procain, and it is to be especially recommended in cases of goitre in which the surgical risk is grave¹.

For the various operations on the chest, regional and local anesthesia have been employed by many. Local anesthesia has been advocated for thoracoplasty and other major operations on the chest⁵. Gaseous anesthetic agents are also recommended for operations on the chest³. It has been my experience that a general anesthetic such as nitrous oxid, ethylene, or

ether, is preferable to local anesthetics for radical amputation of the breast.

For operations on or through the abdominal wall almost all the existing methods except paravertebral block usually produce anesthesia. Figures 1 and 2 are



Figure 7.

Caudal needle in caudal canal, and 80 mm. needle in second sacral foramen on each side. The tip of the left middle finger rests over the left posterior superior spine. The tip of the right index finger is on the end of the coccyx. The tip of the right thumb is opposite the left sacral cornu about 3.75 cm. from the end of the coccyx.

descriptive of the methods commonly employed at the Clinic, and the results have been satisfactory. For intra-abdominal operations posterior splanchnic block has been employed in a series of cases^{7,9}, by the method illustrated in Figures 3 and 4. It produced satisfactory anesthesia in only 48 per cent of the cases, and for that reason has been supplanted by balanced anesthesia in many of the cases presenting grave risk.

For operations on the extremities the textbooks may be consulted. For operations in the rectum¹⁰, bladder⁴, and perineum, sacral anesthesia has usually been found to be satisfactory, and in most in-



Figure 8.

Caudal needle in sacral canal; needle in the second sacral foramen on each side. Tip of left middle finger on left posterior spine. The right hand holds the stilet of the caudal needle so that its point lies at the level of the third sacral foramen. (Of course the point of the caudal needle lies in the canal at the same level as the point of the stilet lies on the skin.) The syringe lies over the patient's lumbar region.

stances is preferable to spinal anesthesia. Its value is emphasized by Martin and Arbuthnot¹², in reviewing 6000 cases of spinal anesthesia. They say that sacral anesthesia is preferable to spinal wherever it can be employed. Figure 5 may serve to recall the anatomy involved in the application of sacral anesthesia and the technic.

Sacral anesthesia is one of the most satisfactory forms of present-day regional anesthesia, and is commonly used in the Mayo Clinic for operations on the rectum and bladder; it is frequently used for operations on the perineum with satisfactory results (Figs. 5, 6, 7, and 8).

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MICHIGAN ONE HUNDRED YEARS AGO

The letters of a Doctor, locating in Pontiac, to his relatives in New York.

EDITOR'S NOTE: The following letters, written one hundred years ago, furnish most interesting incidents of medical practice and pioneer days. We feel certain that our members will gain pleasure in reading them. We are indebted to Dr. B. R. Corbus for making them available.—Editor.

Weedsport, Oct. 20th, 1828.

Dear Sir:

From the date and place you may perceive that I have not got along on my journey as fast as I had anticipated. The line boat on which I embarked at the lower aqueduct did not get into Schenectady until late in the afternoon. The packet had started and I found that I must be delayed until the next noon or continue on the same boat to Utica. Being belated in the same way at Utica I went on to Weedsport and got here

at midnight on Sunday. I went yesterday with George to Auburn. From want of time I cannot give the particulars of my journey until I write from Buffalo. Thus far I have been delighted with the tour and have taken notes and which I will transcribe in my next.

I have called on the physicians in this place and find as I have anticipated that there was nothing to tempt me to remain. This part of the country is crowded with doctors and the whole business of Weedsport and vicinity may be worth twelve or \$15.00.

I take the western packet at noon. The packets do not run the whole length of the canal. You have to take another line at Utica and Rochester; at the latter place I shall be detained one day. I shall not get to Buffalo until Friday evening.

The fare is 3 cents and meals extra.

Yours, etc.,

D. L. Porter.

W. P. Porter.

Detroit, 23rd Oct., 1828.

Dear Sir:

I shall now in as condensed a form as possible endeavor to describe the "most interesting views or those which appeared to me such on my route. After leaving you at the lower aqueduct we moved on at a snails pace for Schenectady. The scenery on this section of the canal is splendid. About half way between the two places is a range of rocks towering upwards of a hundred feet, once the bank of the river but now the heel path of the canal. It would be most similar to (please to call imagination to your aid) a canal at the foot of the rocks under the banks of the Mohawk, immediately below the Cohoes falls. The earth to form the tow path was brought from a considerable distance. Four miles from it we have one of the most romantic views on the whole western tour if you except that on Lake Onondaga. If you should ever find it convenient by going a little out of your way do it by all means as you will be well rewarded for your trouble. The company on the boat was not worth much I can assure you. It was almost night before we got to Schenectady and found that the packet had gone and that I must either remain on the same boat until we arrived at Utica or stay about 20 hours at S. We then passed Rotterdam, Amsterdam, Schoharie Creek, Caughnawaga, Sprakers basin during the night. In the morning and day Canajoharie, Fort Plain, Indian Castle, Finks Ferry. That night Little Falls, Herkimer Bridge, German Flats, Frankfort and at noon on Saturday, Utica. Utica is an elegant place and does a great deal of business. Their Broadway is occupied by gentlemen's seats and churches. Two attracted my attention, an Episcopal, the smallest but finest externally in a very superior order and a large Presbyterian, the front and sides of imitation marble. There is also in the place an elegant Catholic chapel in imitation of the cathedral at New York. The court house is a very indifferent building. Genesee Street is the one for business. It is about three-quarters of a mile in length rising gradually to the south end of the street which runs north and south. From this point you have a very fine view of the place and particularly of this street which is wide and well paved. The buildings are generally good and there is a great display of all kinds of goods, women, horses, carriages, etc. The bridges which cross the canal are in general very low and dangerous to boats. About two hours after our arrival we heard the horn summoning the passen-

gers on board, who had increased in number and respectability of appearance. They were generally western farmers on their return from visiting their friends at the east. Though not the best of company, I contrived to obtain a good deal of useful information of them. The next place of any note was Oriskany, celebrated for its woolen manufactory. It is very large, good looking building on the tow path. It employs 200 hands the year around. The water is conducted to it in a culvert under the canal. The cloth manufactured at this place has acquired a deserved reputation for the superior execution and color of their goods.

It was just after sundown on Saturday evening when we arrived at Rome. The principle feeder for the 69 $\frac{3}{4}$ mile level enters the canal at this place. By the by, we have nearly all day sailed through a swampy forest with here and there a clearing for a lock house or a log hut. Even the villages are surrounded by very circumscribed clearings. We saw abundance of game during the day. Near Rome the Mohawk dwindles almost to a brook. It is about the size of Pawlet River and as crooked as the Dutchman's tree which could not remain in any position in quiet. In the morning when I woke we were at Canastota, 116 miles west of Schenectady. During the early part of the day we passed several places not even deserving a name and the same appearance of forest. At 2 p. m. arrived at Syracuse. This village has been in existence about 8 years. Its appearance is prepossing. The buildings display a considerable degree of taste and are mostly painted. All of course are new. They have some fine churches. To the north west is seen the village of Salina one mile from Syracuse on the east end of Onondaga Lake. At this place the salt works first commenced and it was the place which surrounded the surrounding villages with the water for their works by means of a pump worked by steam and discharging 190 gallons of the water in a minute and conducted in logs 4 miles west to Liverpool one and one-quarter miles south east to Syracuse and three and one-quarter south west to Geddisburgh. The water is evaporated in immense vats at Syracuse. They cover 60 acres. Salina, Geddisburgh and Liverpool boil it away. The works at Salina cover about 400 acres, at Liverpool 50 acres, Geddisburgh 17 acres. The quantity prepared at these places is immense but I was unable to obtain any information which could be depended upon for the amount. If you examine Spaffords Gazeteer you will obtain a great deal of information which was out of my power, it being Sunday, etc. At Geddisburgh (two and one-half miles west of Syracuse) you have an elegant view of Onondaga lake, which is about 10 miles long and three wide. At the same time you see Liverpool, Salina and Syracuse. The first to the west side; four miles east of that the two and one mile south of that Syracuse. They are all beautiful villages. Between the two last are the new court house and jail, both in a commanding situation and well built. The lake is a curiosity. The surface is slightly brakish, but water taken from the bottom is intensely salt. Onondaga village is two miles south of the lake and is not visible. After passing a great number of small villages deserving no particular notice, we arrived at Weedsport at 1 o'clock Monday morning. In the morning I went about the village which contains about 400 or 500 inhabitants and 100 houses of all denominations. I found George. He is in a very good business. The store is on the canal wharf in the center of the village and has a good run

of business. The situation of the place is favorable for business; it is the center of Cayuga county and the port from which the goods for the village of Auburn and the rest of the county receive their goods. It is the forwarding of these goods to the owners that constitutes the heft of George's business and is very profitable. Situated as the town is it will eventually become the capital of the county.

I rode over to Auburn with George, a distance of seven and one-half miles south over a very rough road. Unfortunately it commenced raining just as we got there and we could only go about for a few moments at a time between the showers to view the place. The prison, a gloomy looking building containing 700 prisoners, is at the north west part of the village. Directly east of this is the Theological Seminary of the Presbyterians. It appears that there was a blow up here, the same as in Troy with Doctor Lansing, and the church was divided; the opposition are building an elegant new church in the Gothic stile and Lansing has been driven from the place by his own violence and the unyielding obstinacy of the opposition. Manufacturing and flouring of every description is carried on to a great extent. There are many elegant buildings in the place, some you might with propriety call palaces, but Robisons observation is too true. "All your fine buildings are employed as taverns and places of amusement." The corporation of this place have with praiseworthy perseverance overcome almost insurmountable obstacles to beautify the place. There is an extensive water power here which is created by the outlet of Cayuga lake and which passes through the center of the place. It also runs at the foot of the prison walls and here it is used for a satinet manufacture in which the prisoners alone are employed. Each man weaves 12 yards a day of a superior quality. All kinds of mechanical business is carried on here and much of it by water power. The prisoners are all made to work at something. There are many elegant country seats near this village.

October 20. This morning I went to see the mineral spring in the neighborhood of Weedsport. It has just enough sulph of iron and sulph hydrogen gas to make it disagreeable. At noon I got aboard of the packet for Rochester. It was very cold and windy. We however had plenty of good company. 21st, 10, Arrived at Rochester. Being belated more than an hour they would not allow us a moment to examine the place. The aqueduct over the Genesee river is a splendid work made entirely of stone. The flouring business is carried on here on the most extensive scale in the United States. One mill has 17 run of stone. The mills are built of stone and there is not one drop of water which passes through the river without first traversing a flume. It would be impossible to give you any idea of the works on this river and vicinity. We immediately embarked on another packet and arrived this morning at 11 o'clock at Buffalo. There was nothing particularly deserving of note on the route except the deep cutting at Lockport. The canal here raises by five double locks 60 feet. All cut to an immense depth in the solid rock. As you go from one lock you enter another, the front gate of the last serving for the back gate of the next. All the view I had of it was by the light of the lamps, it being 2 o'clock in the morning when we passed. Three miles north of Buffalo we passed Black Rock, a very indifferent place. Gen. Horters palace is the only building worth

noticing. My fingers ache with writing so much and I must defer my description of Buffalo until my next. This afternoon I went to Black Rock and delivered Mrs. Closes letter to Mr. Bird, who treated me with great politeness and has engaged to send letters to me before the boat goes on with an introduction to Augustus Porter, an influential lawyer in Detroit. A Mr. Jones and Gov. Cass. For all this I have to thank Mrs. Close which I most heartily do, do you remember to give them with my thanks the first time you see her. The steam boat Henry Clay, leaves here at 9 o'clock tomorrow morning. You spoke about my fare, Aqueduct to Weedsport \$5.00 (Big trunk 25 cts.) Weedsport to Rochester, 73 miles, \$3.50. Rochester to Buffalo, 93, \$3.38.

Yours, etc.,

L. D. Porter.

W. P. Porter.

P.S.—This is to be understood as intended for the whole family. As such, my respects, etc.

Detroit, November 1st, 1928.

Dear Brother:

I take the earliest opportunity to inform you of my selection of a place, the prospects for business and as complete an analysis of the character of the people in this outlandish region as I have been able to obtain from my short residence amongst them. I left Buffalo last Saturday at daylight in the Henry Clay. Friday was her regular day but owing to the high south west by west wind they were afraid to start. On Saturday the wind was high and continued rising all day and we made but little head way; when we got off Erie it was a perfect hurricane and they could not land the passengers. The next morning we got to Grand River and landed the passengers with great trouble and risk. The waves were very high and it took us three hours to make eight miles. It lulled slightly in the middle of the day and after running 30 or 40 miles it came on harder than ever. At sundown the engineer and pilot informed the captain that in spite of the engine we were driving ashore. The anchors were cast and between them and the engine we remained stationary until morning. Of all the ludicrous scenes and disgusting as ludicrous you never saw the match to that aboard the boat on that night. Of 200 passengers, myself and two others alone escaped sickness. We got no supper and if they could have kept the tables stationary it would have required a hand to every dish to have kept them stationary. It was as much as we could do to keep ourselves in our berths and those on the floor rolled from one side to the other, straining and groaning and vomiting and sopping it up with their clothes, men, women and children promiscuously. In the morning we had a view of Cleveland and an indifferent place it is. The wind was high all day and at sundown we made Sandusky, about the size of Stillwater. Arrived in Detroit early Tuesday morning. Never, if you wish one moment's comfort, navigate any of the western lakes in the fall or early in the spring. Captain Norton, however, tells me that he has not for 15 years had such a hard trip, but at those seasons of the year it is very liable to storms of more or less violence. The fare was ten dollars. One day's extra board (while at Buffalo) one dollar. Extra baggage seven and six pence.

DETROIT

Detroit covers nearly as much ground as Troy but is not compact. The houses are indifferent, most of them miserable; streets wide and muddy,

side walks few and far between. One public house (all the rest broke down.) Abundance of all kinds of provisions but not one article that is cooked so as to be half eatable. Fare \$1.00 a day or \$5.00 a week by the month. There being no opposition they tuck it on without mercy and there is no remedy as no one will take a boarder for less than one month pay in advance. There are three churches of the most indifferent architecture. A plain brick State House. The Governor's residence is an old wooden building about the size of the old part of the Kilby house where Sherwood lives, but only a story and a half high. There are about 20 stores, as many mechanics of all denominations, 14 lawyers, two priests, 13 physicians, three of whom keep drugs and medicine. You may judge of the prices by what I have to pay. Three dollars for a common size mortar and pestle, 50 cents for carb of soda, \$1.50 for calcend magnesia, 88 cents for carbonate just as good, \$8.00 for opium (by the by I had none with me. I thought I put up some), 38 cents for pill boxes— $\frac{3}{5}$ per viols, \$1.50 for vol ammonia, $\frac{1}{9}$ for salts, $\frac{10}{2}$ for bottle of lost oil. For quinine they charge \$7.00, bark \$1.50 lb. Every other article in proportion. The population is about 4000 to the extent some say less.

OAKLAND COUNTY

I took out my Territorial License for which I had to pay \$5.00 and have to report myself to the Oakland County Medical Society and have to pay \$2.00 to them. The penalties for practicing without these certificates is on conviction for every offense \$500.00 and imprisonment at the discretion of the court, the money to be laid out in new roads. The Council or Legislature are now in session. There are 13 members. I have been introduced to them all and all advise me to go to Washtenaw county (where Hays is) or Oakland the capital of which is Pontiac. I have seen Hays, he is doing nothing at present. There is an old physician in the town and he has a hard row of it at present. He is very desirous of forming a partnership on equal terms, each putting in like capital, \$250.00 which is to clear us for the year. Nothing else will do for him as he says he cannot get a credit for anything, everybody being driven for money and fearing strangers. I concluded to visit Pontiac in Oakland County before I gave him any answer. I got into the stage on Friday morning for that place 25 miles from here. After going one mile we came to the forests which extend eight miles west, for this eight miles it is one impassable marsh having a corduroy road which is made by laying logs across the road to a height of two feet above the swamp and then drawing on six inches of clay. Owing to the wet weather this was a complete bed of stiff mortar, the horses every three or four steps going down between the logs belly deep. It took four hours to get over this distance, the passengers walking the whole distance. (Do you recollect paddys working his way on the canal.) (This is a dead water level and the only way to drain it is to commence cutting through the plain at Detroit. We then came to the first rise of ground about eight feet to the oak openings or bastard prairies. Thousands of acres extend for an incalculable distance of as elegant soil as ever you saw covered with a close sod of coarse high grass with scattering trees of oak and at considerable distance apart. The farmer has nothing to do but girdle his trees and enclose and plow his ground. With one yoke of oxen he will seed down forty acres the

first year. We had a tolerable road for the rest of the way being chiefly over the plains with here and there a spot of corduroy and a comfortably deep mud hole.

PONTIAC

Pontiac, at which we arrived late in the evening, is a small village of about 50 houses in the precincts of the village. The country was settled the earliest of any part of the territory back from Detroit. The farmers are generally in good circumstances, that is, they own their lands (which cannot be bought on a credit). Many are wealthy. There are five lawyers, a Presbyterian clergyman, who preaches in the court house, an excellent flouring and saw mill and a small clothing shop which does business to the amount of about \$1,000 a year, the last \$1,500. Abundance of water privileges. This part of the country is covered with small lakes and it has been and is considered one of the most unhealthy places in the territory. There is one physician about 40 or 50 years old. A man of good talents of bad morals and beastly habits. He is very intemperate, is rough and uncouth in his manners. As ugly and obstinate as a bull and a professed atheist. A man looked upon as very good for his professional acquirements, feared by all and hated by the most of his present employers. He has been sick most of the summer with delirium tremens and the rheumatism and at present is paralytic in one foot. Drunk half of his time. A considerable property acquired by his profession and a very agreeable and large family. He at present attends to business and does what little there is. From all these circumstances and the pledges of many of the best citizens I have concluded to settle there. The least for which I can obtain board and washing is \$2.00 a week. An office, \$35.00 a year. A horse that is good for anything 50 or 60 dollars. English horses are worth 100 to 150 dollars. A saddle \$20. Oats and corn 3/n a bushel. Prairies hay \$4.00 to \$5.00 a ton. Rice 3/5. Wheat 4/n to 4/6. Wood \$1 to \$2.00 a cord. I shall not purchase a horse until spring as there is nothing to do until next summer. From June to October is the sickly season. Transportation from this to Pontiac is by the stage \$2.00. All baggage over 15 lbs., 88 cents. By the waggon I can send my baggage for 5/n a hundred and intend to walk out on Tuesday for I dare not venture my neck in the stage again and can go it in less time. The rate of charging is high. For visits and med. in Pontiac the least that Doctor Thompson charges is one dollar. Mileage 2/n. Where he goes from eight to twelve miles \$2.00 whether he leaves med. or not; over \$3.00 a visit. Consultation five dollars. Obstetrical cases five dollars whether he goes one rod or fifty miles; after visits extra. Bleeding fifty cents at the house of the patient. Office 25 cents, same for Ext. Dentis, 12½ to 25 for cathartics, 2 cents for a pill of any kind.

The people are rough as Tartars. The majority intemperate, all or nearly all drink some. They have been and the mass of the people here now are the most wicked set that ever lived in the U.S.A. Three-quarters are infidel in their sentiments, at least of the first settlers. This class in the wilderness and their successors are sturdy and Oakland county are rapidly dying or clearing to respectable emigrants from Vermont, New York (Pennsylvania?) and Ohio. Government lands are worth \$1.25 an acre to take your pick in any part of the territory. Speculators have bought up the most desirable locations and lands under

improvement sell for \$2.50 to \$5.50 an acre. A pair of horses that can do farm work \$150. Oxen 60 to 70 dollars a yoke. Pork \$5.00 a hundred. Beef \$3.75 to \$4.50. Butter fresh 1/6 to 1/8. These are considered the standing prices the year round. Little is exported, being consumed by emigrants. My sketch of the country is necessarily imperfect as I have not been off from the turnpike and returning by night I have but one view. I calculate to make a critical examination when I walk to Pontiac and while I am there and the result you will have in my next. Therefore place no great dependence on the present cursory, perhaps incorrect statement as to the face of the country; the rest I have obtained from observation and information from good sources. You must not let any but the family examine this, fatigue must be my excuse for the manner and matter. Recollect me to enquiring friends, etc. It will be unnecessary to the family as it is intended for all though directed to you.

Yours, etc.,

D. L. Porter.

Pontiac, December 29th, 1828.

Dear Brother:

I commenced a letter to you some days ago and it contained much good advice relating principally to your negligence in sending papers to me. I cannot even now give you much credit as I have received but one letter, and one paper from you. If it is possible send me some paper from our section of the country regularly, and I will forward my North Western Journal regularly. You may perhaps obtain more correct information as to the actual situation of this territory, than it would be in my power to give for several months, as I am almost entirely dependent on travelers and the newspapers for what information I obtain. At this season of the year we have to place reliance on the papers of the day. After November the traveling season closes in consequence of the bad roads until the middle of January. Do you recollect the parable of Dives and Lazarus—and the gulf attended to there-in. Such at present is our situation. Six miles of the road between this and Detroit is almost impassable for foot passengers and a loaded wagon is out of the question. For the last month the weather has been as warm as it usually is in April. A great deal of rain has fallen and it has not frozen ice one-half an inch thick. (Our streams have been all frozen over once but broken up again). The roads are very deep muck in the wood land and are far from good in the plains or oak openings. The game which has been heretofore plenty is almost annihilated by parties of strolling Indians of the Saginaw tribe (400 or 500 have passed through the place since I came here), who depend on it for subsistence, their corn crop having failed the last season. Partridges and quails are however very abundant. As you go west the game is more abundant.

What an indelible thing that word west is. When I came to this country I supposed that I was on the very edge of the civilized world. I have as it were but arrived at the threshold. West of Lake Michigan the white inhabitants numbered 10,000 last spring and the settlements extend several hundred miles west of this place, and petitions are already afloat to have a new territory set apart embracing those settlements in its bounds. A resolution approving of such a course was passed by the last Legislative Council and a committee appointed to make a draft of a petition to Congress. I find that I knew nothing

of the situation of this country and had as indefinite an idea of the resources of the country, the manners and customs of the people and the advanced state of agriculture and the arts, as I had of the inhabitants of the moon. I have no doubt that this will one day be one of the greatest agricultural and manufacturing countries of the Union. Owing to the mildness of our winters sheep and all kinds of stock propagate and thrive beyond conception. The expense of keeping sheep is nothing during the winter season and there is nothing wanting but an increased supply of wool to start machinery for its manufacture in every part of the territory. There are abundance of men able and willing to embark in the business as soon as the times shall warrant it. This village would offer as fair encouragement as could be asked by an enterprising man. Water power is abundant and there are constant calls for an increase of machinery to do the work for the farmers of this part of the country. The cloth draping establishment in this place has two carding machines, two Jennys and two looms constantly at work and the man cannot attend (though a real driving fellow) to half the calls for work. The man who built the grist mills, saw mills and triphammer in this place died last summer and the whole are to be sold at auction in the spring. It would be a grand chance for Mr. Hawes or Sprague or some such men, as it will be a great speculation. Doctor Chamberlain who has had the charge of the grist mill for the last six months has cleared between five and six hundred dollars and has not been confined to it either, and what is more, knowing nothing about the business. It has two run of stones and any quantity of water and for five hundred dollars lain out in the dam and digging a ditch across a neck of land near Mud lake, can be made to carry 16 run of stone. Every half mile, for five miles an extensive mill might be erected. We are on the highest table land with one exception, in the northern states. The streams run in every direction from this county; our extensive lakes supplying the head waters. The Clinton, the Flint, Huron and Rouge head in this county or near its lines.

But I must for the present proceed to other matters. Did you ever dream of my finding a nineteenth cousin in this country? It is a fact, however, having been claimed in that or some other degree (I don't recollect the names of the different degrees of consanguinity and not having a bible handy am not able to define the present one,) by Archibald Philops of Nassau of this town. He is a nephew of Grandfather Lawrence and either a cousin or brother-in-law of Uncle Lionel. Aunt Ann I think is a sister of his. He has lived with Uncle Lionel and has visited at grandfather's and at father's. He was at father's during the late war and has told me of a wounded man who was under father's care at the the time. He may recollect him by the time and circumstances. He is a man of Uncle David's size about 35 (I should think by his looks). He is a good looking man and the best dressed farmer in this county. He came to this country about eight years ago in company of one Williams, purchased a lot of land containing about 600 or 800 acres of land. On it they erected a saw mill, which is considered the best and does the most work of any in this part of the territory. It is eight and one-half miles southwest of this place on the Saginaw turnpike (so called though nature did the work and that well, too). It is the handsomest farm I have seen and on it is an extensive

pinery which in this country is very valuable. Williams is dead. His half part of the mill and farm is to be sold at auction in February or March and is estimated at \$1,200. That sum has been repeatedly offered for it but by the law it has to be sold at auction. Philops, after paying his debts, will be worth clear about 1,200 or 1,500 dollars. He is lately married, what luck he has had I cannot say. His wife is a good looking intelligent woman, further I know not. I have been there twice. He lives in an old log house which is neat and well furnished. He has an excellent barn and a good share of stock for the country.

CHRISTMAS

I really wish that you could have seen our Christmas celebration in this town. Of all motly assembly! You never saw the like. It is general holiday. The first thing was to call out the sharp shooters to wreak their vengeance on the turkeys. They were set up at 25 rods, sixpence a shot at arms and there were some of the greatest marksmen I ever saw. One man bought twelve shots and the contract was that if he did not strike the head or neck, even though he killed the turkey, it was to be considered as lost to him. He struck the neck nine times, the head once and the body twice. Many of the marksmen killed at every shot. After shooting they went to gambling and drinking, singing and dancing. You can form no conception of the scrape they had. It is utterly out of my power to give even a faint outline of the proceedings. The scrape was kept up until Sunday night. I thought that many must have killed themselves but to my amazement there was not an accident, nor a single dead set battle, nor any violence though I think that many will feel the effects of it for months if not for life. Many lost a great deal of money. One young man set up his farm at rush for 500 dollars and took a share in. He won it back and set it up again for one-half and lost that and before night every cent he had in the world. Such are the people who are pioneers in a new country. Slaves alike to the soil and to their passions. They are however, a transient class. They soon fall a sacrifice to their excesses or when broke down retreat to the western wilderness again to gain and again to loose; there being no such thing as reformation.

I have had but little business since I wrote last. One call which ought to have stood me twenty dollars cost me four or five besides my time and labor. I was called in council to Hoxies Settlement 35 miles northeast of here in Macomb County with Doctor Jennings, a graduate of Burlington in the days of Smith and Porter. It was a case of typhus and the man died 12 hours after I got there. I was detained one day by my horse being sick; the man who died did not leave enough to bury him and I had the pleasure of being gone three days, paying one dollar a day for a horse and keeping him during that time.

HORSE COLIC

The owner of the horse swears that he will sue me for damages to his horse, but I do not think he will as Doctor Jennings has sent me his affidavit and also another man that the horse was well and free from sweat when put in the stable at night but that when I started the next morning for home before I got fifty rods he fell down, apparently with the colic, for which there was no evident cause. I can also prove that the horse has been subject to such turns and that the owner has sponged twenty dollars out of one man and

ten out of another for a like accident to the same horse within a year. I have notified him of these facts. What he will do I cannot say. At present I have not money nor credit enough to raise a horse (\$50 to \$70), saddle (\$25), and bridle (\$3 to \$5). Doctor Thompson has been very particular in warning everybody against me as a quack and swindler. The first I have disproved by my papers and practice, the second I must leave to time to develop. I am determined to stick to Pontiac through evil and through good reports. I know I can give the Doctor a pull as he is most heartily hated. One man, an enemy to Thompson and in my esteem no friend to me, offers to let me have one hundred dollars if I will give him my judgment bond for one hundred and fifty with interest and an execution on my horse and books and medicine. I have thanked him for his kindness as I ought but have concluded to wait patiently until spring. My stock of medicine will last me several months and LeRoy will accommodate me with board at his own risk but is so far prejudiced by Thompson that he will go no farther. I have paid the \$20 rent on an office for six months in advance and what money I have will pay my horse hire until I shall be able to get a horse. Twelve families have given me their public pledge that they will give me their business for one year at least, but I have to take my pay in grain or dicker as it is called, a year from this time. Which is the only season for paying debts in this country.

A MEDICAL FIGHT

Thompson having quarreled with all the neighboring physicians, they have one and all pledged themselves not to call on him in council and have proposed to me to act as consulting physician, which I have engaged to do. I have not seen Hays for some time, he is raving mad because I would not commence a partnership with him at Ypsilanti. I consider myself bad enough off now but that would have been ten times worse. Philops likes his cousin and swears he will do what he can for him and does so, but is in no situation at present to back him in getting a horse. Him, I believe, for I know he is in debt and as money is scarce he slaves like a dog at his mill and farm to clear himself, which, if nothing happens, he will do next summer. I find that he is a real industrious fine man.

HAPPY NEW YEAR

January 1st, 1830. A Happy New Year to all of you. I was woke about an hour since by the yell at my door of some ragged, wild looking urchin, of "A Happy New Year, Doctor." I got to the door and thanked them, they were not satisfied with that, however, and one of them said "that dad had told him that I was a Dutchman and had oceans of hot punch and cake and his object in calling was to partake of the good things and he would be damned if he did not have some and Dick wanted some too. I found that I could not be rid of them by fair means so I resorted to the earnest and gave them a chance either to clear out, take some yalop or a cowhiding. To my utter amazement one chose the yalop (not knowing what it was) I mixed it with some water, he ate some but concluded he had no "further occasion," decamped with a yell and followed by his companions who promised not to trouble me for devils milk again in a hurry. I see the crowd begins to collect at the tavern opposite already and from the appearance of things they will probably have as great a spree as on a

former occasion. You may be surprised to learn that it is but 8 o'clock and I writing a letter. Do you recollect my expressing a wish to have the ague for the sake of experiment? I am satisfied for I have it with a vengeance every other day, at precisely 12 o'clock. It is not like our ague. It makes me shake like vengeance, but does not last over two or three hours when I am able to resume my books or ride or whatever else I feel disposed for the moment to do. The chill is very severe, but the other stages amount to nothing and when over I feel no bad effects except a general soreness for a few hours. It is probably occasioned by the very warm weather and the draining the mill pond to repair the dam. Almost every person in the village has it, but they never do anything for it as cold weather will stop it. I have had four fits and expect one today. I shall leave it to take its course for a few days longer when I shall have to try calomel for a few days. The ague is looked for regularly and receives as little attention from the inhabitants as the change of seasons. I have one case of pleurisy on hand. It is a new settler and whether I shall ever get my pay is uncertain. He shall have a chance, however, for he won't die this trip. My prospects grow more encouraging. I wish that some of our young farmers from Saratoga who can raise from three to five hundred dollars would come out and view this part of the territory. They would be delighted with it and could in three years double their money and in ten be wealthy. I cannot learn a single instance where a man came in with industry and economy, who at the end of five or six years cannot raise from one thousand to ten thousand dollars. Such men as the young Backers and Traverses could not but do well. They must always be cramped there while here with 500 dollars they would be independent and would not have to work so hard as they do now. Mention it to them if you think of it, but don't tell them that it is unhealthy. In truth, it is not more so than the western part of New York and the whole of Ohio. They must have money as there is no credit in this country for lands and they must have great confidence if they can get (?) provide the necessaries without it. For that reason I like the country. Every (?) who occupies a farm can pay you his bill, though only in the winter season and generally with produce or with his note on interest which passes about as readily as the cash. In fact I would as leave hold one as the other if the signer is known to be a farmer. Mechanics are very much needed and are paid extravagant prices for their work. A good toiler would have as much as he could do all the time and receive Troy and Albany prices. It is the same with the shoemaker. A good one could keep five or six journeymen at work. There is also a great chance for another blacksmith. All our mechanics have more than they can attend to and a tanner who understood his business could clear four times as much as he could with the same capital embarked in our village of Waterford, as raw hides sell very low and tanned leather is higher than with you. He could also buy a great abundance of them. Bark is low and he could grind it by water power. If he felt disposed he could purchase 50,000 deer price he chose to ask.

There are several wealthy men coming in next season, they have purchased village lots and some skins in a year and pay for them in leather at any have contracted for buildings. What they are going at I cannot learn, let it be what it may,

they are welcome. Thompson and me closed accounts yesterday, he said that it was always good policy to work off the bile at the end of the year. He raved like a mad man and I laughed at him. I found afterwards that it was his determination to quarrel with me and then make peace and form a partnership. I will see him, as he wished me d'n'd first. A partnership on no terms shall be formed now, as he has acted like a scoundrel. By his violent and unmanly conduct he has long ago excited the contempt and hatred of many, and his present course is far from a soothing one. I shall eventually root him out; root and branch, if he does not go to his majesty on a whiskey barrel first. The greatest misfortune I have to contend against is the coming in here after two real scoundrels had to decamp. They both did well for a year or two but became dissipated and shaved all their creditors and friends, out of their demands. The people still feel sore and are very much on their guard and their fears are kept alive by the bold assertions of Thompson. The course he pursues is the very one which I could have wished, as I might not have been known for a good while, but now I am known personally, or by report by every person within ten miles of this. Augustus Porter has done me a good turn also and without my asking it. He has written to many of the leading citizens, I find, in a flattering manner and the way I learnt it was by receiving invitations to their houses as a friend and several showed me the letters. It is more than I had expected of him as he is a cold phlegmatic fellow. I had a letter to him from Mrs. Closes friend at Buffalo and also to several other gentlemen at Detroit who have treated me with great politeness. My calculations on eventually settling in Detroit are lain aside in consequence of the number of physicians compared to the population and wealth. When I leave here it will be for the east or south, though I am confident that in five years I shall be independent here if my health holds out.

Yours, etc.,

D. L. Porter.

The thermometer has stood for the last three days in the afternoon at 60° to 71°. This morning it is cold and freezes, the first time for three weeks. The change has been very sudden and I think will occasion me some business as the people for some time back have grumbled about their sides and backs.

Pontiac, March 1st, 1830.

Dear Brother:

I received your letter containing the Post note last week, for which I am very much obliged to father, etc. There is nothing of a very interesting nature in the letter excepting that and the tender of your services as groomsman in case of necessity. I fear that if you defer visiting this country until such time as you receive a formal invitation to attend my debut, the day will be "lang and Sare" before I can welcome you to this earthly paradise.

DEBUTANTES—WOMEN

I have not as yet seen the young lady in the territory whom I would take for better or worse for her weight in gold. The majority are lamentably deficient in either natural or acquired graces. In the rich and harmonious vocabulary of the Kentuckian, they are half horses, half alligator and the rest made up of the well known properties of the wild cat and snapping turtle. There are many who would be ornaments to any society

if they had the advantages common in our own section of the country. You must therefore select one for me in old Saratoga against the time that you think it would be best for me to play the fool.

Business is improving. In the last month I have charged \$45.00. Ten of which is good for nothing. I have entered into a partnership with Mr. Beach in the druggist business. The contract is in these words. 1st, Elisha Beach to procure a suitable building which he shall supply with all necessary furniture, drugs, medicines, etc. 2nd, In consideration of the occupation of said building free of rent D. L. Porter shall dispose of the stock furnished to the best of his ability, for the exclusive benefit of said Beach of which he shall keep a regular account. 3rd, The drugs and medicines used by D. L. Porter shall be allowed 4½ per cent on all sales of patent medicines, secret remedies, specifics and compounds manufactured and sold by him for said Beach as a compensation for his time and labor. 5th, The above contract to remain in force until such time as D. L. Porter shall pay to Elisha Beach a sum of money not less than one-fourth, nor to exceed one-half of the capital actually embarked in said business. After which he shall be entitled to his proportional share of the expenses. I have taken possession and the business goes on well. I like the terms as I am not confined at all, he tending shop while I am off about my business.

I have written to Jas. Riley at the request of Judge LeRoy and Mr. E. Beach, to propose to him to come on and take charge of their mills, etc., which they have purchased on the Thread river, together with a village plot. It is a great speculation and will be very profitable. They want a man whom they can trust and who will be willing to take charge of their concerns. I recommended Riley and they authorize me to say to him, "Come and see for himself. If he is satisfied, embark whatever capital he pleases or they will hire him and he can become a partner at such time or on such terms as he pleases." Let him come on immediately with five hundred or a thousand dollars and go into partnership. If he prefers it he can go into a partnership with several responsible men who cannot attend to their mills in person. I want some man who will oversee. That is the situation of three mills in this township, any one of which will be profitable. Mill Wrights and all kinds of mechanics will find plenty of employment next season. If any feel disposed they can take contracts on the United States turnpike next season and will make money. The 17 miles which were completed last season was very profitable to all the contractors. Speak to Sprague and to Mr. Hawes or any other such men and tell them the situation of the country. There is a new woolen factory going up in the spring here. They are getting out the timber now. Has Howland got any steady industrious journeyman who understands the wagon maker's business. If he has tell them to come on. If Riley (he will refer to you for information) comes on he had better start as soon as he can collect his money. If he was to bring on a good span of horses he will dispose of them to good advantage. Tell him not to wait for navigation, but come by land and go by land through Canada by way of Lewiston. That route will not cost him more than to come all the way by water. Besides he is wanted early in the season and he cannot get here until the last of May or first of June if he waits for the boats.

Phillops has married his with whom he

has lived for five years in defiance of public opinion, during which time she has to his knowledge had intercourse with other men. He is run down by her relatives who are poor, miserable wretches, who have frequently fallen under the lash of the law for their errings. He supports them, pays their debts, law fees and fines. He is going to ruin as fast as he can. His character and credit are now both lost and is not allowed to hold intercourse with any one but his wife's relatives. I find he is very much involved and Uncle will lose his debt if he does not attend to it soon.

Young LeRoy intends to take a tour to the east in the spring and says he shall visit Waterford. Entertain him well. He is simple and ignorant and has a great curiosity to see the curiosities of the east and to visit the factories, etc. His stay will probably be short in that country.

The hint on the envelope of the Journal was occasioned by the writing on the first Sentinel which I received. It related to Mr. Givens Death and was done with ink. The Postmaster saw it and requested me to inform my friends to write their obituary notices in a sealed letter or wait until the papers published it. The solutions which you use are not clear enough and leave a yellow stain. Be more careful in preparing it and use a clean pen. I do not receive one-half of the numbers of the Sentinel. It is nearly three weeks since any came and those before were odd numbers. Hint to the Postmaster to be more particular or think of enclosing them more regularly. You will cut off and file the note at the bottom. Give my respects to my friends.

Yours respectfully,

D. L. Porter.

W. P. Porter.

Pontiac, May 2d, 1830.

Dear Brother:

You perceive by the dates of my letters that I stick by in promise to write by the first mail of every month. I feel in better humor for writing now than usual from the improvement of my business and prospects, and not of mine alone, but of the whole county. Since my last letter there has been but little sickness until within a few days. My charges since the 23rd of April have been \$31.54 and I have two patients to visit out of town besides three that come to the office. Great fears are entertained throughout the territory (this of course must not be hinted out of our own family as it might deter emigrants), that it will be the most sickly season that we have had for some years. I must confess that from present appearances it will be the case; if my suspicion should prove correct I have no apprehensions for myself on the score of business. For myself I never was in better health or spirits than I have enjoyed since the first of February, and all that I ask is to have it continue until the first of October, (the end of the sickly season), then I care but little what comes. I have enjoyed myself greatly since the first of April in riding over the country and seeing the immense improvements in the farming department; ever since that time the farmers have been breaking up the openings which is done with great ease and rapidity. The last month was warm and pleasant. A great many wild flowers were in blow in March; on the 15th of last month I saw peach, wild plum and crab apple trees in full blow. The gardens about the village are very early, more so than I recollect seeing them at the east. The woods are generally leaved out and

we have elegant pasture over the whole country; in the meadows the grass is six and eight inches high, when of its full size it is from four to six feet.

During the month of April we had a great many fires in the woods. The hunters set fire to the dry grass and leaves, and old logs, dead trees and most of the small brush is burnt clean. The fire seldom attacks the large trees, only consuming the under brush and this occasions the openings which are the greatest ornaments to our country and have excited the surprise and admiration of all strangers. The hunters' object is to encourage a rank growth of grass to improve the hunting of deer etc. These fires excel in beauty anything that I ever saw during the night. The light is very vivid and appears to dance about amongst the trees and assumes the most fantastic forms, rapidly moving along and changing its appearance. The spectator who is not accustomed to these scenes would almost believe himself in fairyland.

The prospects of our village, county and territory are very cheering. The increase of our population will be greater than in any preceding year. The tide of emigration has again set towards the territory. The emigration mania or fever is prevailing very extensively in the western part of New York, in all the middle states and most of the eastern states. There have been pioneers from every section of the middle and eastern states to examine the country. I am not aware of an instance in which they have returned to their friends without purchasing a lot first. An agent for a society of Quakers in New York State has purchased an extensive tract about twelve miles from here on the Saginaw road. They are expected on with their families in the early part of the season. Six wealthy families from Genesee County are now on their way for this village. They will be here this week. They are all men of business I understand—whether merchants or mechanics I have not learned for a certainty. Several new buildings are now going up in the village and a meeting of the citizens is to be called in a few days to take into consideration the measures to be pursued for building a church and an academy. There are some lands in the vicinity the proceeds of which are appropriated to that purpose. Business of all kinds is very good at present, and will increase next month. In June the Indians go to Malden in Canada to receive their presents. All the Indians in the territory except the extreme south part, go through this place. (Pontiac being the old head quarters of all the tribes, and they still appear to regret the necessity which compelled them to resign the most delightful part of their dominions endeared to them by numberless associations of family, friendships and feuds of savage massacres, and inviolate treaties (like those of the whites) made to trample upon in violation of the most sacred pledges of fidelity). During their sojourn the merchants purchased immense quantities of the most valuable furs and skins and pay for them in goods and whiskey at an enormous price. (By the by, it is worthy of note that these same Indians receive presents from the American government).

From the middle of July to the middle of October, business is comparatively dull (yet in Waterford it would be called brisk even then) in the mercantile department, though all others flourish, if possible, more than ever. You will notice the puff in the North Western Journal in relation to Saginaw. (I call it a puff, if it was

not for the bad appearance which a letter makes when a part is erased by xxxx I would surely give it a daub). The statements in that are all correct which I can certify from personal observation. The village of Le Roy is the one where I wanted Riley to go, but the time having passed over which Messrs. Beach and LeRoy engaged to wait for an answer from him, the situation has been given to another. Its location is similar to that of Waterford at the junction of the Thread and Flint rivers. In the course of a year or two it will be a fine location for some of our young men who want to go into the mercantile business, and there are a great number of Indians in the vicinity who do all their trading at that place and is now very profitable to Mr. R. Stevens, who has the command of the whole. At present I do not think it would warrant an opposition.

By the bye, do not mislay that note of father's, for if any accident should happen to me such as taking a check on the tow path, it will be the only means of saving any of my property here. They are the greatest hands to administer on the estate of a stranger that I ever heard of, all the property being consumed in fees and costs by the estate great or small; (it is conducted in the same manner as in the southern states. The amount of my charges until yesterday was \$225.32 and all I owe is about \$20 to Judge LeRoy for board. Everything that you have done here is very high and expenses are great in the village, but I continue to keep all within my income. Doctor A. L. Hays has failed (from such good fellows, Lord deliver me!) He owed the Monroe bank about \$300 and all his real and personal property was pledged to his smouseing (or carousing) friends (who lent him and offered me money at 25 per cent). He is sued in the U.S.A. Court and how he will get out of the scrape I do not know. I am sorry that he was such a foolish calculator and have no reason to repent my keeping clear of a partnership with him. He has fallen in love with and proposed matrimony to every pretty girl he saw who had any property, and has been uniformly refused; he is now laughed at and ridiculed by everybody without mercy, they considering him a mere fortune hunter. I have had a letter from Robert LeRoy, who from the hurry of business and anxiety to get home, had given up the plan of visiting Waterford. Mr. Elisha Beach has started for New York for dry goods and drugs and medicines. He has taken father's address and intends to visit Waterford if he can spare the time. If not he will write to one of you from New York about the first of June to meet him at a particular day and place in Albany, when he will attend to any commands from you. I requested him to do it in the hope that you might send the grape roots, seeds, etc. by him. Keep the roots packed in moss (until?) you hear from me again. He may disappoint you, but at (that?) they will not be lost to you, if he should not come. My anxiety to receive them is increased by having the offer of a village lot lease for five years free of expense on condition that I cultivate it. I have had it plowed and spend an hour or two after sunrise and after tea in it every day. It is too hot to work in the middle of the day, aside from the necessity of attending my professional business and reading. I shall have an elegant garden and it is directly opposite to the office.

I cannot but admire your taste in selecting a "cara Sponsa" for me and the only thing that gives me uneasiness is the suspicion—the mere

suspicion that I might differ a little from you in relation to her qualifications. I hope that you will at least select a little better for yourself for I doubt whether those delightful traits of character which leads you to suppose that she would be proper for me, could recommend her much to either of us, or to our friends. How does your patient at the half way house come on? I think that it is almost time for convalescence.

I have marked some beds of splendid wild flowers to send home for Abbey, Mr. J. S. and W. L. All that I fear is, least Abbey in attending them, shall find occasion to use a little touch of "Rouge." If it should be necessary for her comfort, I will send her a pattern of one of our bon ton ladies of the forest, who have a peculiar taste in painting their faces and would at least attract some attention in Waterford.

Next time you write recollect that I have some curiosity to know what is going on in Waterford and how our friends do. You have left me to infer that our own family were well and I am indebted to Laura and Abbey for the first direct information for which I am very grateful. I have no room for separate postscripts; indeed, I think it is unnecessary as my letters are intended not only for father's, but Mr. Scotts and Strachan's family. Also recollect me to my friends (real, I mean), perhaps it includes inquiring.

Yours, etc.,

D. L. Porter.

Pontiac, August 10th, 1830.

Dear Brother:

Were it not for fear the family might still feel uneasy about the consequences of my seasoning, I might be tempted to wait a short three months as you did, without writing to you, or giving you the least hint whether I was compos mentos or still breathing the foul air of this earthly paradise; (foul only to the new comer, recollect). I must indulge in egotism therefore to commence. Firstly, my health has greatly improved and with it my spirits. That nervous irritation (I must indulge myself by christening it with a soft name) has in a great measure subsided and I can meet my bitterest enemy without feeling the least fluttering of the heart or swelling of my throat, sensations which made me miserable when indulged and at the same time for several days utterly beyond my control. "Black Bill," as he is called, alias, Doctor T., continues savage because I would not be salivated or die; nor salivate or kill any of my patients, which, thank God, we have not found necessary in a single case, as yet, whereas he has salivated all of his and out of seven cases of fever has lost three. In his wrath he has opened an opposition druggist shop. He damned Judge LeRoy the other day for introducing me here, as since the sickly season commenced he had not charged \$300, whereas ours since the the second of June amounts to about \$500. Business in consequence of the rains has not been as good for the last week or ten days; our daily charges average from 8 to 12 dollars—during our harvest time it would sometimes go as high as 30 dollars.

I have tried for a horse but do not succeed in getting one, as they want good dicker or money. For the present I hire one at \$1.00 per week and keep him myself and have to warrant him in the bargain to be returned safe and sound. At present good horses are very scarce and command a high price. I pay a high price considering the expense of keeping one, but it would cost me from 4/- to

8/- per day if I did not hire by the week and I must have one at my command.

Emigration is still the order of the day and great numbers are flocking into this part of the country—many of them wealthy. Riding through the woods in any direction you find people hunting lots. Oakland County and Saginaw are the order of the day with settlers. What is the name of Austin's brother-in-law and what town is he in? Your account is so indefinite that I am at a complete loss. Powers' brother I have not seen. Ypsilanti is forty miles across the country, 75 miles to go round by Detroit. I never have been there but intend going as soon as business will admit. Doctor A. L. Hays is recently married to a young lady in his neighborhood. William Dennis was here about a month ago and stayed about three days. I never suspected such a thing as his being in want of business. If he had given me the least hint I could at that time have got him into Seth Beaches store at Auburn, as they were in want of a confidential clerk; the old one having left them. The place is now filled. When he left here he concluded to go to St. Josephs, about 200 miles west of Detroit, on Lake Michigan. If he was not suited there (in what respect he did not say) he should go on to the lead mines on the Mississippi and perhaps return to Green Bay. If he is limited in his means and does not get into some kind of business I fear that he will enlist as a common soldier at Green Bay, as there is nothing to induce such a course. His mind appeared to be fully made up as to his future course; and he did not appear near as cheerful as formerly, though in good health. I learn by enquiring that he left Detroit about 3 or 4 weeks ago. He has promised to let me know where he settles and describe the country, therefore say nothing to his friends further than that I have seen him in good health at Pontiac, until I write again.

Wish John Cramer, 2nd, joy from me for being delivered from a living curse in the person of Miss Mary V....., as also for his success in business. I wish I could order you to do the like by Ellis on the first point; though don't forget the latter. I do not feel any surprise at your account of the Peebleses.

You mention some local political squabbles which are disgraceful. Old Saratoga ought, and I hope will be forever and a day politically damned (in plain terms) if she sends J. Cramer to Congress in preference to J. W. Taylor.

PRACTICE QUALIFICATIONS

You enquire what are the legal qualifications of a physician in this country? They are to pass an examination before the censors of the territorial society and before they can proceed to do that he must show the degrees of M.D., a license or a certificate of study for three years, if of a liberal education, four if not. Those presenting a degree seldom have much trouble in passing, but woe to the licentiate of the foreign student as but little mercy is shown to either. The cost is about \$12, if you join the Society, which is expected. Encourage none to come, as 99 out of a hundred will be disappointed as there is not a Pontiac at every door. Our profession is overstocked in the territory and this summer more than 40 have gone away in disgust.

If you ask on your own account I must first ask what is the state of your health or is it on account of it that you propose the question. Our climate is warmer than yours and idiopathic affections of the lungs unheard of, except pleu-

risy. A physician, to obtain a support, must four months in the year undergo everything but death. You must go almost altogether on horseback and contrive every way to save distance by following Indian trails or for want of these cutting through the woods to save distance frequently 30 to 50 miles per day and still have to go from morning to night. We think nothing of riding 15, 30 and 40 miles to see a patient, sometimes 80 to Saginaw, (as the settlement has not and cannot support a physician). With a congenial climate and extremely fertile soil, we have all the dissipation of the south and our expenses are equally great. Should you desire a change of climate go further south, where you can live better with less fatigue. Next spring perhaps I shall visit Waterford in March or as late as April. If you feel disposed to return with me and see how you like the country. You can do business enough during the summer to support yourself handsomely and if you say the word we will steer for New Orleans or some of the towns on the Mississippi on the 15th of September or 1st of October. Explain your views and I will arrange my business accordingly. I should like a warmer climate even than this and I know that I can make ten times the money though it may go as it comes, "easy".

Archy Phillops is doing well today. I took off his splints. Child has a severe intermittent fever inclining to the remittent. The friendly duns I mentioned in my last still cheer me in my hours of relaxation, with at last a proposal to join issue. Recollect me to all our connections and enquiring friends.

Yours, etc.,
D. L. Porter.

W. P. Porter, M. D.

(To Be Continued)

TUBERCULOSIS AS A SYSTEMIC DISEASE

PROF. ERNST LOEWENSTEIN, M. D.

VIENNA

Villemin the discoverer of the contagiousness of tuberculosis already proved in 1869 that tuberculosis bacilli must circulate in the blood of advanced cases of tuberculosis.

Robert Konig, the famous surgeon, assumed in his classical work: "Tuberculosis of Bones and Articulations" that the bacilli must circulate in the blood vessels again and again, without causing miliary tuberculosis. In 1905 I published a paper on Septicaemia in tuberculosis, in which I proved the truth of this view by experiments and I discussed the question of septicaemia very thoroughly.

We know today that we were on the right way. It is sure that bacilli may circulate in the blood without causing miliary tuberculosis; surely we must recognize and acknowledge a border between miliary tuberculosis and bacillaemia, but we must also not forget the identity of genesis of both states. A miliary tuberculosis be-

longs also to the circle of tuberculosis bacillaemias, it is a kind of bacillaemia. I believe that a condition of miliary tuberculosis is only given, if the intrusion of the tuberculosis into the blood vessel occurs again and again. That this repeated influx is necessary is proved by the various phases of development of the tubercles. They show various ages. We must limit the name of miliary tuberculosis to those forms of bacillaemia which result in macroscopic lesions. The greater part of pathologists speak of miliary tubercles only in those phases, where they can see the tubercles with the naked eye. There are however some border-line forms, to which we reckon the sub-miliary tubercles. You see that there are only quantitative differences. We are certainly not able to find the tuberculosis bacilli in the blood in every case with our present methods of examination.

Were I to report upon the results of the most reliable methods, as for example the infection of guinea-pigs, I could summarize as follows:

First stage, 2 per cent; second stage 10 per cent; third stage 30 per cent of the cases show bacilli in the blood. But those figures give no true picture of the real condition, because our methods are as yet insufficient.

The guinea-pig is not an absolutely reliable indicator for the infection with a few bacilli, especially if its resistance is increased by the simultaneously injected blood. In order to understand the pathology of tuberculosis, we have to combine the experience of the clinic with the autopsies, and the bacteriological examination.

Clinically, we know that every one can get a metastatic tuberculosis, despite a feeling of absolute health. Every one of you know a lot of cases, who get a manifestly metastatic tuberculosis (eye, bone, kidney, testis, etc.) as a result of trauma. One of the cases I will never forget, was sent to me by Robert Kock himself. The man, a powerful naval officer was sleeping in his berth aboard his torpedo boat, when a porthole clamp fell back upon his testes. Thirty days later one testis showed sure signs of tuberculosis. After a short time the other testis became affected, despite the immediate surgical removal of the first testis. The vasa deferentia became affected as well as the peritoneum.

Eiselsberg demonstrated a second interesting case of tuberculosis of the elbow, who always got a new fungus of the bones,

wherever even a slight trauma occurred.

I was able to publish a paper on eight cases of tuberculosis of the testes in 1913, where the trauma of the testes was the cause for the development of tuberculosis. The lungs in all these cases offered no sure symptoms of tuberculosis. Such clinical observations have more weight than our experiments on animals. Those experiences in men are natural experiments in man, proving the fact, that the bacilli must circulate in the blood vessels—without great anatomical lesions of the lungs; I believe that an alteration of the walls of the blood vessels, perhaps sclerosis or, in the case of trauma a hemorrhage gives the opportunity for the development of single tuberculosis.

They grow in the extravasation as in vitro. Another proof, that this conception must be true, was found by accident.

Nather (Klinik Eiselsberg) examined the colloid tumors of the thyroids, extirpated in the klinik Eiselsberg histologically. In four of six cases Nather found tubercles in patients who never offered symptoms of tuberculosis, neither before the operations nor for a long time after the operations. Shimonoski made the same observation in cadavers; in 20 out of 26 cases the colloid contained sure tubercles.

But now I reversed the question, in order to become certain on the relation between changes in the lungs and metastatic tuberculosis.

I was sometimes embarrassed in consultations, when in such cases of tuberculosis of the eyes, the kidneys, tuberculosis of the bones, I was put before the question: is there a tuberculosis process in the lungs or not? I was compelled to answer: Surely, there is a tuberculosis in the lungs, but I am not able to prove it by our modern methods, a disagreeable situation for the consultant; but we cannot be expected to hear grass growing.

Therefore I had to appeal to the autopsies. Now I had to go over the autopsy reports of cases with metastatic tuberculosis, i. e., tuberculosis of the bones and the kidneys and to copy the report regarding the changes in the lungs. Now it was surprising that in 60 per cent of the cases with tuberculosis of the bones and in 40 per cent with tuberculosis of the kidneys the report stated briefly, now tuberculosis in the lungs, or an old scar.

But a pathologist like I. Orth in Berlin had observed the same facts. Orth had the opportunity to make an autopsy in 16

cases of tuberculosis of the bones, which died of erysipelas and other accidental causes. Despite of his carefully looking for tuberculosis foci in the lungs, he did not find them. They had surely been there, but we know from Ghon's classical work that tireless research is very often necessary to find the primary focus. Such an autopsy needs two days sometimes.

You see how difficult it is for the pathologist to find in this metastatic form the tuberculosis lesion in the cadaver. One must therefore not throw stones at the clinician, who confessed openly, that he with his methods is not able to make a sure diagnosis in many cases. Here the biological diagnosis is deciding.

These simple, undeniable facts prove clearly, that the metastases in tuberculosis occur in at least 60 per cent of cases in short time after the infection; that means more often in early than in the later stages of infection. Now I tried to get an insight into the questions at which time the bacilli are already spread in the whole body. Only the experiment could decide this question. I infected guinea-pigs right under the nails with a subcutaneous injection of tuberculosis bacilli and removed the foot of the various animals at different periods of time in order to see within which time the guinea-pigs could be saved from generalized tuberculosis. The result was very clear. After 24 hours the bacilli were to be found in the spleen. In other words there was a bacillaemia shortly after infection.

Our next question is; What is the fate of these bacilli in the blood? They are spread to all organs. If there is a great number of bacilli in the blood, a miliary tuberculosis occurs. If only a few bacilli are present the organ of their deposit depends upon chance. We have to differentiate between organs sensitive to tuberculosis and those immune to the disease. We will occupy ourselves with the susceptible organs.

Our experience teaches us which organs are disposed to tuberculosis. If we make a scale of the frequency of the metastatic forms of tuberculosis we find that the bones, the kidneys, the eyes, the meninges and the adrenals, the testes, are the organs which are most frequently affected.

We tuberculosis specialists have to know about these protean forms of tuberculosis, and I was always deeply interested in all metastatic forms.

My experience in the latter types has taught me one sure fact, which I men-

tioned for the first time in a general way, when discussing tuberculosis of the eyes. This wholly neglected fact is the coincidence of several tuberculosis foci in the same system. Surely you will remember cases, which showed 2, 3 or 10 foci in the bones. I saw cases with 14 tuberculosis localizations in the bones, but I was not able to find any tuberculosis lesions in the lungs.

But not only the bones show this phenomenon. The kidneys react in the same manner. We know that the infection of one kidney is a great menace to the other. You know best how often the second kidney becomes tuberculous in time. We must not forget our experience with Addison's disease, where both adrenals are destroyed. And you are well acquainted with the fact that this destruction is largely a symmetrical tuberculosis, although often there are no, or very slight lesions in the lungs.

The same observation is true of the eyes. In 90 per cent of cases both eyes are affected. But we cannot discuss this question and overlook the skin. I examined the cases of our Lupus hospital in Vienna for open manifestations of the lungs, with the result that I did not find more than 5 per cent of cases with an active tuberculosis. But precisely in such cases it is easily to be observed that new lesions appear only and always in the skin. I remind you of the so frequently recurring tuberculids of the erythema nodosum Bazin, of lichen scrophulosorum (scrophulous lichen). Every form of skin tuberculosis involves a disposition susceptibility for new localizations only in the skin.

The best example of my point is of course the affection of the lungs themselves. Every lung tuberculosis involves a circulation of tuberculosis bacilli in the blood and yet only in a modest percentage of cases are any other organ systems affected.

I tabulated the case histories of 40,000 sanatorium cases of pulmonary tuberculosis and I found metastatic in but 1 per cent of all. In short one finds a far lower percentage than one would have expected.

If we look from this bird's eye at the tuberculosis problem, the observation that tuberculosis is localized in one system in the majority of cases gains in certainty. But we experimentors believe always, that we have to make it better than Nature.

Therefore I tried to imitate this experiment of Nature's.

The best example for testing this theory seemed to me the infection of the eyes. I infected series of rabbits in the anterior chamber and waited six months, the time necessary for tuberculosis to cause great destructions. Then I injected these rabbits and new ones as a control intravenously with more tuberculosis bacilli. The controlling ophthalmologist (Prof. Fuchs) stated that in the non-infected eyes a chorioiditis was beginning.

The second test-object was the kidneys tuberculosis. Guinea-pigs show as a rule no affection of the kidneys, though all other organs are severely attacked. Now we infected (one with Dr. Moritsch, assistant of the Klinik Eiselsberg) the kidneys of guinea-pigs directly after subcutaneous reinfection, the other kidney showed a lot of tuberculosis foci.

Another very interesting experiment was made by my pupil Nakamura, an otologist from Japan. He infected the middle ear in three ways: 1—Directly through the eardrum; 2—Operatively through the middle ear and 3—By injection into the carotid.

In every case the other ear was affected.

Sumiyoshi demonstrated the same sympathetic disease, when he infected one adrenal with tuberculosis. Of course the series of these experiments could be continued, but the experiments made by nature in man speak clearly enough. There are other analogies which allow us to bring this thought of sympathetic disease in tuberculosis in one line with our experiences in the one form of sympathetic disease we know to date, that is the sympathetic disease of the eyes, which as I remember even Meller, the successor of Fuchs, explained as a kind of tuberculosis.

And now I have experiments running on the same question, which will be finished after my return.

However, you will remember that the enucleation of the primary affected eye excludes the sympathetic disease of the other eye. In the same way as the extirpation of one tuberculosis kidney at the right time is able to prevent the tuberculosis of the other kidney. And Zuckerkandi told me that he had the impression that in cases with both kidneys affected the extirpation of the worse kidney had a good influence on the other.

In tuberculous infections of the bones I have the impression that the operation of the primary foci of the bones gives better results than our conservative methods. A

scientific statistic on a large scale would be necessary to clear up this point. It is not to be denied however that tuberculosis establishes itself in one system; but the explanation is not so easily given; in Europe the phrase "disposition" is much used for obscuring obscure questions.

Your famous pathologist Wells tried to gain a sure basis for the explanation of this so underestimated phenomenon, the thought of the possibility of an organotropism of certain strains of tuberculosis bacilli, but in spite of his efforts to cultivate strains with a special affinity for the kidneys, these experiments did not attain his aim.

In my opinion every system in our organism has an independence to a certain degree; I believe every organ system can reach alone in so far as regards sensibilization. Which facts speak for this notion?

We are able, for example, to increase the sensitivity of certain portions of the skin to tuberculin. If I repeat the Pirquet test in the same region of the skin many times, the sensitiveness to the tuberculin increases more and more until this region reacts to hundredth dose of tuberculin necessary for any other region. I can further remind you of the fact that cases of skin tuberculosis are unusually sensitive to the Pirquet test. It is entirely possible, that these observations serve to explain the above mentioned facts, that an organ system already infected offers a better basis for the development of new foci than any other tissue.

This sensitivity however must not be confused with immunity, for an organ system can acquire a sensitivity to a disease without respect to the organism but immunity, it seems to me, can be acquired only with the help of other organ systems.

There are two, perhaps three organ systems which have a very high resistance to tuberculosis. The first are the muscles, then also subcutaneous tissue and the thyroid gland. It is very seldom that we see any lesions in these organs. Even after the closest macroscopic and microscopic examination of the muscles and subcutis of cadavers of miliary cases, I was unable to find lesions, although all other organ-systems were heavily affected. When we inject dead tubercle bacilli intramuscularly or subcutaneously we are infecting highly resistant systems.

Our specific treatment of tuberculosis is then simply the process of infecting these resistant systems to force them to take

part in the general infection and in the production of their own powerful antibodies. I have always injected great quantities of dead tuberculosis bacilli intramuscularly or subcutaneously and have been able to produce all the microscopic and clinical symptoms of tuberculosis, which developed into a real cold abscess, which then penetrated and healed in 8 to 10 weeks with the blue scar, so typical of such lesions.

For what purpose did I risk such disagreeable accidents in my treatment? I was led by the wish to mobilize these immune organs in aid of the sensitive ones, which learn never or very slowly to get rid of the bacilli.

The more often this process of healing of a real tuberculosis focus is repeated, the better the organism learns to defend itself; the resistant organs must be taught to kill the bacilli in order to help the defenceless ones.

But we must look to come to the therapeutic problem.

Are there any proofs for this theory in the practice?

This question must be answered in a scientific way. One of the most exactly working disciplines is ophthalmology. The tuberculosis foci may be here controlled very easily and the effect of specific treatment is directly to be read of the eyes.

The disappearance of tuberculosis foci is easily to be stated, because of their small size.

With few ophthalmologists I pleaded for the specific treatment for nearly 20 years, but now I can say, that specific treatment in tuberculosis of the eyes is acknowledged in the whole world as a sovereign remedy. In earlier times the percentage of healing was 10 to 15 per cent, now it is 80 to 85 per cent.

The second object to test my opinion was the tuberculosis of the urogenitary system.

You all know the helplessness of our therapy in cases if both kidneys and both testes and both vesiculae seminalis and the bladder were affected. Such cases are fit to decide whether a treatment is good or not.

Prof. Blum, the famous urologist in Vienna sent these cases to me, to be treated. Since 1905, a year before Wright, I proposed an ideal specific treatment, led by the opinion, that we must use the same, identical virus which causes the illness as antigen, therefore we have to make au-

to-vaccines in all chronic diseases, especially in tuberculosis.

In these cases I cultivated the tuberculosis bacillus directly with my method out of the urine, made an auto-vaccine and injected the dead bacilli in large quantity into the muscles. One of these cases got a hydro-nephrosis, which made the extirpation unavoidable. The histological examination showed the surprising result, that only scars of tuberculosis foci were to be found and a tuberculous stricture of the ureter. All the other cases showed also a surprising melioration which surpassed all expectations. In all these cases the cold abscess of the size of a cherry persisted during two to three months.

These experiments in men must be continued in order to decide the question so important for the therapy of incurable disease.

The same virus which is the cause of the disease is the cause of the healing.

In other words the co-operation of all organs, the resistant as well as the affected, is the solution of one of the riddles of immunity and immun-therapy.

AN ADDRESS BY THE RETIRING PRESIDENT OF THE DETROIT NEUROLOGICAL SOCIETY

FRANK R. STARKEY, M. D.

DETROIT, MICHIGAN

I wish to thank the members of the council and especially the Secretary for their co-operation and assistance during the year, and all of the members for their interest and attendance at the meetings.

While this has not been a year of great achievement and we have not had as many speakers from out of the city as we may have desired, still we have accomplished some things. We have adopted a revised constitution which has been printed and gives more tangible evidence of our existence as a society, and in this we have laid down definite rules for time of meetings which dispense with the rather indefinite procedure of the past. We have held five meetings which is more than the usual number for the year, and have added to our membership substantially and our treasury is in a healthy condition, so that we are really in a more vigorous and prosperous condition than ever before.

Much of our programs the past year has been devoted to the relation of the psychiatrist to crime and it is upon this subject I especially wish to speak, though I may

seem to digress at times, for the public has always looked to the physician for guidance in social and moral problems as well as matters of physical health. The vocation of medicine is a dignified one and carries great responsibility and upon it, to a large extent, depends the progress of civilization, but its prestige in this country is being undermined by cults and fads. The law is gradually letting go of traditions and more frequently seeking medical council but the physician and especially the psychiatrist must not indulge in fantasy and allow himself to be swept off his feet by fads. The psychiatrist should not forget that much of his information is subjective and that the subject has much at stake. It is claimed that the distinction between physical health and disease is a social one; between sanity and insanity a legal one, but in reality they are both social problems. Law represents a desire to promote orderly functioning of a group; crime is a violation of law, so that if there was no law there could be no crime. Affective influences rather than intellectual processes often decide matters of great social and economic importance. Repressed complexes are responsible for judgments formed on slight evidence which harmonize with such constellations. Our attitude is changed in the course of time as much by change in affectivity as by evidence. Strong differences of opinion are attributed to lack of reasoning by opponents. It is a long step from the burning of witches; cutting off of hands for larceny and confining the insane in dungeons, or even padded cells to the present paternalistic attitude toward criminals, and while it cannot be disputed that resistance begets resistance and that the removal of restraint in the handling of the disturbed insane has accomplished much good, still, I feel that the pendulum has now swung too far the other way in dealing with criminals and that we have become derelict in this problem by over-anxiety for the welfare of the delinquent to the neglect of the public at large. There can scarcely be any doubt in the mind of any rational being that crime has increased in this country in recent years. Street hold-ups are so frequent as to no longer attract attention, while pay-roll robberies are so prevalent that many firms pay by check rather than risk the danger of handling the necessary cash to pay off help. Banks are establishing armed forts to protect themselves. Statistics are unreliable because they are always colored

by the affects of the statistician and public sentiment at the time. They are especially difficult to evaluate in this connection because of the extreme breadth of the subject and the many angles from which it must be viewed. There are, however, no reliable statistics to prove that the attitude of those recommending the abolition of punishment is correct. The evidence against punishment is entirely negative. Unfortunately the leaders in this work who are disseminating their propaganda among Women's Clubs, amateur psychologists and other bodies noted for their ability cannot be considered entirely disinterested from a selfish standpoint, for many of them occupy part or full-time salaried positions or receive other increment from this work, while still others who do not receive any financial gain are governed in their zeal by their anxiety for publicity to gratify their own egotism. The newspapers, which are the only reading indulged in by a large per cent of the public, deliberately advertise crime and make heroes of criminals while the doings of worth while people go unnoticed. It is impossible to place full responsibility for present conditions upon any one factor. It seems that by our extreme leniency and failure to enforce the penalties of the law toward the criminal, who is a finished product in most cases, we are beginning at the wrong end. Rather should we start with the home, which is the ultimate unit of our political existence, and there we should foster obedience and the development of character, for obedience is one of the fundamental laws of nature and its transgression is punished all along the line and invariably it results in destruction and oblivion. Honesty, industry and economy are no longer taught in the home so that the exercise of self-restraint is neglected. Inhibition is a necessary product, both physical and mental, of evolution and is built up step by step as each addition of the nervous system is acquired from amoeba to man. The tendency in the home today is not to instill respect for parents, law, religion, rights of others or education, but the watchword of the day seems to be to get by with the least effort, self-sacrifice or inconvenience and this is permitted and even encouraged throughout our educational system. It is no longer the rule of our schools and colleges to promote education primarily for its own sake. The credits system now in vogue permits the students to select subjects which are the easiest for him to get by with, rather

than because of their value from either the educational or economic standpoint, and this at the very time and place when stamina should be instilled into our youth, results in shirking of obligations and responsibilities. Extravagance, promoted by the partial payment plan; the advent of the automobile; stress of competition both social and economic; restlessness; enactment of unreasonable laws which cannot be enforced or respected and attempted adherence to obsolete laws (blue laws. The law's delay; unscrupulous lawyers; multiplicity of laws; segregation of racial groups; attitude of the public, and parents in particular, in attempting to hide mental deficiency, preventing its early recognition and treatment, differing from that toward ordinary disease, are factors in the production of crime. The stigma now attached to mental disease must be dispelled by teaching the public that there is no essential difference between mental sickness and physical ill-health so far as any humiliating circumstances are concerned. The thought of the insane asylum should be eliminated from the public mind. The wisdom of our form of government with its frequent change of personnel and policy is, at least open to serious consideration and the police situation which comes closest to our present subject, is sadly in need of revision, for its personnel is often selected without due consideration of the character of the individual and the habits of its members from the lowest to the highest are at times not such as to encourage self respect for law and order. The handling of criminals by the police, who are often arrogant and brutal, suggesting the very acts they are supposed to suppress. Many institutions and customs exist among them which cannot fail to promote crime rather than prevent it. The so-called kangaroo court composed of the most aggressive prisoners which robs, beats and otherwise abuses and intimidates new prisoners without serious effort to suppress it by the officials in charge of the jails, cannot but breed contempt for and resentment of law and authority. The dissemination of obscene pictures and literature, the peddling of narcotics and alcoholics, the lack of segregation of old offenders from new prisoners, are but a few of the abuses that should be corrected. Among other important causes are German propaganda against punishment of crime which has been so subtly, diligently and systematically carried on from the time they re-

alized their cause was lost and whose effects are evident, though unrecognized by many. Prohibition, which has I believe done more to undermine respect for law and order and common decency, even among our youth, than all other factors combined, should not be overlooked in this connection. The hypocrisy toward prohibition, in the face of the overwhelming evidence of the great harm it is doing, is amazing. It is being fostered by the same type of minds who advocated witch-burning and who formulated the blue laws. When internal revenue was first levied by the United States Government upon those manufacturing alcoholic beverages there was a small group of mountaineers who persisted in making whisky illicitly. During all of the 60 or more years that passed until the introduction of prohibition, the United States Government, with all of its mighty forces, diligently and persistently endeavored to stamp out this illegal practice but was unable to do so even among this small group. Today there are literally millions of individuals, many of them occupying the highest positions officially and socially, in the land openly and flagrantly breaking this law and the government is spending vast sums of money in an endeavor to enforce it. This is increasing our taxes, disorganizing our government and breeding disrespect for law and order, for many officials who are pretending to make strenuous endeavors to enforce it are not obeying it themselves but converting their offices into lucrative positions by illegal methods, while the youth of the country, seeing the ease with which illicit dealers in alcoholics make money, are throwing laws and restraint to the winds. Yet those who pretend that prohibition is a success, instead of acknowledging this condition and reversing their position are blindly shutting their eyes to the truth or perverting it, which is resulting in a general disregard for government, with a subsequent increase in crime. Added to this is the physical harm that is accomplished through the use and abuse of the products of ignorant, inexperienced poorly equipped and unscrupulous manufacturers. The enormous gravity of this subject should not be ignored and the truth should be told by all medical bodies as such, as it is understood and told by its members as individuals. Therefore, I advocate that this society go on record as being opposed to the eighteenth amendment of the constitution of the United States.

The question of what we are to do with the criminal remains and should be, I believe, considered from the standpoint of prophylaxis as indicated above, treatment and prognosis. As to the treatment of the finished product or criminal, I believe that the history of the world proves that swift, impartial, dignified enforcement of the law is the greatest deterrant of crime that we have and it is a notorious fact that there is more major crime in the United States than in any other country in the world. Where extreme leniency has been in practice there is at least no tangible evidence of any decrease in such crime. We have approximately ten times as many homicides in the United States as in England, in proportion to the population, also ten times as many murders. The homicide rate is twice as great in states where the death penalty has been abolished as where retained. The claim that abolishing the death penalty will do away with prolonged and expensive trials is without foundation which is well illustrated in the Thaw case and many other cases. This type of parent with money will go to any length to save their offspring from their obligation to society, and, so long as the sob-sister fraternity exists we will have interference with the regular processes of our courts of law. The anxiety of social workers and other members of the sob-sister squad for the welfare of the criminal to the neglect of the body politic and the victims of their crime, is unwarranted and their efforts and the pressure they bring to bear upon public officials is frequently absolutely illegal. The parole system, while inherently sound, should be handled with great deliberation and caution, for even if we take the advocates of extreme leniency at their word, the criminal is fundamentally wrong and is usually a repeater. If we are to consider all criminals as sick why perpetuate the psychiatric clinics and the service of psychiatrists with their big fees when it is a foregone conclusion that the law breaker is sick and in need of hospitalization and gentle nursing rather than so-called punitive methods. The crimes that we have to deal with are committed by a small group and even if we were to admit, for the sake of argument, that they are sick and irresponsible should we place them in a privileged class and permit them to indulge their abnormal tendencies rather

than to exterminate them in the case of capital offenders or permanently deprive them of freedom in the case of repeaters? The number of executions, even if all convicted were put to death, would be so small and their lives of so little value as to be not worth so much attention. Then why not direct our efforts in some other line. The reason, jobs. I believe that we cannot justify the conclusion that all criminals are mentally sick. To do so we must assume knowledge of mental processes that we do not possess. Obedience, self-control, industry, economy and a true sense of values should be instilled in our youth. Our educational system should be so revised that scholastics rather than athletics would be the aim of the student. A selective system should not permit the students too much leisure but he should be taught the value of time. Hypocrisy should be supplanted by honesty in thinking and acting. Unreasonable and obsolete laws should be repealed. Those remaining should be vigorously enforced. People who cannot be taught to respect the law should be taught to fear it by its swift and impartial action. We should exert greater care in selecting our law-makers. Politicians should be supplanted by statesmen.

As to prognosis. The prognosis cannot be said to be encouraging, for, although education is our main hope, no method yet evolved has been successful in changing human nature even to a small degree and sex, avarice, revenge, vanity, superstition and ignorance, which are responsible for most crime, will continue in spite of law, religion or education. Expert testimony has received so much publicity that for sheer self protection we must modify our position in regard to it. We are looked upon with suspicion by the courts and the public. The alienist and in fact the expert witness in general is often branded a liar from the start. One of the reasons for this is the practice of certain experts of expressing opinions without a complete history and examination of the case or acquiring all of the essential facts. I would suggest that medical experts be selected by the medical societies and not by individuals, lawyers or the courts, although the present method of employing lunacy commissions in use in Wayne County has much to commend it and should result in improvement in handling criminal cases.

EXPERIMENTAL TREATMENT OF DERMATOMYCOSES WITH IODINE

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Materials—Free Iodine (Colloidal Suspensoid state).

Preparation of materials—A colloidal suspensoid state of iodine is prepared by the acidification at 0°C. of sodium iodohypoidite containing gum arabic in solution.

Note—The tincture of iodine is frequently used in the treatment of dermatomycoses. The tincture, however, causes irritation to the skin, often resulting in the production of blisters locally; and, sometimes, in a systematic reaction classified as "iodism."

The colloidal suspensoid used in these experiments is pure free iodine in an extremely finely divided form capable of remaining in suspension in water for a practical length of time. No solvents of iodine stronger than water are present. When applied to the skin it is not held on the surface of the skin by powerful solvents, as in the case of the tincture and is, therefore free to penetrate the skin to the maximum depth of which iodine is capable, and to volatilize from the surface so that no blistering of the skin results, even when repeatedly applied to the same area. It should, therefore, be very useful in the treatment of certain types of dermatomycoses; and, results obtained in experimental cases appear to substantiate this theory.

CASE 1

Patient: Female.

Age: 20.

Occupation: Stenographer.

Diagnosis: Ringworm infection of fingers extending between the fingers and over the knuckles.

Previous Diagnosis: Ringworm.

Previous Treatments: X-ray, Maximum number of treatments; tincture of iodine.

Condition of hands when first observed: Raw areas between the fingers as the result of X-ray and tincture of iodine blistering. New areas of infection on the border of these blisters and isolated new areas. The skin over the knuckles thickened, rough, cracked and "weeping."

Treatment: The entire hands were bathed in an aqueous solution of iodine suspensoid until a lemon-yellow color was obtained. New areas of infection and the border of the old areas were then given the following treatment:—Iodine suspensoid was applied by means of a cotton swab, gently swabbing until all of the iodine was removed from the water, repeating this operation several times until a very dark brown coloration was established. Glycerinated alcohol consisting of 4 per cent glycerin in 50 per cent ethyl alcohol slightly colored with iodine was then prepared

and the patient instructed to bathe her hands freely in this several times during the day to keep the skin moist. This patient was seen daily and the iodine treatment repeated as often as new areas appeared.

Results of treatment: Immediate improvement was observed and in the course of three weeks to one month no new areas appeared, the old areas disappeared and the hands healed completely in an astonishing manner.

CASE 2

Patient: Female.

Age: 40.

Occupation: Housewife.

Previous Diagnosis: Ringworm.

Areas Involved: Both hands, especially on the knuckles.

Microscopic Findings: Negative.

Cultural Findings: Staphylococcus.

Previous Treatment: X-ray, and tincture of iodine employed for more than two years. The condition of the patient's hands was very similar to that in case 1, except that new areas resembled small vesicles.

Treatment: The same treatment which was employed in case 1 was employed in this case. Recovery was not so marked and the skin appeared so dry at times that the patient was instructed to apply mineral oil to the hands. In the course of about two months the patient's hands appeared to be entirely healed. Six months or so later, however, new areas appeared. When these were treated with the Iodine Suspensoid as soon as they appeared, a prompt recovery was observed. No new areas have appeared during the past year.

CASE 3

Patient: Male.

Age: 22.

Occupation: Student.

Previous Diagnosis: Ringworm.

Areas Involved: Scalp and forearms.

Microscopic Findings: *Trichophyton tonsurans*.

Previous Treatment: X-ray, Tincture of Iodine, Zinc Oxide.

Condition of patient when first observed: Several areas of infection occurred on the scalp ranging in size from the size of a dime to the size of a half dollar piece. These areas were highly inflamed and had a distinct border. The infection on the forearms had a similar appearance, though possessing more yellowish scabs.

Treatment: In this case no attempt was made to treat the areas of infection of the scalp, but the infection on the forearms was treated with the Iodine Suspensoid, after having removed all of the grease by means of bathing with a 50 per cent alcohol and then drying the areas. The suspensoid was applied several times as in Case 1 until the infected area became quite dark in color. Only a single treatment was given in this case. When the patient was next seen, about two months later, the infection had entirely disappeared from not only the forearms but the scalp as well. The patient reported rapid recovery following the iodine treatment.

CASE 4

Patient: Male.

Age: 19.

Occupation: Student.

Previous Diagnosis: Ringworm.

Areas Involved: The legs, particularly the thighs, also the scrotum. The condition was

most severe in the inguinal region. The entire inner surface of the thighs in particular was covered with numerous areas of infection which in many instances overlapped so that the whole surface had the appearance of being covered with a dry cracking scab.

Microscopic Findings: *Trichophyton tonsurans*.

Previous Treatment: Zinc Oxide.

Treatment: Two areas, one on each thigh, about three inches in diameter were treated with the iodine suspensoid by applying fresh material as rapidly as the skin removed the iodine from the water until the area was very dark. The patient was instructed to report at the end of a week, but failed to do so. When next seen, about three months later, he reported that there had been a rapid improvement and that the entire infection had fully disappeared. He stated that he had not returned because of the improvement noted, and the fact that he experienced a severe burning sensation of the skin at the point of application for an hour or so due presumably to the fact that the treated areas were covered with clothing. He had, however, observed no blistering and no symptoms of iodism.

CASE 5

Patient: Male.

Age: 20.

Occupation: Student.

Previous Diagnosis: Barber's itch.

Areas Involved: The chin and cheek.

Previous Treatment: Zinc Oxide.

Treatment: The infected areas were washed with alcohol to remove the grease. The scabs were softened by treating with an aqueous solution of iodine prepared from the iodine suspensoid and removed. The infected areas were then given four consecutive treatments with the iodine suspensoid. A marked improvement was observed the following day and the areas were treated with a small amount of mineral oil. The infected areas entirely cleared up within a few days.

CASE 6

Patient: Male.

Age: 21.

Occupation: Student.

Previous Diagnosis: Barber's itch.

Areas Involved: The chin, particularly the skin of the lower lip.

Previous Treatment: Zinc Oxide.

Condition of patient when first observed: There were two areas of infection, one just below the lip and one on the point of the chin. These areas were very similar to those in Case 5.

Treatment: Same as in Case 5, with identical results.

CASE 7

Patient: Male.

Age: 19.

Occupation: Student.

Areas Infected: The thighs and scrotum.

Microscopic Findings: *Trichophyton tonsurans*.

Diagnosis: Ringworm.

Condition of patient when first observed: Several areas of infection were present on the thighs and scrotum and were of the typical ringworm type. The surfaces were reddened and scaly with a sharp line of demarkation between the infected areas and the skin.

Previous Treatment: None. This case was of only about one week's standing.

Treatment: An area about two inches in diameter on the thigh was painted with four or five

immediate successive applications of the iodine suspensoid. This treatment was repeated about every three days for four or five treatments.

Results of treatment: The entire infection cleared up in the course of about one month and has not since recurred.

It is of interest to note that in Cases 3, 4 and 7 *Trichophyton* infections of the skin on parts of the body separate from the parts treated were entirely eliminated following the treatment of local areas with the iodine suspensoid. No explanation for this phenomenon will at present be offered.

SUBACUTE BACTERIAL ENDOCARDITIS WITH A REVIEW OF TWENTY-EIGHT CASES

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The recent appearance of Bierring's¹ clinical review of a series of 30 cases of subacute bacterial endocarditis, read before the section on the practice of medicine at the seventy-seventh annual session of the American Medical Association, at Dallas, Texas, in April 1926, and the subsequent discussion, has served to again emphasize the lack of uniformity among authors in various parts of the country in the application of diagnostic criteria to this disease. At the same time the evidence seems to call for a recognition, either of two forms of the same disease or a differentiation between two separate clinical entities which have much in common, yet with a far different prognosis. In either circumstance the first of these, from standpoint of importance, would be those cases which fulfill the established classical requirements of diagnosis as "subacute bacterial endocarditis" with its implication of rare recovery. The other, whether classed as a mild type of the former disease or as a similar but less fatal malady, deserves a separate and distinctive appellation of its own. The increase in number of reported cases of recovery from a mild type of infection, hitherto designated as "subacute bacterial endocarditis," yet not strictly conforming to the classical description, seems to the authors to justify this contention.

Since the attention of the medical profession was directed to this condition a generation ago, there has been an ever widening discussion of the disease and recognition of it under various names, of

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which two perhaps seem destined to remain in the literature because of their really descriptive applicability, "Subacute Bacterial Endocarditis" and "Endocarditis Lenta." Blumer's² remarkable analytical monograph, with its bibliograph of 195 references, in 1923, served to crystallize the knowledge on the subject up to the time of its publication and to provide a new base of departure for all subsequent contributions.

Three years previous, in 1920, Horder³ made a general review of the subject and gave a most clear cut and workable clinical description of the disease, setting up his fundamental criteria for diagnosis, which, if adhered to, will do much to establish a uniformity of conception about this disease and facilitate the differential diagnosis in the all too common obscure cases which serve as sources of confusion. In many of these latter a hasty and not thoroughly justified diagnosis of subacute bacterial endocarditis, with its dark portent, may work a definite and unnecessary detriment to the patient.

On the other hand, full and appreciative consideration must be given to the experience of Libman⁴, his wonderfully interesting and significant specimens, and his cases of "endocarditis lentissima." These pathological specimens, with their evidence of healed endocardial lesions, undoubtedly represent previous mild cases and probably form the appropriate background for understanding the series of cases with a high percentage of recovery such as reported by Capps⁵ and by Graham, Oille, and Detweiler⁶ among others. With the incontrovertible evidence of healing as seen in Libman's collections of material and the many clinical cures in the reports, it seems very probable that many actual instances of this pathology may occur and not measure up with all of Horder's criteria. It is in this latter group that the reported recoveries predominate and the prognosis in this group of suggestive cases is on the whole very different.

Our own small series of cases, we feel, conforms to the first, or "classical" group, and corresponds so closely to those reported by Bierring¹ as to be in general almost identical. Having approached the analytical review of them from a somewhat different angle than that followed by Bierring we present the results.

The chief aim is but to add, to the available reports of this now well recognized clinical entity, these additional cases in the hope that some future student of this

interesting and baffling malady may deduce from a multiplicity of reviews from widely separated sources, some fact of therapeutic significance and thus modify the present uniformly gloomy prognosis.

These 28 cases represent all recognized instances of this disease seen in this hospital prior to 1926, and were selected by reviewing the case records of all patients indexed as endocarditis. Horder's four criteria for diagnosis: (1) evidences of embolic phenomena; (2) fever; (3) bacteremia, and (4) demonstrable cardiac valvular defect, were used here also as diagnostic yardstick. Sixteen of these 28 cases conformed to all four of the requirements. Certain others were added, 12 in number, because the other clinical evidence was incontrovertible and conformance was seen with respect to three of the four essentials. None was allowed recognition with less than three of these criteria. Of these four criteria two have been found by many observers to be variable in their time of appearance, and of sufficient inconstancy as to be occasionally missed when the patient is not under close and continuous observation. These are the evidence of embolic phenomena, which may be late in appearance, or may occur erratically at intervals throughout the course of the disease, and the bacteremia which may be evidenced in some cases only upon persistently repeated blood cultures. Cases were admitted to this group then which lacked only one of these phenomena, the other being present. No cases were accepted, however, in which fever was lacking or in which there was reasonable doubt as to the existence of a valvular defect. A factor of uniformity in observation was maintained in that all these patients were reviewed during their hospital stay by one of us. (F. J. S.).

I.—Incidence.

These 28 cases occurred in the first 70,000 hospital admissions,* a hospital incidence of .04 per cent.

Age, Race and Sex—Table I.

There were 19 males, 9 females; one was colored, 27 were white; the ages ranged from 19 to 61. The group is too small to permit any conclusions save that there is a significant preponderance of the patients (78-per cent) between the ages of 20 and 45, the most active and economically useful period of life.

* This figure refers to total admissions including both out-patients and inpatients of all departments.

TABLE I—AGE, RACE, SEX

AGE	
Below 20 (19)	1
20-25	6
25-30	2
30-35	5
35-40	7
40-45	2
45-50	1
50-55	2
Above 55 (58) (61)	2

22 (78-%)

RACE	
White	27
Colored	1

SEX	
Males	19
Females	9

II.—*Predisposing Causes—Table II.*

There was a history of acute rheumatic fever in 14, or 50 per cent; tonsillitis in 14, or 50 per cent; scarlet fever in 5; chorea in 2; oral sepsis in 10, or 35-per cent; syphilis in 1; typhoid fever in 3; diphtheria in 2; influenza in 4; pneumonia in 1; etc. Of these later scattered types of previous infection the incidence is probably not higher than the coincidence expectation. A previously recognized cardiac lesion was present in 9, or 32-per cent.

TABLE II—PREVIOUS INFECTIONS

Acute Rheumatic Fever	14
Tonsillitis	14
Oral Sepsis	10
Chorea	2
Scarlet Fever	5
Diphtheria	2
Typhoid	3
Influenza	4
Pneumonia	1
Pleurisy	1
Poliomyelitis	1
Septicemia (Post abortive)	1
Peritonitis	1
Known previous cardiac lesion	9 (2 congenital heart defect)

III.—*Initial Symptoms—Table III.*

The prevalence of asthenia, dizziness, and embolic phenomena in the form of blindness, hemianopia, or abdominal pain suggestive of splenic infarct is interesting as a symptom at onset. The associated phenomena of fever, such as, malaise, chills, sweats, dizziness, etc., are, of course, wholly to be expected and not in any way pathognomonic.

TABLE III—INITIAL SYMPTOMS

Asthenia	10
Headache	4
Fever	5
Sweats	2
Chills	2
Abdominal Pain	4
Malaise	4
Neuritis	2
Dizziness	1
Coryza	1
Blindness	1
Hemianopia	1
Anorexia	1
Insomnia	1
Palpitation	1
Arthritis	2
Cough	5
Epigastric Distress	3

IV.—*Infecting Organisms.*

Of the 21 cases in which a positive blood culture was obtained once or more, and

usually repeatedly, the organism was identified as streptococcus viridans in all but two cases. In these the reports specified only nonhemolytic streptococcus without further differentiation. Of the 7 instances in which a positive blood culture was not obtained there were 2 in which there were three negative cultures, 2 with two negative cultures, 2 with only one negative culture, and 1 with five negative cultures.

The portal of entry must, of course, always be clouded by doubt in this as in other series. Circumstantial evidence indicates, in many of the patients, that the tonsils, paranasal sinuses and abscessed teeth seem the most likely avenues to the blood stream. It is rather striking that the general experience of others in finding that a large percentage of periapical abscesses yield pure cultures of streptococcus viridans, was substantiated in certain of our cases by the recovery of an organism identical with that obtained from the circulating blood. While it is unsafe to attempt any conclusions from such indirect evidence, the facts are certainly suggestive.

V.—*Symptomatology—Table IV.*

The symptom complexes of the several cases presented considerable variation depending upon the length of the period of observation, the stage of the disease, the chronicity or acuity of the process, the presence of intercurrent infections, the presence of unusual phenomena, and the abundance of embolic phenomena, and the general type of progress whether largely influenced by embolism, general anaemia and cachexia, cardiac failure, etc. Reference to the table shows that certain symptoms tended to prevail, e.g. in 27 cases there was asthenia, in 18 loss of weight, in 12 anorexia, in 8 arthritis, in 14 dyspnoea. In 4 of the cases, there was abdominal pain, referable in three instances to splenic infarcts. The painful Osler nodules were present in 7 cases, or 25 per cent. Neurological manifestations were evident in 17 of these patients at some time, which dizziness, headaches, and hemiplegia were the most frequent.

TABLE IV—SYMPTOMATOLOGY

Arthritis	8
Osler Nodes	7
Dyspnoea	14
Palpitation	6
Asthenia	27
Anorexia	12
Loss of weight	18
Chills	12
Fever	28 (all)
Sweats	14
Cough	5
Abdominal pain	4
Neurological:	17

Dizziness	6
Headache	3
Blurred Vision	2
Heimanopia	1
Photophobia	1
Neuritis	2
Bell's Palsy	2
Aphonia	1
Syncope	1
Coma	2
Hemiplegia	4
Blindness, recurrent	1
Drowsiness	1
Insomnia	1

VI.—Physical Findings—Table V.

The positive findings upon physical examinations also varied for the same reasons given above; and, again, certain phenomena appeared too frequently to permit explanation on the basis of coincidence. For example, some degree of recognizable anaemia appeared in 18, obvious malnutrition in 14, a demonstrable cardiac lesion in all, demonstrable clubbing of the fingers in 13, petechial hemorrhages in 22, and the spleen was palpable in 11 of the 28.

TABLE V—PHYSICAL FINDINGS

Emaciation	14
Gross Anaemia	18
Palpable Spleen	11
Clubbed Fingers	13
Petechial Hemorrhage	22
Cardiac Lesions:	28 (all)
Aortic Insufficiency	9
Aortic Stenosis	1
Mitral Insufficiency	21
Mitral Stenosis	15
Congenital Defects	4
Pulmonary Stenosis	2 (?)
Patent Ductus	1 (?)

VII. Cardiac Involvement—Table V & VI.

There was sufficient clinical evidence to warrant the diagnosis of aortic insufficiency in 9 cases; aortic stenosis in 1; mitral insufficiency in 21; mitral stenosis in 15; and congenital defects of the heart were suspected in 4. Disturbances in the cardiac function were arbitrarily classified as apparently complete compensation, 18 cases; subacute decompensation 6 cases; and acute decompensation 4 cases. Undoubtedly, many of the first two groups would have been reclassified into the third group had they been under observation toward the end of the course of the disease, as were the three cases so tabulated. Auricular fibrillation was observed in 2 cases only.

TABLE VI—CARDIAC FUNCTION

Complete Compensation	18
Subacute Decompensation	6
Acute Decompensation	4 (3 others later)
Auricular Fibrillation	2

VIII.—Embolic Phenomena—Table VII.

Of the 24 cases showing unmistakable evidence of embolism the incidence of distribution is shown as follows: petechial hemorrhages, in the skin, in 16; in the conjunctivae in 8; in the retinae in 9; in

the kidney (as indicated by the appearance of red blood cells in the urine) in 9. There were 8 cases of cerebral involvement; 2 presumable pulmonary infarcts; 4 proven splenic infarcts; and 3 renal infarcts (seen at autopsy). There were 2 instances of peripheral embolism, 1 in the femoral, 1 in the brachial artery.

TABLE VII—EMBOLIC PHENOMENA

Petechial Hemorrhages	22
Skin	16
Conjunctive	8
Retinae	9
Osler's Nodes	7
Kidney	9
Cerebral	8
Pulmonary	2
Splenic (Proven by Necropsy)	4
Renal (Found at Necropsy)	3
Peripheral	2
Femoral	1
Brachial	1

IX.—Laboratory Findings—Table VIII.

Blood: In 6 cases the red count and hemoglobin content approximated normal, being over four million red cells and 75 per cent hemoglobin. In 13 cases there was mild anaemia—between 3 and 4 million red blood cells. In 7 cases there was a moderately severe secondary anaemia. In one case the anaemia was very severe, a red count of 1,044,000 and a hemoglobin of 19 per cent being recorded.

The white corpuscle count was at no time above 10,000 in 15 of the cases; in 8 the maximum range did not exceed 15,000; and in but 3 instances was it above 15,000. In the highest (24,000) it was associated with embolism and thrombosis of the left brachial artery, and in the next highest (18,000), the rise accompanied pulmonary infarction.

Renal Involvement: In determining renal involvement several factors were considered; namely, the urinary findings, the phenolsulphonphthalein excretion, and nitrogen retention. Reference has already been made to the appearance of red blood cells in the urine in 9 cases. Albuminuria has been a variable feature, particularly so because it may depend upon so many influences outside the actual circumstance of this disease entity. In some instances it was of occasional appearance only, in some a constant finding. It did appear, however, in 21 of the series, in 10 of whom there was a definite appearance, either continuously or repeatedly, in considerable amounts.

In 12 patients upon whom the test was recorded, the phenolsulphonphthalein excretion was within normal limits in 8, and was definitely decreased in 4. Retention of nitrogenous products was shown in only

7 cases, in 6 others the nonprotein nitrogen was normal, in 9 the urea nitrogen was normal. The apparent discrepancy between these figures and those of Table VIII is due to the fact that not all of these determinations were made on the same patients.

The blood Wassermann reaction was frankly positive in no case.

TABLE VIII—LABORATORY DATA

Blood Counts:	Blood Pos.	Culture Neg.	
			RBC and Hemoglobin Range
Approximately normal (RBC 4 million, Hb. 75%)	6	4	2
Slight anaemia (RBC 3-4 million, Hb. 60-75)	13	10	3
Moderately Severe Anaemia (2-3 million, Hb. 40-60)	7	5	2
Extreme Anaemia (Less than 2 million, Hb. 40%)	1	1	
Leucocyte Range:			
Never above 10,000			15
10,000 to 15,000			8
Above 15,000			3
Urinalysis:			
Albumen not found	7		
Albumen present	21		
2 to 4 plus	10		
1 plus	9		
Trace	2		
Casts present	16	(Hyaline and Granular)	
R.B.C. present	9		
Blood Chemistry: (Figures in mmg. per 100 c.c.)			
Nonprotein nitrogen (Number of patients)	11		
Below 35	6		
Above 35	5	(71, 85, 50, 78, 47)	
Urea Nitrogen (Number of patients)	14		
Below 15	9		
Above 15	5	(50, 29, 22.4, 53, 27)	
Phenolsulphonphthalein Output:			
Number of patients	12		
Below 50% return in 2 hours	4		
Above 50% return in 2 hours	8		
Wassermann Reaction:			
Negative	26		
Frankly Positive	0		
Equivocal	1**		
Not reported	1		

** 2 plus with one antigen, negative with another.

X.—Treatment—Table IX.

Treatment proved as unsatisfactory here as elsewhere. In general all patients were put at rest and upon highly nutritional diet, with suitable tonic, stimulation of appetite and assimilation instituted. In 4 cases the removal of obviously vitiating foci of infection was carried out. In one case, which filled all the requirements of diagnosis except a proven bacteremia—there being three negative blood cultures—treatment by removal of diseased tonsils and teeth resulted in an apparent cure. This fact alone serves to throw considerable doubt on the validity of the diagnosis, especially as the symptoms dated back but a few weeks. However, there were evidences of cerebral and pulmonary embolism and a presystolic cardiac rumble developed while under observation.

TABLE IX—THERAPY

Intravenous Acriflavine	5
Intravenous Gentian Violet	4
Sodium Cacodylate	7
Removal of Foci	4 (one apparent cure)

XI.—Post Mortem Findings—Table X.

Owing to the unfavorable prognosis and uniformly unsatisfactory results from the known methods of treatment but few of these cases remained in the hospital until time of death. Therefore, but four were made the subject of necropsy study. In one additional case, which terminated outside of the hospital, the spleen alone was examined by the local physician, and his findings reported. Of these the lesions were as follows: evidences of old infection of the mitral valve 4; aortic valve 2; pulmonic valve 1. Fresh vegetations were found on the mitral valve 4, the aortic valve 2, in the conus 1. Mural vegetations were present in three cases. There were 4 instances of splenic infarcts, 3 of renal infarcts, and 1 of pulmonary infarct.

TABLE X—NECROPSY FINDINGS

Heart:	
Old valvular lesions	All
Mitral	4
Aortic	2
Pulmonic	1
Fresh Vegetations:	
Mitral	4
Mural	3
Aortic	2
Conus	1
Infraction:	
Splenic	4
Renal	3
Pulmonary	1

XII.—Duration.

The average duration before recognition was a little less than 5 months, 12 of the cases giving a history of from 3 to 6 months' illness prior to admission. Of the 13 cases of which we have accurate information as to the date of death, the average duration of the disease was slightly less than 10 months.

COMMENT

This series of cases again serves to focus attention upon those facts so frequently emphasized by observers of this disease: the prevalence of previous infections preparing the necessary background of diseased endocardium, the so-called rheumatic group—acute rheumatism, chorea, etc.—upon which the specific organism streptococcus viridans becomes established through some later portal of entry into the blood stream—a focus of infection. With such small hope of results in the way of treatment with any of the available agents now at hand, the most rational procedure in attempting to reduce the future mortality from this disease seems to lie in the field of preventive medicine. As the science of medicine as yet has advanced no means for controlling the chief predisposing factor of rheumatic heart disease, the atten-

tion should be devoted to removing the immediate etiological factor of streptococcus viridans infection by a thorough eradication of all foci of infection, particularly tonsils and all devitalized teeth, in persons with known rheumatic heart disease.

We propose the diagnosis of *subacute bacterial endocarditis* be limited to those showing three or more of Horder's criteria, in which the prognosis is known to be uniformly fatal and that the others be diagnosed *suspected subacute bacterial endocarditis*. Surely there must be some significance to the fact that patients having all of Horder's four diagnostic points practically all die; while innumerable instances showing less than three have been reported to recover. If these patients all had one and the same disease, at least those showing the four criteria have progressed to a definite and readily recognized stage where the general problem and outlook is quite different and it seems that a clear conception of this as a fact might avoid much of the current confusion.

CONCLUSION

(1) A greater uniformity of conception is desired in order to further our knowledge of this disease. To this end a more general and a more strict application of Horder's criteria is urged in those cases to be labelled "subacute bacterial endocarditis." For the nonconforming group of cases we suggest the term "suspected subacute bacterial endocarditis." Such a diagnosis is particularly suitable because it implies the idea that the graver condition may be in the offing and still affords some fair degree of hope as to the prognosis.

(2) The only present hope of reducing the mortality of subacute bacterial endocarditis seems to lie in a reduction of the incidence of the disease by a removal of all discoverable foci of infection in all cases of rheumatic heart disease.

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VITAMINS AND HEALTH—A CHRONOLOGICAL STUDY OF THE VITAMINS FROM 1915

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(Using the American Medical Association Journal as a reference.)

Using the American Medical Association Journal as a reference and dating back to 1915, there appears from time to time articles dealing with vitamins. The first of these is to be found in the November issue of the eighth Journal. It speaks of some substance other than fats, proteins and carbohydrates which is vital to animal life. As a first illustration it was shown that the wheat grain plus wheat straw, while adequate to nourish the cow, was not sufficient for reproduction. The absence of this substance from other foods was responsible for poor growth and disease, such as, beriberi, scurvy and rickets. The name vitamins was given to this substance, and its absence in foods is called avitamosis.

Aside from fats, proteins and carbohydrates, vitamins are necessary for normal metabolism, i. e., toxicity of metabolism is held in check by the presence of vitamins. William¹ and Seidell¹ came to certain conclusions regarding the chemical composition of these substances, but they are not definite enough to take a place in the literature of today. Their conclusions, however, point to the fact that the vitamins are being given considerable study by able men. Watson and Weymes also contributed articles in 1915. In October, 1916, is an article entitled "Dietary Toxicity and Food Deficiency." In summary the article discussed the interest centered in the toxic performance of some micro-organism in the body and that the power of defense of the host is overlooked. It directed attention to the fact that certain foods play a very important part in such defense. Dr. Lusk² writes in 1917, that in an investigation of the chemical factors entering into the cultivation and growth of the meningeococcus, which was conducted at Cambridge, certain vitamins were found necessary and that nutrition included something more than the production of energy from fats, proteins and carbohydrates. He called them unidentified components of diet.

An article appears in the November number of 1917 under the title, "Vitamins and Tumor Growth" by Leo Loeb³ of St. Louis. In concluding his study he asks

the question as to whether tumor cells have the power to synthesize vitamins. He argues that on a diet deficient in vitamins, if the animal increases in weight only as the tumor increases, it is obvious that the tumor increases independent of the vitamins, but if, on the contrary, the tumor increases and the animal remains the same, then the tumor must be extracting the necessary vitamins for its growth from the host's tissues. This he claims has been found to be a fact, and from this I would conclude that an invading micro-organism may have the same effect upon the host. Then when we find the particular vitamin that a given micro-organism absorbs or synthesizes we may either limit the amount of such vitamins, or feed it in such quantities as will suit the needs of the organism plus the body or host.

In one of the September numbers of the same year (1917) a warning is sounded, that we cannot lay all nutritive disorders to food deficiencies. Mr. Funk⁶, in the December number, calls attention to a number of cases of necrosis of the cornea in Danish children who had been fed on nearly fat-free separator milk, and who got well on breast feeding, whole milk and cod liver oil. Dr. Hess⁷ claims in this connection, that pasteurized milk may bring about scurvy unless an anti-scorbutic is used in the dietary. Madison⁷ pointed out in 1918, that nursing women should have foods high in nutritive value, or vitamins, and that boiling milk destroys a portion of the vitamins. He suggested further, that a food rich in vitamins, such as barley, will increase weight over rye or wheat, also that lack of vitamins influences appetite and the reverse. He found that polished rice is poorest in vitamins, and barley is highest among the grains. Dried cooked vegetables have little or no vitamins, and in fresh fruit they are abundant, and acid-fruits are thermo-stable. Their presence in wine is questionable, and bacteria themselves are dependent for their growth on vitamins. Beriberi seemed to develop when they began to polish rice, and became a disease of prominence in proportion. Rice contains vitamins, but they are in the layer or skin of the grain, and this is removed by polishing. Also that the milling of wheat had a lot to do with the disease of the army in Europe especially in the Dardanelles. Canned meat and vegetables were also condemned for the same reason, i. e. lack of vitamins.

In the "Study of Polynuritis," which is the analogue of beriberi, McCollum⁸ sepa-

rated from rice millings what he called water soluble vitamins B, and found that this same vitamin could be separated from various plants by the use of alcohol, and fed properly, it would cure beriberi. This is the first reference I found of a specific vitamin. In the same year (1918), Chick⁹ and Hume⁹, at the Lyster Institute, found that foods differ in their vitamin stability when subjected to heat. Wheat vitamins were notably stable. They also found that one food may contain a number of different vitamins, any one of which could be destroyed or made dormant by heat. From this I conclude that various vitamins had been separated and tabulated by 1918.

In 1919, Dr. Jansen¹⁰ experimented with young rats to determine the vitamin content of cocoanut oil. The outcome showed no growth of the rats. He, therefore, concluded that there was little or no vitamin in cocoanut oil. He also found that vitamin is not identical with secretin. Osborn¹¹ and Mendal¹¹ have suggested that green foods supply a very important part of our food diet on account of their high vitamin content, as compared with cereals, meats, potatoes, fats, and sugar. It used to be thought that we eat green foods only for the roughage they supplied, but the studies of Osborn and Mendal raise them in the scale of value by showing us their vitamin content.

Hulbert¹², in 1920, found that foods containing no vitamins would stop cell division in the sexual organs of chickens, and that by adding vitamin-containing food, the cell division went on as before.

Danials¹², Byfield¹³, and Laughlin¹⁴, found that by feeding an anti-nuretic vitamin, such as is obtained from the wheat embryo, to babies with a food containing a sufficient number of calories that growth was stimulated and resistance to disease increased. Stimbock and Gross found that plants of yellow pigment contained an abundance of fat soluble vitamins, and that heating for three hours under fifteen pounds pressure does not destroy any of the vitamins of the yellow maize.

In 1920, an article appeared summing up all I have covered to this point, but adding nothing to the material of other investigators up to 1919, excepting the prophecy that in the study of foods and their relation to metabolism in the human body, the vitamins would play an increasingly important part.

Writing in January, 1920, Danials¹² and Byfield¹³ were the first to call attention to the fact that there is a distinct relation

between the vitamin content and the amount of food a baby would take. They cited that a breast fed infant requires a less amount of food than a bottle-fed baby, and that the addition of a high vitamin containing food would create a greater desire for food. They mention especially the anti-nuretic vitamin B.

In the January number Hess³⁶ and Unger³⁶ called attention to the role of the fat-soluble vitamin A and its relation to rickets. They stated that the drying of foods containing vitamin A fixes the anti-scorbutic principle and brings it into a more permanent state. In other words, it makes the anti-scorbutic principle more thermo or heat stable. They give as an example that milk that has been quickly dried will stand a heat of 120 degrees centigrade for an hour, whereas milk (fluid) loses all its anti-scorbutic when heated in like manner.

At that time they did not know that vitamin D was the anti-rachitic vitamin residing in both milk and cod liver oil, and that it is thermo stable. Or, that vitamin A is the anti-scorbutic principle and that vitamin D is the anti-rachitic principle, both of which are very abundant in cod liver oil.

It was found further, that in dehydrating vegetables, young fresh vegetables should be used if we are to retain their greatest vitamin value. Also in reference to rickets, and the beading of the ribs, they found that the same beading occurs in scurvy, but that it disappears upon feeding orange juice and other anti-scorbutic foods.

Dr. Boutwell¹⁹ also found that the vitamins in yellow maize, chard carrots, sweet potatoes and squash were thermo-stable after three hours of heating under fifteen pounds pressure at a 150 degrees centigrade. Dubin²⁰ and Louis²¹ reported in the May 29th Journal for 1920, a formula for the preparation of a stable vitamin product designated as vitamin B. It was prepared as follows: calcium oxide 10 per cent, phosphorus 15 per cent, nitrogen 3.5 per cent, fat 2.5 per cent, iron 3 per cent, silicates 5.6 per cent, moisture 10 per cent. They gave this preparation to polynuretic pigeons, normal and scorbutic guinea pigs, and finally to children who showed evidences of malnutrition, marasmus and rickets. A marked acceleration of growth was obtained, particularly in the children. This proved that the preparation contained anti-nuretic, anti-scorbutic and anti-arthritis vitamins. This product in conjunction with a properly balanced diet

of fats, carbohydrates and proteins would seem to be a valuable addition to our feeding problem. In June 12th number, 1920, McCarrison²² records where a monkey was fed for fifty-one days on a food deficient in vitamin B. At the necropsy a well developed carcinoma was found. He attributed the growth to the deficiency in the food. He again reports in the July 24th number of the same year the fact that gastro-intestinal diseases are very apt to develop when diets are deficient in one or more of the vitamins, but rich in carbohydrates.

Osborn and Mendal in the August 14th number, 1920, report their findings. Vitamin B in the fresh juices of the orange, lemon and grapefruit is about equal to a same quantity of cow's milk. Prunes contain a little more and lemons and grapefruit a little less.

Von Masenburg²⁴, reporting in the October 9th number, 1920, says that spasmodic is not influenced or caused by a deficiency of any of the food excessory factors.

Samuel R. Damon²⁵, in the July 8th number for 1922, reports that vitamin B was necessary, not alone for its growth stimulating properties, but also because it stimulated the appetite. The effect of all the vitamins on nutrition was out of all proportion to the amount used, and further, that rats fed a sufficient basal ration but lacking in vitamin B had a gradually descending weight line, which rapidly ascended when the wheat germ was added to the ration. Emmett Holt, writing in this same number, says that pasteurizing food or milk, in particular, is considerably more destructive to its vitamin content than boiling at a high temperature for a short time, and further, that the indiscriminate use of vitamins is going to lead to disappointment, since each case presents a new picture and should be studied as such. In closing his article he calls attention to the fact that cabbage is a rich source of all our vitamins, and that a diet containing a reasonable amount of whole-milk, cereals, green vegetables, potatoes and fruit will eliminate the fear that there is a deficiency in vitamins. This statement is true for the adult, but it is not true for infant feeding since they need a more careful supervision of their diet.

Writing in the July 15th number, 1922, Shumoske Marin²⁶, discusses an eye disease in rats due to a deficiency in vitamin A in their food. He says that several names have been applied to it. McCollum

and Simonds termed it xerophthemia and is analogous to keratomalacia in man, the pathological changes being the same as those which characterize necrosis and the destruction of the cornea. An unsigned article in September 23rd number, 1922, calls vitamin A a specific vitamin in the treatment of rickets. In the light of later researches this statement was found to be untrue, but that a fourth vitamin, or vitamin D is the one potent in rickets, and that vitamin A holds first place in the treatment of xerophthemia. Leading up to this later knowledge McCollum, writing in 1923, says that the power of certain fats to initiate healing in rickets depended on the presence in them of a substance which is distinct from fat soluble vitamin A. His experiment demonstrated the existence of a fourth vitamin whose specific property was to regulate the metabolism of the bones. Further, that cocoanut oil which had received no chemical treatment possessed calcium depositing properties and had little, if any, anti-xerophthemic effect. Again, in speaking of xerophthemia, an article which appeared in the October issue, 1922, in the study of vitamin A, brings forth the fact that the first lesions of the disease does not appear in the cornea, but is manifest by a local foci or degeneration of the lids, and then a hardening or drying of the epithelium of the cornea.

An article in the November 4th number, 1922, comments on the rich source of vitamin A from green plants and marine life, especially the cod. Citing that green plants have the power to synthesize it, and that because the cod lives on sea algae or the diatoms, it also has the power to synthesize it. Another point which is interesting to note is that the cod is one of the fishes that never come to the surface, so that it is never exposed to the sunlight or the ultra-violet rays.

In the January 14th number, 1923, of Vol. 78, Wright²⁷ asserts that vitamin B acts by facilitating the carrying out of the functions of the intestinal canal, and that results produced⁴ by its absence are loss of appetite and diminished food intake, loss of weight and death. All this being due to the intestinal stasis and absorption of toxic products which result therefrom.

Sidney Walker²⁸, in some experiments on rats with fat soluble vitamin A, says that he treated xerophthemia with mercuric chloride, (1-3000) and 2 per cent solution of protargol without results. They made smear cultures of the infection as

soon as the eye symptoms appeared and found a large coccus,; with this they tried to inoculate the eyes of well rats, but without results. The eye symptoms were cleared up with the addition of vitamin A to their food.

Vitamin, as a factor in immunization, was discussed in the February number for 1923 by Biondo. He cites that the taking away from pigeons of vitamin B causes loss of their immunity to anthrax, and its return in their food restores their immunity.

Da Metto²⁹, in his studies of the vitamin containing fruits, found that the alligator pear and the Brazil nut contained a water soluble vitamin, and that both offered advantages as a diet in diabetes.

Sherman³⁰ and Smith³⁰ in the May 13th number, 1922, commenting upon the proprietary concentrates of vitamins, stated that most of them are of no use, and that fruits and vegetables, when used in sufficient quantities, would leave no call for the concentrates so-called.

Dr. H. C. Sherman³⁰, in the May 20th number, 1922, commenting on the lack of anti-scorbutic, or vitamin C in grains, says that an abundance of the vitamin C is to be found in oranges, lemons, tomatoes and raw cabbage, and that a cow fed on fresh grass produces milk rich in vitamin C.

In the June number (24th), 1922, E. V. McCollum³⁴ and Nina³¹ Symonds M. A., carried out a series of experiments on rats to determine the potency of a number of vitamin concentrates. They conducted their experiments the same as any feeding experiment. They found six different concentrates advertised to bring about wonderful results to the purchaser, to be absolutely without effect, and they had to use the known food vitamin carrier to bring the rats back to normal. An experiment carried on by Cramer³¹ where rats were fed on foods devoid of all the vitamins showed that they were less resistant to disease, that their bodies lost their muscle tone. In our work in the biological laboratory in Detroit we found the same thing to be true. In the February number, 1923, it is reported that the chemist, Katsuya Kakahashi³² isolated the vitamin A from cod liver oil. Ten grams of the substance was separated from one kilogram of cod liver oil, 0.0001 grams of which was sufficient to save an animal dying from a deficient diet. The substance kept well in a fatty solution, and it contained 80 per cent carbon, 10 per cent hydrogen, and resembled cholesterol.

In May 19th number, 1923, it was reported that a dog that had been fed on a high vitamin A diet did not lose his vitamin A even if he was starved, but did lose it if he was fed on a vitamin A free diet.

In 1924 Ishido³³ found that the ultraviolet ray prevented atrophy which would otherwise occur in the bone marrow of rats in avitaminosis. At the present time we know that the ray is nearly a specific in rickets, but it does not influence xerophthalmia, and that cod liver oil does.

In June 16th number of the 1925 Journal, the question was asked as to what vitamins can do, and in summing up it was stated that they seemed to act as a regulator of mineral metabolism. Three women, Miss Danials, Miss Armstrong and Miss Hutton, in the biological laboratory of Iowa City, carried out an experiment in feeding rats with a diet lacking in vitamins. The second generation of these rats all showed rickets. Of the fifty rats fed, twenty-five were controls. The first twenty-five developed snuffles, decreased in weight and appetite. Autopsies on them showed that all had pus in the mastoids, and paranasal sinusitis. Seven had serious eye lesions, in six the middle ear was filled with pus, and the lungs were infected in ten. Of the controls, five showed a little nasal reddening, none showed eye, ear, nose or lung infection. All were free from sinus trouble. A number of the sick rats, when fed cod liver oil, recovered rapidly.

Hurbert³⁴ believes that each vitamin enhances the action of others. Gurstinberger³⁵ found that vitamin B was curative in herpes, stomatitis and acute gingivitis.

There is an interesting article in the March 22nd number, 1924, in which is recorded an experiment dealing with milk. Milk was heated in a copper receptacle for forty minutes at 60 degrees centigrade and fed to rats, using as equal number of controls that were fed milk which had been heated in like manner except in a glass container. The first rats all developed scurvy within a month, but the others remained free from it. It was found that some of the dairies in Germany used hydrogen peroxide to preserve milk, and it was noted that there was a decided increase in scurvy among children who had used this milk. This seemed to prove that the vitamins were oxidized.

In conclusion, I would say that our knowledge as to just what vitamins are, and what they do in the human body is not entirely clear. That vitamin concen-

trates, if there are any, are not very essential to our feeding problems, there is no doubt of the existence in foods of a very necessary food factor called vitamin—a life sustaining property. All foods contain their correct proportion of vitamins under normal conditions. Rickets, scurvy, polyneuritis or beriberi, xerophthalmia and malnutrition are due to the absence of one or more of the vitamins in food, and their cure depends directly on feeding the proper vitamin containing food.

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MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

WHO WILL DETERMINE MICHIGAN'S HEALTH IN THE FUTURE?

Has it ever occurred to the readers of this Journal that a single public health official or even a health organization cannot successfully compete with the problem of good health and that they must have co-operation? In order to do the best public health work there should be co-operation between the people at large, the medical profession, the dental profession, the nursing profession, the teachers, and all official and non-official health agencies. It occurs to me that this combination might form what could be designated as a public health team and that its effectiveness in bringing about a greater degree of good health will be in direct proportion to the amount of team work it shows.

As your State Health Commissioner, I do not mind telling you that I would be willing to become a candidate for the position of Manager of this team and if you care to elect me to this position, I would organize the various members about as follows:

Inasmuch as the co-operation of the physicians is of most importance, I would expect them to be regular members of the team with the other groups forming what might be called co-operative members.

The job of the health official today is one of education and the best way for him to spread that education to the public at large is through all the members of this health combination referred to above and particularly through the physicians. All preventive work such as vaccination for the prevention of smallpox, immunization against diphtheria, scarlet fever and typhoid fever, should be done by private physicians and the only reason health departments have done this work in the past and are still doing it is because it has not been taken over by the medical profession which means that the right kind of co-operation has not existed. So what the boards of health are doing now in this respect and what they have done may and should be considered as demonstration work for the purpose of teaching the public that it should call upon their own doctors to protect them against those com-

municable diseases for which we have a method of immunization.

Another one of the things that we are trying to teach the people is that their babies should be kept well from the day that they are born and to accomplish this baby clinics have been established and are being conducted by boards of health. I am sure that every right-minded public health official would be glad if this work were taken over by the practicing physicians as it is, in fact, being taken over in the large cities.

Continuing this line of thought, we are preaching (and in this respect the State Medical Society and the various County Societies have tried to help us) that adults and older children as well as babies should be kept track of, that they should have periodical medical examinations at least once a year to determine the condition of their health with the hope that pathological conditions may be discovered early and thus be entirely remedied or at least kept from progressing. The dental profession have worked hard on this co-operative plan and have obtained the best results. There is hardly anyone of any intelligence who does not go to his dentist at intervals to have his teeth looked over and defects corrected.

Teachers are becoming much interested in the public health program and it is a pleasure to hear superintendents of schools and others in the teaching profession make public utterances to the effect that medical inspection of school children is doing much to improve the health and consequently the scholarship of the pupils.

Non-official health agencies are busy in their various lines and to get the best results for Michigan's health in the future, all of the members of the proposed public health team should work together and through a central agency.

Suggestions as to how more active teamwork can be brought about will always be welcomed by this department and will be acted upon whenever they are found feasible.

Guy L. Kiefer,
Commissioner of health.

SCARLET FEVER STREPTOCOCCUS TOXIN

Judging from the requests coming in to the Bureau of Laboratories, a number of physicians did not receive my letter of February 7 in regard to the distribution of scarlet fever streptococcus toxin. To prevent further misunderstanding, I attach the letter, and urge that its directions be read carefully:

"The fact that persons can be immunized against scarlet fever by repeated inoculations of scarlet fever streptococcus toxin has been definitely established. Scarlet fever streptococcus toxin will be distributed by the Michigan Department of Health for the active immunization of children against scarlet fever after February 1, under restrictions. There are so many unknown factors in this immunity reaction that additional information is necessary before general distribution can be recommended.

"I have authorized the Biological Distribution Division to distribute these products upon requests from health officers and physicians as follows: The request of the physician or health officer should be made in writing, stating the number of children he wishes to protect against scarlet fever. Upon the receipt of the request, scarlet fever streptococcus toxin for performing the Dick test on that number of children will be forwarded with instructions for performing the test. When the department receives notification of the number of Dick positive children that are to be immunized, the first dose of toxin will be forwarded for treating the positives. Ten days later the second dose will be shipped, ten days later the third dose, and ten days later Dick test material for retesting. The physician and health officer will then make a report to the department which must include a description of the reactions as well as the number of failures to immunize as indicated by the Dick test.

"I feel that there has been too great an attempt to force scarlet fever prophylaxis and therapeutics along the line of procedure that has been found satisfactory in diphtheria, and that not enough study has been given the method of application of the scarlet fever toxin to secure active immunization.

"Very truly yours,

"Guy L. Kiefer, M. D., Commissioner,
Collaborating Epidemiologist,
U. S. Public Health Service."

MOUTH HYGIENE ACTIVITIES

Interest in the work of the new Bureau of Mouth Hygiene and Preventive Dentistry has been very marked. Three educational leaflets, "Dental Hints for the Prospective Mother," "Baby Teeth," and "The Child's Permanent Teeth" were printed last fall, and before the first of the year requests had been received for 100,000. They have been reprinted in several dental journals and have brought many favorable comments from outside of Michigan.

A suggested plan for dental health activities among school children was sent out with the January number of the News Letter for Public Health Nurses issued by the Bureau of Child Hygiene and Public Health Nursing. As a result, such an avalanche of requests for material came in that the supply was immediately exhausted and unfilled requests for 25,000 leaflets had to be filed awaiting a new printing.

The director of the bureau, William R. Davis, D. D. S., has been out in the state almost continually since the last of January, filling requests for talks before clubs, Parent-Teacher meetings, and conferences and clinics with public health nurses and dentists.

ENGINEERING VISITS DURING DECEMBER,
JANUARY AND FEBRUARY

Inspections of railroad water supplies, a service carried on in co-operation with the United States Public Health Service, were made in the following cities:

Adrian	Hartford
Albion	Jackson (5 visits)
Allegan	Kalamazoo
Ann Arbor	Lansing (3 visits)
Bad Axe (2 visits)	Ludington
Baldwin	Mackinaw City
Battle Creek (3 visits)	Manistee (2 visits)
Bay City	Monroe
Benton Harbor	Monteith Junction
Birmingham	Muskegon (4 visits)
Boyer City	Owosso (2 visits)
Cadillac (3 visits)	Oxford
Cass City (2 visits)	Palms
Caro (2 visits)	Pentwater
Detroit (3 visits)	Petoskey
Durand	Pontiac (2 visits)
East Jordan	Port Austin
East Tawas (2 visits)	Rochester
Flint	St. Joseph (2 visits)
Frankfort	South Haven
Freeport (4 visits)	Traverse City
Grand Ledge	Wilmington
Grand Rapids (5 visits)	Vassar
Grayling	

Sewerage and sewage disposal confer-

ences and inspections were reported for 21 cities:

Adrian (3 visits)	Lapeer
Bay City	Manistique
Detroit (2 visits)	Marlette
East Grand Rapids (3 visits)	Melvindale
Escanaba	Memphis (2 visits)
Flint	Muskegon
Grand Rapids (for Petoskey)	Muskegon Heights (2 visits)
Hastings	Romeo
Holland	Traverse City
Lansing	West Branch
	Zeeland

Steam pollution investigations were carried on in six cities:

Battle Creek	Grand Haven
Blissfield	Grand Rapids (2 visits)
Croswell	Holland

Swimming pool investigations were made in two cities:

Lansing (2 visits)	Ypsilanti (2 visits)
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Inspection of one county tuberculosis sanatorium:

Adrian

Inspection of four plants for garbage collection and disposal:

French Landing (2 visits)	Lansing
Grand Rapids	Muskegon

Water supply conferences and inspections included 29 cities:

Adrian	Grand Rapids
Ann Arbor (for Dexter)	(Michigan Soldiers' Home)
Battle Creek	Grand Rapids (for Rockford)
Bay City	Hudson
Big Rapids	Lake (School)
Benton Harbor (3 visits)	Lansing
Berrien Springs (Emmanuel Missionary College)	Manistique
Carson City (for Maple Rapids)	Memphis
Detroit	Menominee
Detroit (for Utica)	Midland (2 visits)
Escanaba	Monroe
Grand Haven	Niles
Grand Rapids (4 visits)	Reading
	Rockford (2 visits)
	South Haven
	St. Joseph
	Williamston

MEDICO-LEGAL SERVICE

The Michigan Department of Health has for many years maintained a laboratory and employed a chemist whose sole duty is to make medico-legal analyses in suspected criminal cases. This is in accordance with Public Acts No. 109, requiring the department to make such analyses when requested to do so by the proper authorities.

After every election a number of new coroners, prosecuting attorneys, and sheriffs take office, and most of them do not know that they can secure the services of a state official to make such analyses and

to assist them in their investigations. This department is very desirous of making this service of maximum value and it is for that purpose and also to give some points on the handling of such cases that this article is written.

When a postmortem is to be made in a case of death from a suspicious cause, if it is desired that the state toxicologist make an analysis, the following instructions should be followed: The state toxicologist, Charles L. Bliss, should be notified at once, by telephone or telegraph, care of the Laboratory, Michigan Department of Health. Calls at night should be sent to his home. It is very desirable that he be present at the postmortem for several reasons. The postmortem is made by a physician appointed by the coroner; the toxicologist can assist the physician, thus dispensing with the necessity of employing a second physician. By being present he can determine what organs or other materials he needs for analysis without having to depend upon the selection made by some one who probably has never made an analysis. He receives the organs direct from the body and from that time he alone is responsible for them. Furthermore, he can almost always secure information which is of very great value in making the analysis; this shortens the time required for the work, saves material which might otherwise be wasted in testing for poisons that are not present, and cuts down the fee that is charged.

The body may be removed to an undertaker's unless it is desired to hold the postmortem elsewhere. Nothing further should be done to the body until the toxicologist arrives. The clothing should not be removed nor the body washed; valuable clues or evidence might be destroyed. The body should not be embalmed. Although the use of arsenic and certain other poisons in embalming fluids is prohibited in this state, the fluids contain other chemicals which may interfere with or even absolutely prevent the detection of certain poisons.

If the toxicologist is not present, the postmortem is usually made in a manner which is very unsatisfactory from a medico-legal standpoint. Organs are often sent to the laboratory which are not suitable for a proper analysis; often they are sent in containers which have not been properly cleaned or sealed; sometimes preservatives have been added; and usually little or no information is given, leaving the toxicologist without a clue to work on. This in-

creases the work on the analysis and also usually increases the fee charged.

No charge is made for the services of the toxicologist at a postmortem except ordinary traveling expenses. A charge is made against the county for any analysis made. This charge, however, is a very reasonable one, and depends upon the amount of work required. All fees for such work go into a state fund.

It might be added that in every instance where the toxicologist was present at the postmortem, if the case proved to be a criminal one and was brought to trial, a conviction for murder in the first degree has resulted, and in every other case with one or two exceptions the cause of death has been definitely determined. In those cases where he has not been present, but organs have been sent for analysis, there have been comparatively few convictions and some of these cases could not even be brought to trial.

If the postmortem is made without the toxicologist being present the following points should be observed. The organs which are usually best for analysis for poisons are the stomach and a part of the intestine with their contents, the entire liver and both kidneys, also the urine if there is any in the bladder. The stomach and intestine should be ligated before being cut out and should not be opened. Each of these organs should be put into a new, clean, glass-topped fruit jar and properly labeled and sealed. No preservative should be added. The jars should be delivered by an officer if possible; if sent by express they should be addressed to the toxicologist.

In addition to analyses for poisons the toxicologist is prepared to make analyses and examinations in many other kinds of criminal cases, such as examination of suspected blood stains, semen stains, etc.

SPRING CLEAN-UP

Spring clean-up campaigns have become so increasingly popular of late that special educational material has been prepared this year to meet the demand. With the passing of the tacked-down carpet and plush hangings has come a welcome emancipation from the rigors of old-time house-cleaning, and the energy thus liberated seems to be transferring itself to municipal improvement.

All of which is a matter for congratulation. A clean town is not automatically a healthy town, but it stands a better chance of being one. And it certainly is a more cheerful and prosperous town.

As a part of the educational material, a new fly poster has been prepared, notable for its lack of the traditional manure piles and garbage pails. There is a leaflet to accompany the poster, and a "Clean Up Your Town" leaflet written especially for popular distribution in clean-up campaigns.

This material, like all poster and pamphlet material from the department, is sent free of charge, upon request.

PREVALENCE OF DISEASE

	February Report			Av. 5 years
	Cases Reported			
	January 1927	February 1927	February 1926	
Pneumonia	661	679	754	900
Tuberculosis	647	342	434	387
Typhoid Fever	26	33	21	37
Diphtheria	499	485	382	508
Whooping Cough	560	534	1,314	596
Scarlet Fever	1,438	1,423	1,500	1,362
Measles	523	902	7,798	2,511
Smallpox	171	186	32	186
Meningitis	10	13	8	16
Poliomyelitis	8	2	3	4
Syphilis	1,083	1,148	1,154	915
Gonorrhoea	705	717	1,200	808
Chancroid	7	12	3	10

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health
February, 1927

	+	-	+ -	Total
Throat Swabs for Diphtheria				972
Diagnosis	31	360		
Release	153	130		
Carrier	2	274		
Virulence Tests	14	8		
Throat Swabs for Hemolytic Streptococci				625
Diagnosis	133	216		
Carrier	49	227		
Throat Swabs for Vincent's	14	379		393
Syphilis				5865
Wassermann	1			
Kahn	969	4802	93	
Darkfield				
Examination for Gonococci	145	1149		1294
B. Tuberculosis				414
Sputum	63	318		
Animal Inoculations	3	30		
Typhoid				104
Feces	15	46		
Blood Cultures	1	11		
Widal	9	15		
Urine		7		
Dysentery				38
Intestinal Parasites				14
Transudates and Exudates				325
Blood Examinations (not classified)				687
Urine Examinations (not classified)				372
Water and Sewage Examinations				531
Milk Examinations				87
Toxicological Examinations				13
Autogenous Vaccines				4
Supplementary Examinations				153
Unclassified Examinations				523
Total for the Month				12414
Cumulative Total (fiscal year)				103371
Decrease over this month last year				2410
Outfits Mailed Out				96612
Media Manufactured, c.c.				62420
Typhoid Vaccine Distributed, c.c.				2054
Diphtheria Antitoxin Distributed, units				30251000
Toxin Antitoxin Distributed, c.c.				21760
Silver Nitrate Ampules Distributed				3410
Examinations Made by Houghton Laboratory				1693
Examinations Made by Grand Rapids Laboratory				6028

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

MINUTES OF THE EXECUTIVE COMMITTEE MEETING

The executive committee of the Council of the Michigan State Medical Society convened at 6 p. m., in the Pantlind hotel, Grand Rapids, March 16, 1927.

Present: Chairman Stone, J. D. Bruce, Geo. L. LeFevre, President Jackson and Secretary Warnshuis.

1. The Secretary made comment upon the present condition of legislative matters and the President presented the resignation of A. W. Hume as a member of the Legislative Committee. The Chairman of the Council, the President and the Secretary were instructed to attend hearing on the Tuberculosis Sanitarium at Lansing on March 23rd. The Secretary was directed to present to the Internal Revenue Office at Washington and also the district office in Detroit the ruling of the Attorney General of Michigan regarding the use of narcotics by osteopaths and call the attention of the United States Revenue Collector to the ruling of his department in regard to the issuing of such licenses.

2. The Secretary reported completion of the organization of the Endowment Educational Foundation and he was instructed to use his judgment in making a modest beginning towards securing outside subscriptions to this Foundation.

3. The Secretary reported on the plans and arrangements that were being perfected for the Annual Meeting at Mackinac Island. These were approved and publicity regarding same was directed to be made in the columns of the Journal.

4. The Secretary reported upon District Conference Post Graduate work we are planning and the plans outlined were approved.

5. On motion of Dr. LeFevre, supported by Dr. Bruce the Secretary was instructed to arrange a conference of County Secretaries to be held in Jackson during the latter part of April, at such date as the Secretary may select after making contact with the profession in Jackson.

6. The Secretary reported on activities that were being pursued in regard to the investigation of illegal practitioners. Upon motion of Dr. LeFevre, supported by Bruce the Secretary was authorized to employ and utilize the services of Mr. John C. Carey, attorney.

7. The Secretary was instructed to collaborate with the Chairman of Committees on County Societies and Dr. Peterson for the arrangement of Cancer Clinics and public education in regard to cancer, during the month of May.

8. The Secretary was instructed to call to the attention of the Superintendent of the Battle Creek Sanitarium a communication received from the Judicial Council of the American Medical Association and secure if possible his reply to this communication.

9. A communication from the physicians of

Luce County requesting authority to organize a Luce County Medical Society was read and the Secretary instructed to take up the matter with the Councilor of that District and after favorable recommendations were received to then submit a referendum vote to the entire Council relative to the granting of a charter to the Luce County Medical Society.

10. A communication from Dr. Elwood, Secretary of the Menominee County Medical Society requesting authority to affiliate with adjoining Wisconsin County Society was read. The Secretary was instructed to take this matter up with the Councilor of that District and also the Secretary of the Wisconsin State Medical Society and then to submit this information to the entire Council for a referendum vote.

11. On motion of Doctors LeFevre and Bruce, the Secretary was instructed to publish a roster of the members of the State Society by Counties and to place this roster in the hands of each member for his reception room table.

12. President Jackson presented a communication from the State Commissioner of Health relative to co-operative survey and study as regards maternity mortality in the State. On motion of Dr. Bruce supported by Dr. LeFevre, the Secretary was instructed to take this matter up with the Committee on Public Health and through that Committee to tender to the State Department of Health the Society's co-operative support.

13. President Jackson presented a communication from Mrs. Caroline Bartlett Crane, Chairman of the Society's Committee on the organization of a Woman's Auxiliary. The communication was approved and the Secretary instructed to send this letter to the Presidents and Secretaries of each County Society.

The meeting adjourned at 10:30 p. m.

F. C. Warnshuis, Secretary.

A SUMMARY OF THE MINUTES OF MEETING OF THE HEALTH LEGISLATIVE BUREAU

The second meeting of the Health Legislative Bureau was held Feb. 4, at 7 p. m. in Hotel Olds, Lansing. In the absence of the chairman, Dr. Haze, the meeting was presided over by Dr. J. B. Jackson.

Representatives of the State Medical Society, State Department of Health, University of Michigan, University of Michigan Hospital Nurses Association, Michigan Tuberculosis Association were present and took part in the discussion—Senators Person and Greene and Representative Upjohn were also present by invitation.

Senator Person, who introduced a bill into the Senate to repeal the law of 1925, which provided for the establishment of a state sanatorium and setting aside of \$500,000 for this purpose, was asked to express his opinion as to why it was necessary to repeal the present law. The Senator replied that he believes the law was a piece of joke legislation and that \$500,000 which is in the general fund of the state cannot be legally drawn out by anyone. He contended that the committee as provided by the law which has chosen Ann Arbor as the site of the new sanatorium, is not legal. The senator stated that he would be glad to see an institution such as contemplated at Ann Arbor after Howell was first taken care of.

Senator Greene, who was a member of the committee which chose Ann Arbor as the site of the new sanatorium, stated that Ann Arbor was chosen because with this location not only the needed additional beds would be supplied and with a consulting staff of experts available, but it would also afford an opportunity for proper teaching of diagnosis and treatment of tuberculosis to the medical students. This he considered a very important point. As to the legality of the action of the committee Senator Greene stated that this had been gone over and passed on by the legal department of the state.

Representative James T. Upjohn, who, like Senator Greene, is a physician, spoke of the great need for better teaching of tuberculosis prevention in medical colleges and expressed the hope that Michigan would not be deprived of the privilege of taking a leading part in the better training of its medical students in tuberculosis. He entertains no doubts as to the legality of the committee which chose Ann Arbor as the site of the new institution. He also spoke of the drafting of a bill to supplement the law of 1925. This would soon be introduced into the legislature.

The representatives of the Bureau then discussed the question and in brief expressed the following opinions:

1. There is urgent need for more beds for the tuberculous in Michigan. We have in all sanatoria in the state approximately 2,200 beds and we have an annual death rate of about 2,800. We are still short approximately 600 beds according to the minimal estimate for proper care of the tuberculous of the state.

2. A sanatorium should not only provide treatment for tuberculosis but for the patient. Many complications and coex-

istent diseases are found among the tuberculous and to properly care for this a consulting staff of specialists is important. Ann Arbor furnishes at minimal cost the services of a highly trained corps of specialists to meet such needs.

3. If a half million dollars were spent at Howell to improve conditions it would not relieve the urgency of the situation by adding more beds. That institution is at present the proper size for most effective work.

4. The sanatorium as contemplated for Ann Arbor would furnish an institution which would make possible better training of the medical students in tuberculosis. All medical schools are weak in the teaching of this disease. With a sanatorium close at hand with, perhaps, 250 patients most excellent training in the diagnosis and treatment of tuberculosis would be made possible and the young doctors from Michigan would be better prepared to give effective help in combatting this disease.

5. The opinion was generally expressed that Howell is needed for its beds and that the Ann Arbor sanatorium is also much needed.

Communication from Kalamazoo Academy of Medicine, St. Clair County Medical Society and Genesee County Medical Society were received expressing their hearty approval of the site (Ann Arbor) of the new sanatorium and affirming their conviction that more beds for the tuberculous should be provided.

Dr. J. B. Jackson, who presided, spoke briefly, expressing the opinion that it was the sense of the meeting that repeal of the law establishing the sanatorium at Ann Arbor was not necessary and would not bring best results in the cause of tuberculosis in our state. He repeated that apparently no one present had any desire to scrap Howell.

The meeting was then adjourned.

E. R. Vander Slice, Secretary.

WAYNE COUNTY MEDICAL NEW HEADQUARTERS

The Wayne County Medical Society celebrated the formal opening of their new home in the Maccabee Temple on Friday evening Feb. 18. A reception was held in the club rooms from 7 to 8. At 8 a sumptuous banquet was served in the large auditorium on the first floor. The large banquet hall was filled with members of the society and their guests.

Dr. Martin, who is the editor of the

Wayne County bulletin, was especially graceful and witty in his introduction of the speakers of the evening. Dr. J. H. Dempster, the president of the Wayne County Society, in a brief address welcomed members and guests into the new home of the society.

Dr. James E. Davis in a scholarly manner reviewed the important features of the Hippocratic oath and called attention to the applicability of this old statement of ethics to present day practice.

Mayor John W. Smith spoke of the fact that the medical profession often fails to show a spirit of co-operation. If the doctors of the State could agree they might control legislation pertaining to medical practice and hygiene and public health. In proof of this he called attention to the effect of the united efforts of the profession in defeating the chiropractic bill during the 1925 session of the legislature. He also called attention to the responsibility of the profession in eliminating from its ranks licensed members who are unfit to treat the sick.

Dr. Hugh Cabot, dean of the University Medical School, spoke of the responsibility of the profession in training the doctors of the future. The accumulating mass of scientific knowledge has made this task increasingly difficult. He emphasized also the obligation of the profession in teaching the public the facts of medical science. Health education is a demand on the part of the public and it is the plain duty of the profession to meet this demand.

Dr. Guy L. Kiefer, newly appointed State Commissioner of Health, emphasized the value of periodic health examinations. He called attention to the fact that many physicians have failed to submit themselves to these examinations much to their own disadvantage.

Judge Alfred J. Murphy brought the greetings of the legal profession in a very happy manner. He ably criticized the present methods of presenting partisan expert testimony and made a plea for a method of securing such testimony free from prejudice and partisan bias. Medicine and law should strive together for better and nobler ideals of practice.

Rev. John T. Nichols, S. J., president of the University of Detroit, spoke of the fact that the Jesuits have always emphasized education as a preparation for any field of activity. Modern pre-medical education emphasize too much the stuffing with facts and too little the cultural values. Pre-medical training should teach students

to think. Poorly trained men should not be given the stamp of approval in the hopes that they may change for the better. Hospital staffs need to appreciate more fully their responsibilities in training internes. Too often this responsibility is slighted.

The Wayne County Society is to be congratulated on its new surroundings; the club rooms are most artistic in their appointments. A dining room is operated in connection for the convenience of its members. President Dempster, on behalf of the society, extends to all members of the State Society the courtesies and conveniences of the club and dining room when spending any time in Detroit. This invitation is sincere and our members will find a hearty welcome in the new home of the Wayne County Society.

COUNTY SECRETARIES' CONFERENCE

Our annual County Secretaries' Conference will be held in Jackson on April 27, 1927. Detailed information and program will be mailed to every secretary.

These annual conferences have been found to be most helpful and constructive. Interchange of thought, reviewing of our organization's aims and activities, imparting of information and the discussion of individual experiences that characterize these conferences have always resulted in good. Secretaries derive inspiration and help; County Societies, and through them our State Society, reflect increased activity and stimulation by reason of this annual meeting.

Every secretary is urged to attend—he should attend. Every County Society should direct it's secretary to attend. Jackson is so located as to be reached conveniently, either by train or automobile. Remember the date, refer to your program that is mailed to you and make it a point to be on hand. Presidents of County Societies are invited to accompany their secretary for a cordial welcome will await them.

CANCER DEATHS

Appended there is a tabulation of deaths from cancer over a five year period. These figures are compiled by the State Department of Health from records on file in its office. They are pertinent at this time in view of the proposed Cancer Education Week that is to occur in May. The need of

such a cancer week is attested by the fact that from 1921-1926 there were 17,694 deaths due to cancer—a yearly average of 3539 or 10 per day. Some of these deaths could have been prevented—more can be

be prevented by education, early examination and the instituting of thorough, effective preventive treatment. These statistics are imparted for your information and study.

STATE AND COUNTIES

	1921	1922	1923	1924	1925	Total 5 years	Aver. 5 years	Aver. rate per 100,000 population
STATE	3,285	3,424	3,472	3,744	3,768	17,694	3,539	91.9
1 Alcona	5	6	4	1	7	23	4	65.4
2 Alger	4	4	9	9	5	31	6	54.1
3 Allegan	47	39	45	44	41	216	43	113.0
4 Alpena	20	28	23	18	16	105	21	117.2
5 Antrim	7	12	7	11	12	49	10	86.6
6 Arenac	7	5	6	7	12	37	7	73.2
7 Baraga	5	2	3	3	3	16	3	36.0
8 Barry	21	34	26	18	23	122	24	110.3
9 Bay	57	69	56	81	66	329	66	93.2
10 Benzie	8	7	3	1	2	21	4	57.6
11 Berrien	65	78	74	87	86	390	78	117.7
12 Branch	41	38	29	35	32	175	35	145.0
13 Calhoun	102	109	92	113	96	512	102	130.1
14 Cass	24	22	25	22	31	124	25	121.1
15 Charlevoix	15	6	13	10	9	53	10	63.3
16 Cheboygan	9	10	12	9	15	55	11	78.1
17 Chippewa	20	10	19	16	20	85	17	67.3
18 Clare	4	5	5	6	4	24	5	60.0
19 Clinton	25	22	24	15	25	111	22	93.5
20 Crawford	1	7	4	4	5	21	4	93.1
21 Delta	23	25	25	24	36	131	26	82.3
22 Dickinson	21	18	13	23	21	96	19	96.7
23 Eaton	34	50	36	40	34	194	39	131.3
24 Emmet	20	18	18	17	24	97	19	120.5
25 Genesee	99	83	109	82	110	483	96	61.9
26 Gladwin	1	8	3	3	1	16	3	32.8
27 Gogebic	9	12	14	22	19	76	15	40.4
28 Grand Traverse	22	36	26	29	20	133	26	133.2
29 Gratiot	33	36	39	29	37	174	35	96.7
30 Hillsdale	45	39	35	36	44	199	39	137.5
31 Houghton	39	54	63	56	57	269	54	74.6
32 Huron	22	28	28	28	24	130	26	78.2
33 Ingham	78	86	90	97	91	442	88	96.5
34 Ionia	42	26	30	35	32	165	35	103.2
35 Iosco	5	3	11	3	3	25	5	59.6
36 Iron	4	7	6	9	13	39	8	33.3
37 Isabella	7	25	13	17	19	81	16	69.8
38 Jackson	78	82	91	93	97	441	88	110.1
39 Kalamazoo	89	86	87	101	93	456	91	120.0
40 Kalkaska	3	4	4	6	5	22	4	70.3
41 Kent	217	252	222	240	250	1,181	236	123.6
42 Keweenaw	6	3	2	5	2	18	3	47.0
43 Lake	4	3	7	2	2	18	3	66.1
44 Lapeer	36	25	29	17	30	137	27	102.9
45 Leelanau	5	8	7	7	8	35	7	77.3
46 Lenawee	60	44	51	51	62	268	53	109.2
47 Livingston	29	25	24	25	23	126	25	140.1
48 Luce	6	5	8	1	4	24	5	72.5
49 Mackinac	9	5	4	6	9	33	6	74.4
50 Macomb	41	37	37	51	46	212	42	105.6
51 Manistee	20	24	15	29	19	107	21	100.4
52 Marquette	35	43	41	50	36	205	41	87.1
53 Mason	28	23	26	22	24	123	24	120.6
54 Mecosta	21	21	19	19	25	105	21	117.9
55 Menominee	19	17	30	25	28	119	24	100.3
56 Midland	11	12	5	10	10	48	9	48.5
57 Missaukee	5	3	5	5	5	23	4	43.8
58 Monroe	36	34	38	35	34	177	35	89.5
59 Montcalm	49	35	33	32	34	183	36	116.2
60 Montmorency	2	.....	2	3	.....	7	1	22.9
61 Muskegon	68	66	62	64	80	340	68	96.7
62 Newaygo	14	14	13	28	18	87	15	85.4
63 Oakland	73	82	72	99	103	429	86	83.7
64 Oceana	7	23	15	18	17	80	16	102.4
65 Ogemaw	6	4	2	3	7	22	4	50.9
66 Ontonagon	4	9	4	6	10	33	6	42.9
67 Osceola	14	12	20	17	12	75	15	97.5
68 Oscoda	1	1	.....	2	2	6	1	56.0
69 Otsego	5	3	4	.....	2	14	3	48.7
70 Ottawa	61	45	45	56	43	250	50	102.1
71 Presque Isle	8	10	6	7	7	38	7	54.3
72 Roscommon	2	1	3	4	2	12	2	98.4
73 Saginaw	78	113	108	113	98	510	102	97.4
74 Sanilac	17	28	23	21	21	110	22	69.3
75 Schoolcraft	4	11	4	9	7	35	7	65.3
76 Shiawassee	48	43	34	48	48	221	44	118.2
77 St. Clair	57	49	61	72	66	305	61	100.3
78 St. Joseph	31	36	30	41	21	159	31	111.3
79 Tuscola	29	30	32	27	30	148	29	85.7
80 Van Buren	45	42	43	38	32	200	40	129.0
81 Washtenaw	93	118	123	143	136	613	102	196.9
82 Wayne	802	815	922	1,019	1,045	4,603	921	75.1
83 Wexford	19	11	21	14	22	87	17	90.8

SIMPSON INSTITUTE

The formal dedication of the Thomas Henry Simpson Memorial Institute for Medical Research took place at the University Hospital Feb. 10, 1927. This institute exists as a memorial to the late Thomas Henry Simpson, and it was made possible by a gift of more than \$450,000 to the Regents of the University of Michigan by his wife, Catherine M. Simpson. Half of this grant was spent in constructing the building and the remainder is to be placed in trust and the interest used for salaries of research workers.

The building rests directly in front of the University Hospital and upon the edge of the Huron river valley. Its architecture is very pleasing and harmonizes well with that of the administration building of the University Hospital, directly facing it. The building is placed on a slope so that there are three stories in front and five in back.

The entrance leads into a spacious lobby, paneled in black walnut. At one end of the lobby is a huge fireplace, and at the other end a bronze plaque of the late Thomas Henry Simpson done by Herbert Adams, sculptor.

Passing from the lobby across a hallway one enters the library. It is also paneled in harmony with the lobby, with a fireplace at one end and built-in bookcases all about the rest of the room. The ceilings of both lobby and library are frescoed and

the floors are covered with battleship linoleum. The library overlooks the Huron river valley and is a most attractive room. Directly off the library are the offices of the staff, small clinical laboratories and examining rooms.

The second floor is devoted to laboratories, of which there are eight. Three of these laboratories are to be used for chemical, pathological, and bacteriological study; the rest are to be used for the studies of the blood. No expense has been spared in equipping any part of the building or laboratories. All plumbing, fixtures, desks and laboratory benches are of the most modern type.

The third floor is devoted to the clinical study of patients. There are two three-bed wards, one two-bed ward, and one private room, all modern in every respect. The windows of the wards open out on the boulevard.

In the basement and sub-basement are class rooms, with private student entrances, and animal experimental rooms. The animal rooms are so built that they can be cleaned and fumigated at any time. There is equipment for animal surgery and the preparation of animal diets. There is automatic elevator service on all floors and the building is supplied with nursing service, orderly service, and janitor service by the University Hospital. Its proximity to the University Hospital makes



Thomas Henry Simpson Memorial Institute

transportation of patients, staff members and students rapid.

As a whole, the Thomas Henry Simpson Memorial Institute for Medical Research offers an extraordinary opportunity to study, both clinically and experimentally, pernicious anemia. In event the etiology of this disease is sometime determined and its cure known, the Institute will be devoted to general medical research.

During the afternoon of Feb. 10 there was a reception and tea in the library and director's office. Opportunity was afforded at this time for guests to look over the new institute and a group of nurses from the hospital were present to act as guides to those who wished to be taken through the building. The tea tables were presided over by Mrs. C. C. Little, Mrs. J. E. Beal, Mrs. W. H. Sawyer, Mrs. Harley Haynes, Mrs. J. E. Bursley, and Mrs. H. M. Bates. Mrs. Simpson was presented in an informal way to the guests by President and Mrs. Little.

In the evening a dinner was given at the Union for Mrs. Simpson, Dr. H. A. Christian, Dr. C. C. Sturgis, and Dr. Raphael Isaacs. Later, at the amphitheatre of the University Hospital, the formal presentation of the Simpson Memorial Institute to the University was made by Henry Slyfield of Detroit. President C. C. Little accepted the Institute in behalf of the University. Dean Hugh Cabot outlined its coming usefulness and connection with the Hospital and the University. The address of the evening was made by Henry A. Christian of Harvard. Formal announcement of the appointment of Cyrus C. Sturgis as Director of the Institute and as a Professor of Internal Medicine, and of Raphael Isaacs as Assistant Director and as an Assistant Professor of Internal Medicine were made. Both were formerly in the Department of Internal Medicine at Harvard Medical School.

EARLY HISTORY OF SHIAWASSEE COUNTY MEDICAL SOCIETY

The first medical society of Shiawassee county was formed in the late '70s or early '80s, through the efforts of Dr. Colin McCormick, of Owosso, who, by the way, is still in active practice in that city. The local physicians who affiliated at that time were Doctors J. Perkins, J. B. Barnes, C. P. Parkill, J. L. Smith, A. E. Stannard and C. McCormick. Outside the city, the members were, Doctors E. B. Ward of Laingsburg, D. C. Holley of Vernon,

Armstrong and Goodrich of Corunna, J. N. Eldred of Chesaning, O. B. Campbell of Ovid, S. E. Gillman of St. Johns, H. W. Cobb of Perry, and W. C. Hume of Bennington.

Later, the "Owosso Medical Society," on motion of Dr. Holley, was changed to "The Owosso Academy of Medicine," and was so called until the state was reorganized by McCormick of Kentucky, when the name was again changed to "The Shiawassee County Medical Society" and so remained. The original organizer, Dr. C. McCormick, was for seven years the secretary-treasurer, and for five years president under its various names. During those early years many notable men addressed the society at different times, such as McGraw, Shurly, Webber, Carstens and Connor of Detroit; DeNancrede, Peterson, Dock and Darling of Ann Arbor, and lesser lights about the state.

The meetings were always well attended and much interest manifested. An interesting synopsis of the papers and discussions was always furnished the local paper, The Owosso Press, which was read and greatly enjoyed by the people of the county.

Since the reorganization of the society in 1902, there have been a total of 95 members, at various times. Many of these have passed to the great beyond, some have removed to other fields of labor, and a few have gone to sleep as far as a medical society is concerned. And by the same token, these few are doing themselves a greater injustice than the society, for the latter exists without them, but they can scarcely be said to be alive in a medical sense, with no affiliation with the society.

W. E. Ward, Secretary-Treasurer.

MATERNITY SURVEY

It is purposed to conduct a maternity survey of the state. The proposed plans contemplate an intensive study and inquiry into the medical and social factors involved and evidenced in the prenatal state, the confinement provisions and attendance, end results to mothers and infants and a summarization of these and other incidental factors. The actual field work will be under the direction of Dr. Kiefer, Commissioner of Health, in conjunction with the Society's Committee on Public Health. The Council has voiced its approval of this study and assured the Commissioner of our co-operative support and assistance. It is hoped that there will

result from this study an organizational movement that will enhance the welfare of pregnant women and cause them to be surrounded with the best of scientific care during pregnancy and labor.

It must not be assumed or implied that this undertaking is the initiative of any proposed plan of state medicine or state endeavor to usurp any physician's rights or practice. No such ulterior purpose attends this study. The basic, sole thought is to obtain existing facts and study existing conditions and eventually to educate the public. To that end the following letter has been approved and will be presented wherever the state representative may call. Our members are urged to accord to this representative every possible assistance in order that the desired information may be obtained in fullest detail. The results and findings will be imparted in the report of our Committee on Public Health. It is contemplated to undertake this work during the first part of April.

To the Medical Profession of Michigan:

The Michigan State Medical Society is making a study of maternal mortality in Michigan. Through the courtesy of the State Department of Health, the Medical Society has secured the services of Dr. Dorothy L. Green who presents this letter to you.

The study is to be made of the reported deaths in cases connected with childbirth and the actual facts will be ascertained for the future guidance of the medical practitioners of Michigan. There will be no publicity in regard to any individual case or in regard to any doctor.

As president of the Medical Society of Michigan I feel that I am voicing the sentiment of the Society in asking that you assist Dr. Green in making this study in every way that you can. Any statement that you make to her in regard to your patient will be considered as entirely confidential. This work is to be carefully and painstakingly performed, and should accumulate statistics the analysis of which will be of great value to the general practitioners and the obstetricians of Michigan.

Again hoping that you will heartily co-operate with Dr. Green, I am,

Very sincerely yours,
J. B. Jackson, President.

EUTHANASIA

We are not purposing to discuss euthanasia—we are simply imparting the following incident. It does furnish a text but we desist sermonizing and moralizing.

The letter left by Dr. E. W. Ruggles of Chicago to the editor of *The Day Spring* appears below. The letter was begun on December 29, and written progressively as the fatal disease progressed. The last entry was written February 25, only three days before his death on February 28. It

was mailed after the physician's death and reads:

* * *

December 27, 1926.

My dear Cochrane:

It is quite probable that some time during the next few weeks you will have occasion to comment on the passing of another of "Hartford's Illustrious Former Citizens"—"the first graduate of the Hartford high school," and all its usual adornments.

Thank you for past favors—but this is different!

I have always said that I would never die of any painful and lingering illness—of course, meaning cancer. And now I have cancer of the throat, which is the most unfortunate place in our whole anatomy to have cancer—hurts all the time, hurts when you swallow food or even saliva, and especially hurts at night. So what is a person to do under these circumstances?

This condition dates from last winter. Of course, I have had supposedly the best of treatment, but everything seems to fail in cancer of the throat. So all I have to do is to calmly wait for death by starvation or some intercurrent malady, and, as I figure, old nature will come to the rescue sometime next summer and release me from my suffering.

But isn't it fine that we doctors have it in our power to do euthanasia on ourselves, when we would probably be put in jail if it could be proven that we did it on any one else? So me for euthanasia—and all arrangements are made.

The most comforting thought I have when suffering pain and knowing of more to follow is that I have it in my power to end it at any time—just go to sleep. I know that this idea is quite contrary to general opinion, but it is an opinion that I have held for many years.

* * *

February 1, 1927.

At this date the condition is slowly progressive. I see no reason for changing any of the sentiments expressed in the preceding, and at the proper time will carry out my plans.

* * *

February 25, 1927.

At this time the suffering has markedly increased, so that it would be practically unendurable unless I were given something to relieve the pain. There is no pleasure or satisfaction in living under such conditions. I am only waiting now for some business to be finished up and then I will be ready for that nice, long sleep.

You may publish this if you wish. It ought to make a good subject for discussion.

Sincerely yours,
E. W. Ruggles.

* * *

A victim of cancer of the throat, and realizing that his case was hopeless, Dr. Ruggles carefully closed up his business affairs, transferred his property to his wife, made all arrangements for the disposition of his body, and ended his suffering by injecting 20 grains of morphine into his veins.

That the end had been carefully planned over a period of months, as the incurable disease progressed, was indicated by four letters written by Dr. Ruggles and left on his office table.

One of the letters was addressed to the editor of *The Day Spring*, and is published. Another was addressed to his wife, and a third to the coroner explaining his act, and one to the under-

January 19, 1927.

takers he desired to handle his funeral arrangements.

Although Dr. Ruggles had kept his affliction a secret from all save his wife and his most intimate friends, there were in the funeral party three of his closest personal friends to whom the physician had confided his plans.

Strangely enough, each of the three men had been sworn to secrecy and thought he was the only one who knew. It developed that each had tried to dissuade Dr. Ruggles, but had been convinced by the physician that his plan was best. All three had been given identical instructions, indicating that the physician had not rested upon the uncertainty of one friend surviving him—and had depended upon one friend remembering the instructions that another might forget.

The three knew nothing of the manner or time that the physician intended to escape his suffering, but only that he contemplated evading the last agony of death from the dread disease from which he was suffering.

Dr. Ruggles did not formulate his carefully laid plans until convinced that his case was hopeless. He had been at the Mayo Brothers hospital at Rochester, Minn., telling his patients in Chicago that he was going to the clinic. He had consulted the best specialists in Chicago, but they gave him no hope.

Knowing that his trouble could not be cured, he began last fall making arrangements with his bankers to transfer his property to Mrs. Ruggles. Since the first of the year he had declined to take new patients, telling them that he was going away, but continued his office practice at 6856 Wentworth avenue.

On Monday, February 28, Dr. Ruggles left his home at 10:30 in the morning. When he failed to return at 6 o'clock in the evening and Mrs. Ruggles had failed to get a response to her repeated telephone calls, she called Harry Mayzels, a druggist above whose store Dr. Ruggles had his offices. He found the physician dead on a bed in an inner room. Dr. C. S. Salmon, 6255 Ashland avenue, a friend of Dr. Ruggles, was called. He declared that the physician had been dead since 1:30 in the afternoon. The note left by Dr. Ruggles to the coroner stated that the morphine was administered at 1:20.

OPIUM LICENSES TO CULTISTS

Under ruling of the Department of Internal Revenue, Washington, District Collectors may issue a license to dispense opium, etc., to osteopaths provided the state does not prohibit such practice on the part of osteopaths. A number of years ago the ruling of our attorney general prevented the issuance of such a license. With a new administration and a new attorney general that ruling was reversed and the license issued so that for several years osteopaths have been dispensing opium, etc.

Shortly after January 1st of this year, the Board of Registration appealed to the attorney general for a review and a new ruling. This has been rendered and reverses the previous ruling and is quoted:

Osteopathic Practitioners: May not administer narcotics.

L. A. Potter, Inspector, Department of Health, State Building, Lansing, Michigan.

Dear Sir:

Under the provisions of the Harrison Narcotic Law, so-called physicians, dentists and veterinary surgeons are required to register with the Commissioner of Internal Revenue in order to dispense, distribute or prescribe certain narcotics without violating the terms thereof. You have requested the opinion of this Department as to whether, under the statutes of this state, osteopathic physicians are authorized to administer the narcotics included within the Harrison act, as a part of or incident to the practice of their profession.

The practice of osteopathy is regulated by Act No. 162 of the Public Acts of 1903, as amended, being sections 6740-6747, C. L. 1915. Section 1 of the Act creates the State Board of Osteopathic Registration and Examination, and provides for the manner of registering applicants for licenses to practice. Section 2 provides that if an applicant shall possess certain requirements therein specified, he shall, before being granted a license to practice, submit to and satisfactorily pass an examination, and

"If such examination be passed in a manner satisfactory to the board, then the board shall issue its certificate granting him the right to practice osteopathy in the State of Michigan, in all its branches as taught and practiced in the recognized colleges and schools of osteopathy."

Section 4 of the Act provides as follows:

"The certificate provided for in section 2 of this act shall entitle the holder thereof to practice osteopathy in the State of Michigan in all its branches as taught in the recognized schools of colleges of osteopathy, *but it shall not authorize him to practice medicine within the meaning of Act 237 of the Public Acts of 1899, or acts amendatory thereto;* Provided, That nothing in this act shall be construed as to prohibit any legalized osteopathic physician in this state from practicing medicine and surgery after having passed a satisfactory examination before the State Board of Medical Examiners in the State of Michigan * * *."

The legislature in enacting this act clearly had in mind a well defined distinction between the practice of medicine as defined by the laws regulating physicians and the practice of osteopathy.

Section 4 above quoted expressly provides that the certificate shall not authorize the holder thereof to practice medicine within the meaning of that term as defined in the laws regulating physicians. Indeed, it would seem that the legislature had contemplated future presentment of the question now before us, for in section 7 of the act, it defined the method of treating diseases known as osteopathy as follows:

"This system, method or science of treating diseases of the human body known as osteopathy is hereby declared not to be the practice of medicine or surgery within the meaning of

Act No. 237 of the Public Acts of 1899 * * *"

and clearly indicated that it had in mind when enacting this regulatory legislation, the then well understood osteopathic method of treatment of diseases of the human body by manipulation by the hands. In 21 Ruling Case Law, page 371, it is said:

"Osteopathy is a well recognized school of healing which does not require just the same

kind of knowledge as do surgery or materia medica. The failure of a legislature to provide for the special examination of osteopathy may mean an intention not to include them within the prohibition. Also the danger attendant on manual manipulation is not the same as the danger attendant on surgical operations or the administration of drugs. * * *

It is my opinion that the administration of narcotics is not a part of or incident to the practice of osteopathy as contemplated by the Michigan statute, but rather involves necessarily the practice of medicine; the right to practice medicine being expressly denied to an osteopathic unless such osteopath is a registered physician.

Vtry truly yours,
Wm. W. Potter, Attorney General.

The matter has been presented to the Internal Revenue Department at Washington and to the revenue collector of Michigan.

DUES

This issue marks the last one that will be received by members who have not paid their 1927 dues. We have no option in the matter; to discontinue sending is a postal regulation. Members who have failed to remit to their local secretaries are requested to do so at once.

MONTHLY COMMENTS

Medical—Economic—Social

By the aid of our daily press, college and high school suicides have been played up with considerable prominence. We are not disturbed for it is apparent that this suicidal tendency is not bound to be epidemic—it's average is fairly established. The following two poetical verses are of interest by reason of the variance of sentiment expressed. George Stirling died by his own hand and The San Francisco Call and Post prints what is believed to be his last poem—a plea for the right to die as he did.

Has man the right
To die and disappear,
When he has lost the fight?
To sever without fear
The irksome bounds of life,
When he is tired of the strife?
May he not seek, if it seems best,
Relief from grief? May he not rest
From labors vain, from hopeless task?
—I do not know; I merely ask.

Or must he carry on
The struggle till it's done?
Will he be damned, if he,
World-weary, tired and ill,
Deprived of strength and will,
Decides he must be free?
Is punishment awaiting those,
Who quit, before the whistle blows,
Who leave behind unfinished task?
—I do not know; I merely ask.

To which we submit in reply these lines by Charles Hanson Towne:

When he went blundering back to God,
His song half written, his work half
done,
Who knows what paths his bruised feet
trod,
What hills of peace or pain he won!

I hope God smiled and took his hand,
And said, "Poor truant, passionate fool!
Life's book is hard to understand,
Why couldn't thou not remain at school?"

The Annual Meeting of the A. M. A. will be held in Washington the week of May 15th. Hotel reservations should be made at an early date.

Letters have been addressed to County Secretaries to nominate a local representative to aid Mrs. Crane's committee in organizing local women's auxiliary societies in affiliation with each county unit.

The Annual County Secretaries Conference will be held in Jackson on April 27th. County Presidents are urged to arrange so that the local Secretary will be present. The detailed program will be mailed to each Secretary.

Turn to the article in this issue: "Michigan One Hundred Years Ago." It is a fascinating narrative and imparts interesting details as to practice in the region of Detroit and Pontiac a hundred years ago. The article will be concluded in our next issue.

Councilor Ricker recently suggested a rostra of members in good standing in County Societies constituting our State Society. He urged that such a rostra, supplied to each member and placed on his reception room table would have a twofold purpose. First, it would acquaint the public as to what doctors are in good professional standing and affiliated with the recognized medical organization of the county and state. The public knows that a man to attain membership must have essential personal qualifications and be possessed of a certain standard of professional education. Second, men who have been indifferent or luke warm to society affiliation will perceive a new reason for obtaining membership. Consequently the Council has directed that such a rostra be published and supplied to each member in good standing. This will be issued about May 1st. It will include only the names of members whose 1927 dues are paid. Secretaries are requested to draw their members attention to this fact.

O U R O P E N F O R U M

Affording Opportunity for Personal Expression

Editor of The Journal:

There is so much to commend in the present make-up of the Journal and so much of its contents which interests me personally that I wish to express my admiration and to extend congratulations. I cannot but marvel at the results you have obtained.

Sincerely,

Andrew P. Biddle.

And here goes our joy. Apologies to the New York State Journal of Medicine.

Editor of The Journal:

We always await with eager expectation the Journal of the Michigan State Medical Society, and frequently take occasion to quote from it, for it always contains novel selections and excellent information.

We are quoting your report regarding your Journal in the March 15th issue of our Journal. We commend you for your excellent showing.

We are well aware of the trials and tribulations of an Editor, and of the ever present possibility of some omission or commission, which may not be of importance, but which is often irritating. We note on page 221 of your March issue an editorial which is reprinted word for word from our Journal of February 15th. I know that you will pardon me, if I call your attention to the fact that no credit whatever is given to our Journal. The article as it stands appears as if it were written originally by your editorial staff. While we are exceedingly flattered by your choice of it, yet we would have felt still more so, if you had, at the end, credited it to the New York State Journal of Medicine.

Congratulating you on your excellent Journal, we are

Yours sincerely,

Frank Overton, M. D.
Executive Editor.

March 10, 1927.

Doctor Frank Overton,
2 East 103rd Street,
New York City, N. Y.

My Dear Doctor Overton:

This acknowledges receipt of your letter of March 8th and I appreciate the kind things that you say about the Michigan Journal which would express my sentiments if I inserted for the word Michigan the New York State Journal. Then you go on and take out all the joy that there is in life and point out the glaring error that occurred in our March issue. I knew that I should not have gone to New York, where I was during the time that our Journal was on the press and being mailed, thus foregoing my usual custom of checking over the final page proofs before the press run started, to check just such errors.

Of course we acknowledge openly and frankly that the article referred to was lifted bodily

from the New York State Journal of Medicine and was used for the purpose of a filler, as you and I are often compelled to supply such additional space at the last moment. Our printer failed to note, as was noted on the copy that was sent him, that this was from your Journal and that credit should have been given accordingly. This is but an incident of the trials and tribulations that you refer to and it always happens when we think the sun is shining most brightly.

We have no desire to indulge in plagiarism and regret the incident for which proper amends will be made in our next issue. I have just about come to the conclusion that it is not safe to let any issue go to press without a final check of the page proofs and by reason of that our visits will have to be planned at other periods of the month, but in this instance I was compelled to go and had no other alternative.

Assuring you of our appreciation for calling our attention to this fact and tendering you our hearty wishes for a continuation of the good work that you are doing with the New York Journal, I am

Yours very truly,

Secretary-Editor.

Editor of The Journal:

I wish to presume upon your patience somewhat, because I cannot refrain from writing you in regard to your new State Journal. Being a diligent reader of the Journal for many years I feel that we owe you a great debt in your constant care for our interests in helping to supply the modern medical literature, and I address you today especially on account of this most excellently built and complete medical journal especially since the January number of this year. We have reasons to be proud of it.

Sincerely yours,

Simon Levin, M. D.

Editor of The Journal:

Enclosed you will find a check for \$5.00. I wish to enter my subscription for one year for The Journal of the Michigan State Medical Society.

By way of introduction, I might say that I graduated in the class of '19 from the Detroit College of Medicine and Surgery. Later came to Mexico, in general practice in Mexico City for three years and four in this hospital. We have 40 beds and do a considerable amount of surgery. I am planning to return to the states in the spring and locate in Michigan. I prefer surgery and have been successful in it, however I shall be obliged to take advantage of whatever opportunity that may present itself.

I do not know the price of the Journal, if not sufficient the proper amount will be forthcoming on being advised as to the subscription price.

Faithfully yours,

C. R. Illick.

Editor of The Journal:

If history is history it should be accurate and with this object in view I desire to make a few corrections in the history of the Wayne County Medical Society published in the March number. This article states that the Wayne County Medical Society appears to have ceased in 1876, but the fact is that at least from 1891 until 1902 it was a thriving organization. Its rival during part of the time was the Detroit Medical and Library Association, which disbanded about 1900, to be succeeded by the Detroit Medical Society, and these were the two large societies in Wayne County at the time when the reorganization of the A. M. A. went into effect in 1902. This reorganization made one County Society in each county the unit of membership in the State Medical Society, and of the A. M. A. Hence, it was necessary for the Detroit profession to amalgamate. A plan for amalgamation was proposed at a largely attended meeting in September, 1902. This plan provided for disbanding existing Societies and forming a new Society to be called the Wayne County Medical Society. Unfortunately for initial harmony, three members of the old Wayne County Medical Society claimed that their Society was incorporated and could not be disbanded with their objection and the outcome of this anticipatedly harmonious meeting was that the Detroit Medical Society disbanded and its members joined the old Wayne County Medical Society, which was then incorporated. Another inaccuracy is the date of purchase of a permanent home at 33 High Street East, which was July 1st, 1910, and not 1909.

Yours very truly,

F. B. Tibbals.

Editor of The Journal:

The Illinois State Medical Society is running a special train to Washington, D. C., over the Pennsylvania railroad for the A. M. A. meeting in May.

Will you, in the forthcoming issues, announce this for us in the valued columns of your much-read Journal?

Chicago is the transfer terminal for physicians coming from your district. Travel on this special train will undoubtedly hold many pleasurable features that otherwise would be unavailable. In addition to this opportunity for fraternization among doctors from Illinois and states north and west, there is a certain amount of professional pride in making of this "Special" a banner train.

Cordially, as ever,

Charles J. Whalen, M. D.

Editor of The Journal:

At the meeting of the Board of Trustees of the American Medical Association held in November, 1926, a recommendation was adopted expressing the hope that the Council would "undertake to have lectures on medical ethics made a part of the curriculum in every approved medical school." This matter was taken up at the business meeting of the Council on February 13, 1927, and the following report was unanimously adopted:

"The Council on Medical Education and Hospitals of the American Medical Association recommends that adequate instruction in the tra-

ditions and principles of medical ethics be included in the required curriculum of all medical students. While realizing that the subject is now touched upon in all schools, and that its principles can be inculcated by example, yet the Council believes that detailed and sympathetic explanation of the 'Principles of Medical Ethics,' as formulated by the American Medical Association should be the minimum of the formal instruction given in medical schools.

"The Council suggests that the subjects of medical economics, medical jurisprudence, medical history and perhaps also in some instances pastoral medicine might be conveniently grouped with that of medical ethics under the general title of the 'Social Relations of the Physician.'

"The Council recommends also to the American medical profession through its national, state and local organizations that it seek to adequately familiarize its members with the same material suggested for medical students."

With the tremendous increase in the knowledge of medicine and the added complexity in medical practice, including the increasing extent to which hospitals are being utilized in practice, the matter of medical ethics and the importance of maintaining a high degree of integrity on the part of hospital staffs are coming to be more and more important.

Very sincerely yours,

N. P. Colwell, Secretary,

Council on Medical Education and Hospitals.

Editor of The Journal:

You certainly get results when you go after anything. The offender is very much chastened—I hope permanently. I do not like friction.

Just what was done here I do not know—that is unnecessary. However, I could not let the matter close without thanking you for your lively interest and co-operation.

Yours very truly,

J. F. Heffernan, M. D.

COMMITTEE OF REVISION OF THE PHARMACOPOEIA OF THE UNITED STATES OF AMERICA, 1920-1930

Editor of The Journal:

The chairman of the United States Pharmacopoeia Revision Committee has asked the Subcommittee on Therapeutics and Pharmacodynamics to address to you a statement explaining the purpose of the presentation of the volume of the Tenth Revision of the United States Pharmacopoeia, which was forwarded to you a few days ago. This object is partly to make it convenient for you to familiarize yourself with the rather important changes, the additions, deletions, and modifications of titles, that have been made in this revision. The chief object, however, is to enlist your assistance, and to give you some help in bringing the ideals of the Pharmacopoeia to the attention of your students; to acquaint them, through you, with the existence of this work and with the objects that it represents; to point out how these aims serve and deserve their professional interest; and to make them somewhat familiar with the book as a reference work of authoritative information. It is especially important that medical students should have convenient ac-

cess to the copy of the Pharmacopoeia as a reference book, since it is not intended as a medical text-book.

As you know, the immediate purpose of the Pharmacopoeia consists in providing standards for the standard drugs, and in this it may be truthfully said to reflect the best practice of the American medical and pharmaceutical professions. By giving official recognition, sanction and encouragement to the best, it serves as a powerful incentive and means for improvement and progress of the two professions who own it in common, and who manage it by a democratic system that should and does make the Pharmacopoeia representative of, and responsive to, the whole membership of both professions. Indeed, one of the objects of this presentation is to keep up interest in this popular control, so that the students, who will be practitioners by the time of the next Pharmacopoeial Convention, will help to elect and send competent representatives.

The last Committee of Revision took the wise step of dividing the work and responsibility of the revision fairly definitely between the two professions, according to their special training. The selection of the "best" drugs and preparations, the assignment of their dosage, the elaboration of bio-assays, and other matters requiring medical knowledge were left essentially to the physicians of the Revision Committee; while the pharmacists, chemists and botanists were charged with the working formulas, tests, etc. This division increased the general efficiency and worked out very happily.

The selection of the "best" in drugs is necessarily a delicate undertaking; but the committee tried faithfully to act in harmony with the tendencies of modern medicine; to eliminate what seemed at present useless or practically superfluous; and to add the new drugs whose value had been fairly definitely established. This was made possible by the authorization to admit drugs protected by patent, as is the case with so many of the synthetic chemicals. Accordingly, the present Pharmacopoeia was able to include standards, and incidentally non-copyrighted names, for the arsenamines; procaine (novocaine) and other synthetic anesthetics; chaulmoogra oil and ethyl chaulmoograte; amidopyrine (pyramidon); the colloidal silver preparations, mild and strong; barbital (veronal) and phenobarbital (luminal); calcium iodobehenate (sajodin); carbromal (adalin); chloramine (chlorazene) and dichloramine; epinephrine (adrenalin); thyroxin, and a number of others. To an increasing extent, teachers and students may find it profitable to look upon the titles of the Pharmacopoeia as a basic reference list of drugs and preparations of worth; but even those who may not agree with the committee in all its decisions will find the list of additions and deletions at least quite interesting. Incidentally strict adherence to the official names and abbreviations helps to avoid confusion in prescribing and in dispensing. A list of preparations is given under each drug, as also the ordinary dose, in both metric and apothecaries system.

The bulk of the text of the Pharmacopoeia consists of working directions for preparations and for testing, which are very important to pharmacists and indirectly also to physicians, since they insure uniformly high quality of the drugs; but the details of much of this text are not in the providence of medical men. There is, however, quite a number of other valuable features, which make the Pharmacopoeia a very handy source of useful information. These are best appreciated

by examining the table of contents, on pages III and IV of the book, or better still, by running through its pages. We would mention especially the authoritative definitions and descriptions; the physical constants such as solubilities, melting points, etc.; the admirable succinct "Identification Tests for Chemicals," pp. 440-444; the descriptions of standard analytical procedures and methods; the formulas for test solutions and equivalents; tables of formulas and molecular weights of a large list of chemicals; of equivalents of temperatures, of weights, and of measures—all in convenient form and reliable. The descriptions of the bio-assays are of especial interest to pharmacologists. It is interesting to recall that the United States Pharmacopoeia has set the pace for the world in this subject.

Our sub-committee ventures to suggest that you take occasion to point out to your students the value of our national Pharmacopoeia in these various directions; that you encourage them to become familiar with it, and to this end, that you place the volume in your library or laboratory, where the students may have access to it.

Very respectfully yours,

W. A. Bastedo

H. C. Wood, Jr.,

Thorald Sollmann, Chairman of
the Sub-Committee on Therapeutics and Pharmacodynamics.

THE JOURNAL
IS
YOUR FORUM—
WE INVITE YOU
TO UTILIZE
IT FOR THE
EXPRESSION OF
YOUR VIEWS
ON
MEDICAL SUBJECTS

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. V. H. Kitson has re-located in Ionia.

Dr. W. A. Evans of Detroit is president of the Detroit Board of Health.

Dr. B. R. Shurly is a candidate for membership on the Detroit Board of Education.

Dr. G. L. LeFevre's home, Muskegon, was destroyed by fire on February 28.

Dr. A. E. MacGregor was recently appointed chief of staff of the new Post-Montgomery Hospital, Battle Creek.

Dr. Alexander W. Blain has been re-appointed a member of the Detroit Public Welfare Commission by Mayor John Smith for a period of four years.

At the annual meeting of the Federation of State Medical Boards of the United States, held in Chicago, February 16th, the following officers were elected:

President-Elect, Guy L. Connor, M. D., Detroit, Mich.; Vice-President, Henry M. Fitzhugh, M. D., Westminster, Md.; Secretary-Treasurer, Walter L. Bierring, M. D., Des Moines, Ia.; Member of Executive Council, Charles B. Kelley, M. D., Jersey City, N. J.

Dr. Byron U. Richards, of Pawtucket, R. I., is the present President of the Federation.

NOTICE

The National Association for the Study of Epilepsy will hold its next annual meeting at Cincinnati, Ohio, on May the 30th and 31st, 1927, immediately preceding and in joint session with the American Psychiatric Association. Papers will be read by Doctors Bass of Texas, Syz of Baltimore, Clark of New York, Pollock and Davis of Chicago, Shanahan of Sonyea, Notkin of New York, Sharp of Buffalo, Odell of Clinton Springs and others.

We would appreciate your giving some publicity to this notice in your Journal.

Respectfully,

G. Kirby Collier, M. D.

A. L. Jacoby, A.B., M.D., Director of Neuro-Psychiatry of the Harper Hospital and Director of the Psychopathic Clinic of the Recorders Court, will present the next paper to the Highland Park Physicians' club, Thursday, April 7, 1927, at the Highland Park General Hospital at 8:30 p. m.

Subject: "The Next Step in Preventive Medicine."

Dr. Jacoby has had a wide experience in neuro-psychiatry, having served as assistant in psychiatry at the State Psychopathic Hospital, Ann

Arbor, Michigan, and had charge of the psychiatric department at the Naval Hospital at Portsmouth, Me.

The members of the Michigan State Medical Society are invited to attend this meeting.

The Highland Park Physicians' Club,
Chas. J. Barone, Secretary.

The following is the program for the Tri-State Medical Association:

PROGRAM

Morning Session
Tuesday, April 12, 1927

Clinics 8:30 A. M. to 12:00 M.
Clinic Hospital

Clinics Arranged and Conducted by the La Porte County Medical Society.

1. Post-operative Complications.
Dr. J. H. Andries, Prof. of Surgery, Detroit Medical College, Detroit, Mich.
2. General Medical Clinic.
Dr. Charles Phillips Emmerson, Dean and Prof. of Medicine, Indiana University School of Medicine, Indianapolis, Ind.
3. Heart Clinic.
Dr. Charles Louis Mix, Prof. of Medicine, Loyola University, Chicago, Ill.
4. Goitre Clinic.
Dr. Charles A. Elliott, Prof. of Medicine, Northwestern University, Evanston, Ill.
5. Joint and Bone Clinic.
Dr. Kellogg Speed, Associate Prof. of Surgery, Rush Medical College, University of Chicago.

Luncheon at 12:00 M. Clinic Hospital.

Afternoon Session

2:00 P. M.

Spaulding Hotel, Ball-room

1. The Alleged Tremendous Increase in Heart Disease of Late Years.
Dr. J. H. Upham, Prof. of Medicine, Ohio State University, Columbus, Ohio.
Discussants—
Dr. J. M. Gordon, South Bend, Ind.
Dr. Miles Porter, Jr., Ft. Wayne, Ind.
2. Neurasthenia and Psychasthenia from the Internist's Point of View.
Dr. Charles Phillips Emerson, Dean and Prof. of Medicine, Indiana University School of Medicine, Indianapolis, Ind.

Discussants—

Dr. Louis A. Miller, Toledo, Ohio.
 Dr. William M. Donald, F.A.C.S., Detroit,
 Michigan.

3. X-ray Studies of the Normal and Pathological Gall Bladder.

Dr. Preston M. Hickey, Prof. of Roentgenology, University of Michigan, Ann Arbor, Mich.

Discussants—

Dr. John T. Murphy, Toledo, Ohio.
 Dr. Stanley A. Clark, South Bend, Ind.

Banquet 6:30 P. M.

Spaulding Hotel, Ball-room.

Evening Session

8:00 P. M.

Spaulding Hotel.

Some Problems Connected with the Diagnosis and Management of Non-malignant Affections of the Colon.

Dr. Frank Smithies, Prof. of Medicine, University of Illinois, Chicago, Illinois.

All Papers Will be Open for General Discussion.

OFFICERS

Dr. H. H. Martin, President.....LaPorte
 Dr. Wm. Donald, Vice-President.....Detroit
 Dr. R. V. Hoffman, Treasurer.....South Bend
 Dr. W. W. Beauchamp, Secretary.....Lima

COUNSELLORS

Dr. Miles F. Porter, Sr.....Ft. Wayne
 Dr. M. A. Mortensen.....Battle Creek
 Dr. John Gardiner.....Toledo

DEATHS

IN MEMORIAM

Dr. Daniel Geib was born at Elmira, Ontario, February 8, 1855, and died at Detroit, Michigan, February 17, 1927. He attended the Rockwood Academy, Rockwood, Ontario, and was graduated in medicine at the University of Michigan in 1879. For a time he practised in Arlington and Cambria, Wisconsin. In 1887 he located at Groton, South Dakota. In 1915 he came to Detroit where he was in active practice until he retired one year ago. He had served as President of the Aberdeen, (South Dakota) District Medical Society and for a number of years was Councillor of that District to the State Society.

In January, 1927, he was elected to Honorary Membership in the Wayne County Medical Society. He was a member of the American Medical Association, Michigan State Medical Society, Wayne County Medical Society and the East Side Physicians Association.

He was married in 1880 to Louisa Davis of

Vandecar, Ontario, who with four children, Doctors L. O., and O. D. Geib, of Detroit, Gladys Geib and Mrs. Jay Reeves of Marshfield, Oregon, survive him.
 E. L. R.

Dr. Walter G. Welz, a prominent obstetrical specialist, died suddenly at Providence Hospital, Detroit, March 8th, 1927. Dr. Welz was a graduate of the Detroit College of Medicine and received post-graduate work in Virginia. At the time of his death he was chief of staff at the Herman Kiefer and Women's hospitals. He was a member of the Wayne County Medical Society, the Michigan State Medical Society and the American Medical Association.

Dr. William G. Hastie, 2556 W. Grand Boulevard, Detroit, died March 5th. Dr. Hastie was 67 years old and was born in Guelph, Ontario, but when a small boy came to Detroit. He was a graduate of the Detroit College of Medicine. Dr. Hastie had practiced in Detroit for thirty-two years, was a charter member of the Wayne County Medical Society and a member of the Michigan State Medical Society.

Dr. Johnston B. Kennedy was born in Brampton, Peel County, Ontario, May 8, 1858, and died at Detroit, Mich., March 5, 1927. He attended the high school of Brampton, then studied pharmacy at the Ontario College of Pharmacy, from 1876 to 1879. His medical study was begun at Trinity College, Toronto, from 1881 to 1884, then coming to Detroit he received his degree in medicine from the Detroit College of Medicine in 1885. This was followed by post-graduate study in London and Berlin. His practice, which has been entirely in Detroit, was confined to surgery, in which department he was consultant to Grace Hospital. He had, at different times, many allied medical interests, having served as county physician from 1894 to 1896, and for a number of years following 1913 as president of the Board of Health and as a member of the Wayne County Board of Pension Examining Surgeons.

Dr. Kennedy's interests extended beyond the limits of his own profession, his attention always being engaged by anything that he believed would further the best interests of Detroit. For seven years he served as a valued member of the Library Commission, being especially active on that board during the construction of the new Library building. His activities extended, also, into the world of business, including directorships in the Board of Commerce, U. S. Mortgage and Bond company, and the Metropolitan Investment company.

During the World War, Dr. Kennedy was commissioned a captain, though because of his age he was not placed on the active list. He was a member of the American Medical Association, Michigan State Medical Society and Wayne County Medical Society and the American College of Surgeons, and in the Masonic order was a Knight Templar.

In June, 1885, Dr. Kennedy was married to Miss Jessie Young, at Vittoria, Canada, by whom, with three sons, Frederick J. and Doctors Charles S. and William Y., he is survived.

E. L. Robinson,
 Chairman Necrology Committee.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

HOUGHTON COUNTY

The regular monthly meeting of the Houghton County Medical Society was held at the Mis-cowaubik Club at Calumet, Mich., Feb. 1, 1927. Nine members were present.

Dr. K. C. Becker, presented a case of "Perthus" disease.

Dr. M. D. Roberts gave a very good paper on "Aviation Medicine."

Alex B. MacNab, Secretary.

TUSCOLA COUNTY

At the meeting of the Tuscola County Medical Society Feb. 24. The officers for 1927 were elected as follows:

President Dr. R. L. Dixon, Wahjemega; Vice-President, C. N. Race, Caro; Secretary-Treasurer, C. W. Clark, Caro; Delegate to State Society, J. G. Maurer, Reece; Alternate, R. A. Townsend, Fairgrove.

C. W. Clark, Secretary.

GRATIOT-ISABELLA-CLARE COUNTY

The February meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Alma City Hall, Wednesday, Feb. 16 at 8 p. m. One out of town speaker was Dr. Walter E. King of Detroit, subject, "Newer Developments in Biologic Therapy." The doctor's talk proved very interesting.

E. M. Highfield, M. D., Secretary.

BERRIEN COUNTY

The February meeting of the Berrien County Society was held at the Hotel Vincent in Benton Harbor. Excellent papers were given by the tSate President, Dr. Jackson, on "Diagnosis of Gall Bladder Disease," and by Dr. Boys of Kalamazoo Academy on, "Treatment of Burns," illustrated with moving pictures.

Committees were appointed for Cancer Week observance. A resolution was passed urging the State Legislature to approve the appropriation for a new Tuberculosis Sanitarium at Ann Arbor and to defeat the bill known as Senate Act No. 22 File No. 21 introduced to repeal the bill providing for the erection of the Sanitarium at Ann Arbor.

W. C. Ellet, M. D., Secretary.

GOGEBIC COUNTY

At the regular meeting of the Gogebic County Medical Society held in Grand View Hospital on March 11, Dr. H. F. Ringo read an interesting and stimulating paper on "Periodic Health Examinations." It was followed by a lively discussion in which every member present took part. A resolution was passed to devote twenty minutes of each meeting during the current year to the subject of periodic health examinations.

The average attendance thus far in 1927 has been good. Out of a membership of 29, the attendance in the January meeting was 20, in February 21, and in March 15.

In the April meeting Dr. Nelson M. Black of Milwaukee, Wis., will lecture on "Injuries of the Eyes."

Louis Dorpat, Secretary.

BRANCH COUNTY

The Annual Meeting of the Branch County Medical Society was held Feb. 8, 1927 at the Arlington Hotel, where a chicken dinner was given by Dr. R. L. Wade, the retiring president. The following business was then transacted before proceeding to the election of officers.

By request from Dr. Becker, his membership was transferred to the Calhoun County Medical Society. The application of Dr. A. R. Callendar and Dr. Dobson were accepted.

The following officers were then elected for the ensuing year: President, Dr. A. G. Holbrook; Vice-President, Dr. S. E. Fae; Secretary-Treasurer, Dr. E. E. Hancock; Delegate, Dr. W. A. Griffith, and Alternate, Dr. W. W. Williams.

B. W. Culver, M. D., Secretary.

OAKLAND COUNTY

A meeting of the Oakland County Medical Society was held at the Pontiac Board of Commerce, 6:30 p. m. Feb. 10, 1927. Twenty-four members were present, and two visitors.

Reading of the minutes of the previous meeting was followed by reading of papers of letters by the secretary. Motion was made by Dr. Ferguson, supported by Dr. Naefie that the Legislative committee act promptly in the matter of the bill before the State Legislature to abolish the proposed Tuberculosis Sanitarium at Ann Arbor.

Dr. C. H. Benning introduced Dr. R. L. Kahn, State Immunologist. Dr. Kahn gave a most interesting talk on the Kahn Precipitation Test and the Diagnosis of Syphilis." No discussion of any moment followed Dr. Kahn's talk, but many questions were asked showing that his talk met with a great deal of interest. The meeting adjourned.

The next meeting of the Oakland County Medical Society will be March 11, 1927 at which time we will have a paper on Gynecological Problems, by Dr. George Kamperman of Detroit.

Frederick A. Baker, Secretary.

EATON COUNTY

The Eaton County Medical Society held its regular monthly meeting on the evening of Thursday, Feb. 24 at the Harriet Chapman Hospital, Eaton Rapids, Mich.

Eleven of our members were present. The meeting was opened by the president, Dr. Sackett. The letter regarding a new Tubercular Sanitarium in Ann Arbor from the State Secretary

was read. Discussion was free and about evenly divided for and against. As a result the letter was tabled and no action taken, because of a division of sentiment. As there was no further business we proceeded to the program of the evening.

Dr. Sleight of Battle Creek addressed the Society on Glaucoma, Iritis, and Conjunctivitis. His talk was very practical and with the free discussion that followed, very beneficial to all present.

Dr. Harry Knapp of Battle Creek then addressed us on "Common Orthopedic Problems in Common Practice." This talk was thoroughly enjoyed by all.

Following these talks a light lunch was served and the meeting adjourned.

H. J. Prall, Secretary.

BAY COUNTY

Monday evening, Feb. 28, the society was addressed by Dr. Jackson, President of the State Medical Society. He took as his subject "The Diagnosis of Gall Bladder Disease." The talk, which was illustrated, was very interesting and elicited free discussion.

April 27, Wednesday evening, the Tri-City (Saginaw, Flint, Bay City) Medical meeting will be held at Bay City. A banquet will be held at the Wenonah hotel at 7 o'clock, after which the members will adjourn to the Washington theater, one-half block distant, to hear Dr. Chevalier Jackson of Philadelphia on the subject of "Bronchoscopic and Esophagoscopy Cases of General Medical and Surgical Interest." The address will be accompanied by lantern slides and moving pictures.

Monday evening, Feb. 14, the society was addressed by Mr. Otto Louis on the subject of "A Modern Drug Store."

Mr. Louis is in the drug business and is past president of the Bay City Chamber of Commerce.

Wednesday, May 11, the society will provide the program for the Alpena society at Alpena. The September meeting will be provided by the Alpena members at Bay City.

ALPENNA COUNTY

The Alpena County Medical Society met at the new Alpena hotel at 6:30 o'clock for dinner, after which the regular monthly meeting was called to order by the President, Dr. F. J. O'Donnell.

Papers were read by Dr. Leo F. Secrist on "The Treatment of Ante-partum Haemorrhage" and by Dr. Earnest L. Foley on "Serum Treatment of Scarlet Fever." Both papers proved very interesting and were freely discussed by all members present.

The Secretary was instructed to write Dr. Guy L. Kiefer inviting him to come to Alpena and deliver a public address on matters appertaining to Public Health. A reply has been received from Dr. Kiefer accepting this invitation for the latter part of April or early in May, at which time our County Society expects to put on a rousing Community Public Health meeting with our State Commissioner of Health as the principal speaker.

We have arranged for a reciprocal program

with the Bay County Medical Society for the coming year. They are to give us a program and be our guests, at Greenbush Inn on May 11 and our Society is to give them a return program early in September, at Bay City. We are endeavoring to arrange at least two more reciprocal programs with other county societies but as yet these have not been definitely consummated.

W. B. Newton, Secretary.

IONIA-MONTCALM COUNTY

The March meeting was held at Ionia Thursday evening, March 10th.

Thirty members and guests partook of the dinner, which was served at the Reed Inn.

Dr. Guy L. Keifer, Commissioner State Health Department, gave a talk on "Co-operation Between Physicians and the State Health Department." He explained how the State Health Department is endeavoring to help and work in co-operation with physicians in the work of diagnosing, preventing and curing contagious diseases.

Dr. C. C. Young, Director of Laboratories, gave an instructive talk on the amount of laboratory work done by the Health Department, but confined most of his remarks to the development of the successful preventive and curative treatment of scarlet fever. The State Health Department has been conservative in regard to using or advertising this curative treatment but believe now that it is so thoroughly proven that this offers us the best remedy which we have at our command to combat scarlet fever. Both talks were greatly appreciated and freely discussed.

Applications for membership of Dr. F. A. Hargrave, Dr. W. H. Wilkinson, Dr. John W. Foan, Dr. J. A. P. Duncan and Dr. H. L. Innis were read and all were elected to membership.

It was moved, supported and carried that our Secretary be instructed to write to our state representative and senator that our County Medical Society has gone on record as favoring the erection of a new tuberculosis sanatorium at Ann Arbor.

H. M. Maynard, Secretary.

KALAMAZOO COUNTY

The last regular dinner meeting was held in the academy rooms on Tuesday the 15th. The dining room was again filled and our only hope is that it will continue to be so at every meeting of the year.

A very interesting and concise dinner talk was given by Dr. Nancy Scott of Western State Normal as abstracted elsewhere in the bulletin.

The regular meeting was then called to order by the president, Dr. Bartholomew.

Report of committees:

Dr. Shillito reported that he, with Doctors Thompson and Jackson, attended a meeting of the physicians in Lansing relative to the building of the new tuberculosis hospital. They were of the unanimous opinion that the bill to build this hospital should be passed and not repealed. Dr. Jackson pointed out that in favor of the original proposition to build the hospital at Ann Arbor was the need of more beds for tuberculous patients, the presence in the university hospital of the different specialties, the patients could be used for instruction, and it would give an opportunity

for research work that is not done a Howell, Mich. It was suggested that sentiment in favor of the original bill be aroused in Allegan and Van Buren counties.

The application for active membership in the society of Dr. James H. Swan of Marcellus was read.

The president mentioned the need of available men to send out when requests were made to talk on medical subjects before parent teacher associations and so forth. Dr. Boys believed this was a good job for the secretary, to recruit these men when necessary. The regular secretary was not present to defend himself.

A letter addressed to Dr. Jackson from the Calhoun county medical society was read, inviting our members to two meetings to be held in Battle Creek. The first was a dinner meeting at the sanitarium on March 8, in honor of Elliot P. Joslin who would talk on diabetes. The second meeting will be held April 5 at the Kellogg Corn Flakes company, 7:30 Eastern time. Dr. F. H. Albee will talk at this meeting.

KENT COUNTY

The Kent County Medical Society has met twice in both January and February.

The first meeting in January was addressed by C. C. Young, Director of the Laboratories of the State Board of Health, regarding the use of scarlet fever toxin and antitoxin. This meeting was also attended by Dr. Guy L. Kiefer, the newly appointed State Commissioner of Health, who talked a few minutes concerning his experience with scarlet fever immunology, which has been extensive, and also concerning the relations which he thought ought to exist between the State Department of Health and the practicing profession.

The second meeting in January was held at Blodgett Memorial Hospital and case reports were given by members of the staff of that hospital.

The first meeting in February was addressed by Dr. Frankwood E. Williams, Director of the National Committee for Mental Hygiene who spoke upon the subject "The Mental Health Aspects of General Medicine." Dr. Williams particularly emphasized the mental hygiene of childhood. Among the discussants of this address were Dr. William Morter, assistant superintendent of the Kalamazoo State Hospital, and Dr. Robert Haskell, Medical Director of the Wayne County Training School.

The second meeting in February was given at Butterworth Hospital and consisted of case reports of brain injuries and the amidoxyl treatment of arthritis.

The programs of two of the meetings have been filled by local members of the society. These meetings we find are particularly interesting and furnish material and time for a free discussion which is of practical value.

The Kent County Medical Society has undertaken several public health education projects.

A program is being arranged for Cancer Week, under the auspices of this society and in conjunction with the Michigan State Medical Society. Also lectures are to be given by the members of the society in the various high schools upon subjects of historical interest in medicine. As-

sistance is rendered in this work by the Extension Department of the University of Michigan.

In addition a program of health lectures is being formulated in conjunction with the industrial managers of various businesses in Grand Rapids, whereby such health lectures shall be given to the employes of these firms. These business men believe that outside of other considerations of education that education in the care of the health will be of direct economic benefit to them in the saving of days which employes are absent from work on account of illness and accidents. Posters, circulars, pamphlets to accompany these lectures are to be obtained from the American Medical Association.

The society has received eight new members since Jan. 1, 1927, either by transfer from another society or as new applicants.

H. T. Clay, Secretary.

JACKSON COUNTY

February meeting of the Jackson County Medical Society was held at Mercy Hospital, Jackson, February 22, 1927; Dr. C. S. Clark presiding.

Dr. Guy L. Kiefer, State Commissioner of Health, addressed the Society on "The relation of the Physician to the Department of Health." He stressed the necessity of complete co-operation in contagious and infectious disease; the value of diphtheria toxin-antitoxin and the scarlet fever immunization by the three dose toxin method; the value of the school inspection program to the physician, especially the O. R. & L. men and the pediatrician.

The society voted to purchase a stereoptican lantern and a committee was appointed to secure it.

* * *

March meeting of the Jackson County Society held at the Tip Toe Inn, Jackson, Mich., March 15, 1927.

Following a T-bone steak supper, Dr. Clark called the meeting to order and announced his committees for 1927.

The newly organized collection department of the society was discussed and the manager lauded for his prompt and efficient work on accounts already turned in.

Dr. E. C. Taylor of Jackson gave a very interesting talk on "Medicinal Value of Certain Citrus Fruits." He cited cases which had been under his observation and outlined treatment using the citrus fruits.

* * *

The Jackson County Medical Society have organized an "Emergency Relief Unit for Disaster" in co-operation with Richard F. Smith Post No. 29, American Legion, Jackson, Mich. Twenty members of the society are ex-service men.

The paper organization is as follows:

Dr. R. M. Cooley, Commanding Officer.

Dr. D. B. Marsh, Adjutant.

Dr. M. J. McLaughlin, Dr. H. H. Hurley, Triage officers.

Four surgical teams.

One medical team.

One O. R. & L. team.

Major A. M. Anderson, Q. M. C. Ses., Supply Officer.

Major P. L. Taylor, Inf. Res., Guard Officer.

Each hospital has agreed to furnish emergency surgical and medical supplies according to a prescribed list prepared and in their office, also to furnish available and necessary nurses.

The Consumers Power Company have assured us of their complete co-operation and willingness to furnish trucks and men.

The American Legion post members will act as guards and the guard officer and adjutant are special deputy sheriffs with authority to prevent spectators, etc., from interfering with necessary relief work.

Five motor ambulances are available for evacuation of injured to hospitals outside of the affected area.

D. Burr Marsh, Secretary.

LENAWEE COUNTY

The February meeting was held at the City Hall, Adrian, Thursday evening the 24th. There were 21 members present including four new members as follows: Dr. C. S. Lane, Hudson; Dr. F. J. McCue, Hudson; Dr. A. H. Veezey, Hudson, and Dr. J. W. Barnes, Hudson.

The meeting was called to order by President Hammel.

The minutes of the last meeting were read and approved.

The report of the Legislative committee was carried over to the March meeting.

A motion was made by Dr. F. A. Howland that the Legislative committee file a protest with Senator Norman Horton and Representative John Rorick that the Lenawee County Medical Society is opposed to the repeal of Act No. 357 of 1925 relative to the building of a Tuberculosis Sanitarium at Ann Arbor. Seconded and carried.

Dr. F. E. Andrews moved that the Secretary notify Senator Horton and Representative Rorick instead of the Legislative committee. Carried.

Motion by Dr. E. T. Worden that the Lenawee County Medical Society go on record as being opposed to so-called organized Free Clinics in the county with the exception of Clinics conducted for the benefit of indigent people. Carried.

Dr. C. H. Heffron suggested that the County Society conduct a series of Free Clinics in various parts of the county for the benefit of the needy poor.

It was decided to make this a subject for discussion at the next meeting.

It was announced by the Secretary that the meeting for March would be held in Hudson at the residence of Dr. F. J. McCue. The speaker will be Dr. Esli T. Worden of Adrian who will speak on "Diseases of the Ear, Nose and Throat."

It was announced by the Secretary that the April meeting will be a joint meeting with the Lenawee Bar Association and that Dr. Frank B. Tibbals of Detroit will be the speaker.

The scientific program consisted of a paper by Dr. F. A. Howland of Adrian. His subject was "Some Common Diseases and Injuries of the Eye, and Their Treatment." The paper was instructive and well given, and gave evidence of a great deal of preparation by the author.

The paper was discussed by Dr. S. J. Rubley of Britton and Dr. E. T. Worden of Adrian.

Dr. A. W. Chase of Adrian explained a method

for locating foreign bodies in the eye by means of the X-Ray.

Adjournment.

R. G. B. Marsh, M. D., Secretary.

On Thursday evening, March 3, 1927, 30 physicians of Lenawee County gathered in the parlor of the Blissfield Tavern to do honor to one of the oldest practicing physicians of the county, Dr. R. M. Eccles.

One of the doctors acted as a "patient" and was reposing on a couch in the darkened room, when Dr. Eccles was brought in by Dr. Lamley who had asked him to come to the hotel for consultation. When Dr. Eccles asked to have the lights turned on in order that he might examine the patient, he found himself confronted by the largest gathering of Lenawee County physicians ever seen in one group.

It was a complete surprise to the doctor, he having had not the slightest rumor of what was being planned.

An excellent chicken dinner was served in the dining room of the Tavern and numerous impromptu speeches were made.

Dr. R. M. Eccles was born in Ontario, Canada on March 3, 1858, and received his medical education at the medical school of the University of Toronto. He came to Blissfield, Mich., in 1879 and has practiced there ever since. He is regarded as one of the best liked men in the county not only by his fellow workers but by the public as well.

SAINT CLAIR COUNTY

Regular meeting of Saint Clair County Medical Society, held at Hotel Harrington, Port Huron, Mich., Feb. 17, 1927. Supper was served at 6:30 p. m. This was followed by a short social hour. Business session started at 8 p. m. Minutes of meeting of Feb. 3, 1927, read and approved. The President reported illness of Dr. C. B. Stockwell, an honorary member of our society. Dr. J. H. Burley addressed a letter to the society thanking us for the kind attention of his fellow members during his illness and for the potted plant sent him. A letter was read to the society from the Free Clinic Association. This was referred to a standing committee on clinics. Several suggestions were made to the Health Officer, Dr. Gertrude O'Sullivan, by members of the society relative to closing of the Health Office during the noon hour and also the closing of same from noon Saturday until the following Monday morning. An inquiry was made regarding the use of the City Health Office Nurse attending non-contagious cases. Dr. O'Sullivan stated that this nurse was employed on a part time basis, that is, worked only during the forenoon and that the hours were too short to allow care of the contagious cases. The following members were present as Dr. Albert French, Coroner of Wayne County, began his paper: Doctors Ryerson, Ard, Smith, Waters, Heavenrich, Wight, Kesl, Howard Brush, O'Sullivan, Callery, Wellman, LaRue and Grice. Miss Marie Fouchard, Superintendent of Port Huron Emergency Hospital was present as a guest.

Dr. French addressed the society upon, "Sudden Death from Natural Causes." The subject was covered in a very acceptable manner and was enjoyed by the members present. Dr. French promised a revised typewritten copy to the Secre-

tary for submission to the State Society but has, so far, failed to keep his promise. The paper was discussed by Doctors Callery, Waters, Ryerson, O'Sullivan, Howard Brush and Heavenrich. Dr. Ryerson expressed the thanks of the society to the speaker for his splendid paper. Dr. Heavenrich made the suggestion that attendance at our meetings was not as good as it might be and that efforts be made to increase it. It was decided to divide the city into two parts and have a member assigned each week to call all members up on the telephone and remind them of the meeting. Meeting adjourned at 9:10 p. m.

Regular meeting of Saint Clair County Medical Society, held at Hotel Harrington, Port Huron, Mich., March 3, 1927. Supper was served at 6:30 p. m. followed by a short social hour. Business meeting called to order by President Ryerson at 8:15 p. m. Members present, Doctors Bowden, Wheeler, Ryerson, Heavenrich, Callery, Clancy, Patterson, MacKenzie, Bovee, Treadgold, Ard, Vroman, Smith, Attridge, Wellman, Norris, Waters, Thomas, Grice and Windham. Visitors: Doctors Penberthy, Manwaring, Sykes, Meredith and Gaddis.

Dr. G. C. Penberthy of Detroit read a most interesting paper on "Fractures" and supplemented his talk by a series of lantern slides showing apparatus and methods of treatment of the various types of fracture. There was a brief discussion following Dr. Penberthy's paper before his departure to board a conveyance leaving for Detroit. The President thanked the speaker for his interesting paper.

Dr. J. G. R. Manwaring of Flint spoke upon the subject, "Chemical and Physical Characteristics of Healing and Infection of Wounds." This was a most interesting and profitable paper. It is regretted that the Secretary could not have recorded this talk in shorthand. If it is not out of place or improper it is suggested the Secretary-Editor obtain a copy of this paper from Dr. Manwaring for re-print in the Journal. This paper was discussed by Doctors Clancy, Heavenrich, Sykes and Ryerson, Dr. Manwaring closing in the usual manner. A rising vote of thanks was extended the speaker by the society. The meeting adjourned at 10:35 p. m.

George M. Kesl, Secretary-Treasurer.

COUNTY SECRETARIES ANNUAL CONFERENCE

Hayes Hotel, Jackson, April 27, 1927

In compliance with our policy, the 1927 Annual Conference of all of our County Secretaries will be held in the Hayes Hotel, Jackson, on April 27th.

The meeting is called for 11:00 a. m. and will continue through to 4:30 p. m. with a luncheon at noon. Jackson is on fast time.

A detailed program will be mailed to all Secretaries on about April 10th. Presidents of County Societies are urged to attend. The Councilors will also be present.

Please reserve this date—we need your co-operation to cause this conference to record the greatest degree of good.

ROSTRA OF MEMBERS

As indicated in the minutes of the Executive Committee a rostra of all members in good standing will be printed and supplied to each member for his reception room table. The rostra will be compiled from our records as of May 1st. County Secretaries are requested to call this to the attention of their members. Only those whose 1927 dues are paid, will be so listed in the rostra. Please urge payment and thus obviate omission of names.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

MODERN PRACTICE OF PEDIATRICS—William Palmer Lucas, M. D., LL. D., Professor of Pediatrics, University of California Medical School; Physician in Chief, Children's Department, University of California Hospital; Consulting Physician, Baby Hospital, Oakland, California; Visiting Physician, San Francisco Hospital for Children; Visiting Physician, San Francisco Hospital. Price \$8.50. The Macmillan Company, New York, publishers.

This work has for its incentive the desire on the part of the author to emphasize the relationship between the study of the diseases of childhood and the positive aspects of health. In covering what the author terms the "orthodox" field of pediatrics, there is evident throughout a strong insistence upon preventive medicine. "I have tried to show," says Dr. Lucas in the preface "how the most technical, the most intricate problems of the research laboratory—how the most complicated aspects of clinical pediatrics—are related in their contribution and significance to the prevention of diseases."

PHYSICIANS OF THE MAYO CLINIC AND MAYO FOUNDATION—A series of 635 biographical sketches with 611 portraits and including complete and accurate data concerning the professional life of each physician prior to January, 1926. Octavo volume of 578 pages. Cloth, \$7.50. W. B. Saunders Company, Philadelphia and London.

Received.

HEALTH SUPERVISION AND MEDICAL INSPECTION OF SCHOOLS—Thomas D. Wood, M. D., College Physician, Adviser in Health Education, and Professor of Physical Education, Teachers College, Columbia University, and Hugh G. Rowell, M. D., Physician to the Horace Mann Schools, Lecturer and Assistant Physician, Teachers College, Columbia University. Octavo of 637 pages, with 243 illustrations. Cloth, \$7.50 net. W. B. Saunders Company, Philadelphia and London.

Received.

A TEXTBOOK OF CLINICAL NEUROLOGY—Israel S. Wechsler, M. D., Assistant Professor of Clinical Neurology, Columbia University, New York; Attending Neurologist, The Montefiore Hospital, New York. Octavo volume of 725 pages with 127 illustrations. Cloth, \$7.00. W. B. Saunders Company, Philadelphia and London.

An excellent text and digest.

CANCER OF THE RECTUM, ANUS AND COLON

I have been requested to write an editorial on the above subject with the hope of stimulating interest and activity in cancer week. In no sense do I propose to exhaust the subject nor the reader, as the following few lines will disclose.

Cancer of the rectum, anus and colon is a condition which develops insidiously, and with few exceptions ultimately results in death. There is no cure other than early surgery—very early. Early cancer presents no symptoms as a general rule, and most often patients arrive with the complaint of bleeding, pain variously manifested, diarrhoea, including a discharge from the bowel of pus, often obstruction which has been interpreted as constipation. May we therefore suggest that possibly the earliest common symptom should arouse the interest of the medical men is in sustained change in bowel action. Bleeding as a rule is a late symptom of cancer, and the condition from which it results is usually beyond help other than by such palliative means as is afforded by a colostomy, and the various means of local treatment. We are well aware that there are occasional and remarkable cures resulting from the various types of treatment; however, they are the exceptions, and not the rule. Out of approximately 2,500 tabulated cases we may cite that the first symptoms complained of in 622 was blood in the stools; pain in 324; diarrhoea 300; constipation 298; loss of weight 243; tenesmus 239; pain in abdomen 169; pain in back 113, with the remainder complaining of various symptoms which we will not tabulate.

We will not go into the differential diagnosis, other than to stress the importance of determining definitely in all suspicious cases that the pathology is not a malignancy. We will mention that any tumor or obstruction in the rectum and anus is suspicious of cancer, and under no circumstances should be treated at all, other than radically, until the determination is made definitely. It is common experience for an advanced cancer case to be referred to the specialist that has been treated by some careless, and I believe we are justified in saying, incompetent medical man for "piles or intestinal indigestion." Any pathology that can be felt by digital examination should be carefully investigated, and malignancy excluded. I may say that no physical examination is complete without at least a digital examination of the anus and rectum. Any medical man who considers himself competent and thorough should follow a digital examination with a proctoscopic examination, and in the presence of symptoms a sigmoidoscopic examination. When it is considered that approximately 1 in 4 cancers located in the gastro-intestinal tract are found in the rectum, the importance of the above suggestions can be readily appreciated. Again, I would mention that bleeding from cancer is a late symptom, as is loss of weight. There is no cancer age, since it is not unusual to find cancer of the rectum with patients in their early twenties. Cancer spreads by contiguity, by the lymphatics, and through the blood stream. Contiguous spread occasionally involves the prostate in men, though great resistance is offered by the aponeurosis.

Briefly, symptoms of cancer in the pelvic colon may be divided into two classes: premonitory first, and second those in which the tumor is manifested and cachexia has appeared. In the first mentioned stage there may be pain accompanying gastric and intestinal disorders; this may be localized or assume the form of colic, although pain is the more constant. It is not necessarily continuous. The pain may be referred to the lumbar region or the umbilicus, and quite commonly to the caecum and radiation along the cord to the left testis may be experienced. With the arrival of the second class, where the tumor is discovered, we have an advanced condition, though in this location, as opposed to the rectum, the prognosis is by no means so bad. A barium enema with X-ray observation should supplement any complete proctologic examination, especially where symptoms point to the colon. Nodules in the liver which are commonly present in advanced carcinoma of the rectum are usually not demonstrated other than by abdominal section.

Conclusion. Examine your cases digitally always, if you will, but without exception where there are symptoms. Examine them intelligently and carefully. Ordinary internal hemorrhoids cannot be felt digitally, therefore do not diagnose anything within the anus and rectum that you can feel as "piles." Polyps are potentially malignant. Stricture is often diagnosed as cancer, while unfortunately the fatal error is often made of diagnosing cancer as stricture. Do your part, especially during "Cancer Week," but in any event examine your cases and know what you are dealing with—do not guess. Guessing is often fatal to your patient, as well as to your reputation.—H. J. Hirschman.

SILVER COMPOUNDS

Silver nitrate first demonstrated the bactericidal property of silver. This was, obviously, an invitation to the chemist to devise a silver compound that could be used freely in solution, as silver nitrate could not. Especially desired was a silver salt that would kill the gonococcus without irritating the urethra, for it was soon learned that silver was especially efficacious as a gonococcide. To the majority of silver compounds offered from time to time one of two objections is made by the patient: first, they hurt; second, they leave dark stains on the linen.

Now comes a comparatively new silver iodide preparation—one that actually protects the silver and the iodine from the action of light, and yet leaves its activity as a germicide apparently unimpaired. Neo-Silvol, as this product is called, is said to be 20 times as active as pure carbolic acid (in other words, to have a phenol coefficient of 20) in contact with the gonococcus, and at the same time to be notably bland in its effect upon the inflamed tissues and free from the dark-staining tendency that characterizes other silver preparations.

Further particulars are offered to the readers of the advertisement on Neo-Silvol which appears on another page of this issue.

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No. 5

ORIGINAL ARTICLES

THE TRUTH, THE WHOLE TRUTH AND NOTHING BUT THE TRUTH*

RUSH McNAIR, M. D.,

KALAMAZOO, MICHIGAN

Before he begins his testimony, the doctor, with his right hand uplifted to heaven, and with the Creator of the Universe and all the world for witness, swears to tell the truth, the whole truth, and nothing but the truth, so help me, God.

Sooner or later, having finished or been finished, the doctor steps down.

He is willing to swear now that he tried to tell the truth but is not so sure that what he uttered was the truth he tried to tell. And as for telling nothing but the truth, he is not so sure but that he told anything but the truth. And as for telling the whole truth, were it not to him so tragic, it would be to laugh.

The plaintiff nor the defendant nor the court—the honorable judge presiding—nor the intelligent jury, asked for the whole truth.

All that either of the contendants wanted were certain statements that would help to develop his theory of attack or defense.

It is desired that the doctor's testimony shall be shaped to fit.

The doctor realizes that he has made a sorry spectacle. He has failed as an exponent of the science of medicine. He has stumbled. He has admitted that he didn't know. He has been silenced when he attempted to utter a little more of the truth.

If by good fortune, he escapes some of the pitfalls dug for him, he gets the questionable compliment that he was a clever liar.

In other words, he knows he has been in a quarrel—a melee—a fight. A fight in which no mercy is shown, and he is carrying wounds he is not proud of.

How different the pictures the text books of forensic medicine paint of the dignified, honored, medical witness, so full of truth and information, whose dictum shall be oracular and final.

Let us enter into the court room and listen to the way in which the doctor is exploited to develop or suppress facts, by which blinded justice speaks.

On direct examination the doctor may be asked questions so few that he thinks the cause ill described; or, he may be asked more and pertinent questions that seem to make the cause more clear.

Then comes the cross examination. It is then demanded of the doctor that he shall modify his declaration by admitting that there are many conditions other than those he named which might result in the same way; or that this, that or the other thing might have been the cause. And it is demanded that he admit that this result or that result or the other may possibly follow rather than the one to which he has testified.

In short, it is demanded of him that he shall reverse his statements.

Now the doctor may be remembering the precept of Hippocrates that "experience is fallacious and judgment difficult." For the human animal is of such complicated, inexplicable makeup and causes may come from such long distances, and results are so uncertain, and often of surprising

*Exaugural Address, Kalamazoo Academy of Medicine, December 21, 1926.

contrariness that the doctor must truthfully admit, speaking in the abstract, the possibility of many modifications and exceptions. And he must rely on the intelligence of the jury to place the same significance on such admissions as he himself.

But when the admission and modifications approach to the denial of his original declaration, and general admissions and modifications are made to apply to the concrete case, the case at hand, the doctor must explain how they do not affect the integrity of his original declaration. This the doctor has a right to do. To be sure, the attorney who represents the opposite side will try to prevent him so doing, as I have, myself, more than once been, by his per-emptorily saying, "Doctor, I don't care to have you give a lecture." And the danger is that the doctor will surrender his right.

But, doctor friends, of the central medical fact, the one on which the case hinges, the great truth, the doctor shall not surrender.

It is a very serious matter.

Your word, your steadfastness, may be the only defense of the wages of the poor, or the liberty of the innocent. You must defend this truth with every resource that your education and experience have given you. You must defend it with every wit of grey brain and courage you have. You must defend it for the honor of medicine; for the love of your home; for the memory of your father and mother; for your son whom you loved more than father ever loved son before, and plead this cause as he pleads now for you forevermore before the Great White Throne.

At any moment during the cross examination, the attorney may digress to spring such questions as, "Doctor, will you please explain specific gravity?" or, "Doctor, please describe an anomaly of the shoulder joint?" or, "Doctor, will you please tell us what square root is?" or, "Doctor, where is the cardiac sphincter?" or, "Doctor, can you tell the amniotic fluid by the smell?" "Yes." "Then, Doctor, will you please explain that smell to the jury.*"

* NOTE: The answer was:

"The smell of the amniotic fluid like any other smell is more easily recognized than described. But I believe a fair description is this:

A farmer in hay making time goes out in the morning and mows down a field of grass.

The sun is shining and the grass begins to cure. Suddenly a shower falls and thoroughly wets the new mown hay-in-the-making. As quickly the rain stops and the sun pours down again. And there rises in a mist a peculiar odor, with the slightest suggestion of must, not unpleasant but characteristic and once smelled can never be forgotten.

This smell in my opinion bears a striking resemblance to that of the amniotic fluid."

Testimony in defense: State of Indiana vs Dr. Arthur Edmonds: Manslaughter.

Again the doctor is often at a complete loss to know what is wanted by the form in which the question is put. I heard the question asked of one of the most learned men of the Academy, referring to a fracture of the skull, "Doctor, was it a severe fracture?" The doctor answered, "I don't know what you mean." The examiner said, "I will ask the question again, doctor, and demand an answer." The doctor looked puzzled enough, and replied, "I haven't the slightest idea what you mean." Now if he had asked the doctor to describe the fracture, or asked, "Was it a linear fracture?" or a "Stellate" or a "depressed" or a "complete" fracture, the answer would have been very easy for the doctor. I imagine the intelligent jury believed the doctor either hedging or unwilling to tell the true, and all the while, the doctor was absolutely anatomically correct.

Some learned legal gentlemen have an irrepressible desire to shine in pathology. He demands that you accept his invention. In a recent action the learned cross examiner demanded of me, "Is it not a fact, doctor, that all cases of heart disease are caused by a prolonged, continued infection?" I answered, "No." "Do you mean to make oath, doctor, that all cases of heart disease are not caused by a slowly acting long continued infection?" "No," I said, "Many cases of heart disease are caused by very brief infection, such as in influenza, scarlet fever, diphtheria, or many a boy or man suffers an acute dilation of the heart, sometimes fatal, from a brief extraordinary muscular exertion. And there is the athletic heart that winds up in a fatal interstitial nephritis. We quarreled quite a while over it, and I am not informed which word the intelligent jury believed.

Sometimes the learned examiner invents physiology. In an infanticide case, in discussing the moment when the newly born takes on a separate blood circulation. The prosecuting attorney who was a huge man with a taurine voice, and had a stack of obstetrical books as high as the table; some of them atlases with vividly colored plates lying open before him, exhibiting the fazes of partuition; wherever in the world he got them; the jury could plainly see, he was thoroughly prepared to force truth from an unwilling witness. "Is it not a fact, doctor, that at the instant of birth, the blood rushes down through the cord from the mother, and rushes upward from the child, the two streams collide, the blood clots, and stops the circulation?"

I answered, "No. The blood from the mother comes down through one vein and upward from the child through two arteries, therefore, there can be no collision." "Just so, doctor," he triumphantly shouted, exhibiting to the jury a colored picture of the birth cord, that looked like the tow line of an old whaler, and covered with barnacles. "The course of the blood is reversed, what went down, goes up, and what went up goes down. They meet in the twists and clot, don't they, doctor?" I am almost sure the jury saw it in his way.

Sometimes the learned cross examiner without purpose that you can make out, delights in hurrying the medical witness. In a case where a man dropped dead, and his widow sought compensation, I having viewed the remains, it was demanded of me. "Doctor, what did this man die of?" "I don't know. "Don't you have any idea what he died of?" "No sir." "Haven't you any thing to say about what he might have died of?" I replied that I was pretty sure that he didn't die of scarlet fever or small-pox, but what he did die of, I did not know. "Did he die of heart disease?" "I don't know." "Did he have heart disease before he died?" "I don't know." "Was his heart too big?" "I don't know." "Did he have valvular disease of the heart?" "I don't know." "Do you know anything at all about his heart?" "Yes, I do." "Well, doctor, if you know any thing at all about his heart, will you please tell the jury?" I said, "It stopped."

Once in a while the gloom is further lightened. A friend of mine was being cross examined where the controversy hinged upon an injury to the chest. The learned examiner had read in Gray's anatomy that there are on each side, seven true and five false ribs, two of the latter floaters. He got his terms a little mixed and he put the question. "Doctor, how many permanent ribs are there?" The doctor was startled and confused, but when he got himself together, he returned an equally learned answer, "Search me, I don't know."

In an action in which a wife was endeavoring to recover damages from a saloon keeper who, she alleged had sold her husband the liquor which caused him to attack her, breaking the bone over one eye and kicking her in the bowels, causing her to suffer pelvic abscess and much misery. My negative answers rather exasperated the learned examiner and he went at me pretty hard. The words peritonitis and

pregnancy had been used a number of times during the trial. The learned attorney got them hashed in his mind, and he said, "doctor, in your examination of this case, did you find symptoms of pregnitis?" My reply was, "No sir." He said, "Could not a blow over the eye sufficient to break the bone and kick in the abdomen, sufficient to cause abscess cause pregnitis?" I said, "No." Then he comes back triumphantly and demands, "But, doctor, if in your examination, you had found pregnitis and you did not think that the blow on the eye or the kick in the abdomen caused it, what would you say was the cause?" I replied, "I give it up."

Years ago, I heard a little circle of the elder lawyers relating with what seemed to me, an unreasonable amount of mirth, their exploits in cross examining and by clever pit falls, how they had ruined the testimony and humiliated and made the butt of ridicule a number of our older doctors. In my mind I looked forward to the time and am still anticipating when I shall furnish cause for equal hilarity and am not so sure that I have not already done so.

Other means having failed to break the witness, there remain two others; the best of all. The first is by a series of offensive and aggressive questions to so embarrass and anger the medical witness that he loses his head. Such an episode occurred in our circuit court on an important litigation for damages arising from a child having been bitten by a dog. The plaintiff's attorney stated that to win, he must crush the testimony of the principal medical witness of the defense. And by a series of questions pertaining to nothing in the case and finally becoming of a personal character, the doctor became so unreasonably angry that he turned his back on his tormentor, and refused to answer questions. And that was just what the lawyer set out to do. And he fired volleys of unanswered questions at the medical witness, *aposteriori*.

The other method is by piling blandishments on the witness till he is beguiled off his guard. The best example of such in my experience, was that of the examination of Doctor X, by Clarence Darrow in the Loeb-Leopold case. May I be allowed a word of description of the court scene.

One might suppose from newspaper accounts and the atrocity of the crime that the defense covered in a corner. The fact is the very opposite. The state's attorney and his staff huddled in a small space at

the judges left. The defense had the whole right, and center. And while the prosecution seemed subdued and unaggressive, Clarence Darrow like the old lion that he is, raged over and dominated his ample spaces. The air of the court room was sympathy with the killers. Babe sat with a disengaged, bored air. Dickie, a handsome young man, was flirting with his eyes with any pretty face within his vision. They were at ease by reason of what ever arrangement had been made in their behalf.

I tried to read in his face, what the verdict of Judge Caverly would be. It is a handsome, gentle, delicate face. All its hues have been brought out by the art of the masseur. Down the middle of his forehead from under his black skull cap, he has trained a single lock of hair, a la Disraeli, oiled and fashioned to a fresh and more fetching curl at the opening of each session. It is the face of an aesthete a dilettant, a dreamer. His delicate, beautiful hands show the highest art of the manicurist. I said: Can those sensitive, tapering, lily perfumed fingers with those polished nails, tie a noose of rough, prickly sisal or of hemp greased with vulgar lard.

Doctor X, eminent specialist, author and teacher of medical jurisprudence for two score years, goes to the stand.

His face is flushed and his eyes dilated, knowing he is in for the cross examination of his life. Mr. Darrow comes forward in a reassuring, slouchy manner, and leans carelessly over the railing, a few feet from Dr. X. "I have known you for a long time, Dr. X, and I acknowledge your great reputation as an expert. You and I have served together in cases heretofore; and, if at any moment in my zeal in behalf of my clients, I pass the bounds of courtesy, I now ask your pardon. I hold you in the highest esteem and confidence. My appreciation of your integrity and ability is so high, that had you not been retained by the state, I would have employed you myself."

There sat Dr. X, and he sat and took that. It is easy to the one who looks on to criticize the one who is undergoing the ordeal, but I said to myself, "How can you stand for that? In God's name, Dr. X, why don't you jump to your feet, shake your finger in his face, and say, 'Mr. Darrow, I will not accept the insult. My testimony is not for sale. And all the gold of your Loeb's and Leopold's can not buy it.'" But Dr. X sat back in his chair in

what might appear acquiescent silence. And I felt thereby, he lost half of his authority. Then Mr. Darrow shoved aside the jar of honey and took off his gloves and holding up a copy of X and Y's work on Mental Disease and Forensic Medicine, demanded, "Did you approach the defendants in your examination as your book states you should, 'as a physician?'" Dr. X faltered a reply. Twice Mr. Darrow repeated the question, each time with growing indignation. Dr. X then responded, that that statement was in Dr. Y's part of the book, and he himself had not read it. Mr. Darrow shot back, "Then, Dr. X, I have the advantage over you. I have read your book."

I am reciting this only to illustrate the success of the blandishment method, and find therein, a little comfort for the failure of the modest and over truthful doctor from the provinces.

Kind friends, if I have not already said it, I want to declare that the doctor on the witness stand is in a fight. If he sustains his contentions, all well and good, but if not, when he leaves the chair, he can look back over his shoulder, and see his hide hanging on the fence. Do not understand that I recommend that the medical witness should appear churlish or belligerent. The best medical testimony I ever heard was given by Dr. Edward Ames, the sole witness for the defense, who for two sessions of the court, with an inexhaustible good nature, with a witticism or a smile, parried the thrusts of a most aggressive and forceful examiner who did not forbear the insult.

It is exploited by the press and accepted by some of the courts that at the present moment, medical testimony stands at nadir. Dr. Joseph Collins, an alienist and an expert states, "Expert medical testimony is held in lower esteem after each notorious trial. It can not go much further before it becomes valueless.

I am persuaded that this author takes himself too seriously and that whatever the public may think and however convenient it may be for courts to attribute their failures to the medical witness, I believe that trial lawyers have none the less confidence in us than in any other class of witnesses.

It would be a very wicked and dishonorable thing for a doctor, for any purpose, to misstate in the slightest degree, any fact in the science of medicine. But in the matter of an opinion, as for instance, as to the sanity or insanity of an accused,

or as to whether a testator was at any time competent to make a will, or in estimating the time of recovery from automatism, a doctor should have full privilege of his opinion. Why should doctors be held venal for differing in opinion on a complicated situation, when the highest court in our land, the great supreme court, which has had eight years to study the Volstead Act, a law drawn in plain and simple language, differs five to four in deciding whether that act is constitutional when it restricts the physician in the use of a medicine of ancient and high repute.

Let us as our legal brothers put it, assume for the moment that much of the reproach cast upon medical testimony is deserved. Shall we not, then, study out new concepts, and organize more luminous and effective ways to preserve and protect and develop forensic medicine to the end that it shall stand in line with the wonderful growth of other forces of that science and that art to which we devote for evermore, our labor, our life and our sacred honor.

THERAPEUTICS IN PRE-MEDICAL EDUCATION

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The great tidal wave of medical progress which swept over the world from 1885 to 1905 washed away the crust of empirical medicine and left in its stead a biological science from which modern bacteriology, immunology, preventive medicine, pathology, biochemistry, biophysics, and a changed medical curriculum have arisen. With the event of the mass of new thought and fact there had to occur reorganization of the fundamental ideas in practically every branch of medicine and with this change came a multitude of new ideas which had to be passed on to medical students.

In the late nineties and during the dawn of the twentieth century, medical education was a whirlpool of conflicting ideas. Medicine was fast becoming an endurance contest with so much to be given in four short years that only the surface could be scratched. The host of new facts, especially in the branches of bacteriology, biochemistry, and physics made a fundamental preparation in those sciences necessary. General chemistry, organic chemistry, physics, zoology were all taught in

the medical school. Crowding of courses became so great that the medical curriculum had either to be lengthened or a year or more of literary work required. Finally there arose from the conflict a combined literary and medical course of six or seven years.

Again the waters seem to be rising and one sees in written manifestos and hears in spoken words from medical educators, ideas of changes with a tendency to revert back to a more classical foundation for medical students enabling them not only to be physicians, competent in their field, but to be truly men of education. It is advocated as well that the classical foundation will prepare them to better understand their medical profession. Criticism has arisen over the cut and dried curriculum all students must pursue before entering medicine, leaving them little time for the study of the humanities. One hears also objections that medical students during their literary training delve into courses bordering on popular interest and fail to gain the fundamentals. All of these criticisms make one wonder whether we are trying to create a new type of medical student with an education comparable to the scholar of the academic courses, in addition to his training as a physician; whether we are trying to train scientists in medicine rather than able practitioners; or whether we are attempting to exhume and reincarnate the student of sixty years ago.

Educational unrest is nothing new even in the brief life of American universities. President Wayland, in his report to the Corporation of Brown University in 1850, states: "He (the student) works wearily. He studies only to accomplish a task. He can read nothing but text books, and he turns mechanically from one to the other. He learns to cram for a recitation or for an examination, and when this last is over, his work is done and he is willing to forget all that he has studied."¹

To remedy this situation, Wayland proposed drastic measures. The system of adjusting collegiate study to a fixed term of four years should be abandoned. The time allotted to each particular course should be determined by the nature of the course. Each student should be allowed, as far as practicable, to study "what he chose, all that he chose, and nothing but what he chose." No student should be under any obligation to proceed to a degree and every student should be entitled to a certificate of such proficiency as he might

have made in each course pursued. The withdrawal of allegiance to the German system and an inclination toward the Oxford and Cambridge plan is seen in Wayland's method of correction.²

Some of his ideas were adopted in spirit and exist today, but most of them have gone by the wayside. It is true in most medical schools that, at present, subjects are given time in proportion to their value and difficulty. It is also a fact that more and more elective courses are offered medical students, and Harvard has for several years given but one comprehensive examination at the end of the fourth year to cover the students' entire clinical work. The trend at present seems to be in the direction of more elective courses, shorter hours for the less important subjects, and comprehensive examinations.

If one considers the medical student of sixty years ago as the acme of perfection because he lived in the age of classical training, one side-steps the all important fact that medical students of that period were exceptional if their education was even equivalent to our present high school education. It was the unusual student who studied the classics before entering medicine. In an article published by George D. Chaffee telling of the "early days at Michigan," he states: "The law and medical students were not, as a rule, college educated and their clothes, manner, and often their grammar shocked the delicate sensibilities of their more fortunate literati. It jarred some of them to hear 'I seed', 'I knowed', etc."³

That this fact was evident to President Tappan, can be seen in his "University Education": "We ought to make apparent the difference between a mere professional and technical education, and that large and generous culture which brings out the whole man and commits him to actual life with the capacity of estimating from the highest points of view all the knowledges and agencies which enter into the well being and progress of society. That is not really the most practical education which leads men soonest and most directly to practice, but that which fits them best for practice."⁴

Unquestionably one purpose of a State University is to train men to become able practitioners so that they may go out again into the state and be a benefit to the people. The state institution should not consider it a duty to place above the training of practitioners the birth of research workers. Furthermore, with education a

popular profession one can easily discern that talent cannot be elicited where talent does not exist.

Progress, whether it be in medicine or in any other form of human endeavor, is not a slowly advancing thing. Instead it moves by stops and starts, by trial and error. There is no doubt to any close student of medical education that the introduction of the two pre-medical years has proven a great benefit to the training of medical men. The pre-medical curriculum was drawn up some 15 years ago in a more or less arbitrary form by a group of men interested in achieving an ideal. They knew their plan was not flawless and they probably realized their goal would not be accomplished during their lifetime. However, they had foresight enough to know that once progress was begun in the direction of more thorough training, it would slowly continue. The requirements still remain two years of Latin, which can be taken in high school, six hours of English, twelve hours of Chemistry, eight hours of Physics, eight hours of Biology, and twelve to sixteen hours of a modern language, with a total of sixty hours demanded for entrance. This left twelve hours of elective work in any other field in which the student was interested.

This plan not only allowed the student opportunity to obtain the superficial scrapings of the literary field, but also made it possible for him to take some of the fundamental courses which had hitherto been given in the medical school. Criticisms which have arisen do not apply so much to the original plan but to the method in which the courses are given and the lack of benefit derived by the students from many of them.

Warthin strikes the keynote when he says that the pre-medical student is thrown in with large classes of literary students where courses are "more or less popular and superficial, containing much duplicated matter of elementary physiology and morphology, and a smattering of heredity, evolution, genitics, and vitamins They do not give the medical student that broad conception of the unity of all life, the broader view of the evolution of plant and animal life and of man in particular."⁵

Physics is often given to medical students along with engineering students with emphasis placed upon stress and strain and little said concerning light, heat, radio activity, and electricity. Often the modern language courses do not in-

clude conversational and scientific courses available to medical students. A course in reading current medical periodicals in either French or German is not existant, as far as I know, and yet think of the benefit it would have! Few pre-medical students take sociology, enthology, art, or music. Anthropology is rarely studied and yet the whole medical science is based on the history of man! Physicians, too, are told they must consider themselves leaders in their community; they must preside at banquets, and be active in their societies, yet it is the rare doctor who has had even a rudimentary training in public speaking!

It has been said that a majority of men entering upon the study of medicine have had that desire since their earliest recollection. When they enter college they are confronted with certain requirements which they must pass before entering their chosen field. No committee meets them and points out certain studies which may benefit them as they go along. They may peruse their catalogue for electives and come upon such terms as Sociology 21, but they are unaware such a course is Anthropology. Because they early commit themselves to medicine, few instructors try to interest them in other subjects. They even pass through the entire two years of pre-medical work without so much as a trace of pure medical science to interest them.

It is a much mooted question whether the pre-medical education should be only in the humanities or should act as a period during which the foundation is laid for the work to come. Would it not be better to strike a happy medium so that both the humanities and the fundamentals are gained? Would not a committee acting as advisors to all pre-medical students be a decided help in planning courses for them? Let this group keep in touch with pre-medical students and direct them. Perhaps by supervision, such a body might be able to direct the misfits, who invariably come into medicine, along other more suitable channels before their mistake is serious.

Cannot some of the literary courses be rearranged so that they have a definite appeal and a decided value to pre-medical students? Instigate such studies as biophysics, embryology, the reading of periodicals in a modern language, and stress enthology, anthropology, and public speaking. Remove the non-essential courses such as qualitative analysis or incorporate it as part of general chemistry,

and allow this time for other subjects. Bring forward into the pre-medical years perhaps bacteriology and the history of medicine. In other words, revise and combine the pre-medical and early medical education.

At the University of Michigan, the medical faculty meets periodically with President Little and the literary faculty for such a purpose. The future may present a more useful and beneficial program.

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MICHIGAN ONE HUNDRED YEARS AGO

(Continued from April Issue)

The letters of a Doctor, locating in Pontiac, to his relatives in New York.

EDITOR'S NOTE: The following letters, written one hundred years ago, furnish most interesting incidents of medical practice and pioneer days. We feel certain that our members will gain pleasure in reading them. We are indebted to Dr. B. R. Corbus for making them available.—Editor.

Pontiac, February 19, 1831.

Dear Brother:

I am very much pleased to have an opportunity of answering a letter from you at this time, although I had almost made up my mind that you had concluded a correspondence rather a waste of time than otherwise. I regret that I should find occasion to reprove at this time. The two last papers which I received were indorsed "The postmaster will look well to the infraction of the U. S. A. Laws"—The postmaster has also received a letter instructing him to open all papers which are not left open at one end of the envelope, as the law directs, and instancing those particularly directed to me. "A word to the wise, etc."

I am rejoiced to hear that father's health is again restored and hope that you will, as far as possible, prevent his exposure to cold and fatigue, which have generally occasioned his sickness.

RELIGION

The revival which he speaks of has surprised me not a little; perhaps my residence in Pontiac has had an influence over me and has induced me to attach less importance to the subject than it really deserves. Be it as it may we are but little troubled in that way here; and the people appear to consider that a religious excitement is injurious to the happiness of community (and the great majority to) the individual.

You must have perceived by the papers that I have at length affected a dissolution with Dr. R. It was brought about with considerable difficulty. The course which I pursued was the one I mentioned in my letter of the 1st. Inst.

My business has been very good for some time past. In fact, too good for my own comfort for the last three weeks. Pleurisy and peripneumony Notha has prevailed extensively and there has been a good many fatal cases, mostly amongst elderly people.

The sleighing is superb—weather middling cold—has been very severe—business of all kinds lively.

POLITICS AGAIN

Politics run higher here than in N. Y. The people all want offices and every one is astonished at the presumption of his neighbor in daring to presume to wish and ASK as much as he demands for himself. There are about a dozen candidates for the council, not one of whom is fit to serve in as a menial to the most inferior of a genuine republican council.

10 bells. I have a call to visit one of the surveyors at Grand Blanc and must start immediately to reach there by daylight. The case is similar to most of the others—pleuritis. I must therefor defer writing more until the next opportunity. I should not forward this unless it was necessary to avoid difficulty with the postoffice and to satisfy you that I was well.

Recollect me to all and I remain.

Yours, etc.,

D. L. Porter.

W. P. Porter.

P. S.—If you can get a set of Accouching instruments conveniently I should like to have you forward them by Uncle Lionel. I would have given all I was worth recently for a set, but they are not to be had on any terms here except miserable forceps. Not a physician in the territory that I know of owns a set like father's. I believe if I had had them Monday I could have saved a fine woman. The Vectis and ——— would have been INFALLIBLE.

D. L. P.

Pontiac, 20th March, 1831.

Dear Brother:

I received a letter from Abby last night informing me that you had now received any letters from me for several weeks. The last one I wrote I was obliged to cut short in consequence of a call to start immediately for Flint River. I had the pleasure of riding all night and at daybreak met another messenger sent express from a trading post on Saginaw Bay 80 miles from the Flint to see a poor devil who took the liberty to die an hour after I got there—of course, my hopes of a fee died with him as he left no property except some Indian goods which the natives kindly appropriated to their own use in consideration of many kindnesses shown him.

DENTISTRY

The old chief made me a present of an elegant pair of moccasins for pulling out some dozen teeth for his tribe.

I have not made up my mind fully that I will not attend to any more of these distant calls. You may judge of the generality of them by a history of this—I had to follow an Indian trail through one continued forest, to lay out two nights in the cold, the messenger nor myself being provided with fire works, or blankets and no provision but what we got at the Flint, nor the possibility of obtaining any until we reached the end of our route. I was gone five days and lost my horse by the Yellow Water (so called by the farrier) but as much in my opinion from fatigue

and want of food. He was not worth much, yet about home he would have answered my purpose as well as any—I have since bought one, a fac simile of father's pacer in colour, build, and gait, though one-half smaller—I paid and AM to PAY seventy dollars.

Business is good and has been during the winter, but I can get little or no pay. In June I shall sue every man that owes me as I must either pursue that course or ruin my credits as I am not able to fulfill my engagements. The accounts are due but I cannot wait forever to collect them, and though there are several hundred dollars against good men I cannot raise one-half enough to keep myself and horse. Should this state of things continue much longer I shall next fall give up the practice and after visiting Waterford, go south. I can do at least as well in any of the large towns on the Mississippi and the expenses of livery be no greater than they are here. For some time past it has cost me \$4.00 a week for myself and horse, besides incidental expenses. Hay is \$14.00 a ton; oats, 4/5. Wheat, 8/—; Rye, 6/—; Corn, 8/—; Flour, \$6.50. Produce must fall when navigation opens as we can then obtain supplies from Ohio. The greatest scarcity prevails at this time and the demand is incessant from the emigrants. The surplus wheat of this county was at least 8,000 to 10,000 bushels last harvest, and now we have to depend on Detroit for bread stuff. Another month will remedy the evil.

Politics and cold water societies are the mania of the day. I do not, nor will I unite with either, as the object is not a *radical reform*, but rather to produce an *effect*. Some of the most infamous characters are the prime movers of the latter and it is united with Anti-Masonry. The leaders boldly declare that it is to affect particular objects, as breaking down the Pontiac club (alias Regency) and to place their own tools in power. Some young men got up a meeting in this place as you will see by the Chronicle. I did not unite with them as they had foolishly proclaimed their objects. A motion appears in my name, though not proposed by me. I do not oppose them, but pretend to be an indifferent spectator of their proceedings, which course becomes necessary if I would not involve myself in their personal and party struggles. It will all die away after election. If you see Derastus Fitch, request him to write me a history of Doctor Richardson's career in Danby. If necessary, to forward affidavits. Dr. R. acknowledges that he ran away for debt and *other causes*. He takes particular pains to slander Fitch and Uncle Joseph and pretends to give family anecdotes. His avowed object is to injure me by showing my descent from such a family. Many believe him and the only way for me to check the evil is to draw his attention to his own concerns and by showing his real character destroy his credit amongst some officious friends. It has placed me in an awkward predicament as I am called upon to defend the characters of men connected with me by ties of blood, yet of whose private history I am utterly ignorant. Tell him any notes or accounts can be collected by enclosing them to G. O. Wittemore or to Daniel Le Roy.

When Uncle Lionel comes on send me some grape roots and flower seeds. The Isabella and Sweet Water are all the kinds I care for, marking them so that I shall be able to distinguish them. Should you, in your visits to the auction rooms, find any medical or miscellaneous works which I have not read I wish you would buy them

and forward them to me with the prices and I will pay you for them in the fall. I have frequently observed sets of Medical Chirurgical Reviews for sale there. I should value such a set higher than almost any other work. I have the largest library in the county and I frequently almost get the blues turning and twisting them over and over, seeking something new in them. Books can be obtained in Detroit by paying 300 to 400 per cent on the eastern prices. Good's old edition they ask \$18.00 for, by which you can form an opinion as to their prices.

Though I can sympathize with John in the loss of poor Watch, tell him not to mourn as I will next fall give him a dog worth a dozen of him. It is of a favorite breed in this country, a mixture of the gray hound and wolf; they are faithful, speedy and strong. The generally require considerable training as they are naturally very fierce. Nothing can entice them from their duty whether in the chase or on the watch. The breed is nearly destroyed by scoundrels killing them where the color corresponds and selling their scalps, calling them wolves and drawing a nominal bounty.

I am sorry to learn that you have been sick since father got well. We have had a great many similar cases here, a large number of which were fatal on the fifth and seventh day. In general, too much dependence was placed on ordinary remedies to the neglect of bleeding. Typhoid pneumonia has prevailed extensively in different parts of the territory and has been very fatal amongst the aged and dissipated. Doctor Chamberlin has had a severe run of enteritis but is now convalescent. Doctor Thompson is laboring under a partial derangement and determined that he must die. He is certainly a curious mortal. Since my dissolution he has thrown a great deal of business into my hands and at this time will take no medicine nor follow even his brother's prescriptions unless I advise it. Previous to that he was bitter and implacable towards me. I think he will recover from his disease, though it will be some time first.

Abby seems half disposed to scold at me for using the term "chit-chat". Though it amused me, she must know that I have too high an opinion of her to imply a suspicion that she could ever degrade herself so much as to become the "mooning oracle of a neighborhood". Anent charities, fate will make too strong an impression on her mind to be easily forgotten—and I think she would scarcely be willing with the title of "Gadder" to unite the one most horrible to a lady, that of "Old Maid". I am pleased to see how much she has improved in her composition, and at this time it will hardly be necessary to thank her for her long and interesting letter. You must let her have the corner of a letter to me as often as convenient. The changes in Waterford must be great since I was there, and I almost fear that I shall feel lost next fall amongst the Puritan faces. Mrs. Henry must take real comfort in making and drilling proselytes. Tell her that the prospects are improving in Pontiac. An effort is making to raise funds to build a church—though I apprehend that they will fail and there are very few professors that are able to render any assistance. Is it Francis or Abby Peoples that is sick? There was a blot on the name and I failed in making it out.

I almost wish I could be in Waterford now to see how you all make out in gardening. Has Mr. Strachan got his hothouse in operation this spring? (And now while I think of it, I have

promised Mrs. Le Roy that I would write for some "For Get Me Not" seed which you may find in the neighborhood). Ask Mr. Strachan the best time for sowing such seeds as Abby shall put up. Does Laura live where she used to? I will not ask any more questions though at this time, as you will have your hands full to attend to all the above requests, therefore recollect me to all and I remain

Yours respectfully,

D. L. Porter.

Pontiac, 12th June, 1831.

Dear Brother:

Your letters and father's, which were sent by Mr. Mercer I received about a fortnight since. The grapes, books and everything else came safe and I am very much obliged to all of you for the favors.

The grapes I have set out and I believe every one of them will live. The soil and climate of the peninsula are peculiarly adapted to the cultivation of the grape and all the fine fruits, but as yet but little attention has been paid to them. Tell Abby that most of the flower seeds she sent me have come up and I hope that I shall be able another season to give her a nosegay from them, premising, of course, that she will come to Pontiac.

Our spring has been very late and wet, but for the last three weeks, for the most part, we have suffered from excessive heat during the middle of the day, the nights being cool and extremely damp. The emigration to this country exceeds all calculation. Great numbers have gone beyond us on the Sagina Shiawassee routes. The actual settlers that have already purchased in this country are calculated to amount to at least 2,000, and in other sections of the territory it is fully as great. The steamboats (a daily line) have some weeks brought 4,000 besides an equal number in the schooners and great numbers by land. In fact, the Michigan fever appears to be completely epidemic at the east. The health of the county has been very good for the season, no cases of fever have occurred as yet—except mild intermittents. I am fearful, however, that this will prove a very sickly season. The swamps are all full, which is always a precursor at this season of the year, and our days being hot with cold nights, undermine the health almost as rapidly as it does farther south, though our diseases are not of so malignant a type as they are three degrees farther south. Emigrants coming to the country at this season of the year, having to submit to the privations and vexations which they must always experience, are more exposed than the old settlers.

Business of all kinds is lively—particularly mechanics, who are all very hard drove. Mercer has opened his shop and is doing a good business. The people like him and he cannot do otherwise than make money if he drives business as lively as he has done heretofore. His family are very pleasant.

Father speaks of visiting Virginia—by all means defer it until the fall for a change of climate affects the system of a northern or eastern man more than I thought possible. I should never think of returning to the state of New York to practice physio, as more money can be made at the south than under the most favorable circumstances there. My intention is ultimately to go down the valley of the Mississippi or to the Floridas. Let us know in your next when Uncle is coming to Michigan. Phillops and myself would

both like to see him very much. Phillops is driving ahead bravely and for some months past has made money very fast and is determined now to be rich. All his old hangers-on have left the country or are dead and he feels encouraged again. Would you write a line to the Argus office and request them to send me their semi-weekly for six months. We shall have a new paper started here on the 4th of July. Our people are the craziest politicians that I ever saw. The excitement at this time is very great and every one has to take one side or the other.

I must cut my letter short as I have to start immediately to see a patient and I shall not be back in time enough to finish and mail it. My respects to all.

Yours respectfully,

D. L. Porter.

W. P. Porter.

Pontiac, 14th August, 1831.

Dear Brother:

You appear to have forgotten the art of letter writing altogether, by not writing once in three months. I will excuse you, however, on the ground that you have such a *multiplicity* of engagements that it would be considered an unwarrantable degree of extravagance of time, to spare one or two hours a month. But "sufficient unto the day is the evil thereof." It is so recently that I wrote home that I have scarce anything to communicate.

POLITICS AGAIN

Politics is almost the only subject that engages public attention. In this country we have carried the election of every candidate which we wanted except that of delegate. The Anti-Masonic candidate, contrary to my expectations, got 39 majority. One-half of the citizens in this part of the county did not vote for delegate at all, as the supposed wings election sure spent all their time in electioneering for the members of the council, in which all were more immediately interested.

The appointment of Mr. S. S. Mason has excited the most violent opposition in every part of the territory. He is now acting governor, but the executive business is almost altogether suspended as the public officers will not do any more business with him than they are absolutely obliged to. I have seen him and he appears to be a very intelligent likely *boy* (age 19.) You have probably read the proceedings of the several meetings. Two have been held in this county.* The one at Auburn six men were in the room, including the hostler and a foreigner. In Pontiac five men who were with the exception of one man officers under the United States government. Not a citizen would turn out, but all united in treating the subject with merited contempt and ridicule. Who will receive the appointment of governor is a question on which all are divided and uncertain. Some say Eton (who will be scouted in Detroit as he is almost universally hated there and on the frontiers); others insist upon it that Austin Austin E. Wing or Gen. Root will have the preference. Whoever receives the appointment must expect to be severely criticised as the tide of popular opinion is set against Jackson's administration and there is but one press in the territory (and that will have to fall through for want of support) in his favor. All are Clay.

* (To gloss over the concern and compliment the president—faugh!!

Emigration continues to increase. If you had rode over this county with me two years ago you would not now recognize it. Where there was not a house for forty miles then there is one now every mile and sometimes nearer—most of which have from ten to fifty acres of ground broke up for wheat. Wheat has done extraordinarily well and all the crops will pass muster.

Business is tolerable good the last 30 days; my charges are \$145.88. The last week \$10 a day and the sickly season is but just commenced.

Have you ever sent word to the Argus office? If you have not, send a line with my direction for their Semi-weekly Argus for one year. I have received one-half a dozen numbers in the last two months and they are either careless in mailing them or miscarry.

A newspaper will be started here in two or three weeks, to be entitled the "Star of the West", published by Mr. Cowen, late of the city of New York. He will get about 800 subscribers.

What has become of Uncle Lionel? Archey Phillips enquires for him every time I see him and is anxious as well as myself to hear from him.

I expect to start for Waterford between the 10th and 20 October with Mr. Seth Beach. We are both arranging our business for that time, though it may be as late as the first of November before we start; if it is we shall go by way of Montreal—Burlington, Vermont, etc.

How is business in Waterford? You have none of you said a word about it for several months. You may tell the old maids (for instance, Aunt Charity), that I have got a rich old bachelor for them to shoot at (with Cupid's arrows?) in the person of Mr. S. Beach, and I shall keep him there until they make a conquest on condition that they will be very accommodating. He is only about thirty-two, an age which requires advice and protection, for which Aunt Charity is well fitted by her matronly age and acquirements. Does she get religious yet, or has she not got out of the age of Deism (that is to say, 38).

Recollect me to Mary, Laura and all the rest. Write soon and oblige

Yours respectfully,

D. L. Porter.

W. P. Porter, M. D.

P. S.—Recollect the Argus. I want very much to keep the run of New York politics.

Pontiac, 1st May, 1833.

Dear Brother:

For once you shall have a short letter, as but twenty minutes are allowed by the postmaster. What is the reason that you or some of the family have not written or sent me a paper since the last of February? The last letter I received from home is postmarked 9th February, from father. I have sometimes feared that ill health was the cause, which cannot hardly be, for if any of you were seriously indisposed you would write forthwith, but to business:

I wish you to see Higgins as soon as convenient and find out his views in relation to Pontiac. Write yourself and request him to do the same, and do not forget the chit-chat of the day.

About four days since Mr. Schinla Hodges, a merchant of this village, and one of the first settlers of the county, started for New York. He has employed me in his family ever since I came here and used all his influence for me. He is engaged in a heavy business and knows more of the inhabitants and prospects of this county than any other man in it. I was sure that the family

would be pleased to see him and requested him to call, which he has consented to do. Before he arrives I wish you would put up some grape roots (no foreign ones) and young plum trees of any kind (as even the horse plum is considered a rarity here). My object in getting them is more to gratify four or five families amongst whom are Beach and Le Roy and Hodges, who are frequently asking us to write to my friends for some—than any ultimate benefit to myself, as in all probability I shall be some thousands of miles from here before they yield any fruit. By the by, Hodges knows nothing about my future calculations and so far is he from suspecting them that he, as well as some others, suppose that it is not impossible that I shall one day be his brother-in-law, and I have no objections to his retaining that impression for the present. His wife's sister, Miss Williams, is a fine girl enough, of a good family, property and country education, but such an encumbrance would be out of the question with my prospects and views of matrimony.

I forwarded some grape seed to Mr. Strachan by a Mr. Parke, merchant of Auburn, two weeks since; he engaged to mail the package at Albany. I would have mailed it here, but our postmaster wanted triple postage, which would be making dear seed of it. They are all of the native grape from Huron river and St. Clair, which many in this country call first rate, but which cannot compare with the Issabella.

If Abigail has any more flower seed to spare I should like a few of the common kinds for "Ladies fair"—those that she gave me last fall are sown in Mrs. Le Roy's and Miss W's. gardens and some of them were up yesterday. Our spring is late, and business is very dull. The ague is the only complaint which is prevalent at present. When navigation commences I hope it will improve.

Seth Beach has *almost* concluded to marry a young and buxom widow in Auburn—weddings are the order of the day. Yesterday I went to see young Andrews (nephew of Dr. Machivel) lately from Stillwater), who fell 23 feet from the Academy frame in Auburn—struck square on his back across a hand spike. He is very badly bruised, but will recover. Dr. Machivel Andrews is now in Malden doing a great business, but Henry tells me is ruining himself by dissipation. The horn is blowing and I must wind up. Recollect me to all, write soon and occasionally send me a paper.

Yours, etc.,

D. L. Porter.

W. P. Porter.

P. S.—Pack them in moss in a box and direct to D.L.P., Pontiac, Md., care of Barker and Stoll, Buffalo.

Pontiac, 18th September, 1833.

Dear Brother:

Yesterday I received a letter from you and the day before, one from John, postmarked Ypsilanti. John forgot to date his letter or to mention the name of the bearer, but deserves great credit for his composition. What was the subject of his original essay at the exhibition? I was very sorry to hear that Cornelia had suffered so much from the Cholera Morbus, but flatter myself that by this time her health is entirely restored.

By the papers I perceive that the cholera is still the absorbing topic at the east *next to politics*. The disease continues its ravages on the frontier, though not to the same extent that it did a few

weeks ago. In Detroit all diseases assume the characteristic symptoms of the epidemic after the inflammatory symptoms have subsided. The proportion of deaths is very small and at present it is impossible to ascertain the exact number as the papers publish no reports on account of the continued fears of the inhabitants of the interior. We have not had a case yet in our county, but scarce a person who is much exposed to the night air escapes a severe attack of cholera morbus or diarrhea. The latter have been more obstinate than I ever saw before. I have had it slightly but it did not prevent me attending to my business for more than four days.

At this time I enjoy better health than I have for two years past and can undergo greater fatigue. The health of the country is improving rapidly and if it continues in the same ratio for two weeks longer I intend visiting Chicago. A party leaves here on the first of October to attend the Indian payment. I have a great curiosity to see it as there will probably be four or five thousand Indians collected there, which includes the whole number of those friendly to the whites.

By the latest accounts our war is about at an end, at least for the present. This is better than the most sanguine could hope for a few weeks since as our troops had to march hundreds of miles through a wilderness; if they get General Blackhawk there is no doubt that it will put an end to depredations for years, if not, he will excite other tribes to take up arms. His education (a liberal one) gives him as great an ascendancy over the Indians as ever Tecumseh had, and he is as implacable an enemy to the whites as old King Pontiac.

Politics begin to attract public attention and you would be amused to hear the sage deliberations of the inhabitants of every hamlet, almost every family in this country taking from one to three papers; they enter into the full merits of the respective candidates and measures are approved or condemned with the same promptness that they would be if we had a voice in the coming election. Jackson would not get a *tolerable minority in Michigan*, four-fifths being warm advocates of Clay. I feel confident that Clay will succeed in the west, let his support be what it may at the east and south. It will be a warm contest at all events.

Albert Phillops, who formerly lived with Uncle Lionel, was here day before yesterday, viewing the country. He is living in Thompkins county and has a family; whether he will settle in Michigan, I do not know; he intends returning this way in a few days.

While on board of the Enterprise there were two fatal cases of cholera, one of whom was the first mate. Mr. Heart, to whose skill last fall as a sailor Uncle L and myself owed the preservation of our lives. He was the best sailor on Lake Erie and when you see Uncle, tell him of his fate.

It is unsafe traveling on Lake Erie in the steamboats as there are more or less cases every trip, probably occasioned by the crows and heat of the machinery. If a friend travels this way, advise them by all means to travel by land all the way. It will take a little more time and become more expensive, but that is nothing compared to the risk.

My business has been very good this season all the time that I was able to do business, but hope that the season of sickness will soon be over as I want a play spell.

John writes about horses. Tell him that I have

a mate for the gray four-year-old, but I have hurt her shoulder and turned her out. Three days ago I bought another, a bay gelding six years old, perfectly broke and as good as ever the old bay was. He is from Kentucky and cost me one hundred dollars. He racks trots or canters and without a curb bit it would require three men to hold him. This winter I may drive him to Waterford; as yet it is uncertain.

Can you ascertain whether Uncle L. intends to visit us this fall? Tell him to write at all events as we are anxious to hear from him.

How does Mr. Strachans' garden look this season? Tell him that I mean to show him an extra one for *this country* in one or two years. I have bought me a very handsome situation on the Court House Square in this village, in all five lots, and my men are now getting out the timber for a house, which will overlook the whole of the village.

McOmbes family were all well and wished to be recollected to their friends when I wrote. I saw them last week. Marian is quite a belle here and has little or no competition. Whether she will find any one to suit her here I cannot say. Recollect me to all our friends. Write soon and oblige

Yours, etc.,
D. L. Porter.

W. P. Porter.

P. S.—What has become of Susan Ten Brook and the other young ladies of W.? Who of them are, or are to be married?

(The End.)

DIAPHRAGMATIC HERNIA

R. S. MORRISH, M. D.

C. D. CHAPELL, M. D.

FLINT, MICHIGAN

Diaphragmatic hernia, as the name suggests, is the protrusion of a part of the abdominal viscera, through an abnormal opening in the diaphragm, into the thoracic cavity. Until the advent of the X-ray, the condition was rarely diagnosed clinically with any degree of accuracy. With the use of the barium meal study of the gastro-intestinal tract, it has been shown that diaphragmatic hernia is much more common than was previously believed.

Collection and analysis, of the findings in the individually reported cases, has made it possible to draw quite definite conclusions concerning the cause, symptoms, course and treatment of these hernias.¹⁻² From a study of these findings it has been learned, concerning the cause of diaphragmatic hernia, that it may be of congenital origin, it may be due to trauma of the diaphragm, or it may be acquired. The congenital type is due to imperfect closure of the diaphragm in one of several areas, but most commonly at the junction of the ensiform process and the costal cartilages. Traumatic hernia may follow injury to the diaphragm, from crushing body injuries,

stab or gunshot wounds. Hernias of gradual origin at one of a number of anatomically weak spots, but most commonly at the esophageal opening, are spoken of as acquired.

The cause of a hernia may not always be easy to determine, and where doubt exists, it may not be possible to accurately classify. Hernia of the right side of the diaphragm is rare, due to the protection afforded by the liver, and the organs that pass through the opening are, therefore, the contents of the left side of the abdomen.

SYMPTOMS

The symptoms encountered in diaphragmatic hernia are neither very definite nor constant. In case of accident there is usually an immediate pain in the epigastrium, and in the left hypochondrium with a tendency to radiate to the left shoulder. This is followed by digestive disturbances, dyspnoea and palpitation of the heart. The symptoms may come on some time after the ingestion of food and simulate duodenal ulcer or gall bladder disease. The inability to eat more than moderate amounts of food without causing an uncomfortable sense of fullness in the stomach, which is relieved by vomiting, may suggest pyloric obstruction. Involvement of small intestine or colon suggests obstruction.

PHYSICAL SIGNS

The physical signs are as indefinite as the symptoms, but the most important seem to be as herewith enumerated:

1. Displacement of the heart to the right.
2. Distant or absent breath sounds over a large part of the left chest.
3. Metallic tinkling heard high up in the chest, not especially corresponding in time to the respiratory movements.
4. Tympany high up in the left chest.
5. Absence over the left chest of a dull note as in the presence of fluid, and of the hyperresonant note of pneumothorax.³

In the differential diagnosis, great reliance should be placed on the roentgen ray demonstration of an abdominal viscus, or a portion of one, above the diaphragm.⁴

SURGICAL REPAIR

Given a well established diagnosis of diaphragmatic hernia, unless there is some definite contraindication, an attempt should be made at surgical repair of the condition, because of the incapacitation, and impaired health incident thereto, and the danger of strangulation.

Wide exposure with complete relaxation under a general anesthetic is essential. An incision on the left side, such as is used in performing a splenectomy, is satisfactory, and enables the operator to pull down the herniated organs into the abdominal cavity. When this is done, the pillars of the diaphragm should be closed with a strong suture, preferably one of absorbable material. As an additional precaution against recurrence, it has been recommended that the stomach be sewed over the repair, or to the parietal peritoneum.

The after care is similar to that following a gastro-enterostomy.

CASE REPORT

The following case record is illustrative of the enormous amount of abdominal contents that may enter the chest through the diaphragm, and of the marked permanent disability that results in the untreated case.

Mr. M., age 33, a painter by occupation, was first examined in December 1920 and gave a history of falling a distance of 40 feet, five years previously. He suffered considerable pain in the hips, and was very weak in the legs for about five months, but otherwise seemed to have no unpleasant symptoms. In 1918, he began to have pain in the stomach immediately after eating, which would reach maximum intensity about one-half hour later. Distention often was very distressing and was always relieved by vomiting. In 1919, was sick two weeks with influenza, and following this, the pain in the stomach seemed to travel upward into the chest, and there was always marked dyspnoea after meals. A very pronounced constipation also developed at this time.

On examination, the general appearance was good, although the face was unusually ruddy, rather suggestive of cyanosis. He was dyspnoeic at all times following exercise, and extremely so after a meal.

The chest was long, with a slight fullness in the left infra-clavicular area. Expansion was about equal on the two sides; tactile fremitus diminished over entire left side. The heart apex was in the 5th intercostal space, and left border about the left sternal margin. On percussion, there was extreme dullness over the entire front, and auscultation showed a general muffling of breath and heart sounds.

X-ray examination of the chest showed a circumscribed area of lessened density in the first and second interspaces, which gradually increased and decreased alternately with the movement of air bubbles from below upward. The barium meal followed the esophagus down to the level of the diaphragm, and then made an acute turn and passed rapidly into the left chest. The stomach filled regularly in all directions, except at the diaphragmatic opening, where it was impossible to visualize the duodenal cap. In the six hour examination, about one-third of the meal remained, and the cap was found to be normal in contour. Above the level of the diaphragm, there was found the stomach, duodenum, and a portion of the splenic flexure, all of which caused ex-

treme compression of the lung and displacement of the heart to the right.

In addition to his distress, and an enforced strict regime in diet, this man was at a distinct disadvantage because of loss of time from his work. He lost an average of one to two days a week. The advantage of an operation was explained, but he chose not to have it done, and the last time he appeared for observation, three years later, he was capable only of doing light bench work in an automobile factory, while his symptoms were unchanged.

The summary of another case is presented herewith in which the size of the hernia was unusually large, and is of considerable interest because several months following closure, inspection of the repair was made possible during a subsequent operation for another condition.

Miss M. M., age 26, single, core maker by occupation, was first hospitalized December 25, 1922 because of injury sustained of the pelvis and left sixth rib. On the second day, she developed what the attending physician diagnosed as traumatic pneumonia, and complained of severe dyspnoea and pain in the left chest. These symptoms cleared up by the fourth day, but a nausea persisted for a week longer. She vomited bright blood at the onset.

At the end of a month, she returned home and resumed her work as a core maker. She was required to lift heavy trays, and this made her uncomfortable, and she found she was less efficient than before the accident. Dyspnoea would occur after slight exertion, and a hearty meal would cause a sense of fullness in the left chest with pronounced cardiac embarrassment. Enforced restriction in diet caused a loss in weight from 160 to 119 pounds.

When first seen by one of the writers, September 3, 1925, she complained, in addition to the sense of fullness in the stomach, of cramp like pains immediately after swallowing and of a very acid stomach.

Examination showed some tenderness in the right epigastric region. In the chest, the breath sounds were distant over the entire left side, with a tympanitic note of percussion. The heart was displaced to the right.

X-ray examination of the chest and gastrointestinal tract showed the right diaphragm to be normal in contour; the left was elevated materially. The bismuth meal passed readily down the esophagus to the level of the diaphragm, then flattened out, and the normal shape of the stomach was not noted, because it was displaced upward to the level of the seventh rib. The pyloric cap could not be visualized. The stomach was empty in one and one-half hours, and the small intestine in 24 hours. There was some stasis in the cecum and transverse colon. Interpretation of these findings, then, showed an eventration of the left diaphragm which contained the stomach, splenic flexure, the proximal loops of the descending colon, and the distal loops of the transverse colon.

Operation, for the purpose of repair, was performed September 25, 1925. The abdomen was opened by a large S shaped incision in the left upper quadrant, extending slightly below the level of the umbilicus. The esophageal opening in the diaphragm was distended to a diameter of five inches, and through it had passed into the chest

cavity, the stomach and omentum, the left lobe of the liver, splenic flexure, a portion of the transverse colon and some small intestine. This was then a case of diaphragmatic hernia, and not an eventration as suggested by the X-ray. The left lung was collapsed, and the stomach and liver were adherent to the posterior parietal pleura.

Following separation of these adhesions, the organs were easily brought back into the abdominal cavity. The edges of the diaphragm were next brought together with about 12 interrupted sutures of heavy, 40 day catgut, and the stomach finally sutured over the repair in the diaphragm.

There was a large, indurated ulcer on the anterior surface of the duodenum, but no attempt was made to remove it, for the patient began to show signs of shock.

Dyspnoea was rather pronounced for two days following the operation, but otherwise convalescence was uneventful. She was kept in bed two weeks and resumed her work November 26, 1925.

X-ray examination, October 24, 1925, showed the diaphragm to be of normal level, and the lung was nearly expanded again. Dyspnoea had disappeared entirely.

February 5, 1926, she again appeared for examination, and complained of pain in the epigastrium about an hour after eating. There was evidence of retention, which was relieved only by vomiting. X-ray examination showed the presence of pylorospasm and a definite filling defect in the duodenal cap.

Operation was performed February 17, 1926 for removal of the duodenal ulcer with the actual cautery, and a new opening was made in the stomach by means of a posterior gastro-enterostomy.

Examination of the diaphragm showed complete closure of the former opening and all organs were in their normal position.

Postoperative recovery was uneventful, and the patient has been entirely free from unpleasant symptoms to the present date.

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FRAGILITAS OSSIUM— ITS HEREDITARY ASPECT*

(With Case Report)

MILLARD S. ROSENBLATT, A. B., M. D.

DETROIT, MICHIGAN

Fragilitas ossium is a disease manifested by excessive and abnormal brittleness of bones, especially the long bones. Synonyms for this condition are considered by some to be, osteopsathyrosis and osteogenesis

imperfecta, (see later). Lobstein¹ first described the disease in 1833.

In affected individuals there are multiple fractures, usually after negligible traumata.

Lovett and Nichols² found that the Haversian systems of bone are absent, and concluded that the formation of bone was abnormal. Key³ found the Haversian canals to be large and irregular. Wagoner⁴ found the Haversian canals distorted and the cortex thin. The calcium and phosphorus content of the blood plasma, and the calcium, phosphorus and magnesium content of bone are normal.

The remarkable family grouping of this disease is very important, and according to Schwarz and Bass,⁵ heredity is the important factor.

In 1896 Spurway⁶ called attention to the association of blue sclerotics in certain cases of fragilitas ossium. In 1900 Ed-dowes⁷ independently did the same.

In 1918 Van der Hoeve and de Kliejn⁸ reported the association of fragile bones, blue sclerotics and deafness in all members of two families.

CASE REPORT

The following is a report of the main facts in a case of fragilitas ossium in which the family history is known for four generations.

M. C., a 12-year-old white American girl entered the Children's hospital of Michigan, for the second time, May 10, 1926, from the Farmington Convalescent Home.

C. C.—1. Painful right thigh. 2. Disability.

P. I.—Following a very slight fall there was immediate disability in the right thigh, and severe pain there. She was brought to the hospital by ambulance at once.

P. H.—The patient had had 15 previous fractures of the long bones: all had healed without deformity. Two years ago a fracture of the right femur had been plated, elsewhere, with a steel plate and four screws.

F. H.—See end of case report.

Positive Points—

P. E.—A young white girl of average stature and development, in severe pain.

Ears—Slightly hard of hearing.

Eyes—Sclera were bluish.

Heart—Heaving apex impulse seen and felt in the 5th i.c.s. at nipple line: L. B. D. nipple line, R. B. D. at right border of sternum. No increase of supracardiac dullness. No thrills. There was a loud blowing systolic murmur at the apex.

Extremities—The right lower extremity was shortened one inch, flexed on the thigh and externally rotated. There was a large deformity at the mid-thigh, and marked muscular spasm in this region. Crepitus was not attempted. The area was very painful.

Pulse was 100 and temperature 99. Respiration 22.

*From the Orthopaedic Surgical Clinic of the Children's Hospital of Michigan.

Procedure, Operation, Progress—

Traction with adhesive was applied, a Thomas splint and Buck's extension apparatus were used. The foot of the bed was elevated six inches and 14 pounds weight used.



FIG. 1

X-ray on entry showing re-fracture at point of previous plating, with practically no callus except opposite the point of plating.

X-ray on entry showed the femur to be refractured at point of plating, with considerable displacement. End-to-end approximation was reached in 24 hours. The steel plate was loose.



FIG. 2

Twenty-four hours after application of adhesive traction.

On May 14, 1926, under nitrous oxide anesthesia, the metal plate and screws were removed through a three-inch longitudinal incision on the lateral area of the thigh at the middle third. The ends of the femur were end-to-end. Areas of rarefaction were seen where the screws had been and were loose, (chronic osteomyelitis). The wound was closed without drainage, and the leg again placed in a Thomas splint with moderate traction.

On May 20 the temperature was 103 degrees, and on probing the wound, several drams of pus were evacuated. Dakin's irrigation was instituted.

The wound quickly cleared, and temperature became normal. A cast was applied on June 10, 1926.

On June 12, 1926, the patient was discharged to the Farmington Convalescent Home.



FIG. 3

Three months after the injury.

On August 9, 1926, the X-ray showed union in good position.

The family tree is diagrammed below.

Family History—

Four of the patient's five brothers and sisters



FIG. 4

Abnormal trabeculation, and almost cystic character of the bone.

have had multiple fractures: the sixth is six years old, and has not had fractures. Two others of this generation have blue sclera: two are deaf.

The mother of these children is crippled from multiple fractures. She has blue sclera. She has seven brothers and sisters, all of whom have multiple fractures, but no history of deafness or blue sclera.

The maternal grandfather of the patient had multiple fractures, as did his eight brothers. No history of deafness or blue sclera can be obtained.

The maternal great-grandfather had many fractures.

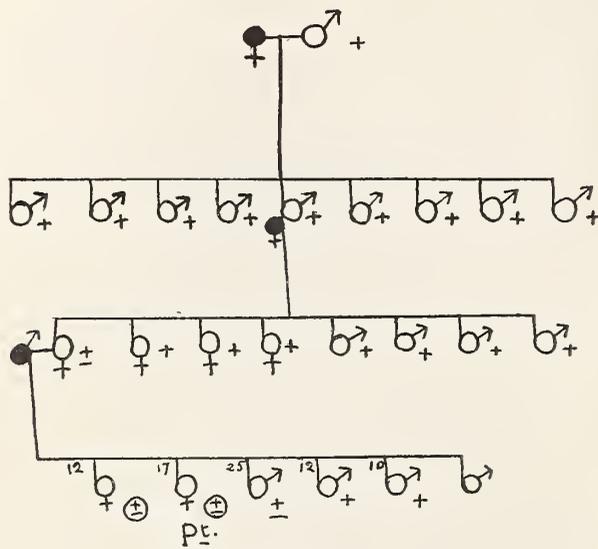


FIG. 5
Family Tree.

- + —Multiple fractures.
— —Blue sclera.
O —Deafness
Pt. —Patient.
No. —Number of fractures.
♂ ♀ —Unaffected mates.

DISCUSSION

In this family, for the four generations which followed, brittle bones have not skipped a generation. Practically all members have had this symptom; several have had blue sclera and deafness.

Conrad and Davenport⁹ have concluded that the hereditary factor involved is typically dominant, and therefore, 50 per cent of offsprings should be affected when the mating is with a normal.

In this family the marriages were with unaffected individuals, and all but one of the offsprings had fragile bones.

Key has stated that fragilitas ossium, osteopsathyrosis and osteogenesis imperfecta are not synonyms, as given by Osler¹⁰ and other authors.

He considers:

1. Osteopsathyrosis idiopathica — Patient has frequent broken bones and blue sclera—born of normal parents.

2. Osteogenesis Imperfecta—not hereditary—occurs at birth and infancy.

3. Hereditary hypoplasia of mesenchyme—brittle bones and blue sclera—Parent affected.

Key feels that Conrad and Davenport did not differentiate their collected 35 cases, (reported in 1915), in these groups, and that only four were truly of class No.

3, the truly hereditary type which they discuss freely.

According to Key, a generation is never skipped in the transmission. In his opinion children with normal sclera born of affected parents will have normal children. They also feel that only persons affected with blue sclera are subject to brittle bones. The members with white sclera being normal in other respects.

From their analyses of the literature, they conclude that blue sclera is the only feature of hereditary hypoplasia of the mesenchyme which is present in every case, and which is transmitted as a dominant hereditary character.

The family reported must be classified in Key's third group, i.e. hereditary fragilitas ossium. In this family group, however, the blue sclera were not dominant, and members not having blue sclera had brittle bones. No generation was skipped in the transmission. Fragile bones in this family are more common than would be predicted from a dominant characteristic.

CONCLUSIONS

1. A case of hereditary fragilitas ossium is reported with the family tree, and with the progress through one fracture.

2. Unlike the conclusions of Key, blue sclera were not dominant; and members not having this condition had fragile bones.

3. Brittle bones occurred in almost every member of the family tree.

4. In the four generations there was no skip in transmission.

I desire to thank Dr. F. C. Kidner for permission to publish this case, and for counsel.

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POST OPERATIVE PULMONARY ATELECTASIS*

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This condition has been defined by Scott¹ as a febrile complication arising within a few days of operation; the characteristic and unique feature, a combination of signs of a unilateral pulmonary consolidation with displacement of the heart toward the affected side.

Since Scrimger² first drew attention in American Literature to atelectasis as a post operative complication, it has been repeatedly recognized in many clinics, and in the neighborhood of a hundred cases have been reported. Excellent clinical descriptions and discussions as to possible etiology have been published, among others, by Scott, Jackson and Lee³.

It is the purpose of this paper to add to the existing reports an account of seven additional cases in which pulmonary atelectasis was recognized as a complication of abdominal operative procedures.

CASE REPORTS

Case 1. M. B.—A robust male, aged 24 years, entered the hospital April 16, 1925, complaining of rupture. There was no history of any recent respiratory infection. Examination was essentially negative except for a left indirect inguinal hernia.

Herniotomy was performed April 17, morphine grain 1/6 and atropine grain 1/100 were given hypodermically as preliminary medication. Ether was administered by the open drop method. There was no vomiting during the period of induction. Cyanosis was not observed during the operation, nor was there any excess of mucous. He vomited once while reacting from the anesthesia.

The patient rested well during the night, but early the following morning he complained of the collection of mucus in his throat. A few hours later coughing became incessant. The temperature, pulse and respiration, which previously had been normal rose to 100.6°, 124 and 40 respectively. Severe substernal pain developed about six hours after onset of the first symptom.

The patient lay curled on his right side. Inspection revealed that motion of the right side of the chest was markedly restricted and moderate cyanosis was observed. The cardiac point of maximal impulse was 7¼ centimeters to the left of the mid-sternal line in the fourth inter-space. Dullness extended eight centimeters to the left in the fifth inter-space. The right border of the heart was 3¼ centimeters from the mid-sternal line in the fourth inter-space.

Impairment, on percussion, was observed posteriorly over the right side of the chest beginning in the mid-scapular region and extended to the base. The percussion note in the right axilla was also dull. Auscultation revealed suppression

of breath sounds over this entire impaired area. A few sub-crepitant rales were heard in the upper right subscapular region and at the left base posteriorly.

The white blood cell count was 20,100 per cubic millimeter and in the differential count 88 per cent were polymorphonuclear neutrophiles.

During the following two days cough which was only slightly productive, and profuse sweats were the most bothersome symptoms.

On April 21 cough was still present, but there was no sputum. Examination revealed less dullness at the right base and the breath sounds were slightly suppressed.

The temperature, pulse and respiration remained within normal limits after the sixth day post operative.

The patient was discharged from the hospital on May 5. He was last seen on June 3 at which time he had resumed his usual work and did not have any pulmonary symptoms.

Report of X-Ray Plates—

1. April 18, 1925.

The right dome of the diaphragm was markedly elevated. The heart mediastinum and trachea were markedly displaced toward the right. The



FIG. 1

Case No. 1. April 18, 1925. Atelectasis of the right with displacement of heart toward affected side.

ribs on the right were very close together, whereas the inter-spaces on the left were wide. The right lung field showed a diffuse shadow suggesting a consolidation throughout the lung. The left lung was clear.

2. April 28, 1925.

The heart was no longer displaced. General lung radiation on both sides was clear. The diaphragm had resumed its normal level.

Case 2. S. P.—A vigorous young male, aged 26 years, was admitted to the hospital February 10, 1926, complaining of ruptures. The general examination was negative except for bilateral inguinal herniae. There was no history of any recent pulmonary infection.

On February 11 the herniae were repaired under ether anesthesia. Morphine grain 1/6 and atropine grain 1/100 were given as preliminary medication. Neither cyanosis nor an excessive accumulation of mucus were observed during the

*From the Henry Ford Hospital.

operative procedure. The reaction from the anesthetic was uneventful.

At eight o'clock the same evening the patient complained of pain in the left chest. At this time the temperature was 100.2°, pulse 90 and



FIG. 2

Case No. 1. April 28, 1925. Normal chest after recovery.

respirations 34 to the minute. The following morning cough was quite bothersome and was productive of thick muco-purulent sputum. Examination at this time showed that expansion of the left side of the chest was distinctly limited. No cyanosis was present. The cardiac dullness extended 11 centimeters to the left of the midline in the fourth inter-space and to the sternal border on the right. On percussion the right lung was resonant throughout. The left lung was normally resonant except posteriorly where there was marked dullness, extending from the upper interscapular region to the base. On auscultation over the right lung the breath sounds were vesicular. Over the left lung anteriorly and in the upper axilla the breath sounds were exaggerated while over the area of dullness posteriorly there was loud tubular breathing and a few scattered crepitant rales were heard. On February 13th, the white blood cell count was 5500 per cubic millimeter.

On February 15 examination showed the cardiac apex was 10.5 centimeters to the left of the midline and 1 centimeter beyond the nipple line. Cardiac dullness extended 12 centimeters to the left in the fifth inner-space and to the sternal border on the right. The right lung remained clear. Percussion over the left lung anteriorly showed Skodaic resonance and over this area the breath sounds were exaggerated. Posteriorly the percussion note remained dull from the interscapular region to the base. The breath sounds were tubular in character and many subcrepitant and crepitant rales were heard. Bronchophony was present.

The temperature returned to normal on the seventh day and was not elevated thereafter and the patient was discharged from the hospital on March 6, 1926. He was again seen on April 6 up to which time there had been no recurrence of any respiratory symptoms.

X-Ray Reports—

1. (Portable) February 12, 1926.

The heart was considerably displaced to the left. There was some narrowing of the interspaces on this side. There was some increase in density in the left lung field near the hilum, and some haziness over the lower third on this side. The position of the diaphragm was not unusual.

2. February 14, 1926.

There was marked increase in density over the entire left lung field. The heart shadow was



FIG. 3

Case No. 2. February 14, 1926. Atelectasis on left with displacement of heart toward affected side.

markedly displaced to the left. The right lung field was clear except for some haziness at the base.

3. March 1, 1926.

The heart was normal in size and shape. Radia-

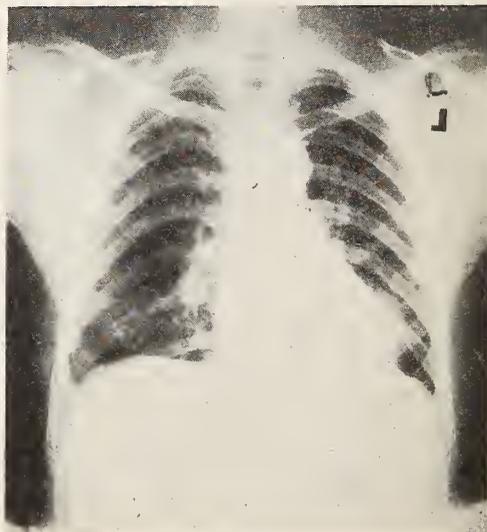


FIG. 4

Case No. 2. March 1, 1926. Normal chest after recovery.

tion through the lung fields was clear. Diaphragm was normal in position.

Case 3. L. M.—A vigorous young male, aged 25 years, entered the hospital March 3, 1926, complaining of bulging in the left inguinal region and in a right rectus scar from a previous appen-

dectomy. There was no history of any recent respiratory infection, but the patient had a chronic morning cough of seven years duration. Examination of the lungs revealed no pathology. A left indirect inguinal hernia and a post operative ventral hernia were observed.

The herniae were repaired under ethylene anesthesia on March 4. There were no untoward symptoms during the period of induction nor during the operation. The reaction from the anesthesia was uneventful. The patient complained of pain in the right chest the same afternoon. Lying on this side gave relief. Coughing began about the same time. During the first 24 hours the temperature gradually rose to 101.8°F. The respiratory rate which previously had been within normal limits, became elevated to 46 per minute. The pulse rate was 90 per minute.

Examination revealed rapid shallow respirations. The cheeks and lips were cyanotic, but the patient did not appear toxic. There was impairment on percussion over the right lower lobe posteriorly, elsewhere the note was normally resonant. On auscultation sibilant and sonorous rales were heard over the impaired area. There was a moderate amount of mucoid sputum which on culture showed pneumococcus, type IV, present. The white blood cell count was 20,500 per cubic millimeter.

Examination of the chest on March 6, revealed only slight changes from the previous findings. The percussion note was impaired over the right base posteriorly and an occasional rale was heard over this area. The voice sounds were not especially altered over the involved lung.

The patient's temperature remained within normal limits after the fourth day post operative and no further pulmonary symptoms developed. He was discharged from the hospital on March 21, 1926.

X-Ray Reports—

1. March 6, 1926.

The diaphragm was slightly elevated. The heart shadow was definitely displaced to the right. The trachea was slightly displaced to the right. At the base of the lung, the diaphragmatic outline was somewhat hazy and there was some mottling and hazing in the lung field. The left lung was clear.

2. March 8, 1926.

The diaphragmatic outline on the right was clear. The heart had practically resumed its normal position. The trachea was in the mid-line. The lung radiation on both sides was clear. There was distinct narrowing of the interspaces on the right side.

Case 4. C. A. G.—A healthy male, aged 30 years was admitted to the hospital April 29, 1926, complaining of hernia. Six months previously he had been troubled with a hacking cough but physical and X-ray examination of the chest revealed no pathology which explained this symptom. General examination on the day of admission showed the lungs were essentially normal. There were bilateral inguinal herniae present.

On April 30 bilateral herniotomy was performed under combined ether and ethylene anesthesia. The preliminary medication consisted of morphine grain 1/6 and atropine grain 1/100 given half an hour before starting the anesthetic. The induction period was quiet and the operation was uneventful. There was no vomiting during the period of reaction.

The maximal temperature during the first 24

hours after operation was 99°F and no unusual symptoms were observed. On the second day post-operative the temperature suddenly rose to 103°F, the pulse rate, which previously had been within normal limits became elevated to 160 per minute, and the respirations rose to 40 per minute. There were severe paroxysm of coughing which was productive of thick, yellow mucoid sputum which on culture showed a type IV pneumococcus.

Examination revealed moderate cyanosis. On percussion the left border of the heart was found to lie nine centimeters from the mid-sternal line in the fifth inter-space. The right border of the heart measured six centimeters from the mid-line in the fourth inter-space. There was marked impairment over the right lower lobe posteriorly. The breath sounds over this area were tubular. No rales were heard. The left lung appeared clear throughout. With this involvement the patient was not toxic. The temperature remained elevated for 48 hours, and thereafter did not go above normal limits. The white blood cell count was 19,700 per cubic millimeter, on second day of collapse.

The chest was again examined on May 11, 1926, at which time the cardiac dullness extended 10¼ centimeters to the left in the fifth inter-space and three centimeters to the right in the fourth inter-space. On percussion the front and sides of the chest were resonant, but there was slight impairment at the extreme right base. No alteration was observed in the percussion note over the left lung posteriorly. On auscultation an occasional sonorous rale was heard over both bases posteriorly. The patient was discharged from the hospital on May 19 at which time healing of the wounds was complete and there was no further pulmonary symptoms.

X-Ray Reports—

1. August 30, 1926.

The heart was normal in size and shape. Trachea was in mid-line. Lung radiation is clear on both sides. The diaphragm is at the normal level.

2. May 3, 1926.

The heart was markedly displaced to the right, as was the trachea. The outline of the diaphragm on this side was obscure, and the interspaces were moderately narrowed. Density having a feathery structure gradually increased toward the base of the right lung field. The plates indicated that the chest was rotated very slightly toward the right.

Case 5. A. M.—A healthy male, aged 42 years, was admitted to the hospital June 3, 1925, complaining of rupture. There was no history of any recent respiratory infection. On examination no pathology was found in the lungs.

Herniotomy was performed on June 4, morphine grain 1/6 and atropine grain 1/100 were given hypodermically as preliminary medication. The operation was uneventful. Neither cyanosis nor excessive accumulation of mucus in the throat were observed during the anesthesia.

Fourteen hours later the temperature was 102°, pulse 100 and respirations 40 to the minute. Examination of the chest at this time revealed no striking findings, however, at the end of 24 hours, the picture was quite typical. The patient lay in bed curled on his right side. The lips were cyanotic. The respiratory rate was 48 to the minute, but there was no distress. There was some cough which was productive of mucopurulent

ent sputum with an occasional streak of blood. Movement of the right side of the chest was quite limited during respiration. Percussion of the left chest showed the note to be hyper-resonant throughout. On the right side the note had a tympanic quality everywhere anteriorly except for an area bounded by the third rib in front, the sternal border, and a line drawn from the apex of the axilla to the apex of the epigastrium, practically the limits of the middle lobe. On auscultation the breath sounds over the left lung were vesicular. The breath sounds over the dull area above described were distant and perhaps expiration was a trifle prolonged. The left cardiac border was $8\frac{1}{2}$ centimeters to the left of the mid-sternal line. The white blood count was 16,000 per cubic millimeter.

One June 10, the sixth day post operative, the patient continued to complain of cough, which was still productive of muco-purulent sputum. At this time there was an increase of resonance over the front of the right chest. The breath sounds were better than formerly. Over the back on the right side there was some impairment of the percussion note below the angle of the scapula. Breath sounds over this area were distant and a few subcrepitant rales were audible. At the left base posteriorly the percussion note was resonant but a few scattered subcrepitant rales were heard.

The patient was discharged from the hospital on June 19, at which time the chest was clear.

X-Ray Reports—

1. June 5, 1925.

The right dome of the diaphragm was high. The trachea was definitely displaced to the right. A mottled shadow appeared in the right lung which occupied the majority of the upper and middle lobes. The lower lung field was clear. The left lung showed clear radiation. The heart was not appreciably displaced.

2. June 11, 1925.

The lung radiation on the right was clear except for some increase in density about the region of the hilum. The heart appeared to be slightly displaced to the right. The diaphragm on the right was still a little high. The left side was clear.

3. June 19, 1925.

The heart was in normal position as well as the trachea. Both lungs were clear. The diaphragm was at the normal level.

Case 6 J. M.—A healthy male aged 35 years, entered the hospital July 14, 1926, complaining of rupture. There was no history of any recent respiratory infection, but on examination the tonsils were large and cryptic. There were bilateral indirect inguinal herniae.

Plastic operation was performed on both sides on July 15, morphine grain $\frac{1}{6}$ and atropine grain $\frac{1}{100}$ were given as preliminary medication and ethylene was used throughout for anesthesia. The operation was uneventful, the induction was quiet, neither cyanosis nor excessive accumulation of mucus was observed. There was no vomiting during the period of reaction.

The following morning the patient complained of mucus in his throat which could not be raised upon coughing. The temperature rose to 102° , pulse was 116, and respirations 28 to the minute. Examination of the chest revealed impairment upon percussion over the right base posteriorly. The breath sounds were poorly transmitted over

this area and many sonorous sibilant and sticky moist rales were heard. The findings in the left chest were essentially normal. The relative cardiac dullness extended about eight centimeters to the left in the fifth inter-space and three centimeters to the right. The white blood cell count was 18,850 per cubic millimeter.

Cough persisted for three days and was productive of a mucopurulent sputum, which on culture showed a pneumococcus, type IV, present. There were no other symptoms. The temperature gradually became lower and remained normal after the sixth day post operative. The patient was discharged from the hospital on July 30, the fifteenth day post-operative.

X-Ray Reports—

1. July 17, 1926.

The right side of the diaphragm was very high. There was a heavy fuzzy shadow at the base of the right lung. The heart was very distinctly displaced to the right, as was also the bifurcation of the trachea. The left lung was clear.

2. July 20, 1926.

The diaphragm had returned to its normal position. The area of consolidation on the right base had largely cleared. The heart and trachea were in normal position.

Case 7. A. K.—A robust factory worker, male, aged 41 years, was admitted to the hospital November 1, 1926 complaining of bilateral inguinal hernia. He had not had any recent respiratory infection, and physical examination prior to operation revealed essentially normal findings. On November 2 bilateral herniotomy was performed under combined ether and ethylene anesthesia. One-half hour previously he had been given $\frac{1}{6}$ grain morphine and $\frac{1}{100}$ grain atropine hypodermically. The anesthetic was well taken and he reacted well after it. The following day the patient complained of some pain over the upper anterior portion of the chest. His temperature rose to 102.4° , the pulse to 104, and respirations to 30. Cough and expectoration of tenacious mucopurulent material developed. Slight cyanosis of lips, nails, and ears was noted. The cardiac apex impulse was palpable $13\frac{1}{2}$ centimeters to the left of the midsternal line in the fifth inter-space. The right cardiac border did not extend beyond the right border of the sternum by percussion. Impairment on percussion was noted over the left lung posteriorly about the angle of the scapula, breath sounds here being of a faint tubular quality, an occasional subcrepitant rale being heard. A few rhonchi were heard over both lungs. The leucocyte count was 11,200 with a polymorphonuclear per cent of 86.

The chest was again examined on November 5. At this time considerable improvement was manifest and general condition, cough being less, impairment on percussion was still present over the left lower lobe, breath sounds were distant, and no rales were heard. The apex beat of the heart was now palpable $12\frac{1}{4}$ centimeters to the left of the mid-line in the fifth interspace. Convalescence from this point on was uneventful, and the abnormal physical signs in the chest gradually disappeared.

X-Ray Reports—

1. November 4, 1926.

The heart was definitely displaced toward the left. The hilus shadows were rather heavy on both sides. In the lower portion of the left lung

field there was considerable increase in density. Slight old infiltration of the apices was noted.

2. November 16, 1926.

The heart was again in normal position. Some slight infiltration was apparent in both apices, but the lower lung fields were quite clear.

CLINICAL FINDINGS

In our patients, all of whom were males, the onset was rather abrupt, occurring within 24 hours after an abdominal operation. The onset was signalized usually by cough and the presence of mucus in the trachea and bronchi, and in about half of the patients, pain in the chest was complained of. Expectoration was mucopurulent in type.

The temperature rose abruptly to 100 or 104. Pulse rates ranged from 90 to 160, and respiratory rates were usually around 40 per minute. The leucocyte count during the first two days of the process averaged 16,770 per cubic millimeter, the per cent of polymorphonuclear neutrophils was 80.

On inspection certain features were striking. The patient lay curled upon the affected side breathing rapidly. Limited excursion of this side was generally noted. Moderate cyanosis was present in the majority of cases, but evidences of intoxication were lacking. A dull note was found usually on percussion, over the right lower lobe, although in one case the right upper and middle lobes were involved, and in one the entire left lung was involved. The breath sounds over the atelectatic area of the lung were of tubular quality in three cases and described as distant in four. Sonorous and sibilant rales were generally heard, occasionally subcrepitan rales.

Serial X-ray plates of the chest were of the greatest assistance in establishing the diagnosis—showing the displacement of the heart toward the side of pulmonary consolidation and demonstrating the high position of the diaphragm on this side—a point which is difficult to clearly establish on physical examination. Quite characteristically the splinting and retraction of the affected side were demonstrated by a narrowing of the inter-spaces on this side and a tendency for the thoracic spine to present a slight concavity in this direction. It has seemed of value to be able to compare such X-ray plates of the chest with plates taken previous, or subsequent to operation, when the chest findings were normal.

CLINICAL COURSE

In our uncomplicated cases the respiratory manifestations were very outspoken

for only three or four days. The first two days were marked by a sharp rise in temperature, pulse, and respirations—the temperature generally remaining normal after the sixth day.

All of our patients recovered, as has been the outcome in practically all of the reported cases.

It is apparent that in the cases here presented and in those reported by other authors, the X-ray findings were indispensable in proving the diagnosis. Practically all reports have been those in which the amount of atelectasis was gross enough to produce displacement of mediastinal contents toward the affected side, and elevation of the diaphragm on this side. It seems very reasonable to believe that minor grades of atelectasis may occur that possess similar clinical features, but in which the radiological findings are less striking—perhaps limited to elevation of the diaphragm on the affected side, and a smaller area of increased density in the pulmonary field. We have encountered several cases of this type where atelectasis has been strongly suspected but could not be definitely diagnosed because of the lack of sufficiently gross changes to produce a clear shift in the position of the heart and mediastinum.

The cases presented give no additional information in regard to the mechanism of production of post operative pulmonary atelectasis. But Jackson and Lee³ have offered a certain convincing evidence supporting the theory that this condition is chiefly due to the absorption of imprisoned air distal to a mucous plug in a major bronchus. They were able to demonstrate by bronchoscopy the occlusion of a large bronchus with mucus. The aspiration of this mucus resulted in an immediate reaeration of the atelectatic area. The other factor in the production of the condition which all admit has been that of limited diaphragmatic excursion which follows abdominal operative procedures.

SUMMARY

The records of seven patients who were shown to have post operative pulmonary atelectasis have been presented. The clinical course of these patients has followed the usual rule of a sharp onset within 24 or 48 hours after an abdominal operation, with a few days of decided thermal reaction, tachypnoea, and tachycardia; the patients showing slight cyanosis, and unilateral pulmonary consolidation, with displacement of the heart toward the affected side. Prompt recovery

took place in all. The course was rapid in evolution and was entirely unlike either lobar or bronchopneumonia. The constitutional reaction of the patient did not parallel the extent of involvement of lung tissue.

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WORD BLINDNESS: DIFFICULTY IN READING IN SCHOOL CHILDREN

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The interesting subject of word blindness has recently received considerable attention in medical literature and the effort expended thereon is valuable because it involves prevention of the misunderstanding of certain individuals who have difficulty in reading. The endeavor to scientifically interpret cases of the various degrees of word blindness by the physician would be of great value to the teacher and parents in their attempts to teach the child reading. This paper is but a preliminary effort in an attempt to add a slight bit of information to the slowly accumulating knowledge concerning the subject, and in so doing, we have not only dealt briefly with word blindness but with mirror writing, left handedness and associated speech disturbances as well.

The study of word blindness began with Sir William Broadbent, in 1872, who called attention to cases associated with aphasia. However, according to a recent text on the subject by Hinshelwood, Kussmaul, in 1877, was the first to recognize word blindness as an isolated symptom. Hinshelwood states further that the term word blindness has been used loosely by some and that this has not only given rise to differences of opinion, but confusion. To quote Kussmaul: "By the term word blindness is meant a condition in which, with normal vision, and therefore seeing the letters and words distinctly, the individual is no longer able to *interpret* written or printed language. With a clear understanding of this definition there is nothing misleading about the term, which I think has now become permanently fixed in our medical vocabulary." Hinshelwood quotes cases to show that the condition is based on definite pathology in the visual

area serving for memory of words and letters.

Orton claims that Hinshelwood's theory is "out of harmony" with the more modern conception of cortex function. Orton in support of his ideas quotes Marie who, in 1922, "called attention to the fact that an infant with right hemiplegia never presents aphasia, and he believes that the temporal region, the gyrus angularis and the surrounding zone are not in any sense preformed centers for language, but brain structures adopted by training to that function.

S. E. Henschen (Brain, Vol. xllx—Part 1) in a recent article on "The Function of the Right Hemisphere of the Brain in Relation to the Left in Speech, Music and Calculation," draws certain conclusions which are worth repeating. He states: (1) That the right hemisphere can best act as a substitute for the left in the hearing and speaking of words. (2) That this capacity of the right hemisphere is less developed as regards reading and especially writing, that is, the higher faculties which are acquired only by education in the civilized nations. (3) That the musical faculty is phylogenetically as well as ontogenetically older than speech and its representation is more uniformly distributed over both hemispheres. Consequently, the right hemisphere can more fully take over the musical function of the left hemisphere when it is damaged than in the case of speech.

In quadrupeds both hemispheres probably have equal and similar functions and are developed to the same degree; it is only in man and perhaps in the erect walking anthropoids that the right arm is developed to a special organ for more complicated acts. This fact appears to indicate the general law that bilaterally gifted animals attain a higher degree of development of the one side only at the cost of reduced faculties of the other side.

The question therefore arises if the right hemisphere is a regressing organ, or if in the right half of the brain there are large cortical fields capable of being educated by training, and reserved for future higher development and possibly for new faculties.

Gordon (Gordon, Hugh: Brain 43:3, 1920) in a study of children in the school for "defectives" in London and Middlesex found that the percentage of left handed children was much higher in these institutions than in the ordinary elementary schools. They averaged 18.7 per cent, or two and a half times as high as in the elementary schools. He also found that 8 per cent of a total of 1,350 were mirror writers, and he offers the hypothesis that something has occurred which has interfered with the proper functioning of the dominant hemisphere.

Sereni states that mirror writing with the left hand is an expression of the symmetry of the build of the body and is illustrated by the fact that any innervation of the muscles of the left hand will give a motion exactly opposite to that resulting from the comparable innervation applied on the right. (Sereni, Enrico; Rev. di psicologia 19:135, 1923.)

Fildes and Myers (L. G. Fildes and C. S. Myers: Brit. J. Psychol. 12:3, 1921) conclude after their study of a six year old child who was left-

handed, and had begun to stutter on being taught to write with the right hand, that a child's early visual experience is probably little concerned with the absolute position of seen objects. His attention is first drawn to form and his powers of recognition are not gravely disturbed whether that form once learned be represented in the ordinary or reversed or inverted position.

Parson (Parson, Blaufort Sims: Left handedness, New York, The MacMillan Co., 1924) claims that the "handedness" of an individual depends on ocular dominance (the eye used in fixation) and that ocular dominance determines cerebral dominance.

It is an established fact that mirror writing and left handedness have a frequent association in children who are known to be retarded in their progress in school-work. Samuel T. Orton ("Word blindness" in school children. Arch. of Neur. and Psych. Vol. 14, No. 5. November, 1925) has recently published an article on "Word Blindness in Children" calling attention to the above. His material was gathered from children presented for examination who were considered as defective or "who were retarded or failing in their schoolwork." Psychometric readings were taken in 84 of these cases which did not agree closely with teachers' estimates of the children's abilities. These figures are not only interesting but instructive when one considers the possible benefit these cases might receive by more thorough study. The Stanford-Binet test was used and the results obtained were as follows:

PSYCHOMETRIC RATINGS OF 84 DEFICIENT STUDENTS

Very superior intelligence.....	120 or over.....	1
Superior intelligence.....	110 to 119.....	0
Average intelligence.....	90 to 109.....	31
Dull normal intelligence.....	80 to 89.....	20
Marginal defective.....	70 to 79.....	18
Moron.....	50 to 69.....	13
Imbecile.....	25 to 49.....	1
Total.....		84

Fifteen of this group had difficulty in reading and their intelligence quotient ranged from 70 to 122, and averaged 92. Two of the cases had progressed to the 9th grade in school and their disability, as Orton states, "was so extreme as to warrant their inclusion in the group of cases described by Hinshelwood under the name of congenital word blindness."

The two cases which were studied by Orton in great detail not only suffered from rather marked degrees of word blindness, but both could mirror write and mirror read and were left handed. In mirror writing, the individual, while holding the pen in the left hand, starts at the right side of the page and progresses toward the left, at the same time writing a

script which is a reverse image and is read easily by holding it before a mirror. As well as the reversal of form in writing, one of his interesting cases wrote at the same time an inverted image. When copying a certain written passage, one of these cases did very well as far as reproduction was concerned, but had practically no conception of what he had copied. However, by spelling out each letter in the words these individuals are sometimes able to gain partial understanding of what they have read. They have thus appealed to their auditory memory. One can readily see that in training these difficult cases in reading, it would be quite essential to make use of and train auditory memory as well as the visual and their sense of touch. The latter has been done by supplying them with raised or blocked letters. Authorities are not quite agreed as to the best method of training in reading, but in the main there are at least two opinions. One is to train the child by the "look and say" method, where the child recognizes the word as a whole rather than the individual letters or syllables composing it. The other method is to teach the individual letters and build up the words from the memory of them. Of course, it must be remembered that little will be accomplished if the child is generally mentally defective, but much may be accomplished if the defect is limited to the visual memory only.

This whole question of word blindness in various degrees, mirror writing, and left handedness is but a part of the important and often discussed subject of aphasia. In the most recent and comprehensive study of that subject by Henry Head in 1920, he proposes to drop such terms as aphasia, alexia, and agraphia and resume the fundamental ideas as proposed by Hughlings Jackson in 1868. The latter "protested against the idea that there was a 'faculty' of speech that could be destroyed by a cerebral lesion. These defects must be considered, he maintained, on the psychical side as defects of the mind and on the physical side as defects of the nervous system." In the discussion of the above paper by Head, S. A. K. Wilson said: "At the same time, I do not see that the 'new' types, so-called, in anyway run counter to the hitherto accepted and familiar sub-divisions." Parsons, a psychologist, maintains that the "neurologists most interested in the subject naturally view it from the anatomical and physiological standpoint, rather than from the psy-

chological, owing to their training and clinical experience."

CASE REPORT

I have recently had under observation a patient who was a mirror writer and left handed and who was slow in her school work, partially because of her difficulty in reading and writing. Her history and examination are as follows:

A. M., female, age 14. High school student, came to the clinic complaining of "spells of unconsciousness."

Family History—Father living and well. Age 60. Mother living and well. Age 51. One brother and three sisters all living and well. One sister died in infancy of dysentery. There was no epilepsy, chorea, migraine, insanity, "nervous breakdowns," tuberculosis, cancer, diabetes, kidney or heart disease in the family.

Past History—She is the youngest child of the family. Was full term, born with instruments. There was considerable trauma to the head, so that it had to be wrapped in cotton for a number of days following the birth and there was also a history of a spasm shortly after birth. She was breast fed, and had intestinal troubles. She had measles, whooping - cough, chicken - pox and mumps, but was never delirious or had any brain symptoms with any of them. Has had occasional sore throats. No serious head injuries.

Menstrual History—Began at 13, and she has been irregular except for a period from January, 1925, to August, 1925. At times her periods last from two to ten days.

Present Trouble—Her first convulsive attack occurred at night in March, 1922, and all of the succeeding attacks up until August, 1922, were nocturnal. The convulsions are generalized. She froths, and bites her tongue, and at times has had involuntaries. Has fallen and injured herself in several of the spells. When she slips in walking or any sudden moving object comes up on the right side of her body, that is appearing in the field of vision of the right eye, she believes it predisposes toward an attack. In the attack her eyes and head usually move toward the right and the right arm will begin to jerk before the rest of her body. The first neurological examination was as recorded:

Patient normal size and weight, and answered questions promptly and intelligently. She was not emotionally disturbed. No hallucinations or delusions. Memory and speech are normal. Gait and station, normal with eyes open or closed. No atrophies or deformities. Hair, skin and nails normal. No tremors. No ataxia. The parents, at this point, volunteered the information that she wrote left handed and as a child had a tendency to spell words backward, and to start writing at the right side of the page.

Cranial Nerves—There was no facial asymmetry or paralysis. She protruded the tongue straight and the tongue movements were normal. Jaw movements normal. Palpebral fissures were equal, and the pupils were equal, round and symmetrical. They reacted promptly to light and accommodation, and in consensual reflex.

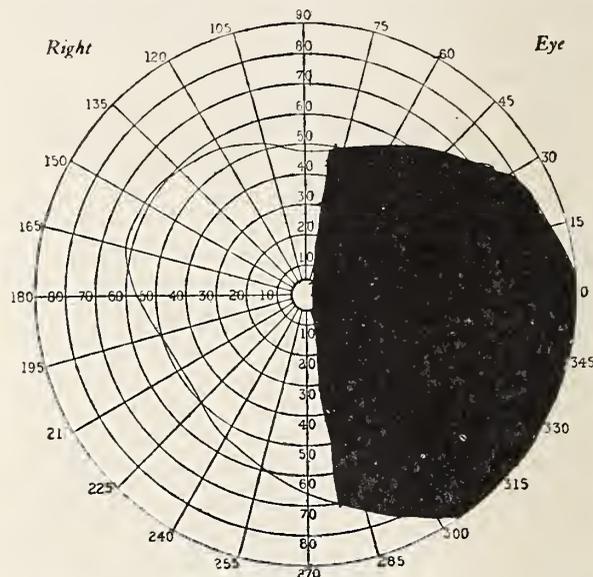
Deep Reflexes—All present, equal and prompt. There was no Babinski. No clonus.

Sensation—There was no change from normal in sensation to pin-point, light touch, vibration, or motion and position.

Her physical examination was entirely within range of normal. It was noticed that the scapulae were scaphoid.

She was referred to the department of ear, nose and throat, and the only pathological finding was "chronic tonsillitis."

The eye department reported her visual acuity as 6/15 in the right eye and 6/5 in the left. The fields showed a temporal scotoma in the right eye and the left was normal. The fundi were negative.

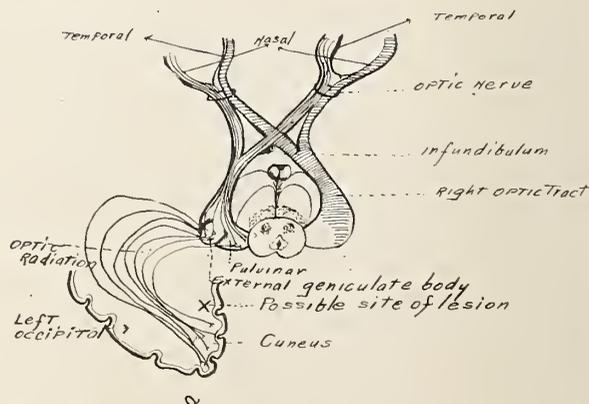


Temporal hemianopsia in the right field of vision, which was consistently found in several examinations.

The X-ray of the cranium was as follows: "Stereo films of the head show a slight deepening of the convolutional impressions, but otherwise negative. The sella is large but within normal limits and shows no bone erosion. The cervical spine are also negative."

Gastro-Intestinal X-ray—Barium meal showed no deformity of the stomach or cap. There was no six hour retention. Greater curvature slightly below the anterior-superior spine. Twenty-four hour progress was also normal, with a marked spasticity of the entire colon. Appendix was visualized, but was not definitely tender.

Laboratory Work—The urine and blood showed no changes from normal, and the Wassermann was negative.

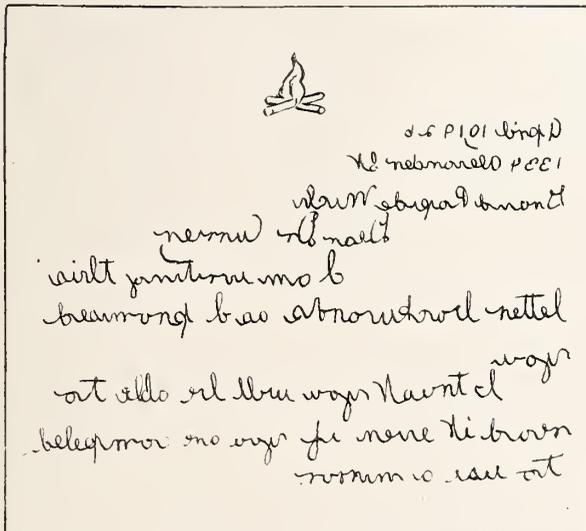


The patient returned about six months later than the date of her first entrance. The fields and fundi were again examined and found to correspond exactly to the first examination. The defect in the right field of vision amounts to a

temporal hemianopsia for large objects and covers the right (entire) field for small objects. The absence of any changes in the fundi places the lesion somewhere in the optic radiation and back of the optic nerve nuclei. It is more than likely located in the gyrus cuneus on the mesial surface of the left occipital lobe and we know, moreover, that the whole optic radiation on that side is not involved, else there would be a nasal hemianopsia in the field of vision of the left eye.

The patient gave further history on her second visit of having failed a grade in school on account of her difficulty in reading and writing. When in the lower grades, she would write from right to left and the teacher would sometimes hold a page of the text book up to the light and reverse the image in order for her to read. She had a marked tendency to mispronounce words such as window-sill and call it "sindow-will," showing again a tendency toward the reversal of the visual image of the letters in the words. Her father states that her arithmetic was always difficult for her because she had trouble in interpreting the problem when reading it herself, but if he read it to her, she "got along all right." When in the office, she showed herself proficient in reading the mirror image of written words.

The following is a letter written with her left hand. This letter can be easily read holding it before a mirror.



She was referred to the assistant supervisor of special classes at Junior College, (Miss Emma E. Dennison), who gave her the several intelligence tests and the results were as follows:

First we gave the Binet test. Result: C.A. 15-5, M.A. 11-7, I.Q. 75.

Second, the Pintner Patterson Performance test which requires no use of language. Result: C.A. 15-5, M.A. 11-5, I.Q. 71.

Third, a National Intelligence test, a group of five tests. Subject is given directions for each test, then allowed a certain length of time on each test; one is arithmetic, others are sentence completion tests, true or false tests, etc. Result: C.A. 15-5, M.A. 12-2, I.Q. 79.

Fourth, Thorndike-McCall Reading Scale for the Understanding of Sentences. This test consists of a series of paragraphs with questions under each. Subject can re-read the paragraph as many times as they wish to answer the questions. Thirty minutes is allowed. Alice finished in twenty-five minutes. Result of this test would

give her a reading quotient of 90. This is low average and shows ability of about 12-year-old.

This case is interesting in that it is a striking example of the difficulty that certain children have in reading and writing and whose difficulty is based on organic brain lesions. Attempts to teach some of those cases to write right handed might easily, and very often does cause such speech defects as stuttering and stammering, although this particular case was spared in that respect. It is more or less natural consequence for a teacher to misunderstand the reason for the apparent stupidity in reading and writing of a child belonging to this class and on the other hand perfectly natural for the child to either resent the criticisms of the teacher and perhaps the family, and assume either a negativistic attitude or one of inferiority or both. Orton suggests that the proper method of teaching these individuals "would be that of extremely thorough repetitive drill on the fundamentals of phonic association with letter forms, both visually presented and reproduced in writing, until the correct associations were built up and the permanent elision of the reversed images and reversals in direction was assured." However, there are those who disagree with him and favor the method of teaching wherein the child learns to recognize the word as a whole rather than a composite group of so many letters.

There seems to be no decided justification for the opinion that either side of the brain is a preformed area for either speech, reading or writing, music or calculation. However, one must make a mental reservation in consideration of the oft quoted work of Pavlov who in four generations trained animals to answer a bell in call for food, reducing the number of times from 300 in the first generation to 10 in the fourth, before they would complete the reflex act. As Marie has pointed out, children suffering early in infancy with a right hemiplegia do not develop an aphasia. Moreover, when an infant begins to use its hands as in reaching for objects, the motor co-ordination is equally as good on the right side as the left. The child's playthings are at once naturally placed in the right hand by the parents, and all imitated movements tend toward the dominance of the use of the right side of the body and the left cerebral hemisphere. By the time the child has reached school age, it has already acquired speech and either right or left handedness, usually the

former. In case there has been a congenital or an acquired defect of the left cerebral hemisphere, or a defect in vision sufficient to interfere with the right eye as being the fixing eye, then one can quite reasonably propose these defects as the basis of the interference of normal associative processes between speech, reading and writing. The use of the left hand and the ability to mirror write as well as to mirror read are all, as Sereni (Sereni, Enrico: *Rev. di psicologia* 19:135, 1923) has pointed out, an expression of the symmetry of build of the body. "This is obvious," as he states, "when we consider that, so far as the motio mechanisms are concerned, any innervation of the muscles of the left hand will give a motion exactly opposite to that resulting from the comparable innervation applied on the right." However, as Orton has said, "This does not take into account the sensory images which serve the pattern for writing from memory." One wonders at this point, if there is not a stronger impression on the reversed image in the right side of the brain as well as a stronger association for the reversal of movements due to the injury of the left cerebral hemisphere and the difficulty thereby in the memory for the normal image as well as normal associated movement.

It is the opinion of the writer that neurological diagnosis has not developed as yet to the point where we can in all cases discern the cerebral lesion which might produce a tendency toward mirror writing, and left handedness. Our case shows the value of taking visual fields as fundus examinations and no mention has been made in other papers of the procedure as a part of their routine in examination of these cases. The case is also unusual in that it strongly suggests the possibility of a localized area in the visual cortex for the nasal half of one retina and another for the temporal half. This, to my knowledge, has not as yet been proven. Brouwers' recent work on the primary optic centers, carried on by biological methods, suggests the possibility of determining the true representations, in the cortex, of the optic radiations.

THE ORAL ADMINISTRATION OF GLUCOSE

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The intravenous administration of glucose has been familiar to the medical pro-

fession for a long time. While indisposed a few months ago, the physician who attended me suggested the administration of glucose by mouth as a means of nutrition, as making the least possible demands in the way of digestion and absorption upon the impaired alimentary tract. I have since looked up the literature on the subject of the oral use of glucose and summarize the findings so far as I am able to obtain them in the literature. The London *Lancet* of February 28th, 1925 contains an article entitled "The Oral Administration of Large Quantities of Glucose and Its Therapeutic Uses", by Bennet and Dodds, Middlesex hospital, London, England. Bennett is assistant physician as well as assistant professor of physiology, Middlesex hospital, and Dodds is lecturer in biochemistry and chemical pathologist to the same institution.

The glucose used is the ordinary commercial variety which may be purchased at any factory where candy is manufactured. The ingredients of the mixture are as follows: Commercial glucose, one pound, water one quart, and two lemons. The glucose is dissolved by stirring into one quart of boiling water. The juice of the two lemons is added and the mixture is boiled for five minutes. This gives us a lemonade, or the glucose solution may be flavored by adding the juice of half an orange to a tumbler. Fruit juices of various kinds also may be used to flavor. A person may drink daily over a pound of glucose prepared in this way. The commercial glucose is a by-product in the manufacture of starch. There are other forms of glucose, the crystalline and amorphous forms presumed to be chemically pure, but the commercial variety which is in the form of a viscous or semi-solid substance has the advantage of cheapness when used in large quantities. About the only contra-indication to the uses of glucose in this way would be a pathological glycosuria.

It is well known that carbo-hydrates taken into the body are changed into glucose before they can be utilized by the tissues. When glucose is absorbed it is immediately used up or if ingested in excess of the power of the body to absorb it, it is stored up as glycogen. The ultimate end products of glucose metabolism are water and CO₂, so that in any quantity taken no strain is put upon the organs of excretion; hence its value in the dietetic management of renal insufficiency.

The article referred to in the London *Lancet* is summarized as follows:

1. Commercial glucose is a substance which allows large quantities of glucose to be administered in palatable form at low cost.

2. Its exact chemical composition is difficult to determine, but it is shown to contain arsenic in negligible traces only and to have a calorie-value of about 1000 large calories per pound.

3. Normal persons can assimilate quantities of 200-522 g. in one dose without passing more than a trace of sugar in the urine.

4. The main effect on subjects who took 500 g. in this manner were (a) diuresis, (b) a rise in blood sugar not greater than what occurs after a normal meal, (c) no change in the respiratory quotient, and (d) a marked hypnotic effect in two cases.

5. Large quantities of sugar taken in this manner appear to be detained and diluted in the stomach.

6. There is evidence of dilution of blood during such experiments.

7. Large quantities of glucose have been added to the diet as a therapeutic measure in many clinical cases, particularly in (a) acute infections; and (b) cases with marked under nutrition. Distinct benefit appears to have resulted and no ill-effects have been observed. In some of these cases the glucose administration was accompanied by small doses of insulin.

Among the indications for the oral administration of glucose in addition to renal disease already mentioned is severe pneumonia, when digestion is at a standstill. In these cases glucose is easily absorbed and may keep the patient going until the lysis or crisis is reached.

It is needless to say it is also useful in those diseases in which loss of weight and emaciation are the most prominent symptoms. There are numerous groups of diseases of the alimentary tract in which under-nutrition is the outstanding feature, loss of weight has probably aggravated the symptoms by absorption of the abdominal fat.

Its use is suggested as a dietary adjunct in the after treatment of gastric or duodenal ulcer particularly where hemorrhage has been a complication; inasmuch as the glucose is in complete solution it causes very little motor response from the stomach in its passage into the intestines.

Parenthetically I might say that in a recent voyage across the Atlantic the ship physician on one of the Canadian trans-Atlantic steamships, told me that he used glucose quite freely in cases of sea-sickness. His explanation was that the labyrinthine disturbance caused by the motion of the boat producing a deficiency in blood sugar which was responsible for the disagreeable symptoms associated with sea-sickness. The labyrinthine condition could not be affected directly by ordinary therapeutic measures so that his method was to make up for the sugar deficiency which

was the direct and immediate cause of symptoms, by the administration of glucose which he gave in dram doses of the amorphous form. I pass on his method and suggestion to any one contemplating an ocean voyage.

Detailed information and comment on the oral administration of glucose will be found in articles named in the following bibliography:

- (1) Bennett, T. Izod, "The Therapeutic Uses of Carbohydrate Diets," *Lancet*, July 5, 1924, p. 6. (2) Idem, "The Oral Administration of Large Quantities of Glucose," *Lancet*, February 28, 1925, p. 429. (3) Cathcart, W. R., "What is Glucose?" *Therapeutic Gazette*, August, 1924, p. 540. (4) Taylor and Hulton, *Jour. Biolog. Chemistry*, 1916, xxv, 173. (5) Woodyatt, Sansum and Wilder, *Jour. Amer. Med. Ass.*, 1915, lxxv, 2067. (6) Cori, Carl F., *Jour. Biolog. Chemistry*, December, 1925, lxxvi, 691. (7) Idem, p. 713. (8) Talbot, F. B., *Boston Med. & Surg. Jour.*, 1925, p. 1000. (9) Rudolph, *The Can. Med. Ass. Jour.*, July, 1926.

THYROID GLAND DISEASES WITH RADIUM TREATMENT IN THYROTOXICOSIS*

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The thyroid gland, with its distinctive function in the group of ductless or endocrine glands, has awakened an intensive interest among research workers in preventive medicine, as well as those interested in the control of the many pathological conditions it is heir to.

The dysfunctioning type and enlargements of the thyroid gland can be grouped as follows:

1. HYPOTHYROIDISM.
 - (a) Cretinism.
 - (b) Myxedema.
2. HYPERTHYROIDISM.
 - (a) Thyrotoxic adenoma with or without exophthalmos.
 - (b) Exophthalmic goiter.
3. NONTOXIC ENLARGEMENTS.
 - (a) Adenomas—nontoxic.
 - (b) Adolescent goiter.
 - (c) Colloid goiter.
 - (d) Functional enlargement (simple).

As we are to discuss the treatment of the toxic type of the thyroid gland dysfunction, it is well to deliberate somewhat on the nontoxic enlargements, for differential purposes.

With the exception of the primary exophthalmic activity, there is always a noticeable enlargement of the thyroid gland. The gland may or may not be noticeably

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enlarged in the exophthalmic type, yet an X-ray shadow often shows a substernal proliferation or an enlarged thymus gland. The histological study of the thyroid gland, with its abundant blood supply, nerve control, location and physiological function, is so important that the discussion of disease or dysfunction will lead to the question of immunity, brain cerebration, heat control, and, in fact, the regulation of metabolism.

Granting that a simple enlargement with a slight activity is caused by a sudden demand for the gland hormone to combat an infection, until an acquired immunity is established, or again, that the infection has a specificity to cause an activity of the glandular cells, should the demand be repeated or become continuous, and if there was a lack of the element iodine to hold the balance, the simple compensatory enlargement would be stimulated by the rich blood supply to a hyperplasia of glandular tissue, which eventually could become a hypertrophy with cystic formation. The more or less chronic enlargement denotes the passing of a functional physiological activity to a pathological condition. The compensatory effort may strike a balance and hold in reserve sufficient quantities of split-up iodine product to form thyroxin and stabilize the activity, but leaves the gland permanently enlarged.

The evidence of iodine insufficiency as a factor in the activity of the thyroid gland is so conclusive at present that the element is given to persons predisposed as a prophylactic measure against hyperactivity. Whether the calcium content of the blood with the low iodine intake in individuals of certain localities is another factor, time and research will reveal.

The inferior sympathetic cervical ganglia plays such an important part in the control and distribution of impulses to the heart, blood vessels, vasomotor nerves of the upper trunk which are connected with those of the lower extremities, also the voluntary and involuntary muscles, that it has to be considered when you investigate the many symptoms in hyperthyroidism. Disturbances or irritation of the ganglia may result from (a) pressure due to enlargement of the thyroid gland; (b) increase in the diameter of the inferior thyroid artery; (c) infection in the neck or pharyngeal region; (d) toxins showing an affinity for the thyroid circulation; (e) general disturbances of the sympathetic nervous system from toxins, faulty diet, emotional states, etc.

Lack of iodine as the primary cause of a simple activity, in a functional emergency to hasten the manufacture of thyroxin, will so unbalance metabolism that clinical evidence of disease is manifest. The first subjective symptom of hyperfunction is rapidity of heart action with exercise, during digestion, and during the menstrual period in females. General fatigue follows as a close second symptom and may be caused by the toxemia, tachycardia or faulty metabolism. The objective manifestations are enlargement of the thyroid gland, tubular breathing, pulsation in neck and tremor of hands and fingers on extension. The progressive type shows other well known clinical symptoms, as exophthalmos, facial expression of anxiety, skin rashes, profuse sweating, pruritis, choking sensation and fever; nutritional evidence, as loss of hair, striation of nails and gradual loss of weight. Diarrhoea and a low sugar toleration with an acidosis are often sequelae. Confirmation of hyperactivation of the thyroid gland, after the above symptoms have been interpreted, can be obtained by a metabolic test.

Blood and urine examinations reveal diseases, while bacterial differentiation of excreta prove existing conditions, but with metabolism as a laboratory aid, it not only proves the existence of disease but gives an estimate of the extent or degree of activity. The last factor has a clinical importance in the treatment of hyperthyroidism, for it teaches that a metabolism of a plus 60 to 80 is more grave as to prognosis than one of plus 10 or 20. Furthermore, metabolic estimation is of utmost importance in the follow up results after any method of treatment. Experience and clinical results should be the guide in recommending therapy for any of our human ailments. Criticism and prejudice of any single method of attack should be left with the last century. Our early teaching of surgery alone in goiter and other conditions as the only remedy after medicine has failed, has done much to frighten the laity to postpone interviews with the regular men and caused them to seek cults without any scruples whatsoever. In reporting 400 cases of toxic goiter treated with radium in over six years, it gives some personal gratification to know that very few patients were dissatisfied, none died as a result of the treatment, but five died in spite of it. All of these five died within two months following the treatment; two lived a week, another three weeks,—much too short a time

to receive any benefit from the radium. With one exception (which was moribund) all cases seeking relief were treated. The two cases that lived only a week were both toxic to the extent of psychosis, were hilarious, maniacal, suspicious, and refused nourishment in any form. One case lived seven weeks and developed icterus. The liver at autopsy was four inches below the costal margin. Seven cases, to my knowledge, have had thyroidectomies done after the toxic symptoms have abated, to remove the large adenoma. One of the cases died a few hours after operation, from cerebral embolus. I have learned of two cases that have had relapses of former symptoms.

Reduction in the size of a large adenoma after treatment is in direct proportion to the amount of hypertrophy and firm fibrous tissue present. The soft cystic type, with increased glandular and lymphoid tissue, decreases following radium treatment, but the hard nodular ones do not respond. The firm nodules are fibrous tissue, the result of an organized blood clot within the colloidal cyst.

Clinical judgment in the use of radium for toxic goiter is of foremost importance in all cases. It is a serious error to use too small an amount on the assumption that the same results are attainable from a long exposure with a small amount as would occur from a short application of a large one. The size of the gland, amount of subcutaneous fat and condition of the patient, should be the guide as to the amount of radium, but use at least 100 milligrams.

There is a temporary alleviation of symptoms for about two weeks following the treatment, but with the reaction they all return, so that other symptomatic relief may be necessary for a time. An ice collar will control the blood supply, and sedatives of bromide by mouth or in suppositories will alleviate the nervous condition. Alkaline baths relieve the pruritis and sweating, while alkalies internally will help the nausea and prevent the acidosis.

Convalescence is slow, but progress is noted after the reaction period. The metabolic rate is increased for the first few weeks, but many cases show a normal metabolism in six months. The tachycardia is the last symptom to respond but much depends on the question of endocardial changes, often due to a long standing toxemia.

The rapid control of the toxic symptoms after radium treatment would support a

hypothesis of a change in the character of the thyroid gland secretion by direct effect on the secreting cells. Diminished secretion and reduction in size of the gland would result from the action of the rays on the glandular and lymphoid tissue, also from thrombosis due to the destruction of the endothelial lining of the smaller blood vessels.

The results of radium therapy on toxic goiter are so well established after ten years' experience, that only a true specific or a panacea will lessen our confidence.

Case No. 956. Male, age 36 years. March 5th, 1924. Complaint, (1) trembling hands and limbs; (2) general fatigue; (3) loss of weight; (4) nervousness.

Family History—Paternal father and mother died of cancer of stomach, and one sister of his father died of cancer of the breast.

Past History—Had tonsilectomy twelve years ago. Never had any serious illness.

Present History—Always lived in central Michigan. Had a small egg-shaped lump over trachea since he was 12 years of age but never had any symptoms until four months ago, when he was given medical treatment for the enlarged gland. It became smaller in size when the treatment was first instituted but soon increased in size and he developed symptoms of a toxic type. Never had a rash or diarrhea, but lost 26 pounds in three months.

Examination—Eyes negative. Many abscessed and decayed teeth. Right tonsil is red, injected looking, is level with and adherent to the pillars and has many infected appearing crypts on its surface. Left tonsil larger than the right, very firm but has a smooth surface.

A large cystic adenoma of right lobe and isthmus of the thyroid gland the size of an orange that has pressed the trachea an inch toward the left side. The enlarged lobe is soft, with the exception of a hard nodule at the isthmus border. It lies behind the sternomastoid muscle at the posterior border and completely envelopes the trachea. The left lobe is small but has a coarse granular feeling.

The apex beat lies to the left of the nipple line, yet no heart murmurs are detected. Radial pulse 100. Apex beat 100. Systolic blood pressure 120, diastolic 50. Weight 134 pounds. Metabolism, plus 19. Tremor of hands, fingers, limbs and all the muscles of the body. When standing, the knees trembled like a rigor.

Diagnosis—Toxic adenoma.

Prognosis—Good.

Treatment—Ninety milligrams of radium element, properly screened, was applied over each lobe of the thyroid gland for ten hours.

September 14th, 1924—Had not been able to work for two months before the treatment but secured an outside position one month afterward and has now been working for five months. Feeling very well; has no trouble with breathing, heart, nor has he any of his old symptoms. The extreme tremor of all the muscles gradually subsided, and he claims that he is back to normal.

Examination—Tonsils smaller, but still looking red and injected, probably being infected from the bad condition of the teeth.

The left lobe of thyroid normal in size, the right still large, boggy and has the hard nodule

at the isthmus. Neck measurements about half an inch smaller.

Pulse rate 60, systolic blood pressure 120, diastolic 80. Weight 149 pounds. Metabolism, minus 2.

There is no tremor of hands or limbs and he has just driven his car 75 miles.

NOTES:—

(1) Absolutely no toxic symptoms.

(2) Gained 15 pounds in weight.

(3) Diastolic blood pressure was 50, and is now 80.

(4) Pulse and heart beat now 60, and was 100.

(5) Complete relief from all tremor.

Case No. 941. Male, aged 23 years. January, 1924. Complaint, (1) pressure on neck; (2) nervousness and shortness of breath.

Family History—Father died at 37 years of tuberculosis.

Present History—At 16 years of age he noticed an enlargement of his neck, but did not have any symptoms until two years ago. Over exertion or exercise caused his heart to beat very fast and he became dyspnoeic. His collars became tight so that he had a pulsation in his neck and frequently had headaches.

Examination—Right eye slightly larger than the left, otherwise negative.

Right lobe of thyroid about the size of a baby's fist, lies beneath the sternomastoid muscle, is quite soft, without cysts and becomes a part of the enlarged and cystic isthmus. The isthmus is one and a half inches wide, causes tracheal pressure and has a small cyst at the upper border. The left lobe is soft, extends beneath the sternomastoid muscle, but is smaller in size than the right one. The whole thyroid gland lies well behind the upper border of the sternum, and has a full pulsation with each heart beat. No bruit heard over either lobe. Area of heart's dullness enlarged, accentuating blood pressure 108, diastolic 50; weight 155 pounds. Metabolism, pulse 22.7.

Hands and fingers tremulous on extension; palms cold, clammy and sweating; nails straited. Radiograph examination showed an enlarged thyroid gland which is partially substernal.

Diagnosis—Toxic adenoma with a beginning exophthalmos.

Prognosis—Good.

Treatment—One hundred ten milligrams of radium properly screened was held over each lobe for ten hours.

August 12th, 1924—Less than seven months ago he had a radium treatment. He began to feel better in two months; was less nervous, had gained in weight and had no trouble in breathing.

The general improvement was gradual and today he says he "never was better in his life."

Examination—Only a very slight difference in eyes. Right lobe of thyroid large and boggy but no cysts or nodules felt. Left lobe quite soft and smaller in size. Isthmus still wide, but softened and even the cyst at upper border is less tense.

Measurements of neck reduced only a half inch.

Heart sounds normal, except that the second one is slightly accentuated. Pulse 66, systolic blood pressure 118, diastolic 70. Weight 163½ pounds, or a gain of eight and one-half pounds. Metabolism, minus 2.9. No tremor of hands or fingers, but palms still moist.

NOTE:—

(1) Toxic symptoms have all disappeared.

(2) No evidence of hyperactivity.

(3) The subnormal metabolism with increased weight when he had been working five months, are conclusive evidence of toxic control.

Case No. 999. Male, age 37 years. September, 1924. Woodworker by trade. Complaint, (1) rapid heart action; (2) fatigue; (3) nervousness.

Residence—Lived in London, England, until 1913, then moved to Ontario, Canada.

Family History—Negative.

Past History—Had an accident eleven months ago to his left forearm, which evidently caused the thyroid activity.

Present History: On October 4th, 1923, a piece of wood flew off a circular saw, hit and entered his left forearm. A small splinter remained for seven weeks. The worry of the wound not healing and the pus and infection as evidenced by the sinus drainage, were evidently the exciting factors. Following the operation (which was done under a general anesthetic) he was very nervous, could not sleep, and the heart action became rapid. Has been under observation and treatment for months, is somewhat better but not able to resume his work. Has some headaches, perspires freely so that he has a rash, tires easily and is very uncomfortable.

Examination—Eyes normal in size, with negative muscle control. Right tonsil infected with a large crypt at the center. Tongue coated and tremulous.

Right lobe of thyroid gland soft to palpation. Isthmus wide and firmly tightened across the trachea. Left lobe also slightly enlarged.

Upper circumference of neck, 14¼ inches; middle circumference, 15¼ inches, and lower 15½ inches.

Area of heart's dullness enlarged with apex beat in nipple line. Pulse and apex beat 94 at rest, but on exertion 160.

Systolic blood pressure 122, diastolic 70; metabolism puls 13.

Tremor of hands and fingers on extension. Skin blotchy with profuse perspiration.

Diagnosis—Toxic adenoma without exophthalmos.

Prognosis—Good.

Treatment—One hundred thirty milligrams of radium, properly screened, held over each lobe of the thyroid gland for 10 hours, making 2,600 milligram hours.

November 15th, 1924. Has been able to work six days every week since he had the treatment, two months ago.

Is still nervous when approached quickly or by sudden news, and there is some tremor of the fingers.

Pulse rate 80, and he has gained 12 pounds in weight.

March 2nd, 1925—Has been feeling very well for weeks. Has none of his nervous symptoms. In fact, there is no evidence of the former activity.

Metabolic rate six months after treatment is plus 5.

CONCLUSION

The control of symptoms, reduction in size of gland, increase in body weight and normal metabolism are sufficient evidence to convince the most skeptical of the merits of radium therapy.

REPORT OF TWO CASES OF TULAREMIA IN MICHIGAN

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Tularemia has been recognized as a disease transmissible to man since Vail¹ in 1913 definitely demonstrated a case of bacillus tularensis conjunctivitis by bacteriologically isolating the organism and by guinea pig inoculation. It was not, however, until 1921 that the entity known as "rabbit fever" and declared to be fairly common among market men who dressed rabbits, was designated, after demonstrating the agglutination of the bacterium tularensis by the serum of these patients, as tularemia. Since that discovery was made in Washington, D. C. in 1921, more than 200 cases have been authentically reported. According to information received from the Hygienic Laboratory in Washington, D. C. and contained also in the report of Francis², showing the geographic distribution of tularemia, there has not been before this an authentic case reported from Michigan. We, therefore, believe that a report of these cases may be of interest.

Case 1. A white male, age 27, married, a chef, was admitted to the hospital January 3, 1927, complaining of a painful swelling in the right axilla. He stated that he had always enjoyed good health until five weeks before admission, when he became quite ill with an acute febrile disease. He had a high temperature and "aching pains" in the muscles and joints, with general malaise. He was confined to his bed for three weeks and at the end of the first week, noted a painful swelling in the right axilla. The first of two physicians to see the patient during the course of the febrile attack thought that he had pneumonia while the second made a diagnosis of typhoid fever, although no serological tests or blood cultures were made. There was no diarrhea during the illness and the patient stated that he had been constipated since soon after the onset of the disease. He lost 10 pounds in weight during the three weeks that he was confined to his bed.

No history of a recent infection about the hands or arms could be elicited. Six months before admission he had an acute infection in the right hand and forearm which he attributed to a scratch from an ice hook. There were red streaks up his arm to the elbow and he was away from his work for about two weeks. He did not, at this time nor in the months immediately following, have any painful or tender mass in either axilla. As he had completely recovered from this infection more than five months before his admission to the hospital, it was not believed that there was any direct connection between it and the complaint on admission.

The physical examination showed the patient to be a well developed, well nourished, adult white

male, 5 feet 4 inches in height, weighing 134 pounds. The skin was dark, complexion sallow, and the patient looked sick. The tonsils were large and oedematous and there was one crowned tooth and some pyorrhea. There was no evidence of chest or abdominal pathology and the reflexes were normal. In the thoracic wall of the right axilla there was a tender, firm, indurated mass of about 3 to 5 cm. in diameter, in which there was a very slight increase in local heat. The skin over the tumor was slightly reddened, brawny and not adherent to it. There was no evidence of the abscess pointing and the mass was not definitely fluctuant. There was a leukocytosis of 13,700 with 67 per cent polymorphonuclear leucocytes at the time of admission.

The patient was admitted to the hospital with the diagnosis of axillary abscess. About an ounce of pus of a caseous appearance was expelled from the incised mass. The cavity was well explored with the gloved finger and a small rubber drain was left in. Hot boric compresses were ordered. The following day the tenderness and induration had decreased, the drainage was free and dry dressings were applied. Culture from the abscess material was negative in 18 hours, but in 48 hours it showed a slightly green producing streptococcus. During the three days stay in the hospital the temperature rose steadily from about 98.6° each morning to 101° during the afternoon. The incised area healed quite readily, however, and his progress has been satisfactory.

The history of the appearance of this swollen mass in the axilla within a week after the onset of an acute febrile disease of a somewhat doubtful nature naturally rather focused our attention upon the febrile disease itself. The patient was again questioned regarding any infection of the hand more recent than that of six months before admission, but no such history could be obtained. His description of the acute febrile attack with the appearance of the painful and tender mass in the axilla, the persistence of the abscess after four weeks with no evidence of pointing, the caseous character of the contents of the abscess, and the continued temperature and malaise formed a clinical picture which was strikingly similar to that described by Francis^{2, 3}, and led to the impression that this was a case of glandular tularemia.

In an attempt to confirm the impression, the patient was questioned closely to determine, if possible, some plausible etiological factor. It was learned that he had dressed rabbits upon two occasions this winter, the most recent being only a few days before the onset of the acute febrile attack of five weeks prior to admission. Blood was then taken for culture and for serum agglutination. The serum was forwarded direct to the Hygienic Laboratory in Washington, D. C. It was reported that it agglutinated the bacillus tularensis in

dilutions of 1 to 1280, definitely confirming the diagnosis of tularemia.

We were interested in determining, if possible, the source of the supply of rabbits from which the patient apparently received his infection. A state game law in Michigan prohibits the sale of rabbits killed or trapped in the state, and presumably all rabbits purchased here are shipped in. We were able to trace the rabbits to the market from which they were bought, where it was found that these rabbits were part of a large shipment from Missouri. It was not possible to determine from what particular locality in Missouri they had originally been taken.

Case 2. A white woman, aged 40 years, came to the hospital complaining of a lump in the axilla and of feeling tired all the time. Her physical examination showed the presence of multiple adenomata of the thyroid gland with rather marked evidence of hyperthyroidism. In addition to this she had a moderate grade of hypertension and a fluctuant area in the right axilla. Her basal metabolic rate was plus 73 per cent. She had a normal white blood count and her temperature was normal. Questioning brought out the fact that she had had an acute illness with chills and fever beginning about five weeks previous to her admission which immediately followed the development of a small vesicle on her right middle finger. She gave no history of having had an injury to this finger. Shortly after the onset of this illness she developed two fluctuant areas in the region of the elbow on the anterior aspect of the arm and another mass in the lower right axilla. During this illness she was a patient at another hospital for one week, returning home after the chills and fever had subsided. Two weeks later the vesicle on the finger and the two fluctuant areas on the arm were incised and were found to contain pus. The incisions healed quite promptly but she continued to be quite weak or as she expressed it "felt tired all the time." Her general condition remained practically unchanged during the few weeks previous to her admission.

The fluctuant area in the axilla was incised and drained and found to contain about an ounce of thin, yellowish pus markedly different in character from the thick caseous like pus of case one. Some blood was sent to the Hygienic Laboratory in Washington, D. C. and the serum was reported to agglutinate in bacillus tularense in dilutions from 1 to 320. While the agglutinating power of this serum was markedly less than Case 1, the findings were definitely diagnostic of tularemia. Further questioning brought out the fact, that on several occasions during the several weeks previous to her acute illness the patient had cut up rabbits for cooking after they had been cleaned and skinned in the market. It is impossible to determine, in this instance, the exact source of the rabbits. The incised area healed quite promptly following the incision and drainage.

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FETAL DEATH DURING PREGNANCY DUE TO UMBILICAL CORD AROUND THE NECK*

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Although strangulation of the child during labor by coils of umbilical cord about the neck may not be uncommon, fetal death before labor from this cause seems to be of rare occurrence. Browne¹ collected five instances from the older literature, and Grad² reported another in 1916. The following case is the only one to occur in this hospital for a period of nearly five years:

M. F., white, aged 35, primigravida. The patient was first seen on January 10, 1925 with the history of the last menstrual period having occurred October 27, 1924—calculated expected date of confinement August 3, 1925. The past history was essentially negative, and physical examination showed nothing noteworthy except cardiac extra-systoles occurring every six to eight beats. Pelvic measurements were normal, and the blood Wassermann reaction was negative with plain and



FIG. 1

Two loops of cord constrict the neck of the macerated fetus.

Kolmer antigens. The size of the uterus corresponded to the period of amenorrhoea.

Except for an attack of pyelitis in April, which quickly cleared up with large doses of bicarbonate of soda, pregnancy was uneventful until the beginning of the ninth lunar month. On June 12, 1925 the patient reported that five days previously there had been unusual fetal activity for several hours, then complete cessation. She had lost four and one-half pounds in two weeks, and fetal heart sounds could not be heard. At the patient's request, labor was not induced although the X-ray confirmed the diagnosis of fetal death. Subsequent observations showed slight diminution in

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the size of the uterus and further loss of weight.

Spontaneous labor of seven hours occurred on June 30, 1925. Premature rupture of the membranes took place at the patient's home, but there had been no evidence of hydramnios. The placenta was expelled immediately after the fetus. The latter was badly macerated, weighed 1345 grams, and was 40 centimeters long. Two loops of umbilical cord tightly constricted the neck to the size of a man's thumb, the diameter over the cord about the neck being three centimeters. Evidently there had been considerable tension on the section of cord between the neck and umbilicus as the latter was pulled upward, and the cord near it was reduced in size as if stretched. The child was saved intact for the museum, but X-ray of the long bones showed no evidence of syphilis. The mother had an uneventful puerperium.

Probably death of the fetus was due to failure of the encircling loops of cord to expand in accord with growth of the fetal part³. Violent fetal activity, as was noted in this case, has been mentioned as usually preceding death by strangulation and has been considered an indication for rapid delivery, even Caesarean section.

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HYPERTHYROIDISM MASKED BY THE DIABETIC SYNDROME

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There has come to my attention in the last few months two cases of hyperthyroidism associated with glycosuria. In fact, they showed such typical symptoms of diabetes mellitus that they were thus diagnosed at first. It is because of the infrequent emphasis upon this association of findings that I report my case and call attention to a similar case of my colleague, Dr. Walter den Bleyker.

Mr. K., age 40, Hungarian, married but no children. He had never been sick except that some cataracts appeared on both eyes 18 years ago. They apparently did not follow sickness nor injury, and one eye was operated upon without much improvement. Four weeks previous to my examination he had had pain in the upper abdomen with vomiting by spells which continued at irregular intervals. He had lost 30 pounds in three months and felt nervous and tired most of the time. He was unusually thirsty and complained of frequent urination. He had a fair ap-

petite, drank two glasses of wine daily, and smoked a pipe to excess.

Physical examination showed a lean, rather excitable man. Alopecia areata was present. Adherent cataracts were found in both eyes but more marked on the left. The teeth were very bad, tonsils negative. There was moderate symmetrical enlargement of the thyroid gland. The lungs were practically negative but the heart showed a marked irregularity resembling very much a fibrillation. The abdomen showed general tenderness which was more marked in the epigastrium; no tumor masses were palpable. Superficial and deep reflexes were exaggerated and the skin of the body was dry. The urine showed a specific gravity of 1.028, no albumen, no casts nor pus cells, but a considerable amount of sugar. The blood pressure at this time was 138/70.

Still not being impressed with the signs of hyperthyroidism I sent him to the hospital as a diabetic for further study. While there on a normal diet two 24 hr. specimens of urine were free of sugar; the fasting blood sugar was normal and the blood sugar curve following 100 gm. of glucose rose to 205 mmg. per 100 c.c. and returned to slightly below 110 in 2 hrs. Rest reduced only slightly the nervous manifestations and he performed many excessive movements in bed while talking. On further examination I found a small node in the right upper pole of the thyroid and a bruit over the gland on both sides. The blood Wassermann was reported negative; the basal metabolic rate was plus 65. A diagnosis of toxic goitre, probably exophthalmic, was made but the patient refused treatment and left the hospital of his own volition. The pulse at this time had become quite regular. Three days later at his home the heart was again irregular and the urine showed a trace of sugar.

Unfortunately my case would not submit to treatment of the goitre, but the case of Dr. den Bleyker underwent a thyroidec-tomy and is perfectly well today except for an occasional trace of sugar in the urine.

Falta mentions the fact that in some people hyperthyroidism determines a predisposition for glycosuria. "It appears that hyperthyroidism seems to signify a functional overloading of the pancreas; it is intelligible from this standpoint that glycosuria sets in only in individuals predisposed to it." He concludes by saying, "we are well justified in speaking of a thyrogenic glycosuria in such cases."

Chvostek concluded that a temporary glycosuria occurred in 69 per cent of exophthalmic goitres but this is much higher than any other writer records. Naunyn of Strassburg recorded only one case in a large series.

I had never had this association of findings particularly brought to my attention before, and so I merely wanted to reiterate the possibility of glycosuria associated with hyperthyroidism and illustrate how it may cloud the picture of the true condition of toxic goitre.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

SCARLET FEVER PREVENTION

Perhaps no disease has received as much public attention and interest during the past two or three years as has scarlet fever. Even today, however, there is a divided opinion as to just what policy to pursue in combating the disease. Some urge immunization of all susceptible children, others believe in providing temporary protection with antitoxin at the time of contact; and still others believe, even where there has been direct exposure, in waiting until initial symptoms have developed and then giving a therapeutic dose of antitoxin. Whichever of the three attitudes is adopted, there should first of all be a Dick Test, as a considerable number even in the generally susceptible age group (under 16 years of age) are not susceptible to scarlet fever. The Dick test is, of course, a method of determining whether or not a person is susceptible to the disease, and quite obviously if one is not apt to get the disease, we don't have to worry about either active immunization or antitoxin.

Without attempting to decide which of the policies should be adopted, because each one is useful, the facts as we know them seem to be:

1. Active immunization, as produced by injection or injections of scarlet fever toxin, is an established fact. It has the advantage over the antitoxin in producing immunity for a considerable period of time. We do not know accurately just how long after the injection or injections have been completed immunity will be produced. Immunity is apparently not produced rapidly enough to prevent the onset of scarlet fever after there has been a definite exposure. We do not as yet know how long the immunity once produced will last. It may last a year or two years, or it may last much longer. The reactions upon the persons to whom it is given are variable. In some there is little or no reaction, in others some reaction, and in a very few a rather severe reaction. On the whole, however, reactions are much less frequent and severe than they were when immunization was first practiced three years ago.

2. A prophylactic dose of scarlet fever antitoxin ($\frac{1}{4}$ of a therapeutic dose) will

in the majority of instances prevent scarlet fever even after there has been a definite exposure, provided it is given shortly after such exposure. It gives, of course, only temporary immunity lasting for only a few weeks. Reactions vary considerably. Sometimes there is little or none; while in other instances the reaction is quite severe. It is efficient in producing temporary immunity.

3. Antitoxin, given in therapeutic doses at the time the patient develops first symptoms, almost always results in a lessening of the initial toxemia and frequently in shortening the duration of the disease, and in preventing complications. After recovery from the disease, the patient usually has immunity against a subsequent attack of scarlet fever.

Regardless of what procedure is adopted should the patient, or even an originally Dick negative person, be exposed to scarlet fever at some time in the future, such person should have another Dick test.

RURAL PUBLIC HEALTH NURSING IN MICHIGAN

Rural public health nursing in Michigan had its beginning in 1915 when the Anti-Tuberculosis Association of Grand Rapids put on one nurse—Charlotte Van Duzor—whose activities were confined chiefly to school work and the home calls following these inspections.

In 1919 when the local Red Cross Chapters had sufficient funds in their treasuries many counties started nursing services with excellent programs. Later when these funds were nearly exhausted appropriations from the boards of supervisors were made to supplement the Red Cross expenditure or to assume the financial responsibility entirely.

The number of counties having a rural nursing service is not as great as in 1921-1923 but the greater stability of the work more than compensates for the loss in numbers.

At the present time there are sixty-seven nurses employed in thirty-one counties. In nineteen counties the nurses are paid wholly by public funds while in the other counties the Red Cross and tuberculosis funds are used for the nursing service. In four instances the share the Red

Cross takes in the program is merely in the purchase or upkeep of the car, the other expense being borne by public funds.

The following counties have established a nursing service: Alpena, Berrien, Bay, Cass, Calhoun, Clinton, Crawford, Emmet, Huron, Houghton, Ingham, Jackson, Kent, Livingston, Lapeer, Luce, Monroe, Macomb, Montcalm, Marquette, Oakland, Otawata, Oceana, Ontonagon, Saginaw, Wayne, Washtenaw, Wexford. Hillsdale has voted the appropriation but as yet the nurse has not been employed. Calhoun, Genesee, Ingham, Jackson, Kent, Muskegon, Saginaw and Washtenaw also have nurses employed by tuberculosis funds. In Alpena, Bay, Clinton, Crawford, Huron, Montcalm, Ottawa and Wexford the expense of the service is shared in part by the Red Cross.

The question most frequently asked is, "What are public health nurses doing?" Since the school seems the easiest entrance to the home, this is frequently the first type of work undertaken. After the children are weighed, measured, and inspected a health talk is usually given which touches on diet, proper amount of sleep, personal cleanliness, the need for fresh air, or any other points in hygiene which appear to be especially needed. Home calls are made where it is found corrections are needed, and in this way the nurse has an opportunity to meet the members of the family not of school age and frequently to advise on nursing matters for prenatal, infant, preschool and tuberculosis cases. This friendly contact paves the way for future work.

During this year emphasis has been placed on immunization against diphtheria. In practically every county where this work has been done it has been through an appropriation made by the supervisors. Local physicians assisted by the county nurses do the work. In Ottawa county the three treatments were given to 6,000 school children and to 1,097 preschool children. This represents an enormous amount of work since much preliminary educational effort is necessary before parents will consent to the administration. It is also necessary to set up a definite organization so that the time of the physicians will not be wasted.

Last year Alpena took up this work by townships and the entire county was covered. In Huron, Kent, Saginaw, Clinton, Crawford and Livingston counties immunization has had a prominent place in the program. In Livingston county the appro-

priation for this work was made by the supervisors at the suggestion of one of their own members, the supervisor of each township assuming a part of the responsibility for the advance publicity necessary and in some townships attending personally when the first treatment was given.

Harbor Springs was the first locality to apply to this Department for scarlet fever toxin following an outbreak of scarlet fever in the schools. A very large percentage of the school children were given treatment, the county nurse assisting the physician.

A quotation taken from one of the monthly reports made by the public health nurses throughout the state to the Michigan Department of Health shows another type of work in which all the nurses are engaged—that of bringing patients in actual need of medical attention to the physician.

"When I visited the school the teacher called my attention to a little brother and sister who were much underweight. I visited the parents and secured their permission to take the children to their physician.

Dr. advised tonsillectomies in both cases as soon as possible. The little girl had endocarditis which he believed would clear up following the operation."

The school programs are each year becoming more educational as the nurses are gradually including more class work in their plans. It can readily be seen that when one nurse does all the public health nursing in a county it is not possible to teach many classes, but an effort is being made to introduce as much as possible.

IMPROVING SCHOOL DRINKING WATER SUPPLIES

School wells are the subject of an intensive study recently undertaken by the Bureau of Engineering, in an effort to improve the drinking water supplies of rural and semi-rural schools. The investigation will include only schools that have their own wells. It will not take in the village or city building that is supplied with water from a supervised source.

Work started in Monroe County, a representative of the Bureau of Engineering collecting water samples from 56 schools in that county and from 9 schools in Wayne county during the month of March. It is planned to continue the investigation as rapidly as time and personnel permit, working only during the school year. In some counties the public health nurses will

be asked to assist in collecting the water samples.

ANOTHER SIGN OF SPRING

Plans for continuation of the work begun in 1925 of safeguarding roadside water supplies for the benefit of the automobile traveler are already under way in the Bureau of Engineering, and it is hoped to get an earlier start than has been possible heretofore.

In the two summers that the work has been carried on practically all of the main trunk line highways in the state have been covered by representatives of the Bureau, and drinking water supplies that might tempt travelers have been inspected and samples tested. Of the 805 sources investigated in 1926, a total of 76.3 per cent were found to be safe and 23.7 per cent unsafe. Metal approval signs were posted at the safe sources. This year increased emphasis will be placed upon educating the public to drink only from certified sources.

HEALTH EDUCATION

Pamphlet distribution reached a record total in March, when 107,357 bulletins were sent out by the Mailing Division. An average of 50 requests a day were received for printed material, ranging from individual requests for single pamphlets to group requests for bulletins in quantity. By far the larger proportion of pamphlets went to teachers or public health nurses for use in schools or special classes.

Dental hygiene bulletins led the list, with a total of 53,650 distributed. This unusually high number is partly accounted for by the fact that printing was delayed and requests had piled up for more than a month. The department publishes three month hygiene pamphlets, "Dental Hints for the Prospective Mother," "Baby Teeth," and "The Child's Permanent Teeth." The latter is always the most popular one of the series.

Child hygiene bulletins, the series that usually tops the list, took second place in March, with a total of 32,264 sent out. These went largely to individuals, or to agencies interested in some phase of child welfare work. "Sunlight for Babies" led this list, with "Preventing Diseases of Childhood," "What Do Growing Children Need," "Why Drink Milk," "What Builds Babies," and "Care of the Baby" following in the order named. An increasing interest is being manifested in medical care during the prenatal period, and the leaflets

emphasizing this phase of child hygiene work are growing in popularity.

Communicable disease pamphlets are always in demand, and 6,404 were distributed during March. This series includes bulletins on diphtheria, measles, pneumonia, scarlet fever, poliomyelitis, smallpox, tuberculosis, typhoid fever, and whooping cough. Requests for the leaflet, "Make Diphtheria Ancient History in Michigan," led the list, with whooping cough, measles, scarlet fever, smallpox, pneumonia, tuberculosis, typhoid fever and poliomyelitis following. These pamphlets are popularly written, intended for the average layman, and with their main emphasis upon prevention.

Engineering bulletin requests are equally standard, the number sent out remaining nearly constant each month. A good many people are interested in "Sewage Disposal for Single Houses and Small Institutions," "The Chemical Closet," "Well Water Supplies for Homes," "The House Fly," and "Mosquito Control." These are written largely from the standpoint of the individual, while "Garbage Collection and Disposal," "Water Filtration," "Water Chlorination," "Sewerage and Sewage Disposal," and "Municipal Water Softening" are intended especially for the community officials concerned with such problems.

Of the 13 bulletins coming under the heading "Miscellaneous," "Meals for School Children" and "Food for Growth and Health" are the most in demand, with "Preventing Simple Goitre" third.

All bulletins are sent free of charge within the state.

Requests to be put on the mailing list for the department's monthly bulletin, "Public Health," average 100 a month, and these, with the names that are constantly being taken off, keep the mailing list at about 17,000.

Every effort is made to safeguard the distribution of printed material so as to waste as little as possible. Only those who ask for pamphlets get them.

LABORATORY VISITORS DURING THE MONTH OF MARCH

Miss Helen Cook, serologist at the Mayo Clinic in Rochester, Minnesota, spent a day in the serology room, observing the Kahn precipitation test.

Herbert E. McDaniels, senior bacteriologist of the Chicago Department of Health, spent a week here learning the Kahn test.

Miss Effie M. Cook, technician from

Blodgett Memorial Hospital at Grand Rapids, remained a week in the laboratory studying the methods used in routine bacteriologic examinations and the Kahn test.

Miss Ruby Streman, technician from Sparrow Hospital, Lansing, spends a few hours daily in the laboratory to obtain instruction in blood chemistry work.

F. T. Zieske, M. D., health officer of Roseville and F. A. Sturm, M. D., health officer of St. Clair Shores, were in the laboratory one morning discussing and observing methods used in diphtheria and typhoid work.

W. A. Harrison of the U. S. Public Health Service, Washington, D. C., inspected the biologic plant and laboratory.

F. M. Childs of the Detroit Department of Health observed the Kahn Test for one day.

C. A. Cummings, M. D., Director of Laboratories, and Miss M. Shepherd, both of the Public Health Institute of Chicago, spent two days in study of the Kahn test.

Miss Josephine Rulison is spending the time between graduation from high school in January and the time she enters college in September as an apprentice in laboratory technic.

VISITS OF ENGINEERS DURING THE MONTH OF MARCH

Inspections of Railroad Water Supplies, 14 cities:

Alpena	Hillsdale
Ann Arbor	Mt. Clemens
Bay City (2)	New Buffalo
Cheboygan	Niles (2)
Detroit	Plymouth
East Tawas	Richmond
Hartford	Ypsilanti

Inspections and Conferences, Sewerage and Sewage Disposal, 8 cities:

Adrian (2)	Hillsdale
Detroit (2)	Holland (2)
Ferndale	Muskegon (3)
Grand Rapids	Stanton (3)

Inspections and Conferences, Water Supplies, 9 cities:

Adrian	Highland Park (2)
Alpena (8)	Midland (5)
Comstock Park	Muskegon (2)
East Tawas (6)	Utica (3)
Grand Haven	

Inspection of Swimming Pool:

Owosso

Inspections, Garbage Disposal:

Royal Oak (3)

Inspection Tuberculosis Sanatorium:

Adrian

Inspection of Drainage:

Reading (3)

Inspections, Stream Pollution, 4 cities:

Bay City (2) Holland (2)
Grand Rapids North Shores (2)

Inspection of School Wells and Collecting Samples:

56 Schools in Monroe County.
9 Schools in Wayne County.

PREVALENCE OF DISEASE

	March Report Cases Reported			Av. 5 Years
	February 1927	March 1927	March 1926	
Pneumonia	679	662	1,595	1,109
Tuberculosis	342	419	475	437
Typhoid Fever	33	39	35	50
Diphtheria	485	439	398	518
Whooping Cough	534	609	1,176	625
Scarlet Fever	1,423	1,636	1,779	1,579
Measles	902	1,302	8,269	3,051
Smallpox	186	191	30	229
Meningitis	13	16	11	16
Poliomyelitis	2	4	3	4
Syphilis	1,148	1,620	1,214	985
Gonorrhea	717	879	711	704
Chancroid	12	9	15	15

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health
March, 1927

	+	-	+ -	Total
Throat Swabs for Diphtheria				1286
Diagnosis	45	391		
Release	169	213		
Carrier	14	419		
Virulence Tests.....	26	9		
Throat Swabs for Hemolytic Streptococci				801
Diagnosis	150	219		
Carrier	60	372		
Throat Swabs for Vincent's.....	24	411		435
Syphilis				6776
Wassermann		2		
Kahn	1274	5413	83	
Darkfield	2	2		
Examination for Gonococci.....	173	1181		1351
B. Tuberculosis				547
Sputum	73	431		
Animal Inoculations	3	40		
Typhoid				147
Widal	5	42		
Blood Culture	1	26		
Feces	19	44		
Urine	1	9		
Dysentery				46
Intestinal Parasites				24
Transudates and Exudates.....				233
Blood Examinations (not clas- sified)				970
Urine Examinations (not clas- sified)				496
Water and Sewage Examina- tions				860
Milk Examinations.....				132
Toxicological Examinations.....				17
Autogenous Vaccines.....				7
Supplementary Examinations				209
Unclassified Examinations.....				546
Total for the Month.....				14883
Cumulative Total (fiscal year)				118254
Decrease over this month last year				1928
Outfits Mailed Out.....				16347
Media Manufactured, c.c.....				365515
Typhoid Vaccine Distributed, c.c.				1584
Toxin Antitoxin Distributed, c.c.				29040
Toxin Antitoxin Distributed, units				37660000
Silver Nitrate Ampules Dis- tributed				5592
Examinations Made by the Houghton Laboratory.....				2547
Examinations Made by the Grand Rapids Laboratory.....				6720

Mackinac Island

107th Annual Meeting Place — June 16-17-18, 1927

Mackinac Island stands high and proud in the Straits of Mackinac, between Lake Michigan and Lake Huron and within reach of the crisp, cool breezes that blow south from Lake Superior. Its altitude ranges from 150 to 339 feet above the level of the lake. The great natural beauty of Mackinac in its setting of three great lakes, and the invigorating quality of the

air, have made it a favored summer resort. Interest is added by its storied past visualized in the block houses and white-walled old Fort Mackinac that looks down from the heights on the town and the harbor. The mind pictures easily the colorful procession of Indians, trappers, voyageurs, missionaries, fur traders and soldiers that crossed the island in the days when the



THE GRAND, MACKINAC ISLAND, MICHIGAN—AMERICA'S SMARTEST RESORT

As viewed from the Italian Gardens the Grand may be recognized as the largest and finest summer resort in the world. The luxurious appointments of the hotel include two ball rooms, a grill room, hotel theatre, and spacious parlors and foyers



The tea garden as viewed from the hotel veranda

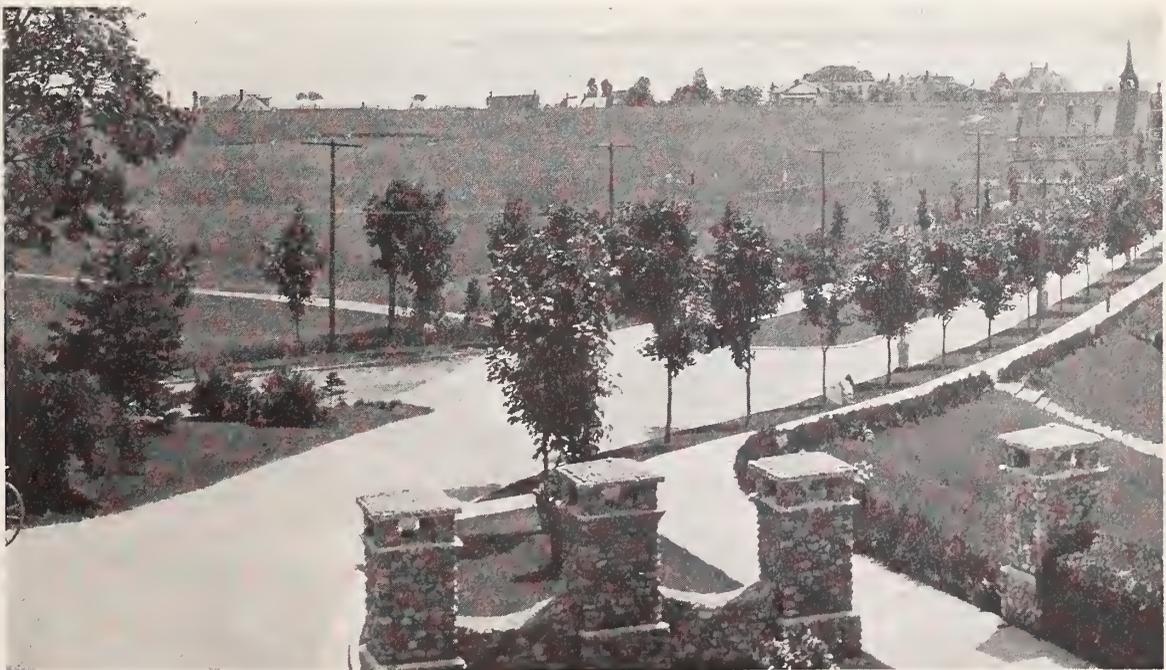
early history of the great Northwest was in the making and three nations, French, American and English, were fighting for possession of the new world.

Delightful drives through Michigan's 2,000-acre State Park, on the Island, are taken in comfortable carriages drawn by horses. The drivers are all local men, well

informed on the history and Indian legends of the Island. One of the most interesting of the drives covers a distance of nine miles through deep forests of maple, beech, birch, pine, cedar, and balsam, and along an occasional precipitous cliff that gives an extensive view of the Great Lakes. Among the points of interest along this



The Grand golf links as viewed from the east veranda



A view of part of the hotel grounds



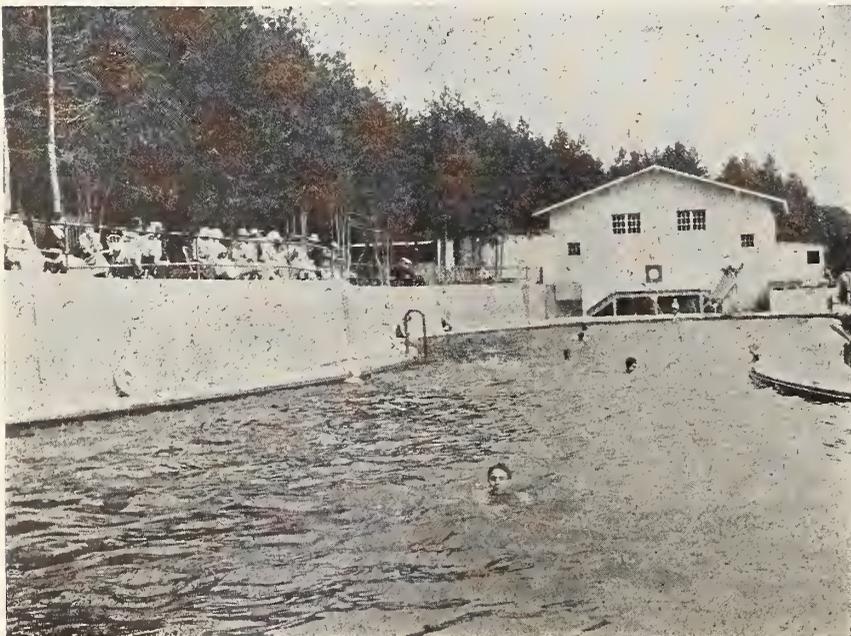
A partial view of the immense veranda, the largest in the world—over two city blocks in length

drive are Robinson's Folly, a steep bluff rising 127 feet above Lake Huron; Arch Rock, a natural limestone arch rising sheer from the water's edge to a summit 149 feet high; Sugar Loaf, a rock cone rising 90 feet from the wild forest growth in the center of the Island; the 1,000-yard Rifle Range where United States soldiers, during their occupancy of Fort Mackinac, practiced marksmanship; old Fort Mack-

inac overlooking the town and commanding the harbor and the straits from its height of 133 feet, the point to which it was removed from Mackinaw City in 1780, after the close of Pontiac's conspiracy; the stone blockhouses erected at that time and still in their original state; Skull Cave, where the fur trader, Alexander Henry, was hidden away by friendly Indians during the massacre of 1763; Point Lookout

with its sweeping view to the north and east; Fort Holmes, built by the British on the highest point of the Island, in the rear of Fort Mackinac, during the War of 1812; Lover's Leap, from which an Indian maiden leaped to her death when she learned that her lover had been killed in battle with one of the hostile tribes; and Pontiac's Lookout.

Other points of interest reached, either by carriage or on foot, are: British Landing, where the British forces landed in 1812 when they captured Fort Mackinac from a small



Swimming Pool

force of United States soldiers; Scott's Cave, a large rock cavern on the west end of the Island; Chimney Rock, Devil's Kitchen and the Wishing Spring.

The John Jacob Astor House, cradle of the Astor fortune, was erected by the American Fur company in 1809, when Mackinac Island was the seat of government for the Northwest Territory. It has low ceilings, heavy timber braces, ancient fireplaces and cumbersome iron door locks, and its old storage vaults still hold the early accounts and record books of the fur company.

Recreation is not limited to driving, walking and sight-seeing. Two of the sportiest, best-kept and most beautiful golf courses in northern Michigan invite the golf enthusiast. Good saddle horses are available and the enticing bridle trails through the woods are numerous. There are tennis courts, baseball grounds, good bathing beaches, large swimming pools, canoes in the quiet bays of the great lakes,

motor boats and sailboats. Moonlight cruises around the Island are arranged at frequent intervals.

The foregoing, abbreviated description imparts but meager details of the Island's beauty, history and attraction. It is a most fascinating environment that provides an ideal surrounding and setting for our Annual meeting. For that reason it was designated.

The Grand hotel will be our headquarters and the place where all meetings will be held. See their advertisement in this issue and send in your reservations.

Special train service is being arranged and will be announced in the June issue.

A committee in charge of all sport events is engaged in preparing a program. This too will appear in the June issue.

The important detail is to note the dates, obtain your reservations and determine not to forego this exceptional Annual meeting.

Official Program, 107th Annual Meeting, Michigan State Medical Society, Mackinac Island, June 16-17-18th, 1927

CALL

The Michigan State Medical Society will convene in Annual Session, on Mackinac Island on June 16, 17, 18, 1927. The order of business as provided by our Constitution and By-laws and official program will be observed.

J. B. Jackson, President.
R. C. Stone, Council Chairman.
W. K. West, Speaker.

Attest: F. C. Warnshuis, Secretary.

CONDENSED SCHEDULE

June 15th.

7:00 p. m.—Council Meeting.

June 16th.

10:30 a. m.—House of Delegates.

1:00 p. m.—House of Delegates.

7:30 p. m.—House of Delegates.

June 17th.

8:45 a. m.—Section Meetings.

1:30 to 6:00 p. m.—Golf and Sports.

6:30 p. m.—Banquet.

8:00 p. m.—General Session.

June 18th.

8:45 a. m.—Section Meetings.

1:30 to 6:00 p. m.—Golf and Sports.

6:30 p. m.—Dinner.

8:00 p. m.—General Session.

All meetings will be held in the Grand Hotel.

HOUSE OF DELEGATES

Theater of Grand Hotel

Thursday, June 16, 1927

FIRST SESSION

10:30 a. m.

Speaker, W. K. West, Painesdale.
Vice-Speaker, Henry R. Carstens, Detroit.
Secretary, F. C. Warnshuis, Grand Rapids.

ORDER OF BUSINESS

1. Call to Order.
2. Report of Credential Committee.
3. Speaker's Address—W. K. West.
4. President's Address—J. B. Jackson.
5. Report of the Council—R. C. Stone, Chairman.
6. Appointment of Reference Committees.
7. Election of Nominating Committee of five.

No two members shall be from the same Councilor District. The duties of the Nominating Committee are:

 - (a) Supervise Ballot for President.
 - (b) Nominate.
 1. Four Vice-Presidents.
 2. Delegate to A. M. A. and Alternate to succeed Carl F. Mol and W. E. Chapman terms expiring.

3. Delegates from 7th, 8th and 9th Councilor Districts will meet the State Secretary in Caucus to nominate Councilors for these districts whose terms expire.
8. Reports of Committees.
 - (a) Medical Education
—A. P. Biddle.
 - (b) Hospital Survey
—R. R. Smith.
 - (c) Public Health
—R. C. Mahoney.
 - (d) Legislation
—H. A. Haze.
 - (e) Tuberculosis
—B. A. Shepard.
 - (f) Venereal Prophylaxis
—W. F. Martin.
 - (g) Civic and Industrial Relations
—L. S. Farnham.
 - (h) Nursing Education
—C. E. Boys.
 - (i) Medical History
—C. B. Burr.
 - (j) Delegates to the A. M. A.
9. Unfinished Business. Amendments to Constitution.
10. New Business and Resolutions.
11. Recess.

SECOND SESSION

1:00 p. m.

1. Roll Call.
2. Reports to Reference Committees.
3. Unfinished Business.
4. New Business.
5. Recess.

THIRD SESSION

7:30 p. m.

1. Roll Call.
2. Reports of Reference Committees.
3. Report of Nominating Committee.
Report of Secretary.
4. Election.
 - (a) Four Vice-Presidents.
 - (b) Councilors for 7th, 8th and 9th Districts.
5. Unfinished Business.
6. Adjournment.

DELEGATES TO ANNUAL MEETING

NOTE:—Delegates in Capitals.
Alternates in Regular.

ALPENA COUNTY

C. M. WILLIAMS, ALPENA
W. B. Newton, Alpena

NORTHERN MICHIGAN MEDICAL SOCIETY ANTRIM, CHARLEVOIX, EMMETT, CHEBOYGAN COUNTY

HARRY SHAVER, BOYNE CITY
FREDERICK MAYNE, CHEBOYGAN

BARRY COUNTY

B. C. SWIFT, MIDDLEVILLE
R. W. Gridwold, Freeport

BAY, ARENAC, IOSCO COUNTY

V. H. DUMOND, BAY CITY
J. W. Hauzhurst, Bay City

BENZIE COUNTY

BERRIEN COUNTY

BRANCH COUNTY

W. A. GRIFFITH, COLDWATER
W. W. Williams, Coldwater

CALHOUN COUNTY

C. S. GORSLINE, BATTLE CREEK
GEO. C. HAFFORD, ALBION
A. F. Kingsley, Battle Creek
W. L. Godfrey, Battle Creek

CASS COUNTY

CHIPPEWA, LUCE, MACKINAC COUNTY

C. J. ENNIS, SAULT STE MARIE
G. A. Conrad, Sault Ste Marie

CLINTON COUNTY

DELTA COUNTY

DICKINSON-IRON COUNTY

EATON COUNTY

P. H. QUICK, OLIVET
Stanley Stealey, Charlotte

GENESEE COUNTY

GOGEBIC COUNTY

GRAND TRAVERSE-LEELANAU COUNTY

HILLSDALE COUNTY

W. H. SAWYER, HILLSDALE
G. R. Hanke, Ransom

HOUGHTON-BARAGA-KEWEENAW COUNTY

A. C. ROCHE, CALUMET
M. D. Roberts, Hancock

HURON COUNTY

INGHAM COUNTY

EARL McINTYRE, LANSING
HARRY B. WEINBURGH, LANSING
Fred J. Drolette, Lansing
O. Bruegel, East Lansing

IONIA-MONTCALM COUNTY

R. R. WHITTEN, IONIA
George E. Horne, Entrican

GRATIOT-ISABELLA-CLARE COUNTY

C. F. DU BOIS, ALMA
M. J. Budge, Ithaca

JACKSON COUNTY

HAROLD L. HURLEY, JACKSON
Corwin S. Clark, Jackson

KALAMAZOO-VAN BUREN-ALLEGAN COUNTY

WALTER den BLEYKER, KALAMAZOO
W. E. SHACKELTON, KALAMAZOO
Sherman Gregg, Kalamazoo
O. D. Hudnutt, Otsego

KENT COUNTY

A. V. WENGER, GRAND RAPIDS
G. H. SOUTHWICK, GRAND RAPIDS
J. D. BROOK, GRANDVILLE
H. J. PYLE, GRAND RAPIDS

E. W. Schnoor, Grand Rapids
 W. E. Wilson, Grand Rapids
 J. S. Brotherhood, Grand Rapids
 R. H. Spencer, Grand Rapids

LAPEER COUNTY

C. D. CHAPIN, COLUMBIAVILLE
 F. E. Dodds, Silverwood

LENAWEE COUNTY

H. H. HAMMELL, TECUMSEH
 R. G. B. Marsh, Tecumseh

MACOMB COUNTY**MANISTEE COUNTY**

HARLAN MAC MULLEN, MANISTEE
 C. L. Grant, Manistee

MARQUETTE-ALGER COUNTY**MASON COUNTY****MECOSTA COUNTY**

B. L. FRANKLIN, REMUS
 Donald MacIntyre, Big Rapids

MENOMINEE COUNTY**MIDLAND COUNTY****MONROE COUNTY**

D. C. DENMAN, MONROE
 James Humphrey, Monroe

MUSKEGON COUNTY

W. F. GARBER, SR., MUSKEGON
 A. F. Harrington, Muskegon

NEWAYGO COUNTY

WILLYS GEERLING, FREMONT
 Dr. Moore, Newaygo

OAKLAND COUNTY**OCEANA COUNTY**

OTSEGO-MONTMORENCY-CRAWFORD,
 OSCODA, ROSCOMMON-OGEMAW COUNTY

ONTONAGON COUNTY

E. J. EVANS, ONTONAGON
 F. W. McHugh, Ontonagon

OSCEOLA-LAKE COUNTY**OTTAWA COUNTY****PRESQUE ISLE COUNTY****SAGINAW COUNTY**

A. R. McKINNEY, SAGINAW
 J. T. Sample, Saginaw

SANILAC COUNTY**SCHOOLCRAFT COUNTY****SHIAWASEE COUNTY**

COLIN McCORMICK, OWOSSO
 W. E. Ward, Owosso

ST. CLAIR COUNTY

A. L. CALLERY, PORT HURON
 D. W. Patterson, Port Huron

ST. JOSEPH COUNTY**TRI-COUNTY**

WEXFORD, KALKASKA-MISSAUKEE

TUSCOLA COUNTY

JOHN G. MAURER, REECE
 R. A. Townsend, Fairgrove

WASHTENAW COUNTY

THERON S. LANDFORD, ANN ARBOR
 JAMES D. BRUCE, ANN ARBOR

WAYNE COUNTY

GEORGE J. BAKER
 A. P. BIDDLE
 G. V. BROWN
 A. E. CATHERWOOD
 JOHN L. CHESTER
 H. F. DIBBLE
 G. B. GARBER
 L. T. HENDERSON
 L. J. HIRSCHMAN
 FRANK A. KELLY
 CHAS. B. KENNEDY
 J. C. KENNING
 J. A. KIMZEY
 C. L. McClINTIC
 W. W. MAC GREGOR
 R. M. McKEAN
 F. M. MEADER
 E. B. RICHEY
 HOWARD W. PIERCE
 F. D. ROYCE
 S. E. SANDERSON
 CLARE L. STRAITH
 R. V. WALKER
 L. F. C. WENDT
 WALTER J. WILSON

A. Amberg
 L. P. Breitenbach
 C. D. Brooks
 F. G. Buesser
 H. R. Carstens
 W. J. Cassidy
 H. L. Clark
 F. H. Cole
 M. A. Darling
 J. E. Davis
 J. H. Dempster
 D. Donald
 W. A. Evans
 G. E. Frothingham
 Hugh Harrison
 A. F. Jennings
 N. O. La Marche
 B. H. Larsson
 B. C. Lockwood
 L. Reynolds
 G. C. Penberthy
 E. D. Spaulding
 W. J. Stapleton, Jr.
 C. K. Valade
 H. W. Yates

GENERAL SESSIONS

Theater of Hotel

September 17th, 8:00 p. m.

1. Call to Order—President Jackson.
2. Invocation.
3. Announcements—Secretary.
4. Nominations for President.
5. President's Annual Address—J. B. Jackson.
6. Arthritis: Ralph Pemberton, M. D., Philadelphia, Pa. (By invitation).
7. Entertainment—Ball Room and Grill.

SECOND GENERAL SESSION

September 18th, 8:00 p. m.

1. Call to Order—President Jackson.
2. The History of Goitre Pathology — Dean Lewis, M. D., Baltimore, Md., (By Invitation).
3. Professional Vagaries.
Morris Fishbein, M. D., Chicago; Editor Journal of the A. M. A. (By invitation).

NOTE—The Evening Dinners at 6:30 p. m. in the Main Dining Room will be a fellowship function, followed immediately by the General Sessions.

SECTION MEETINGS

The five Scientific Sections will meet on Friday and Saturday mornings from 8:45 a. m. to 12:30. Section programs of splendid papers have been prepared by Section Officers as follows:

MEDICAL SECTION

Chairman, C. F. Karshner, Grand Rapids.
Secretary, W. R. Vis, Grand Rapids.

Chairman's Address—C. F. Karshner.

"The Field of Usefulness of Iodine in Goiter"—A. F. Jennings, Detroit, Mich.

"Pertinent Facts Concerning Hemoglobin"—C. E. Roderick, Pathologist Battle Creek Sanitarium.

"The Value of Gain in Weight as an Indication of the Healing of Pulmonary Tuberculosis"—J. Burns Amberson, Jr., William H. Maybury Sanatorium, Northville, Mich.

"Malta Fever"—I. F. Huddleson, Department of Animal Husbandry, Michigan State College.

Saturday morning, June 18.

"O-Iodoxybenzoic Acid in the Treatment of Arthritis"—J. B. Youmans, Department of Internal Medicine, University of Michigan.

"The Power of Sunlight to Destroy Bacteria"—F. M. Meader, Department of Health, Detroit, Mich.

"The Pathology of Pulmonary Radiographic Opacities"—P. M. Andrus, Pathologist Queen Alexandra Sanatorium, London, Ontario.

"Arthritis"—Ralph Pemberton, Philadelphia, Pa.

"A Study of the Dietary Treatment of Pernicious Anaemia"—John Huston, Department of Internal Medicine, University of Michigan.

—William R. Vis,

Secretary Medical Section.

PEDIATRICS

Chairman,

Secretary, D. J. Levy, Detroit, Mich.

Friday Morning June 17th.

"Tuberculosis in Childhood"—Bruce H. Douglas, Northville.

By means of Ranke's classification of tuberculosis and Krause's explanation of the altering of the defensive mechanisms in the child and the adult many of the differences between the manifestations of the disease during childhood and adult life are explainable. The diagnosis and treatment of tuberculosis in childhood can be soundly based on these principles.

"Diagnosis and Treatment of Acute Osteomyelitis in Children"—Grover D. Penberthy, Detroit.

"Postural Defects in Children"—Carl E. Badgley, University Hospital.

"Biophysical Principles of Light Therapy"—Ernest A. Pohle, University Hospital.

Light therapy has been in use for centuries, but only recently the entire physical therapy, of which light therapy is a part, received official recognition as a branch of medicine by the American Medical Association. Little is known, however, regarding the effect of light on cells, tissue, organs and organisms; no standard method of dosage has so far been adopted. It seems desirable, therefore, to present a brief selected compilation of the facts scattered throughout the literature, which form the beginning of a foundation for scientifically conducted light therapy.

"The Choreas, with Special Reference to Their Etiology and Treatment"—Carl D. Camp, University Hospital.

Choreas in children differ in etiology, prognosis and treatment. Infectious type, type due to hereditary syphilis, type due to encephalitis and hereditary defect. Conditions simulating chorea such as multiple tic or habit spasm, also hysteria.

Saturday Morning, June 18th.

"Comparative Vitamin Content of Human and Cow's Milk with Pathological Demonstration"—Miss Icie Macy.

"The Behavior of Children in Relation to Medical Treatment"—Homer T. Clay, Grand Rapids.

"The Relative Importance of Certain Qualitative Variations in the Composition of Infant Foods"—Grover F. Powers, Henry Ford Hospital, Detroit, Mich.

"The Relative Importance of Certain Qualitative Variations in the Composition of Infant Foods." (Lantern slides).

(A discussion of the known factors of importance in the artificial feeding of infants with the intent of stimulating interest in a direct and simple approach to the problem involved.)

"Urology in Children"—Walton K. Rexford, Detroit, Mich.

NOTE:—The Programs for Surgery, Gynecology and Obstetrics and Eye, Ear, Nose and Throat will appear in the June issue.

ENTERTAINMENT

Mackinac Island and the Grand Hotel furnish a unique environment for our Annual meeting. This year's session will enable us to combine pleasure with our work. The program has been so arranged that Friday and Saturday afternoons from 1 to 6 o'clock opportunity is afforded for golf, tennis, archery, quoits, boating and scenic rides about the island. At 6:30 p. m. each evening we will all meet in the main dining room for dinner.

Train and boat service will be announced in the June issue.

Make your hotel reservations *now!*

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

MICHIGAN STATE MEDICAL SOCIETY CONVENTION, MACKINAC ISLAND, JUNE 16-18, 1927

To accommodate members of the Michigan State Medical Society, their families and friends who will attend the state meeting at Grand Hotel, Mackinac Island, June 16th, 17th and 18th, the Pennsylvania railroad will arrange to provide special sleeping cars for exclusive use of members from Grand Rapids to Mackinaw City in their train leaving Grand Rapids at 10:30 p. m., Wednesday, June 15th and Thursday, June 16th, arriving Mackinaw City 7:05 a. m., at which point connection is made with Island Transportation company boat arriving Mackinac Island approximately 8 a. m.

It is quite probable a majority of members will wish to remain over at Mackinac Island until Sunday, June 19th, and, in view of the fact that summer schedule of the Pennsylvania railroad will not be effective until last week in June, the railroad people will, providing approximately 125 persons signify their intention of returning together, operate special train leaving Mackinaw City Sunday afternoon, June 19th, arriving Grand Rapids in time for connection with late night trains for southeastern Michigan points including Detroit.

The short limit excursion fare from Grand Rapids to Mackinac Island and return is \$12.10.

The cost for lower berth, Grand Rapids to Mackinaw City, is \$3, upper \$2.40, drawing-room \$10.50; seat fare, Mackinaw City to Grand Rapids, \$1.50.

For reservations or further information, kindly communicate with Mr. A. E. Butin, Division Passenger Agent, Pennsylvania railroad, Grand Rapids, Mich., or request your local agent to secure train reservations.

R. R. RATES MACKINAC ISLAND

The appended rates will prevail for our State Meeting. They are for the round trip

exclusive of Pullman fares. Members can leave Detroit and intermediate points via the Pere Marquette or Michigan Central at 5:30 p. m., arriving at Grand Rapids at 9:30 p. m. Leave Grand Rapids at 10:30 p. m., arriving at Mackinaw City at 7. a. m., where a ferry will be waiting and to reach the Island by 8 a. m. Through Pullmans will run from Detroit.

Detroit	\$16.50
Ann Arbor	16.50
Jackson	15.50
Kalamazoo	14.40
Grand Rapids	12.10
Benton Harbor	16.20
Flint	13.00
Saginaw	11.40
Muskegon	13.25

Members on the east side of the state can go up on the regular trains at these summer round trip rates.

ARCHERY AT THE ANNUAL MEETING

It seems quite fitting and proper that the ancient sport of archery is to be included in the outdoor events of the Annual meeting at Mackinac Island. What wonderful tales of feats with the bow and arrow could be told by this historic old Indian home and battle ground, lying like an emerald gem in the Straits of Mackinaw.

It is quite easy to imagine that perhaps some long departed Indian spirits will return next June to watch with critical eye some of the feats of skill which will be attempted by the archers of today with their tackle patterned after the old English longbow which have come down to us from the days of Sherwood Forrest.

All archers who are members of the society are urged to be present at the Annual meeting and to bring their archery tackle. There will be various events in which all may feel free to enter. The afternoons of Friday and Saturday, the 17th and 18th have been given for outdoor events and archery will have its place on the program.

The following contests will be carried out subject to whatever changes may be deemed necessary later.

Games of Rovers by groups of four to be played on one of the golf courses.

Trials for longest arrow flight.

Three arrows to be shot; longest flight to count.

Clout shooting contest.

Archery-golf contest to be played by archers against golfers over nine holes, two against two.

Archery-golf contest special.

A special challenge is issued by Dr. S. J. Rubley of Monroe and Dr. R. G. B. Marsh of Tecumseh, to play against any two golfers who are members of the Michigan State Medical Society, in a special contest of 18 holes. The archers to use a soft rubber ball four inches in diameter as a target to take the place of the regulation golf hole. Suitable conditions for the golfers in regard to ground rules will be made according to the condition of the grounds.

Any members wishing to take part in any of the above events are requested to communicate with Dr. R. G. B. Marsh of Tecumseh.

WOMAN'S AUXILIARY

The House of Delegates directed the organization of a Woman's Auxiliary. President Jackson appointed an Organization Committee with Mrs. C. B. Crane of Kalamazoo as chairman. During the past month a communication was addressed to each County Society requesting the appointment of a local organizer or committee. Replies have thus far been received from the following:

NOMINEES:

Barry County—

President, Mrs. Guy C. Keller, Hastings.
Secretary, Mrs. A. W. Woodburne, Hastings.
Treasurer, Mrs. B. C. Swift, Middleville.

Bay County—

Mrs. Paul Urmston, McKinley Avenue, Bay City.
Mrs. L. Fernald Foster, McKinley Avenue, Bay City.
Mrs. C. L. Hess, Hill Street, Bay City.

Calhoun County—

Mrs. Theodore Kolvoord, 137 Freylinghusen Street, Battle Creek.

Chippewa-Luce-Mackinac County—

Mrs. G. A. Conrad, Sault Ste Marie.
Mrs. F. C. Bandy, Sault Ste Marie.
Mrs. E. A. Cornell, Sault Ste Marie.

Gogebic County—

Mrs. E. B. Stebbins, 653 McLeod Avenue, Ironwood.
Mrs. A. J. O'Brien, 419 E. Vaughn Street, Ironwood.
Mrs. D. C. Pierpont, St. James Hotel, Ironwood.

Ingham County—

Mrs. Fred Seger, 216 E. Hillsdale, Lansing.

Jackson County—

Mrs. C. S. Clark, 1046 Fourth Street, Jackson.
Mrs. George A. Seybold, 1503 W. Washington Avenue, Jackson.
Mrs. John C. Smith, 1114 W. Washington Avenue, Jackson.

Mason County—

Mrs. Barbara Switzer, 127 N. James Street, Ludington.

Menominee County—

Mrs. W. S. Jones, Menominee.
Mrs. H. A. Vennema, Menominee.

Wayne County—

Mrs. Robert Beattie, 1455 W. Grand Blvd. Detroit.

County Societies are urged to send in their nominations.

DR. FRANK B. WALKER

We record the death of a member, ex-Councilor and Past-President, Dr. Frank B. Walker of Detroit. In his passing there has ended an unusually full and well rounded life; a life devoted to mankind and to medical science. Exemplifying noble ideals, reflecting true traits of steadfast friendship and clinging to principles characteristic of all reputable doctors, Dr. Walker honored his profession and attained a leadership role that exercised wholesome influences.

We mourn his departure, record our sorrow and extend to his bereaved family our sincerest sympathy.

FRANK B. WALKER AND BLOOD VESSEL SURGERY

The experimental work done in Blood Vessel Surgery by Dr. Frank B. Walker between 1894 to 1897 is not generally known because the work was never published and thereby hangs a story with a moral to it.

While a student in the office of Doctors H. O. Walker and Frank B. Walker I assisted Dr. Frank B. Walker in dog surgery. It is not generally known that Dr. H. O. Walker was the first to do intestinal anastomosis in the human being with the Murphy button, but Murphy gave him that credit at the Milwaukee meeting of A. M. A.

After Dr. Frank had tried various

methods of intestinal anastomosis he came to the conclusion that the best intestinal anastomosis could be done merely with a needle and thread, the method today.

After the experience in intestinal anastomosis he then took up arterial suturing end to end. The abdominal aorta in dogs was cut in two, then suturing through all coats of arteries with eversion of the lips which made an intima to intima contact. After several successful suturing of abdominal Aorta I then assisted him in suturing of the carotid of a horse, which was also successful.

When he had collected, as he thought, a sufficient number of specimen of union with microscopic slide he was about to publish it when Dr. J. B. Murphy published his article (1897) on Arterial Suturing which was done by an invagination method, both by continuous or interrupted sutures, one out of five being successful. Immediately Dr. F. B. Walker gave up the idea of publishing his work because of the well known reputation of Murphy in Surgery. The Murphy operation is taught medical students but it is not carried out by the surgeon because of the usual contraction at site of union.

The method used by Walker was in 1899 published by Dorfler and is the method now universally used, the essential features being a continuous suture of fine silk with round needle that everts the edges and embraces all coats of the vessel.

Had Walker published his work, the pioneer work, he would have been credited father of modern blood vessel surgery. But the name of Murphy was too much.

The Matas operations for aneurisms are the outcome of the knowledge that the intima is the regenerating layer of the blood vessel, not the adventitia.

H. E. Randall.

MEDICINE VS. OSTEOPATHY

In the hearing on the Osteopath Bill the spokesman for this cult reiterated that "they had arrived" and that they were the equal of modern medical science and so were entitled to equal recognition because they were thoroughly educated. For their benefit and for the benefit of our members so that such claims may be refuted we publish the following comparative analysis prepared by the Council on Medical Education and Hospitals of the A. M. A.

April 11, 1927.

In the following statement is given a comparison of medical and osteopathic colleges based on the minimum standard of a medical college that

is considered worthy of approval by the Council on Medical Education and Hospitals of the American Medical Association. This standard is now met by all medical colleges and exceeded by many of them.

1. Entrance Requirements

(a) Medical schools require, not only graduation from an accredited four year high school, but also the completion of two or more years of work in a college of arts and sciences that has been approved by the Association of American Universities, or by the Association of Colleges and Secondary Schools, of the district in which it is located.

(b) There is not one osteopathic college which requires more than a high school education, in some of the schools investigated, even the high school course was not required for all students admitted.

2. Admission and Attendance

(a) Medical schools now require that the student must be in actual attendance in the college within the first week of each annual session and that the student attend all classes except for good cause, such as sickness, no credit to be given unless the attendance has been over 80 per cent of the full time.

(b) In all osteopathic colleges investigated a wide latitude is allowed for students being admitted and, in some, the students were allowed to enter at any time. No records in sufficient detail were found in the inspection whereby an 80 per cent attendance provision could be enforced.

3. Supervision of Instruction

(a) Every medical school now has an efficient executive officer who sees to it that records are kept regarding students' credentials, attendance at classes, grades of courses and accounts of students, as well as any changes made in curriculum.

(b) In no osteopathic school were there records or other evidences showing that the students' work was supervised to an extent in any way comparable with medical schools.

4. Curriculum

(a) In every approved medical college an announcement is issued each year setting forth each course by number subject, content, character, (lecture, recitation, laboratory or clinic); the length of time, where, and by whom given, and the amount of credit allowed.

(b) In no osteopathic college was such complete information given regarding the courses offered.

5. Character of Instruction

(a) In all medical schools laboratory subjects are given, in reasonably uniform proportions of didactic and practical work and by teachers of unquestioned competence. In the clinical work also many patients are studied from all of the many types of diseases occurring among mankind and the students are drilled in the recognition of the different diseases and in the various efficient methods of treating each disease.

(b) In osteopathic schools inspected, certain courses, if taught at all, were entirely didactic, or if laboratory instruction was given, it was without the use of the essential and elaborate equipment now so commonly found in medical schools. Such instruction as was given with patients, was entirely from the osteopathic point of view and in none of these schools was there seen any attempt to teach the students regarding different types of diseases, all patients being

treated by the osteopathic form of manual manipulation.

6. *Qualifications of Teachers*

(a) Every approved medical school now has from eight to twenty expert teachers having professional rank in the various laboratory subjects whose entire time is devoted to instruction and research. In addition there are from four to twelve full-time instructors or assistants distributed in the four main laboratory subjects of (1) Anatomy, (2) Physiology, (3) Pathology and Bacteriology and (4) Physiological Chemistry and Pharmacology.

(b) In osteopathic colleges not one teacher who, from previous experience or training, could be considered as expert, as deserving professional rank, or who was paid a sufficient salary to warrant his devoting his entire time to teaching and research.

7. *Training of Teachers*

(a) In the medical schools the teachers with only an occasional exception have received a complete training in medicine and hold the M. D. degree. The few exceptions are teachers of laboratory subjects who have an A. B., B. S. or Ph. D. degree, and who have had special training or developed skill as teachers in the subjects to which they were assigned.

(b) In osteopathic schools, on the contrary, it is very seldom that a teacher is found who has obtained a medical training or who holds a degree in medicine. The few exceptions who hold M. D. degrees are graduates of low grade medical schools or who hold subordinate positions on the staff of the osteopathic school.

8. *University Affiliation, Finances*

(a) All but a few medical schools are now medical departments of reputable universities and are controlled by the universities, both educationally and financially. All medical schools have incomes either from state appropriations or private endowments so that the actual instruction furnished costs from two to several times what the student pays in tuition fees.

(b) No osteopathic college is a department of a recognized university and all osteopathic schools have to depend for their maintenance entirely on the fees of students, plus other small sums as may be received indirectly through the teaching plant.

9. *Teaching Hospitals*

(a) Every medical school now owns and controls a hospital or is in close affiliation with one in which the school has established an excellent routine of clinical instruction which provides its students with opportunities to examine and care for patients under the supervision of skilled physicians. The patients in the hospitals connected with these medical schools number from 150 to 500 or more each day and represents all types of diseases of which human beings are subject.

(b) In osteopathic colleges, such hospitals as are available care for comparatively small numbers of patients; students are seldom if ever admitted to the wards; in the inspection made, students have never been seen examining or caring for hospital patients and no courses of instruction with hospital patients have ever been noted in the published announcements of osteopathic schools.

10. *Dispensaries or Outpatient Departments*

(a) All medical schools have dispensaries or outpatient departments with patients averaging from 60 to 200 or more daily and representing all types of diseases where students are taught by

physician-teachers who are specialists in medicine, obstetrics, surgery and other specialties.

(b) In osteopathic schools, no clinics were noted in which students were being given instruction in the many various types of diseases to which human mankind is subject. The only instruction being furnished to students was that patients coming to the clinics were placed on tables and where the osteopathic manipulation treatment was administered.

11. *Library*

(a) Every medical school is now equipped with an elaborate and carefully selected library, including the various modern text-books and the valuable medical journals, and there was abundant evidence that these libraries were used by the students.

(b) No osteopathic college was found to have a library other than a few osteopathic books and possibly an osteopathic journal or two.

12. *Museum*

(a) Every approved medical school now has a well equipped museum with normal, anatomical specimens and others showing the changes due to diseases.

(b) No osteopathic school was found to have a museum and no claim of such has been found in any of their printed announcements.

13. *Postmortems*

(a) Students in every reputable medical school are now given instruction in connection with postmortem examinations where diagnoses made on patients who have subsequently died have been confirmed or corrected.

(b) In no osteopathic school have postmortems been noted or any instruction regarding them being furnished to the students.

14. *Anatomy and Dissecting Material*

(a) Every medical school now has an extensive department of anatomy where enough cadavers are furnished to allow each student to dissect a lateral half of the body and under the supervision of teachers who are graduates of medical schools and have had subsequent experience in the teaching of human anatomy.

(b) In no osteopathic schools has there been found a department of anatomy or a dissecting room in any way comparable with that found in the lowest grade medical school. In only one osteopathic school was there found a teacher who had obtained a fair experience in dissection.

15. *Operative Technique*

(a) In all medical schools a sufficient number of additional cadavers are available whereby students can be trained in the technique of various operations, such as amputations, ligation of arteries, etc.

(b) No osteopathic college was found which provided any such course nor has any such course been described in osteopathic announcements.

16. *Animals*

(a) In every approved medical school animals are used extensively in demonstration and research work in connection with the teaching of physiology, pharmacology and bacteriology and a supply of animals is always available, including frogs, turtles, rabbits, guinea pigs and occasionally even cats and dogs.

(b) In the inspections made of osteopathic schools no evidence of such work has ever been found and no supply of animals has ever been seen.

17. *Special Apparatus*

(a) Every medical school is now provided with elaborate apparatus, such as stereopticons, charts, embryological models and roentgen ray apparatus whereby the modern and highly useful aids in recognizing and treating diseases are available.

(b) No such elaborate apparatus has been found in any one of the osteopathic schools.

18. *Published Lists of Students and Graduates*

(a) Every medical school now issues an annual announcement in which besides the lists of subjects taught contains a complete list of its students showing the classes in which they are enrolled, and also its latest list of the graduating class. Thus a list of the bona fide students enrolled in the school or graduated from it during any previous years is always available which prevents the appearance later of imposters who may claim to have taken such courses.

(b) The osteopathic school which openly publishes such records is an exception.

19. *Time Devoted to Medical and Osteopathic Instruction*

(a) The course for physicians now includes high school, 4 years; college, 2 to 4 years; medical school, 4 years and hospital internship, 1 year—total of at least 11 years.

20. *Claims Regarding Hours in the Curriculum*

No judgment in regard to the education furnished by osteopathic as compared with medical schools can be made on the basis of hours of instruction or subjects in which instruction is offered. Truth and scientific fact are not guaranteed by hours of instruction, but by the reliability of the subject matter taught and the qualifications of the instructors and their ability to impart knowledge.

In addition to what has been stated in previous paragraphs, there is still a question as to whether osteopathic theories are based on fact and thus far no reputable university has been willing to endorse osteopathy or to establish an osteopathic department.

21. *Equal Rights with Physicians*

In spite of the serious deficiencies of osteopathic colleges as compared with medical schools osteopaths are seeking the full rights and privileges as physicians. To have equal rights osteopaths should not be unwilling to secure the same professional and educational training as are now required of physicians. All that physicians are asking is for a square deal. Every one who is to be given legal authority to care for sick or injured people should be measured by the same standard of preliminary and professional education. Require that whoever is to practice the healing art shall be measured by the same standard; then grant him a license as a physician and let him use any method of treatment which his educated common sense may indicate.

Very truly yours,
Council on Medical Education and
Hospitals.

MICHIGAN SOLDIERS HOME

By reason of the extended publicity given to conditions alleged to exist at the State Soldiers Home and the emphasis placed upon the statements of misinformed or disgruntled individuals we impart a

statement thereon. The Editor has personally corroborated these reports. By personal inspection we can attest to a most commendable medical administration system instituted by Dr. Dodge that supercedes all former professional services tendered to the inmates of the home.

Report of Conditions of the Hospital in July, 1924.

April 1, 1927.

Dr. Dodge
Chief Surgeon,
Michigan Soldiers' Home.

Dear Doctor:

On July 1, 1924 I entered the Michigan Soldiers' Home hospital as Second Assistant Surgeon, after I had passed the Kansas State Board of Medicine on October 9, 1923, and after I had spent a rotating internship in Blodgett Memorial hospital, Grand Rapids, under the Superintendents Doctors Munger and Morrill:

As I entered the Michigan Soldiers Home hospital, I found the following conditions in the hospital:

Officers—

Dr. Grube was Chief Surgeon and in charge of the hospital. Dr. Keffer was first assistant surgeon, and was ordered by the chief surgeon to do the daily calls at the companies, to take care of all women patients at the Annex and in the hospital, to hire the orderlies, and to instruct the night-orderlies that special attention was given to locking the iron gate in the basement leading to the storeroom for alcohol and medicines.

I was ordered to take care of all the men-patients in the hospital, to take care of the dressing room, and to help Miss Stoll, who did all compounding in the pharmacy, in making up the requisitions for the stockroom for medicines, dressing material, etc., every three months.

Nurses Force—

Supervisor of practical nurses was Mrs. Atwood. She was allowed 13 women helpers to do the practical nursing care. She was not allowed to hire more help.

Orderlies—

There were seven orderlies without any training. These orderlies were not considered high enough a grade as to associate with the women help.

Number of Patients: (Men and Women in Hospital)—

In my estimation there were 110 to 130 patients in the hospital in July, 1924. Ward C2 and ward B2 were not in use.

Condition of Men-Patients—

The sanitary conditions of the men-patients were poor. There were many bedsores which were not treated, because the help was not competent to treat them. Soiled bed clothes were washed in the bathtub, before they were sent to the laundry, because there were no slop-sinks available. The use of opiates for the relief of patients was high. Many patients kept powerful drugs like digitalis in their own possession, and treated themselves. Orderlies left the wards at any time to get mail, or to buy tobacco, or to entertain all over the hospital. As there were only 13 women helping the sick, each one being on eight hour duty, about 120 patients were during night taken care of by only

two untrained practical nurses, and two untrained orderlies. As I was talking over this matter with Dr. Grube, he told me that he was unable to obtain any more help, and that the State of Michigan could not afford to improve the sanitary conditions of the patients.

Dressing Room—

There was not one sterile sponge of gauze in the dressing room. I was told that the steam-sterilizer had not been used for about two years. I could find nobody who knew how to operate the steam-sterilizer. Dr. Grube told me to be very careful with the steam-sterilizer, because the same outfit had exploded in Milwaukee, and killed one person.

There were a few good knives, retractors, catheters, etc.; the hemostates were in no condition for surgical work.

Pharmacy—

All compounding was done by Miss Stoll, who has no certificate. No records were kept about the alcohol. Opiates were kept in the safe in the hospital office, to which only Dr. Grube had access.

Laboratory—

A small room on the third floor was provided for laboratory purposes; it contained two burettes, several test tubes, one test tube rack, two urinometers and one electrical centrifuge. Attachments like aluminum tubes, and centrifuge tubes were missing. There were no chemical solutions kept.

Diet—Kitchen—

Soft diets were prepared by Miss Harris in charge of a small kitchen on the third floor. There were no provisions available for the accurate calculating of diets as necessary for diabetic, nephritic, etc., diets.

Medical records—

There were no medical records kept.

Kindly interview Dr. Grube and Mrs. Atwood to substantiate my above statements.

Sincerely yours,

Arthur Mollman.

Report of the Hospital from July 1, 1924 to
December 1, 1925.

April 1, 1927.

Dr. Dodge
Chief Surgeon,
Michigan Soldiers' Home.

Dear Doctor:

In my previous report I described the conditions of the Michigan Soldiers' Home hospital, as I found them in July 1924. I wish to report the improvements installed in the hospital up to December 1, 1925.

1. Operating Room—

As it appeared impossible to obtain a modern sterilizing equipment, the old steam sterilizer again was put in use in August 1924. Working with comparatively low steam tension and much loss of time it has been used ever since regularly, covering the entire demand for sterile gauze, sponges, utensils, etc. in the hospital.

A few hemostates and general operating instruments were obtained from Lansing; catgut, silk, and silkworm sutures were kept in sterile solutions; gowns, sponges, etc., one hypodermoclysis equipment, and one anaesthesia stand were prepared so that the operating room could be used for emergency work.

2. Dressing Room—

Sterile sponges, cotton-balls, towels, aseptic solutions, etc. were placed on a dressing car. A few instruments, suture material, and an equipment for local anaesthesia were kept sterile. A stand for bladder irrigations, Buck's extensions, and wire gauze were prepared to meet the most necessary requirements for the routine dressings and minor operations for the patients of the Soldiers' Home.

As there was no trained help in the dressing room, I did most of the dressings personally. Among the minor operations performed I did several amputations of fingers and toes, carbuncle operations, tonsillectomies, submucous resections of the nose septum, sinus operations, intralaryngeal procedures, and removal of catheters which had torn off in the urethra. For the latter operations of course I had to use my own instruments.

3. Pharmacy—

As the remedies and pharmaceutical preparations were found in no order whatsoever, because the pharmacy was taken care of by untrained help, a pharmacological system was used to keep all remedies in proper place. Opiates were kept under separate lock and key; and Miss Stoll was instructed to keep this system. Many old and entirely useless remedies were condemned in presence of Dr. Grube. Several modern coal-tar preparations as Luminal, Allonal, Urethan, Paraldehyde, Adalin, etc. were added to the stock with the intention to decrease the use of opiates. On July 1, 1925 Mr. Metzger took charge of the pharmacy. He resigned August 31, 1925, because he was not registered. On October 3, 1925 Mr. W. J. Remus, registered pharmacist, took charge of the pharmacy.

4. Laboratory—

Chemical solutions were prepared, and kept for the routine qualitative urinalysis as for albumen, sugar, acetone, indican, bile, and urobilinogen; and for the routine quantitative urinalysis as for albumen, sugar, and chlorides. The electrical centrifuge was put in order, and the necessary attachments as aluminum tubes, and centrifuge tubes were bought by Dr. Grube. Chemical solutions were prepared for the analysis of gastric contents, of occult blood in the feces, for Gram's stain, Ziehl's stain, and Wright's stain, for blood counts etc. As there was no microscope in the hospital, Dr. Grube's private microscope had to be used.

5. Diet—Kitchen—

Miss Harris was instructed to do accurate calculating of diabetic and nephritic diets according to their protein-fat—and carbohydrate ratio. Only the metric system was used in diet calculating.

6. Care of Patients on Wards—

No improvement of the care of the sick could be expected, unless there was adequate help able to carry the orders given, and willing to take sufficient responsibility and interest in the care of the sick. Mrs. Atwood, supervisor of practical nurses, did certainly everything possible to raise the moral standing of her women helpers by discharging several women entirely unfit for the care of the sick, and by hiring new help. However, at the low salary given, no efficient help could be expected. Up to December, 1925, the number of practical nurses was increased to 16.

As I did my daily rounds, I found the patients' skin in reference to bedsores and bedbug bites in deplorable conditions; so I ordered immediate

medication to remedy the condition, but was not able to correct it entirely, as the help was not sufficient to keep the patients dry, and to turn them in order to relieve pressure. All my patients were given physical examination in as much as the diagnostic means available allowed. The practical nurses were instructed to take temperatures, pulse rates, whenever abnormal conditions were observed. Potent drugs kept in possession of the patients were taken away, and given to the practical nurses, so that they might dispense them personally. Opiates were strictly withdrawn from all veterans of the Spanish-American war. The withdrawal of opiates from the aged veterans of the Civil war was considered unsafe, and therefore not attempted. New admitted patients received opiates only in acute painful conditions, which could not be taken care of by coal-tar preparations. Whenever possible the use of morphine was replaced by the non habit forming codein. I made a special effort to keep patients, suffering from urinary disturbances, comfortable by frequent catheterization and bladder-irrigations, done by myself.

The necessity of washing soiled bed clothes in the bath tub could not be changed, because no slop-sinks could be obtained, and the hopper near the toilet is too small and too inconveniently placed to be used for that purpose. In order to meet this condition kerosene and sulphuric acid were ordered to be used to clean out the bathtubs after the soiled linen had been washed.

Kindly interview Dr. Grube, and Mrs. Atwood to substantiate my above statements.

Sincerely yours,
Arthur Mollman.

Report of the Hospital from December 1, 1925 to April 1, 1927.

April 1, 1927.

Dr. Dodge
Chief Surgeon,
Michigan Soldiers' Home.

Dear Doctor:

I wish to report the improvements installed in the hospital from December 1, 1925 to April 1, 1927, under your administration.

A. General improvements:

1. *Change of Hospital Regulations—*

The regulations of the Walter Reed General hospital, Washington, D. C., were studied and adopted for the use of the Michigan Soldiers' Home hospital inasmuch as this by any means could be done. A copy of your general hospital orders is accompanying my report.

2. *Record system—*

A complete system of medical records covering the history, physical examination, laboratory findings, and treatment of each patient in the hospital was installed in December 1925. As I checked up the medical records on January 1, 1927, there were 562 complete medical records written during the year 1926.

Daily ward reports for the immediate information of the surgeon in charge showing number of patients admitted, number of patients in critical condition, their temperatures, and pulse rates, the amount of morphine disbursed, and general condition of wards, to be signed by each nurse in charge on each eight hour shift, were ordered by Dr. Dodge. The use of order-books as a permanent record of all doctor's orders recording the exact date and time of the orders issued and executed were ordered by Dr. Dodge.

3. *Systematizing the Hospitalization of Patients—*

Two receiving wards were installed on the lower floor of the hospital, one for men and one for women. The order was given to the office of the hospital that all newly admitted patients were to be assigned to these wards. Here they were examined and transferred to the different wards according to their physical condition.

A surgical ward was installed on the second floor, previously called six-bed ward, diabetic patients were grouped together so that they could be given attention in a more practical manner. A special room was fitted up on the second floor for patients seriously ill, where they could be taken care of constantly by special nurses. One of the first orders of Dr. Dodge was to move all orderlies and men-help who were occupying single rooms between wards to the fourth floor of the hospital, and to move all patients from the fourth floor to the third or first floor, in order to gain single rooms for patients, and to get rid of the constant disturbances of orderlies and men-help occupying single rooms between wards.

4. *Water and Food—*

During the fall 1926 an acute endemic with diarrhoea, vomiting and general distress spread over the Soldiers' Home. Upon investigating this matter, the water supply for the Home was found to be badly contaminated with Coli Bacilli. Dr. Dodge immediately ordered that Arctic Spring water was to be used for drinking purposes on all wards. This condition of the water supply was unknown to Dr. Dodge and me, as according to all previous reports from the quartermaster and the chief engineer the water supply was supposed to be in excellent condition.

The feeding of the patients was regulated according to the professional standing orders of the three major hospitals of Grand Rapids; and the diets were divided into

1. Liquid diet without milk.
2. Liquid diet with milk.
3. Soft diet.
4. Light diet.
5. General diet and other diets were to be ordered specially.

B. Special improvements:

1. *Operating Room—*

As there was no instrument sterilizer, Dr. Dodge carried his own electrical sterilizer from Big Rapids to the operating room of the Soldiers' Home, so that instruments could be sterilized before operation. As there were hardly any instruments, Dr. Dodge carried his own instruments from Big Rapids to the Soldiers' Home, in order to be enabled to do major operations. The stock of sterile sponges, towels, gowns, suture material and antiseptic solutions was considerably enlarged, and enabled Dr. Dodge to do operations such as amputations of limbs, breast amputations, appendectomies, gall bladder operations, hernia operations, skin grafting and transplantations, operations for varicose veins, and thyroid operations, which I have never seen previously done in this hospital. Up to January, 1927, Dr. Dodge always had to use his own instruments, then we received two Field Operating Sets from the Medical Supply Depot, Lansing. During same month a new instrument and utensil sterilizer was installed in the sterilizing room. The old, unsatisfactory steam-sterilizer for gauze, sponges, etc. has as yet never been replaced by a modern sterilizing equipment.

2. *Surgical Dressing Room—*

As the old dressing room on the first floor was considered unfit, the six-bed ward opposite the pharmacy was divided into two rooms; the one was designed as dressing room, and the other one as diathermia room. The new dressing room was equipped with a new utensil-sterilizer, with instrument sterilizer and gas plate, with a large hopper, with cup-boards large enough to keep sterile dressings, gowns, suture material, antiseptic solutions, anaesthesia outfit, etc. for emergency and accident work. A new beam-scale, an instrument cabinet, and a dressing-car were placed into the dressing room. As there were no instruments for cystoscopy, catheterization of the ureters, and rectoscopy, Dr. Dodge offered his own instruments for use.

According to the records there were done during January 1927, 345 dressings; during February 1927, 223 dressings, and during March 1927, 385 dressings.

3. *Diathermy Equipment—*

The west side of the six-bed ward was converted into a high-frequency department. From the Liebel-Flarsheim company an equipment was installed delivering Oudin-Tesla, and d'Arsonval-currents. Ever since this installment the patients of the Soldiers' Home were treated for about six to eight hours daily for neuritis, arthritis, prostatic disturbances, lumbago, torcicollis, etc.

According to the records from February 1926 to March 8, 1927 195 separate patients were given 2,005 separate treatments, from 15 to 30 minutes each.

Into the north-west corner a dark-room was placed, as necessary for eye, ear, nose and throat-work.

4. *Laboratory—*

The previous pharmacy was converted into a laboratory by removal of several shelvings, and by installing a long laboratory desk just before the window from one wall to the other. Under the administration of Dr. Dodge the laboratory was greatly improved. A large research microscope from Zeiss, Germany, BCE5, with oil-immersion, fluorit-system, paraboloid-condensor and dark-field illuminator, furthermore a colorimeter of the plunger-type from Bausch and Lomb were purchased. New burettes, and bottles were requisitioned; and the stock of chemicals was much enlarged. To the routine qualitative analysis of urine were added stock solutions for the identification of reducing substances in the urine, as Barfoed's test, Soliwanoff's test, Phenylhydrazine test, etc. The quantitative urinalysis was improved by the use of Benedict's quantitative sugar test, and by the use of Volhard's indirect ammonium-sulphocyanide methods for chlorides. An equipment was prepared for blood chemical analysis, as for the nitrogen-non-protein, sugar, and creatinin determination. Solutions for bacteriological, hematological, and spinal fluid examinations were prepared.

Serological work and bacteriological work requiring culture methods were done by the Michigan State Laboratories in Lansing and Grand Rapids.

Every patient received a routine urinalysis; and all blood chemical work and quantitative urinalyses were done by me, as far as the time allowed me to do so; otherwise I had to send the specimen to the State Laboratories. At least 50 per cent of all the patients in the hospital received an examination for syphilis on the blood.

5. *Pharmacy—*

Upon the suggestions of W. J. Remus, pharmacist, a new pharmacy was installed in the former dressing room. Several new remedies and pharmaceutical preparations were added to the stock, such as Neo-salvarsan, mercurialized serum, Tetanus and Diphtheria antitoxin, Hemostatic serum, Cold serum, Digitan, Novasuroil, Salyrgan, Pituitrin and Iron arsenite in ampules. Furthermore Atophan, Arsenoferratoze, Mercurochrom, Neo-silvol, Anaesthesin, and tablets Digitan and Digitora. The new pharmacy fully meets the requirements of the Soldiers' Home hospital.

6. *Storerooms—*

A second storeroom was installed in the basement for gauze, cotton, rubber goods and glass-ware.

7. *Care of Patients on Wards—*

A complete physical examination has been made the basis of all medical and surgical procedures. With Miss Van Regenmorter, supervisor of nurses, I personally checked the backs, feet, and toes of all bed-patients. By Miss Van Regenmorter the nurses force has been instructed by daily lessons, about how to bathe, how to take temperatures, how to take pulse-rates, and how to watch patients. She has certainly done everything possible to improve the care of the patients by instruction of the nurses themselves. I refer to a special report from her in this matter.

8. *Publication—*

In the Journal of the Michigan State Medical Society February 1927 an article about "Novasuroil in the treatment of the Cardio-Renal Oedema" based upon our excellent results of this remedy on the aged patients of the Michigan Soldiers' Home has been published by Dr. Dodge, and myself.

Sincerely yours,

Arthur Mollman.

NEEDED SAFEGUARDS IN THE PROMULGATION OF REGULATIONS UNDER THE NATIONAL PROHIBITION ACT AND THE HARRISON NARCOTIC ACT

The imposition of duties and prohibitions on the people through regulations promulgated by department heads, bureau chiefs and administrative boards acting under authority of congress, and not directly by acts of congress, seems to be a necessary outcome of the magnitude and complexity of our government. There is no reason, however, why the formulation and promulgation of such regulations should not be as public as are the deliberations of congress in the course of the enactment of a statute, nor why such regulations as are promulgated should not be published as widely and made as accessible as are such statutes as are enacted. In fact, publicity, publication, and accessibility are essential to intelligent co-operation between the department head, bureau

chief, or board promulgating a regulation and interested members of the community who must live under it, and are necessary to due execution and proper compliance.

Because of the absence of any statutory requirements as to the procedures to be followed with respect to these matters, the practices of various department heads, bureau chiefs, and boards varies, and the practice of a single department head, bureau chief, or board may vary from time to time. It seems desirable, therefore, that the entire situation be regulated by law, so as to promote uniformity and to hinder arbitrary and unwise action.

The same principles should doubtless apply to all regulations having the force and effect of law. Organized medicine, however, can hardly concern itself with such a broad field, but must properly limit its interests to the fields of particular interest to the medical profession, namely, the fields covered by the National Prohibition Act and the Harrison Narcotic Act. With a view to the proper control of the promulgation of regulations under the acts named and under similar acts, the following principles are suggested, for enactment into law:

1. Adequate public notice shall be given, and opportunity afforded interested parties to be heard, by brief or orally, before any regulation is promulgated.

2. Any regulation shall be officially published so as to inform the interested public of that fact.

3. A reasonable time shall be allowed after the promulgation of any regulation before it becomes effective.

4. Authentic copies of all regulations shall be available at all times to persons requesting them.

5. All regulations promulgated shall be officially reported to congress annually and be published in authentic form in the Statutes at Large or in some other proper, generally available form.

6. When congress first convenes after the enactment of the proposed law all regulations in force shall be officially reported to congress and shall be published in authentic form in the Statutes at Large in some proper and convenient form, so as to bring publication up to date.

7. To meet emergencies, the president may waive the time limits and proceedings normally required for the promulgation of regulations, so as to permit the promulgation immediately of regulations necessary to meet the situation, such regulations

to remain in force until regulations can be promulgated in due course.

I shall be glad to have any suggestions you are willing to offer with respect to this matter. If such legislation as is suggested above meets your approval, please let me know, so that the way can be better paved for its introduction when congress convenes in December next.

William C. Woodward,
Executive Secretary, Bureau of
Legal Medicine and Legislation.

REDUCE THE MORTALITY RATE OF CANCER IN MICHIGAN

It can be done. Early recognized and properly treated, a large percentage of otherwise fatal cases, can be cured. One hundred thousand people died of cancer in the United States last year. Some of these almost certainly were your patients, and it is likely that some of them were your friends or relatives. The Council feels that the full effort of the State Society organization should be put behind the movement to lessen the mortality of this disease. It is our moral obligation.

Dr. William H. Welsh of Baltimore says, "There was never a time when tuberculosis presented problems of such magnitude as the cancer question." Some day the mystery of cancer growth may be solved. Some day a curative, or even a prophalatic serum may be discovered, but today we know that we have in X-ray or radium or surgery a cure for cancer when that cancer is recognized sufficiently early. So let us take advantage of the knowledge we now possess, and in so doing save many lives.

We have, then, two distinct objectives:

First—To educate the public so that they may recognize those suspicious signals which suggest the possibility of cancer and early seek the advice of their physician.

Second—To educate the physician himself.

Statistics indicate but too clearly that the physician himself is often lax. This is shown by the length of time which will too frequently intervene between the patient's first visit to his doctor and the time when proper treatment is begun. It is probable that hurried history taking and a carelessness in examination are responsible in largest measure, but a lack of knowledge of diagnostic signs and failure to keep abreast of the newer methods of diagnosis, are responsible for the delay in

quite too many instances. The physician as well as the patient must keep constantly before him the danger signals which may mean cancer. They are:

Any sore that does not readily heal.

Any wart or mole that changes in color, size or appearance or if on any part of the body that is subject to chronic irritation, whether there be any change in color, size or appearance or not.

Any lump, especially in the breast.

Any irregular bleeding or discharge.

Indigestion that cannot be attributed to anything in particular.

Any irritation, particularly in the mouth. One of the certain things known about cancer is that, in a great majority of cases, irritation is a predisposing cause.

In case of doubt, and when you can, take out a piece of tissue and send it to the laboratory. Recognize the fact that certain tumors distinctly benign today, may be distinctly malignant day after tomorrow. The lump in the breast, the polyp in the bladder, must always be looked upon with suspicion.

Under the auspices of the Council, and with the co-operation of the American Society for the Prevention of Cancer, and its chairman for Michigan, Dr. Reuben Peterson, a "Cancer Week" is proposed May 9th to 14th. During this week it is urged that County Societies hold clinics under the title, "A Diagnostic Survey of Possible Cancer Cases." Your councilor will help you to plan a program of ethical publicity through the newspapers and public meetings which we hope will interest the people of your community. Such a survey is bound to save some lives in every community. Incidentally a grateful public will appreciate the efforts of your County Society in this attempt to control the ravages of this most dreaded disease.

B. R. Corbus.

HOW TO CONDUCT A CANCER WEEK CAMPAIGN THROUGH NEWSPAPER PUBLICITY

HARRY C. SALTZSTEIN, M. D.
DETROIT, MICH.

During the past few years, publicity about cancer has become more and more widespread and general. The results are becoming increasingly evident. There is freer discussion of the nature and course of cancer; there is more general appreciation of the dangers of delay; and there is keener discernment of the early stages of the disease, both on the part of the laity and the profession.

However, human nature being as it is,

the facts concerned must be repeated and reiterated frequently. Only a fraction of the possible audience has as yet been reached, and as regards the possibilities of attainment through popular education, the surface only has thus far been scratched.

Consequently, the state wide campaign of cancer education, to be held during May 1927 under the auspices of the Michigan State Medical Society, will still fall on quite untilled soil.

Newspapers are just one vehicle of popular education. Radio, lectures, pamphlets, monthly magazines are all valuable and have been used. But 75 per cent of the people read only the newspapers. The remaining 25 per cent, who read periodicals, books, etc., also read the daily papers. Hence newspaper publicity has the possibility of reaching everyone—and with an economy of effort not possible with lectures, pamphlets, etc. (Radio is the newspaper's only rival, but the number of speeches that will be allowed on any one topic is always limited). For this reason, the cancer week campaigns in Detroit have concentrated upon newspaper copy, and the campaigns were shaped so as to conform as much as possible to the principles governing what is news.

The daily press are now quite alive to the cancer problem. They know that education is the only means known at present which has much likelihood of increasing our number of cures; they also appreciate that the public are increasingly interested in cancer and will read about it.

But, being commercial enterprises, and under the necessity of selling their papers, they will insist that the material submitted be "news", and that it be so fashioned that it is capable of holding the attention of the average newspaper reader.

To be news, something must be a drive, an issue, a fight, an argument.* It must also have a local interest—a human interest if possible. People like to read about local happenings, about well known characters, something about which a fight of some sort is involved, or some unusual human happening. To cite a few illustrations: Of all the reasons offered for the continued success of "Abie's Irish Rose" perhaps the most plausible is that it is a fight from one end of the play to the other—and it is over a familiar topic—marital differences and unrest; of which what couple has not tasted? The war in China is news, for it concerns the greatest of all fights, but

* The Practical Value of Newspaper Publicity in the Control of Cancer. Harry C. Saltzstein. J. A. M. A. July 31, 1926. Vol. 87, pp. 347-349.

when a few Americans are in danger, the headlines scream—it becomes of local color—maybe someone who lived near us, or knew someone we knew, was involved. Ty Cobb, apparently unjustly accused by the baseball “czar”—two well known personages, a fight, human sympathy for the “under dog,” all united to make that a front page story for several days.

Anyone can prove these and similar facts to his own satisfaction by taking up the evening paper and glancing through the news columns rapidly, then later noting which items attracted his attention and which he was interested enough in to read through. Unless he is a very unusual and outstanding person, those items involving a fight or argument of some fashion will attract most of his attention.

Cancer news, put in the form of a “drive”, a “cancer week”, wherein “all hospitals aim at cancer”, “Medics Fight Cancer”, etc., is a distinct aid toward reading interest and newspaper acceptability—a local happening with many persons involved, an underlying fight between hospitals vs. cancer.

A prominent person from a distance, coming to inaugurate this drive, is another element bringing in a personal encounter between some one well known and the dire scourge, and as such, is news.

The four cancer week campaigns in Detroit have been conducted in about the same way, bearing the above principles in mind. A date has been set for the “cancer diagnosis clinics”—five days during which all the hospitals will examine anyone who suspects they have cancer. The guest arrives the day before the opening of the clinics, for a series of speeches. The more prominent he is nationally and in the field of cancer treatment or research, the more successful will his talks be. For these speeches we have not been able to improve upon Dr. Bloodgood’s program for him laid down four years ago: a talk to reporters at 9 a. m.; a clinic to the medical profession at 10 a. m.; luncheon to a business men’s organization at 12:30; address to Women’s Clubs at 3 p. m.; address to the County Medical Society at 8:30. The strenuous “whirlwind” program in itself is an unusual element, therefore attracts publicity.

Before these events are to take place, everyone in the community must know that there is to be a “cancer week”. Also, since the slogan is “be examined if you suspect you have cancer”, everyone should know the warning signs of cancer before the clinics open. Furthermore, it is essen-

tial that they understand and remember what is told them, and that they are not alarmed at what they read.

Our advance publicity notices have been begun four to six weeks before the “week”. At first one to two items a week are published; during the last week a daily item if possible. The early notices are best placed in the Sunday edition—there is more space and readers have more leisure. These advance items must contain an introductory paragraph of local interest—a cancer week will take place on such and such a date—Dr. so and so will speak on this date—the Women’s Clubs are planning a luncheon, etc. Then, and generally only after such a local forecasting, will a bit of information about cancer be accepted. This again is only a reflection of human nature. The present war in China focuses interest, so that magazine articles and even entire issues are devoted to Chinese history, customs, commerce, etc.—material which otherwise would not be read. The visit of the Queen of Rumania to the United States unearthed a flood of information about that country which millions of Americans otherwise never would have had access to. After the announcement that some cancer meeting, etc., will or did happen, the average person is in an acceptable frame of mind for receiving brief information about the disease.

The information about cancer had best be given to the press systematically, remembering always that public interest cannot be held for very long, and the lesson must be made practical. A background of general knowledge of the disease, followed by specific descriptions of cancer’s early signs, with a general discussion of treatment methods, etc., is all that is necessary.

We have proceeded as follows: The first items contained statistics about the prevalence of cancer, its apparent increase, the increase in local deaths (readily obtained from the health department), its magnitude as a public health problem, etc. These facts are given not so much for their intrinsic value as to stimulate interest and make people want to read more next week. About a week or 10 days before the clinics open, an article or two on the nature, pathogenesis spread, etc., of cancer is printed. The very frequent start from chronic irritation, the spread from a local spot, the high chance of cure while still local, etc., are detailed. That we do not know its exact origin is stated, but more emphasis is given to the vast knowledge of

very practical value we do have, and authentic reports of high percentages of cures in early cases are repeatedly stressed. The drag of popular and even professional pessimism concerning the curability of cancer is immense, and cannot be overcome in one or two campaigns.

During the week before the clinics open, every effort is made to get as many facts about early symptoms of cancer before the public as possible. These must be very carefully written. It is better to use stereotyped material than trust to one's general impressions, unless the writer is quite familiar with the disease in its early stages. A story of stomach cancer describing an emaciated, vomiting and miserable old man, or one of breast cancer picturing a large ulcerating mass does not help anyone recognize the early stage, and paints a fearful picture which the newspapers do not like to print and which is contrary to the "message of hope" we are trying to instill. Controversial points and statistical arguments are avoided. What will make a possible victim recognize his cancer sooner and get proper treatment sooner is the only information valuable to the layman.

The American Society for Control of Cancer, 25 West 43rd street, New York City, N. Y., will supply needed guides and material, should these be desired.

This series of articles about symptoms had best be confined to full descriptions of early stages of the commoner cancers. We have condensed them into four special articles, of a column or one and one-half columns in length, divided as follows: 1, Breast and Tongue; 2, Lip and Bleeding (vaginal, rectal, etc.); 3, Gastric and Intestinal; 4, Skin and (briefly) proper methods of treatment. (See appendix).

This will bring the campaign up to the guest addresses. These should carry considerable space—it is the peak of the campaign as regards publicity, and it is well to have extra prepared items handy at this time, for after the opportunity is gone, not nearly as much will be printed. It is advisable, and in good taste, to have the guest issue a warning against quacks, serums, pastes, etc.—the noted specialist warns against these treatments, is the way the public will read it, and this is more forceful than similar information given out by the local medical society. His talks to profession and public should be very practical—discussion of early symptoms, possibilities of early removal, etc., and not completely taken up with phases of research

which might be more interesting for the moment. The press should be invited and given free access to all of his lectures.

Next day the free clinics open. All are admitted—it is a bargain day given by the doctors.

The different hospital staffs can easily organize for the examinations. A few men may be detailed to do all of them on alternate days, or, if a larger attendance is expected, they can be divided into sections, as skin, surgery, medicine and gynecology; or the entire out patient department do only cancer examinations for five days. (Fig. 1) Chart of examination.

CANCER CLINIC WEEK

February 17, 1927.

No. 3356

Providence Hospital

Name, Mrs. E. H.

Address, 4244 Spring Street

Age, 60

Sex, F.

Race, W.—M.

What made you suspicious? Lump in left breast

Location of lesion, Left breast.

When first noted, Two years.

History, Two years ago noticed a lump on surface of left breast, never has been under treatment, nor has it been increasing in size.

Examination, Shows hard mass about 3½ inches in diameter in upper quadrant of left breast.

Previous treatment (give dates), None.

Diagnosis, Cancer of left breast.

Disposition of case, Referred to Dr. W. A. Harper, family physician.

R. Walker, Examining physician.

Please fill out and return to Secretary Cancer Committee:
Wayne County Medical Society, 65 East High St.

Fig. 1.

Record card used in examinations for cancer.

Naturally, everyone will want to know how many persons were examined and how many cancer or precancerous conditions were discovered. If a tabulation of these figures is compiled each afternoon, for the next morning's paper, (Fig. 2—tabulation sheet). They can be used as a frame work upon which to write additional articles on cancer. Various points can be re-emphasized; attention can be called to some lesson a certain case demonstrated; it can be repeated that the examinations are not general medical tests, but only for those who suspect they have cancer, and some knowledge of the disease is expected of all who apply, etc.

That is the end. The results of these hundreds of examinations are interesting material to analyze and this can be done without too much additional effort. They represent examinations of supposedly well persons—brought to the clinic before they might otherwise seek medical advice, and as such are an indication of one pertinent public health topic—how much unrecognized chronic illness there is in the community.

DAILY TABULATIONS CANCER CLINIC
HARPER HOSPITAL, 1927

	Unsuspected and Untreated Growths					T'al
	Wed.	Thu.	Fri.	Sat.	Mon.	
	Feb. 16	Feb. 17	Feb. 18	Feb. 19	Feb. 21	
Total admissions.....	85	85	132	127	223	652
Total cases discovered (including all tabulated below).....	22	20	35	26	38	144
Mouth—Positive cancer.....	.....	1	.....	.....	.....	1
Doubtful cancer.....	.....	.....	.....	.....	.....	.....
Precancerous conditions.....	.....	.....	.....	.....	.....	.....
Chr. Irritation—Leukoplakia.....	1	.....	.....	.....	.....	1
Benign tumors of mouth.....	.....	.....	.....	.....	.....	.....
Lip—Positive cancer.....	.....	1	.....	.....	1	2
Doubtful cancer.....	.....	.....	.....	.....	.....	.....
Precancerous conditions, Irritation fissure, Keratosis Leukoplakia, benign tumor.....	.....	.....	3	1	3	7
Breast—Positive cancer.....	1	1	4	.....	4	9
Doubtful cancer.....	5	1	7	7	13	33
Benign tumor.....	1	3	2	1	2	9
Stomach—Positive Cancer.....	.....	.....	.....	1	.....	1
Very suspicious indigestion.....	.....	.....	2	4	.....	6
Colon—Positive cancer.....	.....	.....	.....	.....	.....	.....
Very suspicious.....	3	.....	.....	.....	.....	3
Rectum—Positive cancer.....	.....	.....	1	.....	.....	1
Very suspicious cancer.....	.....	.....	.....	.....	.....	.....
Cervix Uteri—Positive cancer.....	.....	.....	.....	.....	.....	.....
Very suspicious cancer.....	5	7	2	.....	.....	18
Fundus Uteri—Positive cancer.....	.....	.....	.....	.....	.....	.....
Very suspicious cancer.....	.....	.....	.....	.....	.....	.....
Skin—Positive cancer.....	.....	.....	.....	2	.....	2
Epithelioma.....	.....	3	6	7	8	24
Senilo keratosis.....	2	.....	4	2	.....	8
Moles.....	3	3	1	.....	4	11
Benign tumors (excluding sebaceous cysts).....	.....	.....	1	.....	3	4
Other conditions—Cancer.....	.....	.....	.....	.....	.....	.....
Prostate.....	1	.....	1	.....	.....	2
Fibro sarcoma of finger.....	.....	.....	.....	1	.....	1
Cancer esophagus.....	.....	.....	1	.....	.....	1

Fig. II.

Tabulation sheet used for daily record of attendance and results of Cancer Week Clinics. These tabulations are of considerable publicity value.

Our experience has demonstrated that about the same sort of response is obtained each year. There will be innumerable skin cases, with a large number of epitheliomas, usually having had more or less treatment by salves and pastes. A like number of moles, some of them irritated or spreading, will be discovered. There will be a similar large number of breast conditions. Many of these are painful breasts—some with areas of chronic cystic mastitis, others with nothing palpable. Among them however will be scores of breast tumors—often requiring careful diagnostic differentiation. There will be a host of variegated indigestions, requiring further study for any definite diagnosis of malignancy.

There will be a few positive cancers of the cervix discovered among many pelvic lacerations and discharges, and many suspected pelvic conditions—fibroids, ovarian, tubal, etc., lesions.

Each year we have seen a few individuals who, after being told at the preceding annual cancer week clinic that they

had cancer, did nothing further until the cancer week the following year. This is an indication that a follow up system aiming to bring the positive cases under treatment is indicated. The local board of health, district nurses association, or hospital social service department may see the value of doing this work.

DETROIT CANCER WEEK

In the Detroit Cancer Week Campaign February, 1927, the following four articles were submitted to the press for daily publication immediately preceding the opening of the "cancer diagnosis clinics" at all hospitals.

This is the first of four articles on cancer, prepared by Dr. Henry F. Vaughan, Health Commissioner and the Cancer committee of the Wayne County Medical Society. There were 1,008 deaths from cancer in Detroit in 1926. Much of this could be prevented by earlier treatment. The aim of this campaign is to recognize cancers within the first three months, preferably the first few weeks of their existence. It is only by an aroused and intelligently informed public opinion that this is possible. Discussion of cancer in this stage is not fearsome, and, as the articles show, can be quite interesting.

The warnings of cancer do not differ from the warnings of things that are not cancer. This must be understood by both the medical profession and the public. If people follow our recommendation and seek advice as soon as they become aware of any of these warnings, they will find that in a large number of cases the examination will show that the warnings are of things not serious, and which may not require treatment.

If, on the contrary, the examination shows that the warnings suggest future cancer or the early beginnings of cancer, then there is no doubt that these individuals, following the recommendation of the medical profession, will either be protected from cancer, or, if cancer has already started, will be cured in a large percentage of cases. The treatment will be devoid of danger and much discomfort, and will take but a short time.

CANCER OF THE BREAST

The danger signal is a lump or tumor in the breast, especially after 25 to 40 years of age. If there is no lump, it is not cancer. There is no other danger signal whatever. There is no pain or feeling of ill-health. The one and only sign is the

lump. But not all lumps are cancer. If the patient reports immediately, there is high likelihood of curing the lump before it becomes the seat of cancer. Many of these so-called benign lumps or tumors later develop into cancer. After the age of 45 small lumps which show signs of growth should be examined. If this were always done, a large percentage of cases of cancer could be prevented.

The records of Johns Hopkins hospital give 70 per cent cures of cancer of the breast (higher in very early cases); in less early cases, only four to eight months longer duration, 20 per cent. In late cases, no cure. The life buoy is "seek medical advice at once." At once, means the next day, or certainly within the first three weeks after the lump is noticed. The warnings of danger are unmistakable. The way to meet it is equally so. There is one other sign which occurs in a small minority of cases, that is, any discharge from the nipple. Competent advice should be obtained at once. This is what every woman in middle life should know about cancer of the breast. The knowledge is definite, simple, not capable of any misinterpretation.

CANCER OF THE TONGUE

Well developed tongue and mouth cancer is very fatal. Only 12 per cent of the victims are cured. Most people, because they are uninformed, wait until the disease is far advanced. Yet cancer rarely develops inside the mouth except on the basis of an irritated, chronically insulted spot. These are easily eradicated, but most people will not consider these minor conditions of any significance unless definitely warned in some manner. "Teaching is more important than surgery" means that knowledge of these conditions is more important than treatment of the advanced disease.

Rough and dirty teeth and improperly fitting plates are the chief causes of these irritations. An ulcer may result, and if the irritation is not removed, and the ulcer persists, there is great likelihood of the development of a cancer. Any sore in the mouth which does not heal promptly, no matter what the original cause, should be carefully and repeatedly cleansed and protected from irritation. Pain, except in very slight degree, is usually absent. The small spot does not heal. It slowly grows both deeper and larger. Its edges are a little, but not very much, harder than the rest of the tongue. It is now cancer; early, favorable for complete removal, but no time to lose, for the spread is rapid. Small

warts and papillae sometimes start on the tongue or inside the cheek. They should all be removed.

A SMOKER'S "PATCH"

If tobacco irritates the mouth its use should be stopped. One form of irritation is the so-called smoker's patch—leukoplakia. This is a hard, shiny, white patch on the tongue, looking like enamel paint. It is firm and leathery. Leukoplakia may be due to other causes—constitutional disease or irritating teeth. But it can generally be made to disappear by hygiene and removal of the cause. Approximately one-third develop into cancer if not treated. If the patch splits, scales or ulcerates, it should be removed for it is dangerous.

Another form of smoker's cancer is caused by the irritation of the lower lip by a pipe with a stem so short that it is constantly irritating, if not burning, the lip.

The public is reminded again that there will be free clinics, admission to which is from 9 to 10 a. m., each morning February 16, 17, 18, 19 and 21st., at the following hospitals: Deaconess, Delray, Henry Ford, Grace, Harper, Highland Park, North End Clinic, Providence, Receiving, St. Joseph's, St. Mary's and Woman's. These clinics are not intended as general clinics for diagnosis of all diseases, but for consultation to those who suspect cancerous signs. The success of the clinics presupposes that the public have the information contained in these articles, the second of which will appear in this paper tomorrow.

This is the second of four articles on cancer, prepared by Dr. Henry F. Vaughan, Health Commissioner and the cancer committee of the Wayne County Medical Society. There were 1,008 deaths from cancer in Detroit in 1926. There are 300,000 cancer sufferers in the United States. The committee holds that much of this could be prevented by earlier treatment. The aim of this campaign is to recognize within the first three months, preferably the first few weeks of their existence. It is only by an aroused and intelligently informed public opinion that this is possible. Discussion of cancer in this stage is not fearsome, and, as the articles show, can be quite interesting.

Bleeding from the body orifices is a symptom which may indicate cancer. In discussing such bleeding, a few frank statements must be allowed. Any suddenly appearing bleeding, especially if irregular, persistent and painless, is highly suspicious and should demand a careful ex-

amination. Bleeding is one of cancer's favorite ways of starting, and when the "too late" stage is reached, it can always be ascertained that the patient has been warned for several months.

Of course all painless bleeding does not mean cancer. The ordinary nose bleed can be included in this description. But why not find out immediately, instead of disregarding the signal because it caused no pain?

RECTAL CANCERS

Rectal cancers generally start with bleeding. Only an examination can distinguish between piles and cancer. It is probable that the two have not very much in common. Cancer does not arise on the basis of hemorrhoids, but rectal irritations such as fissures, infected crypts, etc., may be the starting irritation of cancer at the anal margin. Cancer frequently starts an inch or two higher up. In these instances before the bleeding starts, there may be suddenly appearing constipation, or alternating attacks of diarrhoea and constipation. If an individual notices anything of this sort, especially if past 35 years of age, a careful examination should be had. **DON'T WAIT. FIND OUT.**

Every woman should know that if there is any bleeding which is not normal, its cause should be determined. There are four or five other conditions which she herself cannot differentiate, but a careful examination will tell. After the change of life has definitely passed, it cannot be too forcibly emphasized that there is no such thing in existence as a return of the change of life. It is very important to stress this point.

There is no part of the body where early cancer is so frequently missed through sheer ignorance of what women should know about their own functions. Excepting certain rare growths on the skin, cancer nowhere in the body has such terrors, yet nowhere is it capable of such easy and early diagnosis and nowhere are cures in early cases more favorable.

Bleeding from the bladder is not common, but may be very significant. Here, again, there may be a bladder or kidney stone, infection, a mild papilloma which can be removed by a simple electric treatment, or it may be painless beginning of a cancer. How to beat it? Find out. The patient frequently consults the doctor for pain due to extension of the growth to the spine months later, when, for anything at all to have been done for him, the first bleeding from the bladder should have been thoroughly investigated.

CANCER OF THE LIP

Nowhere is the association of chronic irritation and cancer so well shown as in the lip. Cancer almost invariably starts on the lower lip, almost invariably in those who have for long years smoked a short stem pipe (not cigars or cigarettes) and almost invariably at the spot where the pipe is always held. It is the repeated mild burn of the pipe plus the irritation of the tobacco.

A small patch starts—a scab forms; this falls off, leaving a small open ulcer. Another scab forms, and every few days the process is repeated. If such a condition persists only a few weeks without healing completely it is dangerous. Smoking should be discontinued. Soon the edges become indurated and hard, the sore grows larger, scabs forming and dropping off every few days. It is now a cancer. It is early, and can be cured in 90 per cent of cases (Mayo clinic figures). A few months later the glands become involved, and there is only 18 per cent curability. Later still, just as cancer everywhere, no chance.

The public is reminded again that there will be free clinics, admission to which is from 9 to 10 a. m., each morning February 16, 17, 18, 19 and 21 at the following hospitals: Deaconess, Delray, Henry Ford, Grace, Harper, Highland Park, North End Clinic, Providence, Receiving, St. Joseph's, St. Mary's, and Woman's. These clinics are not intended as general clinics for diagnosis of all diseases, but for consultation to those who suspect cancerous signs. The success of the clinics presupposes that the public have the information contained in these articles, the third of which will appear in this paper tomorrow.

This is the third of four special articles prepared by Dr. Henry F. Vaughan, health commissioner, and the cancer committee of the Wayne County Medical Society. The committee holds that an aroused and informed public attitude is the best force to combat the inroads of this disease. The recorded mortality from cancer has more than doubled in the last 40 years. It is now fourth in national causes of deaths, being exceeded only by pneumonia, cerebral hemorrhage and heart disease. These articles have been carefully approved and all are urged to read them.

STOMACH

"How do you feel"? In too many instances the answer is, "Not very well; I am troubled with indigestion."

Half of the people suffering from indigestion have some serious organic dis-

turbance. Indigestion is not a disease in itself, but a warning that something has gone wrong. It may be in the stomach, the intestinal tract, the gall bladder, liver, pancreas, or appendix. It may be in the nervous system or heart. It may be that faulty habits of eating or emotional disturbances have brought about disordered bodily conditions which may masquerade as indigestion. Because it is not thoroughly understood, men and women sometimes treat it lightly. So slight—yet, it may be the warning of serious disease. So slight—they go to the medicine cabinet and take their favorite remedy. So slight—yet by merely dulling the pain, not correcting the cause, they may be cutting many years from their lives.

Cancer of the stomach is responsible for one-half of all the deaths from cancer in men, and one-third of all the deaths of women who have cancer. Especially is it true that in the abdomen the warnings of cancer do not differ from the warnings of things that are not cancer. It is impossible to tell cancer indigestion from indigestion due to the variety of causes mentioned above without a thorough and painstaking examination.

Cancer in the stomach starts in two ways: Some on the basis of an old ulcer in the stomach (ulcer in the duodenum—the gut just past the outlet of the stomach—is never followed by cancer). Other cancers of the stomach start “out of a clear sky”, as a suddenly appearing indigestion in a person, usually past the age of 35, who has previously been perfectly well. There is rapid loss in weight.

The advice is thus two-fold: Do not let your stomach warn you year after year without having an adequate diagnosis and treatment. If it is ulcer of the stomach, it should be thoroughly treated, knowing that there is a certain small liability to cancerous change if the condition persists. If past 35, and of previous good health, you suddenly begin to feel discomfort or distress in the stomach or abdomen, with or without belching of gas, nausea or vomiting, even if not severe enough to be called real pain, you should be thoroughly examined, for the conditions may be serious; you may have cancer.

In two-thirds of the causes the definite continuous indigestion is preceded by vague rumblings of the impending trouble. For a few weeks, or months, there is aversion to certain foods (meat, milk, legumes, sweets); appetite may be keen for some viands, there may be marked aversion to others.

The examination for suspicious gastric distress should consist of careful history, physical examination, laboratory tests and X-ray examination. Persistent indigestion should no more be treated without an X-ray examination than should a broken foot be treated without an X-ray picture.

At present we cure few stomach cancers—a fact which has steeped both public and profession in pessimism. This is unwarranted, for even though the operation is formidable, and the disease rapidly spreads past the possibility of complete removal, cancer of the stomach is at the onset a local, removable disease just as surely as it is anywhere else in the body.

Exploratory operation must be advised, and accepted on well founded probabilities rather than wait for later certainty. The time for operation for gastric cancer is short—perhaps the first one to two months. As regards cure by surgery it is an acute disease. This is what is not realized, and is responsible for our pessimism and poor results.

As elsewhere in the body, cancer of the stomach follows repeated and long irritation. The stomach is a muscular, contracting bag lined with mucous membrane. When it contains food, it is in continual motion. If the food consists of hard lumps, instead of soft, well masticated material, there is bruising of the lining of the stomach and this bruising is most frequent at the outlet where the muscular walls of the organ are in most violent motion. As a matter of fact, most cancers of the stomach occur near the outlet.

A stomach previously rendered sensitive by irritating substances has, in the very nature of things, a lowered resistance. Examples of such substances are alcohol, highly seasoned food and tobacco. The excessive use of these agents may be accompanied by retardation of digestion and by the secretion of too much acid. Too hot foods are irritants. Badly cooked, or wrongly cooked foods make digestion difficult. Though no definite statement can be made, it is probable that excessive meats and sugar indulgence are frequently associated with an arrested condition of the blood circulation in the intestinal tract. Eat regularly; chew your food; don't crowd down an hour's worth of food in 15 minutes. Do not over eat—even if you can afford it.

BOWEL

The small bowel is practically immune from cancer. The large, or lower bowel, is a fairly common location of cancer. Though the disease may exist here a long

while unrecognized, the large bowel is peculiar in that, being a waste drain there is very meagre lymphatic absorption from it. Hence, since cancer spreads through the body by way of the lymphatic channels, the spread of cancer from the large bowel is slow. Though the operation is formidable, cures of cases of relatively long standing are accomplished.

As in the stomach, early symptoms are vague. Usually in a person past 40 years of age there may be attacks of lower abdominal distress or pain; associated with a sense of fullness or distention, and then loss in weight. Anything of this sort demands an examination and X-ray study. Any change in one's normal regularity, or the appearance of blood or mucous in the evacuations, is a danger sign.

Sudden and severe constipation; sudden and persistent diarrhea, which does not respond to ordinary treatment; or alternating attacks of constipation and diarrhea, are danger signs. Many diseases (ulcers, fissures, hemorrhoids, colitis, etc.) may cause symptoms like these, but cannot be differentiated from early cancer without a thorough examination. The examination should always include X-ray study. In the large bowel, X-ray study by means of an enema of an opaque mixture is efficient. Many bowel cancers are missed because this was not done.

Most persons with bowel cancer give a history of long continued, often mild constipation. But this is a history of bowel irritation. The cancers usually start at the bends or flexures of the gut, because of hard masses rubbing over these angles for many years. In our sedentary life, again, our food is too concentrated; there is too much sugar; we drink too little water; we develop indolent habits of bowel movement. Drink enough water; take enough exercise; add vegetable bulk to your food; train your bowels to regular habits, and more ills, besides cancer, may be avoided. But if there are signs of persistent disorder go today to your doctor. You may head off what is one of the greatest, if not the very greatest foe to life and health—cancer.

The public is reminded again that there will be free clinics, admission to which is from 9 to 10 a. m., each morning February 16, 17, 18, 19 and 21st, at the following hospitals: Deaconess, Delray, Henry Ford, Grace, Harper, Highland Park, North End Clinic, Providence, Receiving, St. Joseph's, St. Mary's and Women's hospital. These clinics are not intended as general clinics for diagnosis of all diseases, but for con-

sultation to those who suspect cancerous signs. The success of the clinics presupposes that the public have the information contained in these articles. Tomorrow: Skin cancer. Treatment of cancer in general.

The fourth and last article. Last year, there were numerous requests for further information about what to do with moles. The advice here given (in quotation) is that given by the American Society for Control of Cancer.

SKIN CANCERS

Cancers of the skin form a small group, but they are important, because if care is taken, almost all deaths from skin cancer can be prevented, and by relatively simple means. Most skin cancers remain purely local skin trouble, but the possibility of spread to internal organs is always present and is in itself good reason for not neglecting them.

Skin cancers sometimes start in the senile warts of elderly people. These senile keratoses, sailor's patches, weather patches, as they are variously called, begin as small brownish discolorations, usually on the face, but they are also frequent on the scalp, back, and back of hands. At times these discolorations become flat-topped roughness elevations, usually round. They may vary in color from yellowish, grayish brown to deep brown, and are often covered with a scale. This is the beginning of a cancer. The scab is usually pulled off by a towel or finger nail, or in some other accidental way, which causes bleeding; then another scab forms on the sore, which perhaps has meanwhile grown larger. The new scab may again be knocked or pulled off, and so on—the cancer all the while becoming larger. Sometimes it heals up entirely at one side, and advances at another.

Occasionally the cancer shows a tendency to rapid growth from the start, and forms a raised reddish cauliflower-like tumor which anyone at all concerned about his appearance will soon call to a physician's attention.

The slate colored purplish or blue black mole is often the beginning of a most malignant type of cancer, and one which grows very rapidly, spreading very easily to internal regions. This is especially true if the mole is located where it is subject to continued irritations, as from clothing, a belt, shaving, rubbing against the back of an automobile seat, etc.

The treatment of mole by "beauty doctors" or by the use of electricity or caus-

tics—methods which do not assure the complete removal of the deeper parts of the mole—are responsible for the start of some of the above growths. In these cases, traces of the original mole are left behind and because subject to constant irritation from the pull of the scar that is produced by the treatment.

“A brown or black mole should be let alone so long as it shows no signs of growth, or, if it is so defacing that its removal for cosmetic purposes is desired, it should be cut out by a surgeon. If it is removed, the resulting clear scar is usually less disfiguring than the mole, and the possibility of the malignant development of the mole is forever eliminated.

“In treating moles, the one guide should be thoroughness of removal. Any method which is capable of wholly removing or destroying them may be used by the physician. Cutting them out with a knife or a cautery blade does this effectively, and in most cases is the best method, but when the epithelioma is located near the eyelid or the tip of the nose, the deformity that would be produced by a good cutting operation may be so great that other methods of treatment may be considered. In such cases many surgeons prefer the use of radium or X-ray, or to employ the methods of cauterization or scraping. Those all give excellent results in the hands of experts.”

We have been discussing lumps, ulcers, indigestion and irritation. Note again how little was said of pain. Pain generally means extension beyond the local and curable stage. We have not said much about loss of weight (except in discussing stomach cancers, and these should be discovered before loss of weight has advanced). Yet pain and emaciation are the pictures of cancer as you know the disease.

The early cases are not always so well known even to the physician, for frequently we do not see them. The responsibility of diagnosis in these early and borderline conditions is not light; but it is not yours. It belongs to your doctor.

The earlier the lesion, the harder diagnosis, but, in divert ratio, the easier and simpler is the cure. Let us have major diagnosis, minor treatment; instead of minor diagnosis, major treatment.

We have said very little about the treatment of cancer. That, again, is the responsibility of the doctors. It is often grave, but it is not yours. In general, surgery, radium and X-ray, sometimes certain forms of cautery, are the only

proven methods. The surgery must be experienced and anatomically precise; the radium and X-ray treatment similarly expert as regards type of growth and dosage.

To know the value of any new method it must be used in hundreds of cases and these cases followed from three to five years, then compared with the percentage of cures by standard methods. Beware of newly announced discoveries until they have been tried from three to five years, and draw no conclusions from one or a few cases treated by any method.

The stakes are too high. Remember that we have been discussing something which, if left alone, or improperly treated, is invariably fatal, and we have been talking of 60, 80 and 90 per cent cures.

Should any one wish further information, a pamphlet will be sent on application to the Wayne County Medical Society, Maccabees building, Detroit, or the American Society for Control of Cancer 25 W. 43 St., New York.

The public is reminded again that there will be free clinics, admission to which is from 9 to 10 a. m., each morning February 16, 17, 18, 19 and 21, at the following hospitals: Deaconess, Delray, Henry Ford, Grace, Harper, Highland Park, North End Clinic, Providence, Receiving, St. Joseph's, St. Mary's and Woman's. These clinics are not intended as general clinics for diagnosis of all diseases, but for consultation to those who suspect, cancerous signs.

LEGISLATIVE ACTIVITIES

This session of our state legislature has witnessed the introduction of an unusually large number of bills pertaining to health and medical practice. It has been a very arduous and time consuming labor to remain abreast of these legislative activities, to secure and study each bill, to analyze their open and hidden purposes, to deduce how they may or do affect our profession, and to protect the doctors' interests. If one concludes that such supervision is not much of a job we invite him to come and try it.

We are imparting a brief synopsis of each bill:

In re: Senate Bill No. 156.

This is a bill to amend Act No. 338 of the Public Acts of 1917, and relates to the manufacture, sale, etc. of intoxicating liquors.

This bill, we understand, does not in any way affect the medical profession and was reported out of the committee on prohibition and placed on general orders March 17, 1927. It was amended before the Senate in very minor particulars and passed the Senate March 22, 1927.

In re: Senate Bill No. 13.

This is a bill to amend the title and various

sections of Part 2 Act No. 10 of the Public Acts of 1912, which is commonly known as the Workmen's Compensation Law.

This bill was introduced by Senator Pulver January 18, 1927 and referred to the Committee on Labor on the same day.

The interests of doctors are not affected by this act.

In re: House Bill No. 259.

This bill is a bill to amend Section 3 of Act 237 of the Public Acts of 1899 entitled, "An Act to provide for the examination, regulation, licensing and registration of Physicians and Surgeons and for the punishment of the offenders against this act and to repeal acts and parts of acts in conflict therewith, being Section 6726—2 Compiled Laws of Michigan 1915.

This bill is of very great length but the reason for that is because it was necessary to put into it all of Section 3 which is an exceedingly long section. The only change in the present law is as follows:

"But such revocation may be reconsidered by said board upon a showing by sworn petition signed by the applicant and setting up reasonable grounds for claiming that error had entered into the findings upon which the order of revocation was based; said petition shall be supported by the affidavit of at least one person of reputable standing in the same branch of the profession as the applicant, in the community in which the applicant may have been living for one year or more previous to the filing of said petition, and said petition shall be further supported by the affidavit of at least one person of reputable standing in the same branch of the profession as the applicant within the State of Michigan. At or before the filing of such petition for reconsideration of order of revocation the same shall be approved in writing by at least one member of the board."

This bill was introduced by Mr. Main and was referred to the Committee on Public Health on March 8, 1927. The bill has not been reported out of the committee. We talked to Mr. Main, the introducer of the bill, when in Lansing yesterday and Mr. Main stated that the purpose of the bill was to provide machinery for the Board to consider upon rehearing a petition of anyone coming under the act who has had his license revoked.

Mr. Main stated that a case had occurred in his district in which a person who had had his license revoked was refused a rehearing by the Board on the grounds that they had no machinery with which to carry on such a hearing. Mr. Main, before introducing his bill, sent a copy of it to the Secretary of the State Board of Medical Examiners and requested the Secretary to advise him of his suggestions in regard to the bill. Upon receiving no reply from the Secretary, Mr. Main introduced the bill in its present form.

For the convenience of the Board, we might suggest that the number of rehearings be limited so that the Board would not be pestered with unworthy petitions for numerous rehearings.

In re: House Bill No. 265.

This bill is a bill to provide for the examination, regulation, licensing and registration of chiropractors and to prescribe penalties for the violation of this Act. This bill is the regular biennial bill of the chiropractors to establish a Board of their own separate from the Board of Medical Examiners.

This bill was referred to the committee on Public Health on March 2, 1927. It has not been reported out April 15, 1927.

In re: House Bill No. 148.

This bill is a bill to amend various sections of a so-called Workmen's Compensation Law and particularly covers the proposed increase to be paid to the injured employee in case of an accident.

As reported, this bill does not in any way affect the medical profession.

This bill was introduced by Mr. Wade and referred to the Committee on Labor and a public hearing was held some time during the week of March 14th.

In re: House Bill No. 326.

This bill was introduced by Mr. Archie M. Reid, and purports to amend Act. No. 162 Public Acts 1903, being Sections 6740-6747—2 Compiled Laws of Michigan 1915, by adding thereto a new section called Section 2-A. This section reads as follows:

The State board of osteopathic registration and examinations shall from time to time adopt minimum standards of preliminary and medical education and no high school, academy, college, university or medical college or other institution or board shall be approved and designated, or its diploma or certificate be recognized by said board under this act unless in the judgment of the board it conforms with such standard.

This bill on March 16, 1927 was referred to the committee on Public Health.

In re: Senate Bill No. 241.

This is a bill to amend Section 3 of Act 237 Public Acts 1899 entitled, "An Act to provide for the examination, regulation, licensing and registration of Physicians and Surgeons and for the punishment of the offenders of this Act and to repeal Acts and parts of Acts in conflict therewith, being Section 6726—2 Compiled Laws of Michigan 1915.

This bill was introduced by Senator Gansser and was referred to the Committee on state affairs March 15, 1927. The bill has not been reported out of the Committee.

This bill is a bill to provide for the issuance of certificates to persons who served in the Military or Naval Forces of the United States during the World War who received an honorable discharge therefrom, and who have heretofore completed a course of training of at least three school years of six months each in legally incorporated college of Chiropractic under the jurisdiction of the Federal Board of Vocational training or similar Board or agency maintained by any state as part of a state program of Vocational rehabilitation for honorably discharged or disabled soldiers.

Dr. Kiefer, who had a long talk with Senator Gansser about this bill, told the writer that there were only about six of these soldier Chiropractors in Michigan and that his bill was only for the purpose of taking care of these men. Subsequent conferences with Senator Gansser has resulted in the practical withdrawal of the bill.

In re: Senate Bill No. 239.

This is a bill to provide for county health departments and to repeal Act No. 130 Public Acts 1917.

This bill was introduced by Senator Greene and referred to the committee on Public Health March 15, 1927.

This bill, we understand, is a bill which has the sanction of Dr. Guy L. Kiefer, Commissioner of Public Health.

In re: House Bill No. 307.

This bill is a bill to regulate the sale, possession and use of Clinical Thermometers, to define the standard clinical thermometers and to provide a penalty for the violation of this act.

This is new legislation and it is our understanding that the same is in accordance with the practice of the better manufacturers of clinical thermometers and is in no way detrimental to the medical profession.

This bill was introduced by Mr. Look and re-

ferred to the Committee on Public Health on March 15, 1927. The bill has not been reported out of the committee.

In re: House Bill No. 240.

This is a bill to amend the title and sections 2, 3, 4 and 7 Act 267 Public Acts 1915 entitled "An act to provide free hospital service and medical and surgical treatment for persons afflicted with a malady or deformity which can be benefitted by hospital treatment * * * and prescribing the jurisdiction of the probate court in said cases."

This bill was introduced by Mr. Culver and referred to the Committee on Revision and Amendments of the Constitution March 3, 1927. The bill passed the House March 24, 1927 and was transmitted to the Senate and referred to the Committee on State Affairs March 25, 1927. We have not obtained a copy of this bill and therefore, are unable to give you a report of just how this bill amends the present law.

This law provides for the free hospital care of persons who are unable to pay for the same and provides that in certain cases, the Probate Court of the County where these people reside, may send them for treatment to the University of Michigan hospital at Ann Arbor, Michigan.

In re: Senate Bill No. 289

This is a bill to amend the title and sections 1, 2 and 8 Act No. 162 Public Acts 1903, entitled "An Act to regulate the practice of Osteopaths in the State of Michigan, to provide for the examination * * * of Osteopathic practitioners * * *."

This bill was introduced by Senator Wood and referred to the Committee on State Affairs March 29, 1927. See subsequent comment.

In re: Senate Bill No. 93.

This is the regular biennial appropriation bill for the Board of Registration of Medicine. It was referred to the Committee on Finance and Appropriations February 10, 1927. It has not been reported out of the Committee.

In re: Senate Bill No. 270.

This is a bill to provide for the regulation of Schools of Nursing and the examination, etc., of Nurses.

This bill was introduced by Senator Condon and referred to the Committee on State Affairs March 22, 1927.

In re: Senate Bill No. 285.

This is a bill to amend Sections 5 and 8 Act No. 267 Public Acts 1915 entitled "An Act to provide free hospital service and medical and surgical treatment for persons afflicted with a malady or deformity which can be benefitted by hospital treatment * * * and prescribing the jurisdiction of the probate court in said cases."

This bill was introduced by Senator O'Connell and referred to the Committee on Public Health March 29, 1927.

In re: Senate Bill No. 288.

This is a bill to amend Section 8 Act No. 237 Public Acts 1899 entitled "An Act to provide for the examination * * * of physicians and surgeons," being the Medical Practice Act so-called.

This bill was introduced by Senator Wood and referred to the Committee on State Affairs March 29, 1927.

The present law provides in part as follows: "Nor to osteopaths practicing under the provisions of Act No. 162 of the Public Acts of 1903." This bill would amend the present law so that this part would read as follows: "Nor to osteopathic physicians and surgeons or other practitioners practicing under or coming within the purview of Act 162 of the Public Acts of 1903."

It is rather difficult for us to state just what effect these words "or other practitioners practicing under or coming within the purview of Act No. 162 of the Public Acts of 1903" would have upon the present law. The words are of very general meaning and are not necessary to cover osteopathic physicians and surgeons practicing under the regulations set forth in the said Act No. 162. See subsequent comments.

In re: House Bill No. 129.

This bill is the regular biennial appropriation bill for the Board of Osteopathic Registration. It is nothing more than a pure appropriation bill.

It was referred to Committee on Public Health February 15, 1927 and passed the House March 21, 1927. It was transmitted to the Senate and referred to the Committee on State Affairs March 22, 1927.

From the above gist, but three bills called for the registering of strenuous protests: The Osteopathic and Chiropractic.

The Osteopaths sought to create a so-called new school of medicine, to create a new examining board and to give to all its licentiates the right to practice medicine, and surgery in all its branches and to create its own standards. It was a most vicious bill and if enacted would negative our present medical practice act. The bill was pushed with every influence and within a week was slated for hearing. This was the occasion for calling on our County Societies to file their protests. At the hearing, held on April 12th, the proponents made a divided and lame presentation of their case. Our society was well represented as also the Wayne County Society, Board of Registration, State Department of Health, and the University. Protests were voiced by Doctors Kiefer, Cabot, Jackson, Kelly, Bruce, Polozker, LeFevre and Warnshuis. By reason of the representation made, the remonstrances by County Societies, the interviews with the Senate Committeemen and other Senators we have every reason to believe that this bill will not be reported out.

The Chiropractic bill is the same old story of this cult coming up for a board and standard of its own. It was introduced in the House and was accorded a hearing on April 12th. Effective protests were filed but no extended arguments were made because in a canvass of the legislative situation it was decided that this bill could be best handled in the Senate if it ever reached that body.

In concluding this survey of legislative activities we cannot refrain from pointing out that your State Society has once more been alert in the protection of its members' interests and in this respect alone presents reasons for every doctor maintaining his affiliation.

MONTHLY COMMENTS

Medical—Economic—Social

All members whose 1927 dues were not paid by April 1st, have been placed on the suspended list and the Journal discontinued. Re-instatement is obtained by payment of current dues to County Secretaries. A roster of all members in good standing will be mailed to members in the form of a supplement to the June Journal.

Please note the announcement of the program for our Annual Meeting and the Mackinac Island article contained in this issue. The completed program and all detailed information will appear in the June issue. Plan now to attend this meeting and make your hotel reservations now. See our advertising section for the Grand Hotel announcement.

We direct your attention to the editorial on legislation. If one has not noted the proceedings of our legislature he would in his complacency conclude that there was nothing doing in the way of medical legislation. Every one of these bills is fraught with dire potentialities. They affect every doctor. Your personal interests are involved. Your State Society is spending hours and days in dealing with these legislative questions and you, doctor, are the recipient of the benefits derived from the activity. It answers also what you are receiving as a membership benefit.

Dr. Kiefer, State Commissioner of Health, is monthly imparting valued information in the Public Health Section of your Journal. His requests, statements and reports concern all doctors. Our readers should manifest acute interest in these health activities.

Do not forget to bring your golf clubs, tennis racquets, bow and arrows, and your sport togs when you come to Mackinac Island. An arbitration committee will be appointed to settle all contest disputes. Yes, there will be dancing at night following the general sessions.

We especially commend to all our county units the articles on Cancer by Dr. Saltstein, published in this issue. The doctor has conducted effective campaigns in Detroit. His experience and advice will be of material assistance to other counties. Michigan should step into the van of this educational movement.

We fully intended to incorporate a rostra of members in good standing as a supplement to this issue. It was wholly impossible to compile the lists of paid members by counties, send these lists to County Secretaries for verification and prepare copy for the printer. This will be completed, however for the June issue.

Some 2,300 1927 membership certificates have been mailed to members whose dues have been received for the current year. We urge that it be displayed on the wall of your reception or consultation room. It is a distinct honor to belong

to your local unit of organized medicine and your patients have a right to know whether you do or not. Frame your certificate and hang it up.

To know much and to say little is sometimes appraised as an exemplification of wisdom. That may hold good in some instances but not in your County Society meetings. No, we don't mean to have a diarrhoea of words—that is not wisdom—but we do mean that when cases or papers are open for discussion that to not participate and impart from your knowledge and experience is far from wisdom. It is either due to laziness or selfishness. Such types of members are not desired. Join in the discussion and thus aid to intensify the value of your local meetings.

One of the underlying reasons that causes stagnation and limits progress is that so many medical men are concerned with the maintaining of traditions and are loath to relinquish these traditions for newer views that time in its progress demands. We live far too often in the past. We continue to do things as they always have been done and fail to perceive that modern events are not amendable to the precedents of the past. What is needed is vision for the future. Vision that will cause a revamping of past traditions and to adjust them to the present, while also retaining a flexibility that will adapt them to the future. In brief—get out of your rut, mingle with your fellows and let the memories of the past and its traditions serve solely as reflecting thoughts while you are on the stream fishing. When back in the harness, be up and at it in a modern way and cast aside tradition's dreams.

OUR OPEN FORUM

Affording Opportunity for Personal Expression

Editor of The Journal:

Perhaps I am a little late but I do want to congratulate you on your editorial entitled "Whisky." You express my sentiments exactly. The article on "Last Illness of Washington," was great.

Fraternally yours,

J. S. Morrison, M. D.

Editor of The Journal:

I wish to challenge two statements made in the address of Dr. Starkey, before the Detroit Neurological society and appearing in the April number of your Journal: First that the 18th amendment to the U. S. Constitution is the direct cause of the increase of crime and the disrespect for law. Before making so sweeping a statement on any subject one should take necessary pains to inform himself of the facts in the case. Rather

than use the necessary space to correct a statement so wide of the truth, I commend to him the book of Professor Irving Fisher, of Yale University, probably the best informed man in the country on the subject, entitled "Prohibition at Its Worst," where he will find his assertion completely refuted.

Second: That "The homicide rate is twice as great in states where the death penalty has been abolished as where retained." The fact is that the best thought of the people of Michigan has been concentrated upon the attempt to establish the death penalty, and the most cogent reason against such a law is the fact that it has miserably failed to deter homicide in those states still adhering to that relic of barbarism.

The aspersions he casts upon the "sob sisters" and the press, as well as attributing avarice to those attempting to bring about needed reforms, are in very poor taste and a cause for indignant resentment.

Yours for the truth,

E. D. Brooks.

Editor of The Journal:

Replying to yours of the 6th. S. & S. C. stock does not permit of a finer screen than 133, now being used to make your halftones. I have noticed the same discrepancy you speak of and have often been on the point of suggesting to you that some of the photographs from which we are asked to make cuts be retouched in order to get good results. This would have a far better effect than using a finer screen, although the cost would be a little bit higher. The charge for this work is \$3 per hour. So far I have seen very few photographs that require more than an hour's work.

If you will leave this to the writer, I will be glad to take the matter of retouching up with you any time we feel such a proceeding is necessary.

Very truly yours,

A. P. Johnson Company,

M. J. Tietema,
Business Manager.

Editor of The Journal:

On page 278 in the April issue of the Journal appears an article entitled "Cancer of the Anus, Rectum and Colon," credited to Hirschman. I wrote the article which appeared as an editorial during cancer week in the Bulletin of the Wayne County Medical Society. Dr. Hirschman told me that it should be published in the Journal, and I suggested that if he wanted it published that he might send it, but certainly he gave you no reason to believe that he wrote it. This must be embarrassing to him, and undoubtedly a great many men in Detroit will be afforded considerable amusement over the situation. I am

Very truly yours,

E. G. Martin, M. D.

Doctor E. G. Martin,
David Whitney Building,
Detroit, Michigan.

My dear Martin:

Thanks awfully for your letter of April 9th. Hirschman did send me that clipping urging its

publication in the Journal and in the letter conveyed that it was from his pen, that is why I published it and so gave credit.

I am quite sorry that this occurred and I shall make amends for same in the next issue of the Journal.

Yours very truly,

Secretary-Editor.

Editor of The Journal:

Receipt is acknowledged of your letter dated March 17, 1927 together with a copy of a ruling made by Honorable W. W. Potter, Attorney General, regarding the registering by this office of osteopathic physicians to prescribe narcotics.

In reply you are advised that in this as in other cases this office will be governed by instructions received from the Commissioner of Internal Revenue. The information received is very much appreciated.

Respectfully,

Fred L. Woodworth,
Collector.

D. A. McKillop,
Chief, Miscellaneous Division.

Editor of The Journal:

Inasmuch as you have asked for some ideas for sporting events at the Annual Meeting, and due to the fact that Dr. Rubley of Monroe and myself are willing to meet all comers with the bow and arrows either against archers or golfers, I might suggest that an effort be made to see how many of the members are interested in archery and if there are a few who care to take their tackle to the Island. We could arrange a few stunts or contests among them. The thing Rubley and I like to do is play against golfers at their own game except that we shoot an arrow when they drive or putt a golf ball. We puncture a soft rubber ball four inches in diameter laid on the green instead of holing out as the golfer does. Allowances for sand traps are made in favor of the golfer. It makes a very good game.

I have been told that a number of physicians in Grand Rapids are archers, though I do not know who any of them are.

I will be glad to do any thing possible to help fill in an afternoon or morning during the time of the meeting, or help with plans before the meeting, as I imagine you have all you care to do with arranging the important parts of the program.

Yours truly,

R. G. B. Marsh, M. D.

Editor of The Journal:

Would you mind stating in your publication that we should be glad to supply a copy of the "Preliminary Report of the Commission on Medical Education" to any of your readers who may be interested in the general questions of medical education and practice. We should be glad to supply these copies without charge, and anyone desiring a copy of the report can obtain it by addressing, Commission on Medical Education, 215 Whitney Avenue, New Haven, Conn.

Sincerely yours,

W. C. Rappleye, M. D.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

D. E. G. Folsom of Mt. Clemens recently celebrated the fiftieth anniversary of practice. He has been health officer of Mt. Clemens for 35 years. The Journal tenders congratulations.

Post-Graduate Conferences were held in Bay City March 31st, Cadillac April 19th and Lansing April 26th. The fifth District Conference will be held in Grand Rapids, May 11th.

The A. M. A. will meet in Washington, D. C., the week of May 15th. Michigan should be well represented. President Coolidge will address the general session.

Governor Green announces the appointment of Doctors W. A. Lamire of Escanaba and E. S. Cruse of Iron Mountain to membership on the State Board of Registration in Medicine.

The Luce County Medical Society is a new unit in our State Society. Minutes of its organizational meeting will be found in the County Society news columns. Dr. H. E. Perry is president and Dr. J. T. Redwine is secretary.

On March 12th, 1927 Dr. Angus McLean gave a clinic and lecture to the students and faculty of the Ohio university at Iowa City, Iowa, the subject of lecture being: "Relation of the State Toward Medical and Surgical Problems"—maintaining that medicine and the medical professional should be held independent of the state.

The next meeting of the Highland Park Physicians club will be held Thursday May 5, 1927 at the Highland Park General hospital.

Our past president Dr. G. Van Amber Brown is to give the paper of the evening. Subject: "The Developmentally Unfit Infant." This is to be illustrated with lantern slides.

The meeting starts at 8:30 p. m. sharp and the members of the Michigan State Medical Society are invited to attend.

The Highland Park Physicians' Club,
Chas. J. Barone, Secretary.

Fifteen years ago next July Doctors A. O. and Eugene Hart organized a personal service partnership and purchased the building in this city which has become the St. Johns hospital. In 1917 Dr. F. E. Luton was admitted to the partnership, followed by Dr. Charles T. Foo a year later and since that time the firm name has been Doctors Hart, Hart, Luton & Foo. In 1927 another building was purchased for office purposes.

After the Clinton County Memorial hospital was assured the decision to abandon the St. Johns hospital was reached and the partnership has now been re-organized under the name of the Hart Clinic with Doctors T. Y. Ho and V. C. Abbott associated with the four members named above. As soon as the county institution is opened the St. Johns hospital will be closed. It will then be used partly for offices and partly for clinical work.

Announcement and schedules will soon be ready for the 1927 Summer Clinics of the Chicago Medical Society, supported by many of the largest hospitals in the city, among them being the Post-Graduate hospital, Chicago Memorial hospital, University of Illinois College of Medicine, Cook County hospital, Michael Reese hospital, Mercy hospital, Presbyterian hospital, Jackson Park hospital, St. Luke's hospital, Ravenswood hospital, Mount Sinai hospital, Francis Willard hospital, West Suburban hospital, Evangelical hospital, North Chicago hospital, Chicago Lying-in hospital, St. Joseph hospital, Alexian Brothers hospital, Laboratory of Surgical Technique, Washington Park hospital, Jackson Park hospital, Chicago Municipal Sanitarium, John B. Murphy hospital. Several of our large laboratories have also agreed to co-operate with us in this great work.

In 1926 we limited registrations to physicians living in Illinois, but our increased facilities make it possible to accommodate many more than last year. Reservations therefore will be open to physicians from other states and to as many as may be accommodated, in the order of their registrations. Registration fee will be \$10 for each two weeks course, payable at time of registration, and a physician may register for only one course of two weeks.

Admission will be by card only, issued by the Chicago Medical Society and no registration card will be issued until registration fee is paid.

The first two weeks course will begin on Monday, June 13, 1927, at 9 a. m., ending Friday, June 24.

The second two weeks course will begin on Monday, June 27 at 9 a. m., ending Friday, July 8.

This is an excellent opportunity for the medical men of the country to obtain real post graduate work in some of the best hospitals in the world, and from some of the best clinicians found anywhere.

Schedules will be sent to the 10,000 physicians in Illinois, and announcements will be sent to the American Medical Association, and the several state medical journals.

We will probably be unable to accommodate all those desiring this wonderful clinical course, so it behooves those in Chicago and Illinois to register early if they desire to take advantage of this year's summer clinics. Last year our registrations closed one week after the first announcement.

DEATHS

Dr. Frank Banghart Walker, 60 years old, who had been a physician and surgeon in Detroit for the last 35 years, died at his home, 1130 Parker avenue, last night, after an illness of three days.

He was emeritus professor of surgery of the Detroit College of Medicine and Surgery, and was also associated with several Detroit hospitals and the Michigan State Hospital at Lapeer, Mich. He held the rank of lieutenant-colonel in the Medical Officers' Reserve Corps.

Dr. Walker enlisted in the United States Army in April, 1917. In June, 1917, he was commissioned a major and in August was ordered to the Rockefeller Institute for special service. In the same month he was ordered to join Base Hospital No. 36, at the Michigan State Fair Grounds. He served as chief surgeon of Base hospital No. 36 at Vittel, France, from November 17, 1917, to January 20, 1919. He was discharged March 2, 1919.

Dr. Walker was born at Hunter's Creek, near Lapeer, Mich. He was graduated from the Lapeer High school in 1883 and from the Flint, (Mich.) High school in 1885. He received his Ph. B. degree from the University of Michigan in 1890 and his M. D. degree from the Detroit College of Medicine in 1892. He was a fellow and one of the founders of the American College of Surgeons.

He began his career in Detroit with Dr. H. O. Walker, a relative. This association lasted until 1912, when the elder man died.

Dr. Walker was attending surgeon at the Providence hospital and consulting surgeon at the Shurly hospital, St. Joseph's Retreat and the Michigan State hospital. He was formerly associated with the Woman's hospital and the St. Mary's hospital.

He was a former president of the Detroit Academy of Surgery, the Detroit Surgical Society and the Wayne County Medical Society.

Other organizations:

He was a fellow of both the American Medical Association and the American College of Surgeons. In addition, he was a member of the Mississippi Valley Medical Association, the Tri-State Medical Society, the Detroit Surgical Society, the Detroit Medical Club and the Michigan State Medical Society.

Dr. Walker contributed numerous articles on surgery to American medical journals and served as editor of "Physician and Surgeon" from 1899 to 1903. He also was professor of surgery and secretary and treasurer of the Detroit College of Medicine from 1907 to 1913.

He was a member of Detroit Commandery No. 1, Knights Templar, Ionic Chapter; Corinthian Lodge No. 241, F. & A. M., and Moslem Shrine. He was a member of the Detroit Boat Club, the Detroit Athletic Club, the Bloomfield Hills Country Club, the Old Colony Club, the Detroit Curling Club and the Detroit Board of Commerce.

Dr. Walker was married in 1894 to Hattie Belle Venning at Monroe, Mich. She died in 1902. In 1905 he married Kate Huntington Jacobs of Detroit. Mrs. Walker, one son, Dr. Roger V. Walker, who was associated with his father; a daughter, Mrs. George M. Hawthorne; a sister and three grandchildren survive.

Funeral services were held in St. Paul's Episcopal Cathedral at 2 p. m. Thursday. The Rev. W. D. Maxon, rector of Christ Episcopal church, officiated. Burial was in Elmwood cemetery.

Dr. Lem. S. Barney, Constantine, died March 27, following a stroke of apoplexy. He was a graduate of a Baltimore university in 1898. Dr. Barney practiced for 23 years in Leonidas and in 1922 he moved to Constantine where he has

been practicing since that time. Dr. Barney was a member of the St. Joseph County Medical Society and the Michigan State Medical Society.

Dr. Moses Hyman, 4152 Woodward avenue, Detroit, died suddenly March 15th. Dr. Hyman was born in Detroit, graduated from the Western High school, and obtained his degree from the Detroit College of Medicine.

SERUM SENSITIZATION RESULTING FROM DIPHThERIA TOXIN-ANTITOXIN ADMINISTRATION

In order to determine the effectiveness of the 0.1 L+ diphtheria toxin-antitoxin preparation in rendering laboratory animals anaphylactic, experiments were conducted by Chester A. Stewart, Minneapolis (Journal A. M. A., April 16, 1927), on thirteen guinea-pigs. In a series of ten guinea-pigs who had received a single injection of 1 cc. of the 0.1 L+ toxin-antitoxin preparation and a second intraperitoneal injection of diphtheria antitoxin sixteen days later, nonfatal anaphylactic phenomena appeared in varying degrees of severity and after different intervals. In a second series of three guinea-pigs who had received three injections of 1 cc. each of toxin-antitoxin, prompt anaphylactic death occurred in two instances with convulsions and cessation of respiration. The third animal remained perfectly well. A clinical case is reported of the occurrence of a prompt severe reaction in a child previously immunized against diphtheria, following a subsequent injection of antitoxin fourteen months later. This is an example of human anaphylaxis. Diphtheria immunization without sensitization to serum, particularly that derived from horses, is desirable. Recent studies indicate that this end may be accomplished by the use either of antitoxin or of toxin detoxified by means of sodium ricinoleate. Until the effectiveness and relative merits of these two preparations have been fully established by extensive observation, the employment of toxin-antitoxin containing goat serum is recommended to avoid sensitizing individuals to the foreign protein (horse serum) present in the majority of the therapeutic serums at present on the market.

CASE OF COINCIDENT DIPHThERIA AND VINCENT'S ANGINA

Robb Spalding Spray, Morganton, W. Va. (Journal A. M. A., April 16, 1927), observed, in a patient's throat, a whitish, albuminous membrane. A swab was submitted to the city laboratory, where direct microscopic examination revealed myriads of spirochetes and fusiform bacilli. An immediate report of Vincent's angina was made. On the following day, however, the cultures showed a very profuse growth, almost in pure culture, of diphtheria bacilli of the slender, granular type.

CALCIUM CONTENT OF PUS

The work of Isidore Friesner and Samuel Rosen, New York (Journal A. M. A., April 16, 1927), demonstrates that there is an astonishingly close parallel between the amount of calcium in the pus from discharging of ears and the presence of suppurative bone disease. Possibly calcium determination of the pus, together with the quantitative determination of other constituents, may become a valuable aid in diagnosing the existence of a destruction of bone due to the suppuration.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

POST-GRADUATE CONFERENCE

The 10th Councilor District Post Graduate Conference was conducted in Bay City on March 31st. The following program was presented:

- 1:00 p. m.—Open Remarks.
—F. S. Baird, M. D., Councilor.
- 1:30 p. m.—Diagnostic Significance of Cardiac Pain.
—William H. Marshall, M. D., Flint.
- 2:00 p. m.—X-Ray and Cancer.
—T. Leucutia, M. D., Detroit.
- 2:30 p. m.—Obstetrics.
—Reuben Peterson, M. D., Ann Arbor.
- 3:00 p. m.—Ear, Nose and Throat.
—J. Milton Robb, M. D., Detroit.
- 3:30 p. m.—Use of Drugs in Gastro Intestinal Disease.
—William H. Marshall, M. D., Flint.
- 4:00 p. m.—Cancer of the Uterus.
—Reuben Peterson, M. D., Ann Arbor.
- 4:30 p. m.—Sinus Infections.
—J. Milton Robb, M. D., Detroit.

Seventy-five doctors were present during the entire afternoon and expressed universal appreciation for the instructive discussions. The following doctors attended:

E. J. Dougher, Midland, Mich.
E. A. Witter, Bay City, Mich.
F. S. Baird, Bay City, Mich.
W. A. Marshall, Flint, Mich.
C. H. Baker, Bay City, Mich.
A. O. Boulton, Gladwin, Mich.
A. W. Herrick, Bay City, Mich.
V. H. Dumond, Bay City, Mich.
R. C. Perkins, Bay City, Mich.
R. E. Scrafford, Bay City, Mich.
H. M. Jardine, Omer, Mich.
D. T. Smith, Omer, Mich.
G. M. Brown, Bay City, Mich.
J. W. Hauxhurst, Bay City, Mich.
Reuben Petersen, Ann Arbor, Mich.
C. A. Groomes, Bay City, Mich.
C. M. Swantek, Bay City, Mich.
Nina Ely, Bay City, Mich.
C. W. Ash, Bay City, Mich.
J. H. McEwan, Bay City, Mich.
A. D. Allen, Bay City, Mich.
Raye S. Everett, Bay City, Mich.
L. F. Foster, Bay City, Mich.
J. W. Gustin, Bay City, Mich.
Maurer, Reese, Mich.
J. McKenzie, Reese, Mich.
H. P. Lawrence, Bay City, Mich.
T. Leucutia, Detroit, Mich.
J. W. Orth, Midland, Mich.
W. G. Towsley, Midland, Mich.
G. W. Moore, Bay City, Mich.
M. R. Slattery, Bay City, Mich.
E. S. Huckens, Bay City, Mich.

J. W. Weed, East Tawas, Mich.
J. C. Grosjean, Bay City, Mich.
Dan Weston, Akron, Mich.
G. L. Alger, Saginaw, Mich.
F. E. Parkinson, Saginaw, Mich.
Frank E. Abbott, Sterling, Mich.
E. F. Crummer, Essexville, Mich.
C. A. Stewart, Bay City, Mich.
E. C. Warren, Bay City, Mich.
P. S. Windham, Saginaw, Mich.
E. E. Curtis, Saginaw, Mich.
A. J. Cortopassi, Saginaw, Mich.
C. W. Ely, Saginaw, Mich.
A. Grigg, Saginaw, Mich.
Paul R. Urmston, Bay City, Mich.
A. R. Ernst, Saginaw, Mich.
B. B. Rowe, Saginaw, Mich.
E. J. Person, Bay City, Mich.
F. Sadowski, Bay City, Mich.
C. E. Toshach, Saginaw, Mich.
R. M. Kempton, Saginaw, Mich.
R. Scott, Saginaw, Mich.
W. H. Brock, Saginaw, Mich.
W. F. English, Saginaw, Mich.
R. N. Sherman, Bay City, Mich.
T. A. Baird, Bay City, Mich.
A. F. Stone, Bay City, Mich.
V. L. Tupper, Bay City, Mich.
W. K. Anderson, Saginaw, Mich.
E. C. Hanson, Saginaw, Mich.
J. H. Sherk, Midland, Mich.
Fred Drummond, Kawkawlin, Mich.
G. M. McDowell, Bay City, Mich.
William Kerr, Bay City, Mich.
R. H. Criswell, Bay City, Mich.
J. M. Robb, Detroit, Mich.
G. H. Kaven, Unionville, Mich.
M. Kessler, Bay City, Mich.
R. L. Fisher, Standish, Mich.
F. J. Cady, Saginaw, Mich.
Yntema, Saginaw, Mich.
F. L. Busch, Bay City, Mich.
C. F. Adams, Bay City, Mich.

The following program was given at the Post-Graduate Conference conducted in Cadillac on April 19th:

- 10:00 a. m.—Opening Statement.
—Councilor Ricker.
- 10:30 a. m.—Test for Liver Function.
—E. L. Eggleston, M. D., Battle Creek.
- 11:00 a. m.—Colloidal Iodine and Its Possible Uses in Medicine and Surgery.
—W. L. Chandler, Ph. D., Michigan State College, Lansing.
- 11:30 a. m.—Some Animal Diseases Transmissible to Man.
—Professor Ward Giltner, Michigan State College, Lansing.
- 12:15 M. —*Luncheon.*
- 1:30 p. m.—Disorders of the Colon.
—E. L. Eggleston, M. D., Battle Creek.
- 2:00 p. m.—Prenatal Care.
—H. S. Collisi, M. D., Grand Rapids.

- 2:30 p. m.—The Vermicidal Value of Iodine.
—W. L. Chandler, Ph. D., Michigan State College, Lansing.
- 3:30 p. m.—Treatment of the Late Toxemias of Pregnancy.
—H. S. Collisi, M. D., Grand Rapids.
- 4:00 p. m.—Treatment of Primary Anemia.
—E. L. Eggleston, M. D., Battle Creek.

POST GRADUATE CONFERENCE,
LANSING,
APRIL 26, 1927—HOTEL OLDS

PROGRAM

- 11:00 a. m. Opening Remarks.
—B. F. Green, Councilor.
- 11:00 a. m. Treatment of Peptic Ulcer.
—John B. Youmans, M. D., Ann Arbor.
- 11:30 a. m. Evaluation of Gastric X-Ray Report.
—Preston M. Hickey, M. D., Ann Arbor.
- 12:00 M. Luncheon—Hotel Olds.
- 1:15 p. m. Newer Treatment of Pernicious Anemia.
John B. Youmans, M. D., Ann Arbor.
- 1:45 p. m. Cancer of the Esophagus.
Preston M. Hickey, M. D., Ann Arbor.
- 2:15 p. m. Fractures.
—W. J. Cassidy, M. D., Detroit.
- 2:45 p. m. Preservation of Interuterine Life.
—Alexander Campbell, M. D., Grand Rapids.
- 3:15 p. m. Acute Abdominal Conditions.
—W. J. Cassidy, M. D., Detroit.

KENT COUNTY

The Kent County Medical Society met twice in March, both of which meetings were addressed by local members of the society. The following programs were rendered: "Abscess of the Tibia," John T. Hodgen, M. D.; "Pathology of Interest to the Practitioner," William McK. German, M. D.; "Nasal Ganglion Pain," C. F. Snapp, M. D.; "The Incidence of Mental and Nervous Diseases as a Causative Factor in Industrial Accidents," G. J. Stuart, M. D.; "The Attitude of the Medical Practitioner to the Laboratory," G. L. Bond, M. D.; and "A Fatal Case of Infection of Teeth and Tonsils, with Septic Infection," C. E. Sugg, M. D. and G. L. Bond, M. D.

The following resolution was adopted by the society which it is felt states the policy of the society relative to the attitude regarding free clinics; and the control of its membership. The resolution is:

1. The Kent County Medical Society through its members stands ready at all times to give free medical services to the needy. Their interpretation of the "needy" shall be not only the paupers but also those individuals who in the opinion of a trained social worker are worthy of that service.

2. That the Kent County Medical Society shall have through its Committee on Clinics a representative on the staff of every organization giving free Clinics service. So far as possible this repre-

sentative shall be chosen from such of its members who are at the time serving on Clinics.

3. That the president shall appoint at the beginning of his administration a committee of three to be known as the Standing Committee on Clinics. This committee shall designate its representative on the various clinics. These representatives together with the committee appointed by the president shall be known as the Conference Committee on Clinics.

4. We recommend: First that Clinic giving free service shall have a trained social investigator. Second that the records of their investigations shall be accessible to this committee at all times.

5. That this committee shall report from time to time the result of its investigations and make its recommendations to the society.

6. That the Kent County Medical Society is opposed to the plan that any patient of a free clinic shall pay more than a simple initial fee not to exceed 50 cents and not more than 20 per cent above cost of drugs and supplies.

7. The Kent County Medical Society is opposed to the acceptance by its members of any fee for attendance on free Clinics conducted on the plan as outlined in this report.

8. Realizing the difficulty of establishing an economic standard for free service the committee shall stand ready to co-operate with the social workers in arriving at an equitable and proper solution of these problems.

H. T. Clay, Secretary.

SAINT CLAIR COUNTY

Herewith are reports of several meetings of Saint Clair County Medical Society:

Regular meeting of Saint Clair County Medical Society, Hotel Harrington, Port Huron, Mich., on March 17, 1927. Supper at 6:30 p. m. Program at 8 p. m. Members present: Heavenrich, Clancy, Callery, Windham and Ryerson. Visitors: Doctors Price, Sykes and Meredith. Dr. Price, assistant to Dr. Hugo Freund of Detroit, read a very interesting paper on Cardiography. The paper was well received and a very interesting discussion followed its reading. A rising vote of thanks was extended the speaker for coming up from Detroit and giving the paper. Meeting adjourned at 9:30 p. m.

* * *

Regular meeting of Saint Clair County Medical Society, Hotel Harrington, Port Huron, Mich., on April 7, 1927. Supper at 6:30 p. m. Program at 8:15 p. m. At the time President Ryerson called the meeting to order there were about 75 in attendance, approximately one-half of whom were graduate nurses of Port Huron and Sarnia, Ontario, the membership of the Saint Clair County Medical Society and about six physicians from Lambton County, Ontario, formed the remainder of the audience. Dr. Alexander Campbell of Grand Rapids read a very interesting paper on Pre-natal and Post-natal Care. Motion pictures taken in the Grand Rapids Clinic emphasized the various points brought out in the paper. Following the paper a very interesting discussion took place. A rising vote of thanks was given the speaker at the close of the program. Meeting adjourned at 10:15 p. m.

* * *

A special meeting of Saint Clair County Medical Society was held April 10, 1927, at Port Huron hospital.

The matter of protesting passage of the several cult bills now pending before our legislature was taken up and several members pledged themselves to send night letters to Mr. Woodruff and Mr. Gillett. The society also authorized the several telegrams and letters written by the secretary to members of the legislature upon the same subject.

The society authorized the necessary travel expense for the secretary in attending the conference of County Secretaries at Jackson, Mich., on April 28, 1927. You are advised that the secretary of this society will be present at that meeting.

Mrs. James A. Attridge and Mrs. Richard K. Wheeler of Port Huron were appointed as a committee of two to organize the Auxiliary of the Michigan State Medical Society in Saint Clair County.

George M. Kesl, Secretary-Treasurer.

TRI COUNTY

Dr. Smith, president, presiding.

Minutes of last meeting read and approved. Motion by Dr. Carrow, seconded by Dr. Ricker that annual dues be \$15. Carried.

This motion was made after some remarks as to the expense of the society, which have been paid largely by the Wexford county doctors participating in the County Poor Contract, as \$10 goes to the State Society.

Election of officers as follows:

President—J. M. Wardell. Motion by Dr. Gruber, seconded by Dr. Ricker. Carried.

Vice-President—Dr. J. Doudna. Motion by Dr. Ricker, seconded by Dr. Gruber. Carried.

Second Vice-President—Dr. O. Ricker. Motion by Dr. Gruber, seconded by Dr. Carrow. Carried.

Secretary and Treasurer—Dr. S. C. Moore. Motion by Dr. Ricker, seconded by Dr. Doudna. Carried.

Delegate to State Medical Meeting—Dr. W. J. Smith. Motion by Dr. Gruber, seconded by Dr. Doudna. Carried.

Alternate—Dr. Moore. Motion by Dr. Gruber, seconded by Dr. Doudna. Carried.

Medico-Legal Committee—Dr. Carrow. Motion by Dr. Ricker, seconded by Dr. Gruber. Carried.

Contract Committee—Dr. Wardell. Motion by Dr. Gruber, seconded by Dr. Ricker. Carried.

Program Committee—Secretary and Dr. Smith. Motion by Dr. Gruber, seconded by Dr. Ricker. Carried.

Finance Committee—Dr. G. D. Miller. Motion by Dr. Carrow, seconded by Dr. Gruber. Carried.

Meeting adjourned to Staff Room. Hospital reports for September 1925 and 1926 read and discussed.

Meeting adjourned.

S. C. Moore, Secretary.

LUCE COUNTY

Inclosed you will find County Secretary's monthly report together with checks amounting to \$50 to pay the dues of the following members:

H. E. Perry, R. E. Spinks, F. P. Bohn, J. B. Christie and H. S. Stahr. On the list of members you will find also the names of R. E. L. Gibson, E. H. Campbell and J. T. Redwine. Doctors Gib-

son and Campbell have paid their dues for 1927, to the Mackinac, Luce and Chippewa Society. J. T. Redwine has paid his dues for 1927 to the Tuscola Medical Society, which makes according to the list inclosed, eight members to start with—all of whom are legally registered physicians in Michigan—except Dr. H. S. Stahr, who has only recently come to the State hospital from Nebraska and has made application to the State Board of Registration, in this state. He is a graduate of the University of Nebraska, receiving his diploma in 1924 and is also registered in Kansas and Colorado and it is only a matter of form in paying the fee to get his reciprocity here.

We would be glad to have you send a charter for Luce County Medical Society and a copy of by-laws for this society to adopt. Luce County Medical Society was organized on April 11, 1927, by the above named physicians.

Dr. E. H. Campbell, Medical Superintendent of Newberry State hospital acted as temporary chairman, at which time Dr. H. E. Perry was elected president. Dr. J. T. Redwine was elected secretary.

Trusting that the above explanation will make you understand why the dues were not all sent and that we may receive our charter with complete instruction, blanks, etc., that are needed, I am

Yours fraternally,

J. T. Redwine, Secretary.

LENAWEE COUNTY

The March meeting of the Lenawee County Medical Society was held on Thursday, March 24, at the residence of F. J. McCue in Hudson.

The meeting was opened by President Hammel of Tecumseh. The minutes of the last meeting were read by the secretary and approved.

The Legislative Committee was instructed to proceed with their work of investigating the illegal practitioners in the county. A full report of their work will be given later.

A committee was appointed by the president to arrange a plan for the holding of regular clinics for the benefit of the needy poor of the county, these clinics to be conducted by the society members in the various community centers. Dr. C. H. Heffron of Adrian was made chairman, with Doctors McCue of Hudson, Westgate of Morenci, Lamley of Blissfield and Marsh of Tecumseh.

The speaker of the evening was Dr. Esli T. Morden of Adrian, who gave a very good paper entitled "The Business Man's Cold." He stressed the importance of attempting a rational treatment which will make it possible for the busy man or woman to continue at their work while recovering from an acute infection of the upper respiratory tract.

The paper was discussed by Doctors Stafford, Whitney, Howland and Chase.

R. G. B. Marsh, Secretary.

BERRIEN COUNTY

The Berrien County Society held its March meeting at the Four Flags hotel in Niles.

Dr. George F. Dick of Chicago, who was to read the society a paper on Scarlet Fever Antitoxins and Society was unable to return from the Pacific coast in time to deliver the address himself but

sent his paper by aeroplane mail to his assistant, Dr. P. S. Rhoades. Dr. Rhoades presented the paper in a very able manner to a crowd of 110 people. There were many visiting physicians from Kalamazoo, South Bend and Cass county. Although keen disappointment was felt because of Dr. Dick's being unable to return in time, the paper and discussion were so well given by Dr. Rhoades that everybody was well satisfied and felt that the meeting was well worth while.

The personal physician to King Benjamin Pur-nell reports his condition as much improved, viz under the doctors care he is beginning to recover his former vigor. His interstitial pathology (viz nephritis) is improving.

Blossom week in Berrien county is May 1 to 7. The Berrien County Society invites you to come over and down and look us up. It makes a nice ride for the wife and family and the orchards in bloom are really worth seeing.

W. C. Ellett, M. D., Secretary.

HILLSDALE COUNTY

A called meeting of the Hillsdale County Medical Society was held Tuesday evening, March 22 at 7 p. m., the president, Dr. H. C. Miller in the chair.

Minutes of the Annual meeting were read and approved.

Dr. B. F. Green read a very interesting and valuable report of a case of intersusception, with a brief resume of the statistics, diagnosis, prognosis and treatment of this condition.

Discussion opened by Dr. Bechtol and general discussion.

Dr. A. J. Hamilton then read his report of a case of syphilis with remarks on diagnosis and treatment. Dr. Hamilton's paper was most timely and instructive and was followed by general discussion opened by Dr. Johnson.

A resolution strongly favoring the proposed Tuberculosis Sanitarium at Ann Arbor was then offered and motion of Dr. B. F. Green seconded by Dr. G. R. Hanke was unanimously adopted. A copy to be mailed to State Senator Upjohn of Kalamazoo.

Adjourned.

D. W. Fenton, Secretary-Treasurer.

HOUGHTON COUNTY

The regular monthly meeting of the Houghton County Medical Society was held at the Miso-waubik club, Calumet, Mich., April 5, 1927. Twelve members were present. Dr. A. C. Roche presented a paper on "Infantile Paralysis." Dr. H. M. Joy reported a case of a large Dermoid cyst of the abdomen in a woman with marked symptoms of toxic goitre.

The Houghton County Medical Society held its regular monthly meeting, March 1, 1927, at the Douglas House in Houghton. Meeting opened by Dr. M. D. Roberts. Dr. N. T. North of Painesdale read an interesting paper on the "Practice of Medicine in the Panama Canal Zone."

Dr. Scott presented a case of Vincents Angina. Meeting then adjourned to lunch.

Alex B. McNab, Secretary.

EATON COUNTY

The March meeting of the Eaton County Medical Society was held at the Charlotte hotel March 31, 1927.

Dinner was served at 6:30 and followed by a short business meeting.

Dr. William Cassidy of Detroit then spoke on the "Surgical Abdomen." He avoided the common abdominal emergencies and spent about one hour on the uncommon and unusual abdominal surgical conditions, their diagnosis and surgical treatment. This was one of our banner programs and those absent missed a treat.

After a period of questions the meeting adjourned.

H. J. Prall, Secretary-Treasurer.

GRATIOT-ISABELLA-CLARE COUNTY

For our March meeting we had Dr. Max Peet of the University hospital, who talked to us on the "Present Treatment of Cranial and Intra-Cranial Injuries." The doctor also showed a number of very interesting slides, illustrating his work on diseases of the pituitary. Altogether it was a very instructive program.

Dr. J. H. Powers, councilor of this district, was a visitor.

E. M. Highfield, Secretary.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

THE DISEASES OF INFANTS AND CHILDREN—J. P. Crozer Griffith, M. D., Ph. D., Professor of Pediatrics in the Graduate School of Medicine of the University of Pennsylvania, and A. Graeme Mitchell, M. D., Professor of Pediatrics, College of Medicine, University of Cincinnati. Second Edition, Reset. Two octavo volumes totaling 1715 pages with 461 illustrations, including 20 plates in colors. Cloth, \$20 net. W. B. Saunders company, Philadelphia and London.

Difficult to conceive of a more useful, practical text that contains all that one seeks. The authors' names are sufficient guarantee of merit.

THE SURGICAL CLINICS OF NORTH AMERICA—(Issued serially, one number every other month.) Volume 7, Number 1 (Cancer Number—February 1927.) 235 pages with 153 illustrations. Per clinic year (February 1927 to December 1927.) Paper, \$12; Cloth, \$16 net. W. B. Saunders company, Philadelphia and London.

OBSTETRICS FOR NURSES—Joseph B. DeLee, M. D., Professor of Obstetrics at the Northwestern University Medical School; Obstetrician to the Chicago Lyin-In Hospital and Dispensary. New (8th) Edition, Revised. 12mo of 635 pages, with 266 illustrations. Cloth, \$3 net. W. B. Saunders company, Philadelphia and London.

CLINICAL NEUROLOGY—Hans Curschmann, By E. A. Strecker, M. D., and M. K. Meyers, M. D. Price \$3.50, 410 pages. P. Blakiston's Son & Co., Philadelphia.

Imparting the fundamentals that will enable the practitioner to recognize serious neurological diseases in their incipient and early stages. It is an excellent clinical exposition of neurology.

THE JOURNAL

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XXVI

JUNE, 1927

No. 6

ORIGINAL ARTICLES

METHODS FOR THE CONTROL OF SCARLET FEVER*

GEORGE F. DICK, M. D.

CHICAGO, ILL.

Scarlet fever is probably one of the oldest known diseases. The earliest medical manuscripts contain descriptions of acute diseases accompanied by rashes. At first the various rashes were confused. On account of its characteristic pustular lesions, small pox was soon differentiated from other exanthemata. But the confusions between measles and scarlet fever persisted until the 18th century when Sydenham clearly differentiated scarlet fever from measles.

After the development of Jenner's vaccination against small pox, attempts were made to employ a similar method of vaccinating against scarlet fever; on the assumption that the organism which caused the disease would be present in the skin of the scarlet fever patient. These attempts at vaccination against scarlet fever by means of skin scales were not successful. And the knowledge of scarlet fever was at a standstill during the next hundred years until the development of the science of bacteriology revealed the presence of a variety of organisms associated with scarlet fever predominant among which were streptococci and chiefly the hemolytic streptococcus. But similar organisms were also demonstrated in various other diseases, such as puerperal sepsis, erysipelas and lymphangitis. There was no way of differentiating these various streptococci and no one succeeded in establishing the streptococcus as the cause of scarlet fever. It became generally accepted that

this disease must be due to a filterable virus, but it was not possible to prove this theory. During the next fifty years there was another long pause in progress until, as the result of work published in 1923, which included the production of experimental scarlet fever in human beings, we were able to demonstrate that a specific hemolytic streptococcus is the cause of scarlet fever. In most cases this streptococcus does not invade the blood stream but remains localized in the throat, where it causes the angina, and in addition, produces a toxin which is absorbed into the blood and carried to all parts of the body.

We were able to demonstrate that this toxin is responsible for the characteristic symptoms of scarlet fever, including the nausea, vomiting, fever and rash. By injecting comparatively large doses of the sterile toxin, we succeeded in reproducing these symptoms in susceptible human beings.

The discovery of the specific toxin of scarlet fever enabled us to develop:

First, a skin test to determine which individuals are susceptible to scarlet fever, and which are immune. Second, a method of immunizing the susceptible individuals against scarlet fever so that they do not contract the disease on exposure. Third, an antitoxin specific for scarlet fever. Fourth, a method of recognizing scarlet fever streptococci. These four applications of the discovery of the specific toxin furnish the means of controlling scarlet fever.

*Read before the Berrien County Medical Society at Niles, March 23rd, 1927.

SKIN TEST

The skin test to determine susceptibility is made by injecting intradermally .1 cc. of a dilute solution of scarlet fever toxin. The injection should be made on the anterior surface of the forearm, at the junction of the upper and middle thirds. The test is observed 20 to 24 hours after it is made. The observation should be made in a bright light. An area of reddening one centimeter or over, in any diameter, constitutes a positive reaction and indicates some degree of susceptibility to scarlet fever. The positive reaction to scarlet fever differs from the positive Schick test in being more transient and showing no induration. The Schick test for susceptibility to diphtheria may be observed 2 to 4 days after the test is made, but reactions to scarlet fever toxin have usually disappeared in thirty to forty-eight hours; so that the results of observations made more than twenty-four hours after the skin dose of scarlet fever toxin is injected would not be reliable. On the other hand, the test should not be observed too soon—not earlier than twenty hours. The positive reaction to scarlet fever toxin may vary from a very faint pink flush to an intense red, according to the degree of susceptibility of the individual. It may range from one to five centimeters in diameter. The most strongly positive reactions are usually accompanied by slight superficial swelling, without any inundation. We have been impressed with the number of positive skin tests that have been interpreted as negative, especially by physicians accustomed to making Schick tests. It is almost the usual thing for slightly positive reactions to be regarded as negative by those who have not had considerable experience with skin tests for susceptibility to scarlet fever.

If the skin test solution is properly prepared it is not necessary or advisable to use a control, for pseudo reactions are uncommon.

It was pointed out in our earlier publications that the skin test was devised as a means of determining susceptibility to scarlet fever and that it is not a diagnostic procedure. Subsequent experience has shown that this view is correct, but in spite of the warning, some observers have attempted to employ the skin test for the diagnosis of scarlet fever. This is a mistake, for while it is true that the skin test is positive before an attack of scarlet fever and usually negative after the attack, it may become negative in the first forty-

eight hours of the disease, before the full development of the rash, and in rare cases, the skin test is modified but still positive after an attack of scarlet fever.

While the use of the skin test with the toxin should be limited to the determination of susceptibility to scarlet fever, the blanching test, with scarlet fever antitoxin, which will be described later, is helpful in the diagnosis of suspected rashes.

Correctly made and interpreted, with accurately standardized and properly prepared material, the skin test has proved a reliable means of determining susceptibility to scarlet fever.

The number of susceptible individuals in any group will vary according to age and previous exposures to scarlet fever. In crowded city schools, or institutions, the number of individuals susceptible may be as low as 15 per cent. In less crowded districts, or in younger age groups, more than 60 per cent may be found susceptible. Many cases of scarlet fever are so mild that they are not diagnosed clinically. This probably accounts for the immunity in those persons who give no history of scarlet fever but have negative skin tests.

In a series of 10,000 skin tests including all ages, 40 per cent were positive and 60 per cent negative. No case of scarlet fever occurred in persons with negative tests and 48 cases have been observed in persons who had shown positive skin tests before exposure to scarlet fever.

IMMUNIZATION

Persons who are susceptible to scarlet fever may be immunized by means of subcutaneous injections of graduated doses of sterile scarlet fever toxin. It is important that the toxin for immunization be properly prepared, so that it contains a minimum amount of foreign protein, and no horse serum or other animal serum. The dosage should be correctly graduated so as to give no harmful reactions, yet confer adequate immunity.

We are at present advising the use of the following dosage which we have found safe and effective:

A first dose of 500 skin test doses of toxin. A second dose of 2,000 skin test doses. A third dose of 8,000 skin test doses. A fourth dose of 25,000 skin test doses. A fifth dose of 65,000 skin test doses given subcutaneously at intervals of five to seven days.

This dosage may be counted on to immunize more than 90% of susceptible persons to the point of an entirely negative

skin test and modify the susceptibility of the remainder.

It should be emphasized that unless the immunization is carried to the point of an entirely negative skin test, complete protection from scarlet fever cannot be expected, though the severity of any subsequent attack would be modified by the partial immunization.

Two weeks after the last immunizing dose of toxin is given, another skin test should be made. If it is not entirely negative, the last immunizing dose should be repeated.

In a series of 4,147 susceptible persons immunized with the dosage mentioned, no harmful reactions have occurred. There is practically always some local reaction about the site of injection which begins to subside in 48 hours. No necrosis, abscesses or sloughs have occurred.

There may or may not be a general reaction, depending on the degree of susceptibility of the person being immunized. The most severe general reactions which occur consist of general malaise and nausea accompanied by a rise in temperature. These symptoms may appear within a few hours and usually subside the following day. There may be a light scarlatinal rash, which disappears in 48 hours. Such reactions are not common and do not follow all doses, even in highly susceptible individuals. General reactions are most likely to occur after the first, second or third dose. By the time the larger doses are reached enough immunity has been acquired to prevent reactions. As a rule the reactions which occur during the course of immunization against scarlet fever are about as severe as those which follow the use of typhoid vaccine or diphtheria toxin-antitoxin mixtures.

While it is not possible at present to give statistics on the duration of the active immunity resulting from administration of these graduated doses of toxin, experience to date indicates that the immunity obtained is comparable in duration to that obtained with immunization against diphtheria, with proper use of diphtheria toxin-anti-toxin mixtures. It is considerably more satisfactory than immunity obtained with some commercial preparations of diphtheria toxin-antitoxin now on the market.

ANTITOXIN

Scarlet fever antitoxin is obtained by immunizing horses with gradually increasing doses of sterile scarlet fever toxin injected subcutaneously. When the horse is

producing a good antitoxin, he is bled and the serum is separated and refined by the methods employed for refining and concentrating diphtheria antitoxin. This process removes unnecessary foreign proteins, so that the resulting antitoxin causes fewer and less severe reactions and is of higher potency.

The finished antitoxin is standardized against the toxin and its potency is expressed in the number of skin test doses of toxin neutralized by one cubic centimeter of antitoxin. The therapeutic dose of antitoxin should be about 300,000 of these neutralizing units, and the prophylactic dose should contain about 100,000 neutralizing units. No satisfactory method of standardizing the antitoxin has been found that does not involve the use of skin tests in human beings. Some observers claimed that goats could be used for this purpose but they are not suitable and serums standardized on goats have been found unreliable. On account of the difficulty of standardization, it has not been possible for the Hygienic Laboratory of the United States Public Health Service to check the claims of the manufacturers. Consequently, there are several preparations of scarlet fever antitoxin on the market which bear on their labels grossly exaggerated claims for potency. Some of these antitoxins are labelled as containing 50,000 or 60,000 neutralizing units per cubic centimeter. When tested they are sometimes found to have less than 10% of the potency claimed.

The fact is that no antitoxin containing even 40,000 neutralizing units per cubic centimeter has been produced. The most potent antitoxin yet obtained contains 35,000 neutralizing units per cubic centimeter. If an antitoxin actually contains as much as 30,000 neutralizing units, ten cubic centimeters or 3,000 units is an adequate therapeutic dose.

It has been shown that properly standardized scarlet fever antitoxin, given in sufficient dosage early in the disease shortens the course of scarlet fever and reduces the frequency and severity of complications. In order to be most effective, the antitoxin should be given as soon as the rash begins to appear. With every day of delay in administering antitoxin there is a diminution in the benefit derived from it. If the antitoxin is withheld until late in the disease, the tissues of the body may be damaged past repair.

There is considerable variation in the severity of scarlet fever. There are mild

forms in which the chief object in giving antitoxin is to reduce the chance of complications to a minimum. From the mild forms there are all possible gradations to the fulminating toxic type in which the patient succumbs in a few days to the toxemia.

The therapeutic dose of antitoxin adopted by the Scarlet Fever Committee, and put out by the manufacturers licensed by the committee, is adequate for the ordinary mild to moderately severe case of scarlet fever. Within 12 to 18 hours after the antitoxin is given in an early case, there is an improvement in the general condition of the patient; the temperature falls and the rash begins to fade. In more severe cases, especially in those complicated by sinus infections, it is sometimes necessary to give a second therapeutic dose of antitoxin 18 to 24 hours after the first dose.

In extremely toxic cases, with high temperature and delirium, it is advisable to give two therapeutic doses at once.

Occasionally, one sees cases of scarlet fever of several day's duration, in which septicemia has developed and the tissues are injured to such an extent that no method of treatment can be expected to effect a cure. In these cases there is usually a marked reduction in the amount of urine. An effort should be made to administer antitoxin early enough to prevent the development of such conditions.

In doubtful rashes, the diagnosis may frequently be established by injecting 2/10 of a cubic centimeter of scarlet fever antitoxin intradermally in an area where the rash is brightest. The result is observed in 18 to 24 hours. If the site of injection is surrounded by a zone in which the rash is blanched, it may be concluded that the rash is that of scarlet fever, since the blanching is due to the neutralization of the scarlet fever toxin by the antitoxin in the locality of the injection. These blanching tests are sometimes difficult to see; especially if the rash is two, or three days old. It is best to stand some distance from the patient in making the observation. In case there is an increased redness at the immediate site of injection due to irritation from the serum or preservative contained in it, it is often possible to see a zone of blanching surrounding the central red spot.

The disease most commonly confused with scarlet fever is German measles. Since the rash of German measles is not blanched by scarlet fever antitoxin, the

blanching test furnishes a means of differential diagnosis between these two diseases.

Besides its use in the treatment of scarlet fever and in the diagnostic blanching test, scarlet fever antitoxin is given in prophylactic doses to prevent the development of scarlet fever in persons who have been recently exposed to the disease. If possible, it is best to make nose and throat cultures on blood agar plates and examine them for hemolytic streptococci before giving the prophylactic dose of antitoxin. Comparatively few of the contacts contract scarlet fever on any one exposure. This is due to the fact that some of the contacts are not susceptible to scarlet fever and that those who are susceptible may not become infected. If a person is not susceptible or if he is susceptible but not infected, he does not need antitoxin.

In case the skin test is positive, indicating susceptibility to scarlet fever, and the nose or throat culture is positive for hemolytic streptococci, the prophylactic administration of scarlet fever antitoxin is justified. It should be kept in mind that protection with the antitoxin is an emergency measure which affords only temporary immunity.

As soon as the antitoxin is eliminated from the body, the patient again becomes susceptible to scarlet fever and may contract the disease on a subsequent exposure. The protection conferred by a prophylactic dose of antitoxin cannot be expected to last more than ten days or two weeks. It should be followed by active immunization with the toxin which results in more lasting protection.

In making nose and throat cultures for hemolytic streptococci, the question will naturally arise as to whether the hemolytic streptococci found are scarlet fever streptococci or some other and non-specific streptococcus. The differentiation of scarlet fever streptococci is accomplished by testing the organisms in question for specific toxin production. This is done by culturing the organism in plain broth to which a small amount of sterile human blood has been added. The broth culture is incubated from two to four days; filtered through a Berkefeld "W" filter to remove the bacteria and the sterile filtrate is tested for the presence of scarlet fever toxin. This procedure requires about the same time and facilities as are needed for testing diphtheria cultures for virulence. It is, therefore, impractical for those who do not have rather extensive laboratory

facilities, and it may be left to the Health Department Laboratories.

Fortunately, this test for specificity is not necessary in the majority of instances. It is required only in cases of persistent carriers and under conditions similar to those that necessitate tests for virulence of diphtheria bacilli.

The methods employed to prevent scarlet fever in families, institutions or communities differ, according to whether or not scarlet fever is epidemic at the time. It is simpler to test and immunize during the summer months when scarlet fever is not prevalent than in the winter when exposure to scarlet fever may complicate the situation.

If scarlet fever is not present in a community, it is only necessary to make skin tests and immunize those who show positive skin reactions with graduated doses of the toxin.

TREATMENT

If scarlet fever is present in the community or institution at the time the control of the disease is undertaken, the situation is more complicated. The first thing to be done is to make skin tests on every one, and at the same time make nose and throat cultures on blood agar plates. The cultures are incubated over night and examined in the morning for hemolytic streptococci. Those concerned are divided into infected and non-infected groups according to whether or not hemolytic streptococci are found in their cultures. It is not necessary to test these cultures for specific. The skin tests are observed at the end of 20 to 24 hours. It will be found that the infected group contains a number of persons who are immune to scarlet fever, as demonstrated by negative skin tests. On account of this immunity, they will not contract scarlet fever themselves, but should be quarantined as immune carriers who might infect others. They do not require any treatment and may be released from quarantine after all the susceptibles have been immunized.

The infected group will also contain some who have positive skin tests and are therefore known to be susceptible to scarlet fever. These susceptible and infected persons are in danger of developing scarlet fever. They may be given prophylactic doses of antitoxin at once, or they may be watched closely and given a therapeutic dose of antitoxin on the first appearance of sore throat, malaise, or fever.

In the non-infected group, there will be

some with negative skin tests who do not require any further attention, except to be kept from contact with the infected group. The reason for this is that on such contact, they might be infected and become immune carriers.

The non-infected group will also contain a number of persons with positive skin tests indicating susceptibility to scarlet fever. In these, active immunization with the graduated doses of toxin may be begun at once.

The quarantine between infected and non-infected groups should be maintained until immunization of the susceptibles has been completed. One week after the work is started immunization of the susceptibles in the infected group may be begun, regardless of whether they have had antitoxin or not.

Cultures are taken once a week in the infected group and, as they become negative, the individuals concerned are transferred to the non-infected group. It is not worth while to take cultures oftener than once a week.

After the fifth immunizing dose of toxin has been given in the non-infected group, the quarantine may be raised on the infected group and the two groups may be permitted to mingle.

Retests are made two weeks after the last immunizing dose of toxin and extra doses are given where indicated.

If it is not possible to obtain cultures on blood agar plates, the control of an epidemic of scarlet fever is more difficult. Skin tests are made and the persons tested are divided into two groups according to whether or not they are shown to be susceptible. Daily observations of the susceptible group are necessary with administration of therapeutic antitoxin on the appearance of sore throat, fever or malaise. Active immunization is begun at once in the susceptible group. Since it is not possible, without cultures, to isolate infected and contracting the disease until their immunization has been completed.

An epidemic of scarlet fever cannot be controlled by the use of prophylactic doses of antitoxin because, as already pointed out, the antitoxin protects for only 10 days to two weeks, which is not sufficient time for the infected carriers to get rid of the organisms.

It is important in any family or institution to obtain cultures on all possible contacts—the help, visitors, janitors, cooks, waitresses, etc. as well as the immediate

group seeking protection. For one unrecognized carrier may frustrate the most elaborate attempts to control an epidemic. There have been several such instances in our experience, as where a Christian Scientist employed in some capacity about an institution, or a teacher or a cook refused to have a culture taken. Later, when cases of scarlet fever continued to occur in the non-infected group, and these objectors were given the choice of dismissal or culture they were found infected and the new cases of scarlet fever were traced to direct contact with them. On account of these experiences, we now insist that any one who refuses culture be placed under quarantine in the infected group.

We have employed the methods of control outlined here during the past three years in private families, in the preventive medicine clinic of the scarlet fever committee, in hospitals, schools and institutions. The results have been uniformly successful. Scarlet fever has been eliminated from the nursing and interne staffs of four contagious disease hospitals by regulations which require that prospective nurses and internes report for skin tests and preventive immunization before beginning duty in the hospital.

In families where a case of scarlet fever. This has been accomplished in the numerous instances where the families were referred to the preventive medicine clinic of the scarlet fever committee by Health Departments or family physicians.

In 15 institutions comprising about 8,000 persons where epidemics of scarlet fever were present, the methods of control described have been successfully employed.

A word in regard to commercial preparations of scarlet fever toxin seems appropriate here. There are some ricinoleated preparations of scarlet fever toxin described by Larson on the market which it is claimed will immunize against scarlet fever in one or in two doses. It is also claimed that these preparations are "detoxified" and will not cause reactions. Our experience with the ricinoleated preparations indicates that neither the claim as to detoxification or immunization is justified. It is not possible to produce a satisfactory immunity against scarlet fever in the majority of susceptible persons with one or with two doses of any preparation of scarlet fever toxin now available. Institutions have recently come under our observation where attempts had been made to control scarlet fever by the use of a commercial preparation of ricinoleated

toxin. Skin tests made on these groups indicated that they had not been successfully protected against scarlet fever. This conclusion was substantiated by the occurrence of scarlet fever in individuals who had received the ricinoleated preparation. For the present, at least, it is best to employ the five graduated doses of toxin in active immunization.

REPORT OF A CASE OF LUPUS ERYTHEMATOSIS IN A NEGRESS

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Mrs. C. T., widow, colored, 54 years old, occupation—housework.

Patient is a stout middle-aged colored woman. Weight 155 pounds, height 5 ft. 1½ inches. Temperature 99° F. Pulse 96, B. P. Systolic 168, Diastolic 90. Eye reflexes normal. Marked arcus senilis, both eyes. Conjunctivae slightly inflamed. External ocular muscles normal. Tonsils flat, not especially septic. Teeth markedly carious.

She has had a skin eruption for six months with severe itching for which she has been taking nature's pills and applying cuticura salve.

The oral cavity shows a number of vesicular lesions on the mucous membranes of the left cheek and lower lip. On the skin of the bridge and tip of the nose and spreading onto both malar regions involving the flush portion of the face is a slightly elevated, confluent, slightly indurated eruption, with closely adherent, whitish scales over the entire area. The color of the eruption is purplish. On the frontal portion of the forehead on each side, is a similar eruption which extends into the scalp with slight alopecia and scarring. These lesions also appear on the scalp over the mastoid regions. Distributed over the trunk and back is a popular eruption. The papules varying in size from a pea to that of a coin, covered by a fine scale which is easily rubbed off, suggesting that these papules began as superficial vesicles. On the back these lesions tend to follow the cleavages of the skin. There is no enlargement of the superficial lymph nodes.

Laboratory Examinations:—Wassermanns taken on January 1, February 5, and February 12, 1927 were all negative. On February 2, biopsies were done from lesions on the face and part of one of the papules on the chest with the following

pathological report. "There is a diffuse round cell infiltration around the blood vessels of the true skin just beneath the papillary layer. There is oedema of the perivascular structure and in this area



Eruption (spread butterfly like) on face. The forehead lesion can fully be seen near the scalp margin.

—Photo by Ruslander.

are lymphocytes, eosinophiles and young connective tissue cells. No plasma cells are seen."

X-Ray Report:—"Examination made of patient's chest shows slight dorsal scoliosis which has its convexity toward the right side. The heart itself is of normal size. There is some prominence of the transverse arch of the aorta. There is no parenchymal involvement of either lung."

Further physical examination shows the lungs to be normal. The heart beat is regular, no definite enlargement, no murmurs, A2, slightly accentuated. Abdomen heavy, no tenderness or masses. The joints show no oedema, deposit or swelling. Reflexes, pupils and patellars prompt, Romberg negative.

The medical opinion was that she had a mild arteriosclerosis and slight hypertension.

Her past history was essentially negative. She was married at the age of 24, living with husband several years. She had one child and one miscarriage caused

by fall. She stated that no skin disease similar to her present illness was suffered by any other member of her family.

Differential Diagnosis:—This eruption suggested Lupus Erythematosus Disseminatus, Lupus Erythematosus, Erythema Multiformi, Dermatitis Herpetiformis and Tertiary Syphilis. Because of the fact of repeated negative blood reactions and that no other history of syphilis was elicited, this was ruled out. The length of time of the lesions and the lack of other symptoms ruled out Erythema Multiformi, leaving the possibility of Lupus Erythematosus Disseminatus, Lupus Erythematosus and Dermatitis Herpetiformis. While I was not reconciled to making two diagnoses in this case, however, due to the fact that the



Showing eruption on back and trunk as described in article on Lupus Erythematosus.

—Photo by Ruslander.

lesions on her body have cleared up while the lesions on the face and scalp have been resistant to treatment, I think that I can safely make a diagnosis of Lupus Erythematosus and Dermatitis Herpetiformis.

Treatment:—The carious teeth were extracted. She was given a good intestinal cleaning out, stimulant ointments were applied to the lesions on the face and a lotion was prescribed for the body lesions. Internally, she has received Iodiform, grs. 1 in capsules three times a day. She was

given intravenously a colloidal sulphur preparation.

Prognosis:—The skin lesions on the body have cleared up, however, the eruption on the face has not responded satisfactorily, but with all things being equal, I feel that her ultimate recovery is possible.

APPENDICITIS—A STUDY OF MICHIGAN'S STATISTICS

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The term appendicitis is correctly applied to any inflammation of the vermiform appendix. Clinically, however, it has grown into a somewhat wider and looser use in describing the many inflammatory affections of the right iliac fossa.

In this article, which is based on Michigan mortality experience, we have been confined to the statement on the death certificate which may, not infrequently, be in error. It is quite certain that many deaths from appendicitis are not reported as such. The death certificate states some terminal condition such as "peritonitis" and which inquiry has not been able to improve.

Discussion of the incidence of appendicitis offers something on its etiology, although somewhat indefinite, nevertheless suggestive. It must be remembered that these statistics on 31,032 cases are of fatal appendicitis; that fatal appendicitis represents a relatively small percentage of clinical occurrence of the disease; that a large proportion of the deaths follow late operations usually done in hospitals making an impossibility for geographic distribution, that is, an impossibility to divide rural from urban incidence; that nationalities or occupations cannot be separated; and that complications of or sequelae to recurrent or chronic appendicitis are not considered in this article.

Disease of the vermiform appendix seems to be rather modern and one of later civilization. Recognition of it became noted late in the nineteenth century. It is more prevalent in the cities than in the country and modern diet may be blamed. Medical missionaries report the absence of it among the uncivilized races, and apes are said to escape the disease until after some time in captivity. Recognition has long been existent that roughage in diet discourages trouble in the presence of chronic

appendicitis. Study of natural food of men and apes where appendicitis does not occur shows the consumption of much cellulose or roughage.

The component anatomical structures of the appendix are subject to disease as elsewhere and the disease is usually inflammation. Acute infection may be and probably most often is directly conveyed from the lumen of the appendix, invading the mucosa. Hematogenous invasion following or shortly after another disease, as tonsillitis, is a frequent clinical observation. The appendix may become the part of adjacent infectious disease as Salpingitis.

Scars, kinks, rotations and adherence of previously healed appendicitis and embryologic defects of the ileo-cecal region predispose to serious appendicitis.

Peritonitis results from perforation of ulceration or from rupture of a gangrenous process, or it may come about by diffuse inflammation involving the peritoneal coat, setting up a spreading peritonitis.

Abscess within the lumen, or multiple abscesses within the wall, thrombotic vessels, single or multiple ulceration, are pathologic frequencies in the seriously acute inflammation of this organ. Emboli, pyogenic metastasis and inflammatory extension may be terminal occurrences.

Streptococci and B. Coli are probably almost invariably the bacteria found in fatal appendicitis. We have never observed the latter organism in complicating peritonitis except when the lumen has been opened.

To provide opportunity for study of the possible relationship between prevalent infection and appendicitis, Fig. 1, is exhibited.

This chart illustrates the seasonal dis-

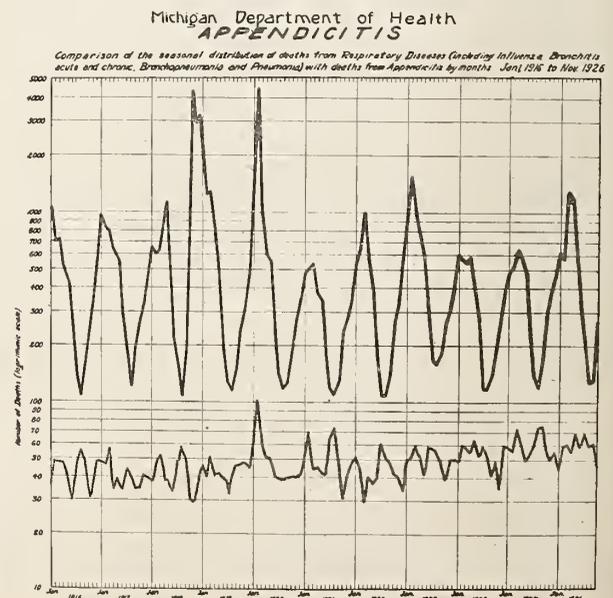


Figure 1

tribution of deaths by months for the respiratory diseases in which are included influenza, acute and chronic bronchitis, broncho pneumonia, lobar pneumonia and also pneumonia of unspecified types. These taken together are compared with deaths from appendicitis for the same period. Ten years of deaths from respiratory infections covers a period sufficiently long to illustrate any elements of periodicity which may have occurred and this period also includes the influenza pandemic of 1918 and subsequent years. The mid-winter peaks in both curves are sufficiently coincidental to command acknowledgment of significance. There is failure, however, in showing respiratory diseases to correspond with the secondary peak in July and August in the appendicitis curve. May not the mid-summer infections of the respiratory tract be more easily met and resisted in the warm months so that respiratory tract deaths are not increased and the fermentative intestinal difficulties of warm weather decrease the defense against appendicitis? At any rate, we know clinically that infections are increased at about the same period that the summer increased death rate of appendicitis occurs.

We would like to offer an explanation of the increased incidence of fatal appendicitis in the 15-19 years period, but attempt to do so appears to call upon recourse to speculation.

Appendicitis is a frequent disease of childhood and, while not generally credited, we believe that it also frequently occurs in infancy. A fatal appendicitis is most often not the first attack. The gangrenous appendix operated in cases 6, 8 or 10 years of age, as in later ages, usually shows evidence of previous inflammation, when history from parents may fail to reveal verification. Forgotten attacks of colic, indigestion, or fermentative disorders may actually have presented appendiceal involvement. Resolution of appendiceal inflammation is incomplete and the defect destines the patient to future attacks and to attacks of greater severity. These reasons, together with the indiscretions of adolescence and depleted physiques from rapid growth, we believe contribute to increase the percentage of fatal appendicitis in 15-19 age period.

More intelligent infant hygiene, earlier and more universal attention to teeth and tonsil infections, especially effected by physical examinations in schools, better medical and surgical judgment, and a more

complete common knowledge explain the reduction of appendicitis deaths up to 30 years of age. But it will be noted that in the last 25 years there has been an increased percentage of deaths from age 30 on. The same facts and reasons which have reduced the death rate up to age 30 have also carried through more defective appendices to suffer attacks of inflammation in the age periods above 30. In other words, the higher mortality during adolescence of 25 years ago relatively reduced the number of pathologic appendices in adults.

We think that an undisputable story is told in these charts and statistics of the Michigan experience of the lost cases of appendicitis, treatment for which is as thoroughly and widely known and practiced as for any disease.

A very interesting comparison is made in the chart, Fig. 2, showing the com-

Michigan Department of Health
APPENDICITIS

Comparison of the age distribution of deaths from Appendicitis for 1901 (Year average) and the average for 1921-1925 by percentage

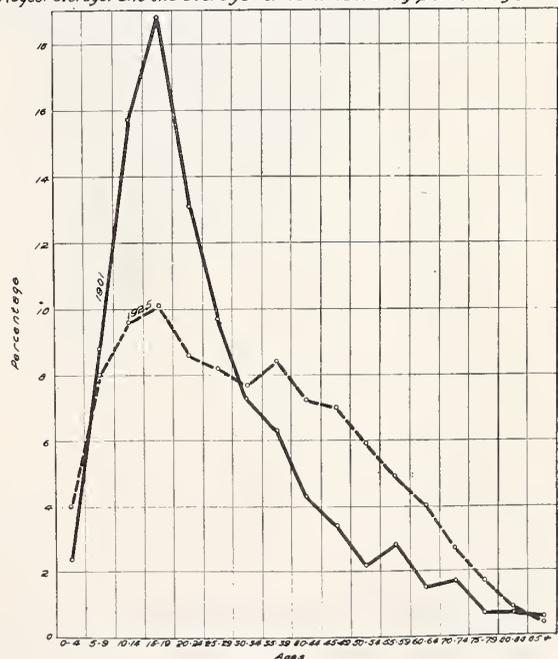


Figure 2

parison of the "age distribution" between the periods of 1901 and 1923, to avoid the accidental variations found in a single year, the deaths for 1900, 1901 and 1902 were averaged and the rates based on the population for 1901; three years being used in this group because the figures back of 1900 were not available. This average is compared with the average shown for the five years 1921 to 1925 and the rates based on the 1923 population. It will be observed that there is a very great differ-

ence in the two outlines presented. This is commented upon above and is a feature which invites further study where data may be available.

In Osler's Modern Medicine we find the statement, "The disease is distinctly one of early life. The majority of cases occur from the 11th to the 30th years of life inclusive." The curve for 1901 quite closely follows this description but the 1925 curve is quite different. The mode, however, is found in both curves in the group, 15 to 19 years of age, but the 1921 curve drops sharply from this point on, while the 1925 curve broadens very considerably and substantiates the observation which has been made by many surgeons in the last few years that there seems to be an increase in the number of cases of appendicitis in the older age groups. Whatever may be the reason for this it certainly presents a striking development and one which can not be explained on the simple theory of better diagnosis. The following table is presented:

Table Showing the Comparison of the Percentage In Each Age Group Between the Three Years 1900 to 1902 Inclusive, and the Five Years 1921 to 1925 in Michigan.

Ages	1901	1925
—5	2.4	4.0
5	8.8	8.0
10	15.7	9.6
15	18.8	10.1
20	13.1	8.6
25	9.7	8.2
30	7.3	7.7
35	6.3	8.4
40	4.3	7.2
45	3.4	7.0
50	2.2	5.9
55	2.8	4.9
60	1.5	4.0
65	1.7	2.7
70	.7	1.7
75	.7	.9
80	.6	.4
85+		

To consider the next chart, Fig. 3, which shows the age and sex distribution

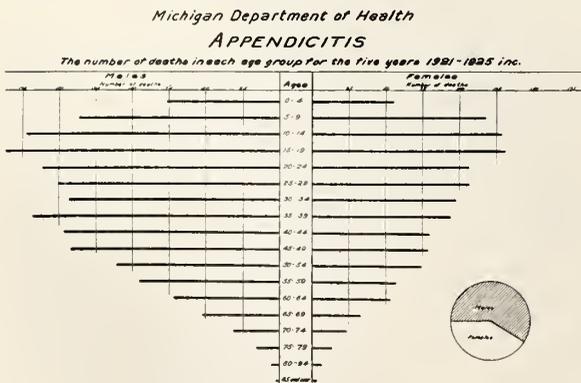


Figure 3

covering the five year period 1921 to 1925, we note in the first place that 59 per cent of the deaths were males and 41 per cent were females. This again does not agree with Osler, who states that "The disease occurs in males two or three times more frequently than in females."

There is not a sharp divergence between the age distribution of the sexes, the mode being found in the 15 to 19 age group in both cases. The significant thing is that so many deaths occurred in the older age groups. This is further illustrated in the chart, Fig. 4, and the following table gives the distribution of the deaths by sex and age for the five years.

Michigan Department of Health APPENDICITIS The number of deaths in Michigan at each age for both sexes and for each sex for the five years 1921-1925

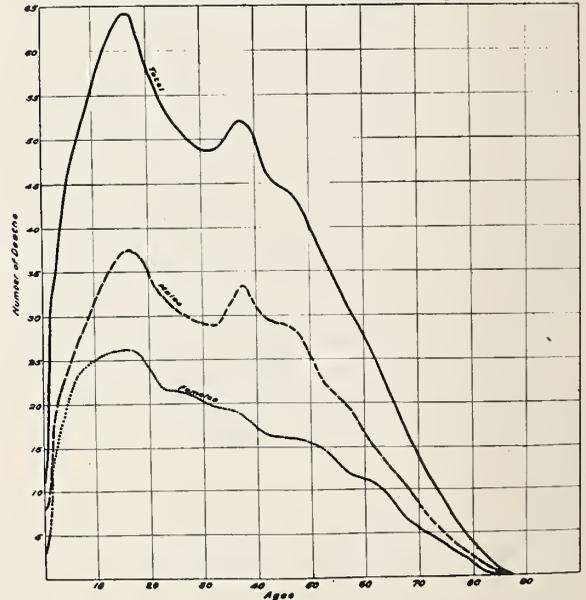


Figure 4

Total Deaths from Appendicitis in Michigan for the Five Years 1921 to 1925, by the Age and Sex.

Age	Total	Males	Females
—1	11	8	3
1	14	9	5
2	32	19	13
3	35	19	16
4	40	22	18
—5	132	77	55
5-9	255	137	118
10-14	301	172	129
15-19	318	187	131
20-24	268	161	107
25-29	257	150	107
30-34	241	143	98
35-39	263	168	95
40-44	227	147	80
45-49	221	142	79
50-54	185	111	74
55-59	153	96	57
60-64	125	72	53
65-69	85	52	33
70-74	54	31	23
75-79	29	16	13
80-84	13	6	7
85+	5	2	3

A more detailed illustration of the seasonal distribution of deaths for the five-year period is found in the next chart, Fig. 5.

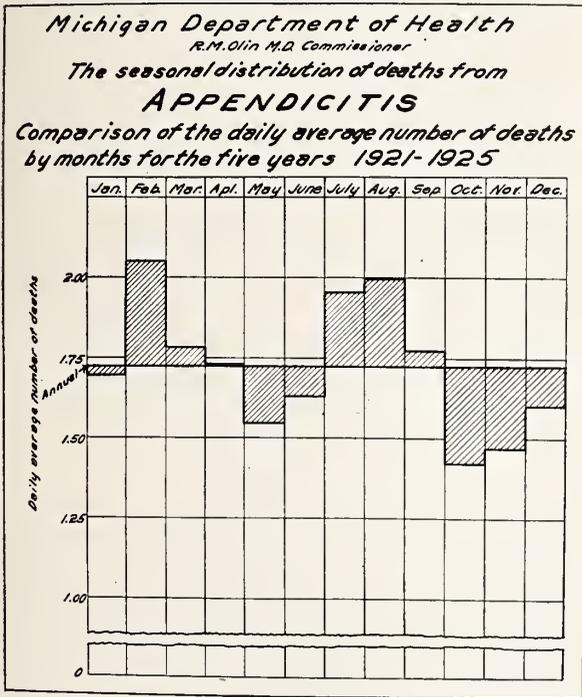


Figure 5

Of the 31,032 deaths considered in this study the somewhat marked seasonal distribution is found. It must be remembered that this covered the five-year period and consequently the variation can hardly be considered as accidental. In consideration of this drawing it will be observed that it shows the daily average number of deaths for the month. This adjusts the difference in the length of the months.

The curve appears bimodal; two distinct peaks showing, one in February and the other in July and August. The lowest months being in October and November. This has already been discussed.

The following table gives the distribution in detail.

Appendicitis.

The Number of Deaths Each Month in Michigan for the Five Years 1921-1925 Inclusive.

Month	1921	1922	1923	1924	1925	Total 5 Years	Annual Average	Daily Average
Jan.	53	53	50	47	59	262	52.4	1.69
Feb.	70	46	53	60	56	285	57.0	2.04
Mar.	45	30	68	59	74	276	55.2	1.78
Apr.	48	42	54	55	61	260	52.0	1.73
May	42	38	43	64	51	238	47.6	1.54
June	38	42	58	53	54	245	49.0	1.63
July	65	62	57	59	59	302	60.4	1.95
Aug.	74	52	56	53	74	309	61.8	1.99
Sept.	48	49	50	42	77	266	53.2	1.77
Oct.	32	43	40	49	56	220	44.0	1.42
Nov.	42	42	50	35	52	221	44.2	1.47
Dec.	46	35	50	61	56	248	49.6	1.60

Let us next consider the geographical distribution of these deaths. The average specific death rate for the five years was 16.2 per 100,000 population. For this we have a wide divergence. Eight counties had no deaths during the period. These are mostly small counties and this is not particularly significant. On the other hand it is difficult to see why any county should have rates two or three times greater than the rate for the state. We can understand, for instance, that Washtenaw county with the great University hospital located therein would have a high rate because of the number of cases brought from outlying districts too far advanced to make

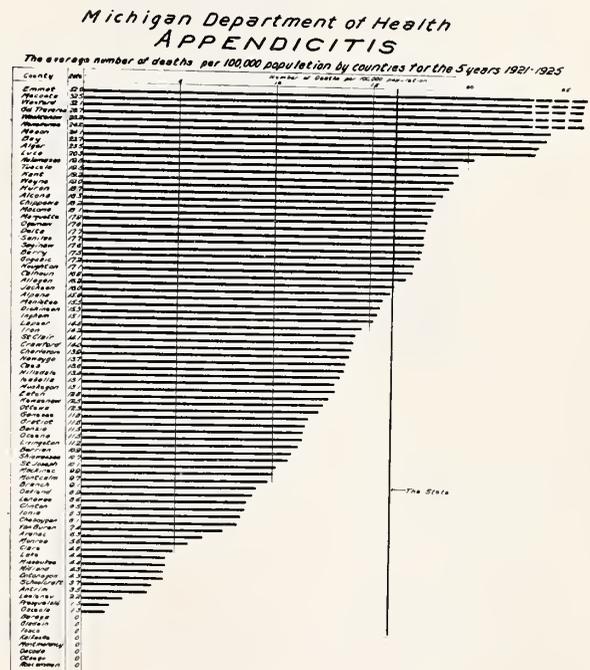


Figure 6

operation successful, and this of course, true in a smaller degree in the other large hospital centers, but this does not account for the fact that some communities furnishing hospital service for a large area should have such a wide divergence of rates.

Appendicitis itself, is not necessarily a fatal disease and cases may be roughly divided into two classes; those patients having a knowledge of a chronic appendicitis and the constant danger of a "flare-up" and with an opportunity to eliminate the danger by surgical interference and the other type of cases where the disease comes on acutely without previous warning and goes promptly to a "ruptured" state, producing a general peritonitis and death.

This geographical distribution is illus-

trated in two ways, one by a bar diagram, Fig. 6, in which the counties are shown in array, in accordance with their rank, and a convention map, Fig. 7, in which is

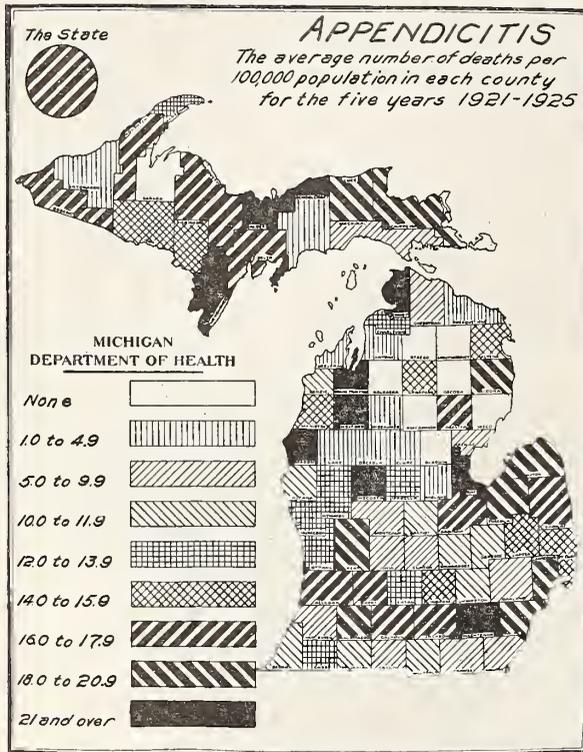


Figure 7

shown the relative county rates for each comparison.

It is hoped that this article will add something to the existing knowledge of this important disease.

THE USE OF PSYCHOMETRIC EVALUATIONS*

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The development of reliable and accurately standardized psychological tests is an accomplishment of comparatively recent years. Partly for this reason we find that people have little information about it, and worse than that they have a vast amount of mis-information. This is perhaps true of any of the sciences during the early stages of their development, but it has been particularly true of the advances made in the practical application of psychometric evaluations.

We use the term psychometric tests to designate the various standardized mental

tests and other measures of specific reactions which have been shown by correlation to have a definite relationship to mental processes. A number of these have been worked out by recognized psychologists and reliable norms have been established by using the tests on thousands of cases of all ages and both sexes. In general these tests aim to measure certain mental reactions which develop independently of special training. That is to say, we do not mean to include the so called "intelligence tests" that are found in the daily papers, because they are mere questions concerning particular bits of information and are not tests of the basic mental processes. Furthermore, they are not standardized, and hence the ratings on them cannot have the same worth that evaluations determined by careful use of recognized mental rating scales.

Of the latter, there are two distinct types of tests. First, the group mental tests such as the Otis or the Terman Group Mental Tests¹ which can be administered to any number of persons at the same time. Second, the individual mental tests such as the Yerkes-Bridges Point Scale², revisions of the Binet Scale by Kuhlman³ and by Herring⁴, and especially the Stanford Revision and Extension of the Binet-Simon Scale⁵. In addition to these we might mention some of the individual tests of special abilities such as the Stenquist Mechanical Aptitude Tests⁶, the Porteus Maze Tests⁷, the Healy⁸ and Goddard⁹ Form Boards, and the Pintner-Patterson Tests¹⁰ especially used to make ratings where there is a language difficulty to meet. Both types, the group and the individual tests, have been used to a great extent in certain public school systems, in certain special schools, and to some extent in other institutions. Obviously, the individual tests are of far more value than the group tests when we wish to learn as much as we can about the patient's reactions, in fact only an individual test is practicable in a situation such as we meet in a hospital.

One of the most useful and most reliable individual mental tests is the Stanford Revision and Extension of the Binet-Simon Scale mentioned above¹¹. This has a series of tests which have been standardized on the basis of age norms. The tests are arranged in age groups in such a way as to bring it about that the average child of four years, for example, will earn by that scale a mental age of four years; the average child of ten years a mental age of ten years, etc. To take a single illustra-

* Read before Interdepartmental Meeting of Henry Ford Hospital, March, 1927.

tion of the tests, a child whose mental age is about four can repeat a series of four numbers correctly at least one time out of three trials; the child with a mental age of about ten can repeat a series of six numbers in correct order; and the average adult can repeat a series of six numbers in reverse order. This scale ranges from the three-year level up to sixteen years or what is called the average adult level, with an additional series of tests for superior adults. For the mental rating of infants below three years, Gesell¹² and Kuhlman¹³ have some tests of fair reliability, and at the present time we are in this hospital working toward further standardization of these infant tests because of the demand for estimates of mental progress from birth on up.

By the term *mental age*—abbreviated as M A, we mean, briefly, that degree of mental ability which is possessed by the average child of corresponding chronological age—C A. In the average individual the mental development keeps approximate pace with the advance in chronological age, but there are all degrees of variation in this. The term intelligence quotient, or I Q, has come into common usage as a means of expressing this ratio which the mental age bears to the chronological age. The intelligence quotient is equal to the mental age divided by the chronological age, that is $I Q = M A \div C A$. For example, if a child with a chronological age of exactly ten years passes all of the tests in the ten-year group and is unable to get any of those in the next year group, we say he has a mental age of ten years. To determine the I Q we divide the mental age in months by the chronological age in months and drop the decimal point to avoid fractions. Thus in this case the I Q would be 100 which is the mid-point of the average group. If this same child passed sufficient tests to gain a mental age of 12 years the I Q would be equal to 120. If on the other hand this child of ten passed only sufficient tests to gain a mental age of eight years the I Q would be 80. For an adult, 16 years or older, we use 16 years as the chronological age and hold it constant because it has been found that on the average the types of processes tested are mature at approximately 16 years of age.

In general the I Q of a given individual who is healthy and normally adjusted remains fairly constant throughout his life. However, there are many factors which may cause the mental picture to change,

sometimes only temporarily, sometimes gradually, and sometimes suddenly and permanently. We need only mention to medical men that certain diseases have an effect upon the mental status, various psychiatric determinants have an influence, and these or other factors may result in the affective or emotional responses bringing about changes in the mental picture. In the division of neuropsychiatry of a general hospital various combinations of all of these factors are met, and since the mind and the body are not two separate entities, but really parts of the same unit, measuring reactions of one is not a separate thing from the other, but one is incomplete without the other.

For general purposes of rough classification on the basis of I Q's we adhere to the scheme outlined by Dr. Terman in his book on the Measurement of Intelligence¹⁴. This classification is as follows:

I Q	Classification
Above 140	"Near" genius or genius.
120 to 140	Very superior intelligence.
110 to 120	Superior intelligence.
90 to 110	Normal, or average intelligence.
80 to 90	Dullness, rarely classifiable as feeble-mindedness.
70 to 80	Border-line deficiency, sometimes classifiable as dullness, often as feeble-mindedness.
Below 70	Definite feeble-mindedness. Of these the ones between 50 and 70 are classed as Morons, high, middle, and low grade; from 20 to 50 are Imbeciles; and from 0 to 20, Idiots.

From this brief resume of what we attempt to measure by psychometric tests and a reminder of the prevalence of these factors in the cases referred to the neuropsychiatric division of a general hospital, the uses of psychometric evaluations become obvious.

Among the specific uses which have been made of such tests, particularly in the neuropsychiatric and occasionally in other divisions of the hospital, the following are outstanding:**

1. To secure definite evaluation of the mental status of many types of problem children such as the nervous child, the behavior problem, and the maladjusted child, any one of which may have an I Q below average or as high as the "near" genius or genius type.

2. To classify congenital defectives so that we may predict the probable mental

** Most of the studies mentioned have been undertaken under the supervision of Dr. Thomas J. Heldt, physician in charge, and his associate, Dr. Groves B. Smith of the Division of Neuropsychiatry of the Henry Ford Hospital, and I am indebted to them for many valuable suggestions.

development. This frequently has a very definite bearing upon the case. Such cases may be partially questions of commitment to Lapeer or to the Wayne County Training school at Northville.

3. To check on the rate of progress in mental development from year to year so as to show the effect of different influences.

4. To evaluate the influence of accidents on mental status of certain cases such as head injuries.

5. To check pre and post-operative cases of brain abscess, brain tumor, etc.

6. To measure the amount and the type of hysterical blocking in mental responses where there is a questioned hysterical reaction.

7. To evaluate the mental picture in various cases of the neuroses and of the psychoneuroses.

8. To measure the rate and the progress of deterioration in such cases as paretics, epileptics, dementia praecox types, etc.

9. To check up on cases where there may be a type of superiority or an inferiority complex and thus get information which may help to avoid an acquired psychopathy.

10. To definitely evaluate the mental status of cases where there are various familial complications such as those regarding the making of a will or other medical-legal aspects.

We see in each of these uses how psychometric evaluations have a specific relation to the main medical problem of diagnosis, prognosis, and especially the treatment and the disposition of certain types of cases.

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"CAN MICHIGAN TAKE CARE OF HER OWN TUBERCULOUS PATIENTS?"

WILLIAM R. VIS, M. D., F. A. C. P.

GRAND RAPIDS, MICH.

Our experience in treating tuberculosis dates back to Dr. Edward L. Trudeau. Himself a victim of advanced tuberculosis and pronounced incurable by Janeway, the Elder, Trudeau fought his way against the medical superstition of his age, went out into the open, and accidentally discovered that open-air treatment was efficacious in quieting his disease. Being an altruist of high type Trudeau began to help others who were affected. In these endeavors for others he sacrificed himself so that he never regained his health because of overwork. However, he lived for 40 years after he had been doomed to die. For 40 years he worked to develop a method of treating tuberculous patients in the open, gradually developing the system now in general use. At his death he had established our first American sanatorium, the Adirondack Cottage Sanitarium, which has served as a model for all our sanatoria of today.

From this beginning by Dr. Trudeau has grown the modern organization for the control of the white plague. Only 50 years have passed since Trudeau's flight from the crowded city to the woods, but in that time the death rate of tuberculosis has been decreased to 20 per cent of its former total. Five decades have passed since his vision that tuberculosis could be cured and our generation has been able to save three-fourths of those who would otherwise have died of tuberculosis. Instead of 395 deaths per year out of every 100,000 in population, tuberculosis kills less than 80 in our day.

These figures are true for Michigan as well as for the whole nation. Michigan has had a relatively low death rate from tuberculosis. The rate in Michigan is lower than that of any other state east of the Mississippi river except Wisconsin. Our state has acquired an undeserved bad reputation as regards tuberculosis and a mis-

taken impression has become prevalent that patients should leave Michigan for some other climate.

Let us consider a concrete case. Supposing we make a diagnosis of pulmonary tuberculosis, what is our first impulse? I believe it has not been unusual for our physicians to direct patients to "go west where it is high and dry." Doctors have said this so often that the laity have learned the lesson and often insist on going west even though the physician may advise against it.

It would be interesting to know where the idea of going west originated and also how the conclusion was reached that Michigan's climate is unfavorable to tuberculous patients. I was interested to note in our daily press a few months ago an account of the settling of Michigan. This account stated that some of the early immigrants avoided Michigan because it was damp and unhealthy and that they settled in Illinois and Indiana instead. Some of our ancestors tell of the many swamps infected with malaria which made living precarious for the first settlers in our state. It seems quite possible that the early impression of the pioneer has come down to us and is still with us today.

In this way Michigan probably became known as having a damp climate. If Michigan was damp it might well be thought unfavorable to health, not only as regards malaria, but also as regards all colds and respiratory infections. From this it is only a step to conclude that tuberculosis might be increased by the dampness.

However, whatever its origin, the theory of Michigan's predisposition to tuberculosis came to be so generally accepted that even the doctors adhered to it for a long time. Today we question the correctness of this theory and there is a strong current of thought in the opposite direction. Tuberculosis authorities are agreed that climate plays but a small part in the cure of tuberculosis. Generally speaking the factor of climate may be considered at about 5 per cent of the treatment.

As regards Michigan in particular it is granted that we have more nose and throat affections than our sister states of higher and drier altitude. It is also probable that such nose and throat conditions are more easily cured in a dry atmosphere. Some tuberculous patients also have nose and throat complications of non-tuberculous origin. Such patients might be benefited by moving to a dry climate. But for uncomplicated tuberculosis the burden of

proof lies with the other side. Trudeau did not go to a dry climate nor to a high altitude. Yet he was eminently successful. The Metropolitan Insurance company states that at its Sanatorium at Mt. McGregor, N. Y., 1,354 patients have been discharged in the past nine years and over 70 per cent are working today. The United States government has not built its sanatoria for the World War veterans in the west exclusively. They are located in New England, North Carolina, Tennessee, Wisconsin, etc., as well as in the western states. If statistics are reliable, there is no clear-cut advantage in the results obtained by western sanatoria over eastern or central institutions. The tuberculosis statistics of our western states show a relatively lower incidence. There are at least three factors besides climate which might help to explain this. First, the population of our western states is a pioneer race and more virile. Second, our western neighbors live largely in the open and a relatively smaller percentage live in large cities. Third, the west has largely escaped the problem of Negro, Italian and Slavic inroads.

It is not easy to correct a mistake and today a steady stream of patients is flowing westward. To me these eager searchers for health may be compared to the legendary seekers for the pot of gold at the foot of the rainbow. The foot of the rainbow seemed so easy to find but proved to be evanescent. So, too, the lure of climate raises false hopes. To many sufferers the west is the counterpart of the rainbow, the place where the treasure is to be found—the treasure, not of gold, but of restored health.

They have been told that out west many have been cured of tuberculosis and they are naturally hopeful that the same good fortune may await themselves. Had they been aware of all the facts they might have been less eager to go. They were probably not aware of the fact that they would be unwelcome guests in that land of the west. They could not anticipate the privations which awaited them in a strange community. They could not know of the bitter disappointments suffered by those who failed to find relief. They were not told of the many who were laid away in neglected graves or returned home at last disillusioned. Had they known all the facts many would scarcely have ventured to leave home at all but would have chosen to make the fight in their native community.

It is our privilege as medical advisors to clarify the issue for our patients. It is far better to make the fight at home where finances are not such a paramount issue, where the municipality can assume the burden if necessary, and where friends are near to help.

Another consideration is efficient medical attention. The biggest single factor in the cure of tuberculosis is a good doctor. In the home community the patient has a fair knowledge of the doctors and can secure good attention. If means are limited free medical service can also be obtained in many of our Michigan communities.

So much for the attitude of the patient and the doctor. The patient should be given the facts lest he be misled. The doctor should know how to advise the patients lest "the blind lead the blind."

Besides these individual responsibilities, there remains the part of the community. It is written that "the poor ye have always with you." So it might be said of tuberculosis—at least we will have it with us for some time to come. We can scarcely blame the Denver authorities for a feeling of resentment when we ship our tuberculous out to them. The authorities know that the western cure of tuberculosis is not the glorified process that some of us have imagined it to be. They realize that a tuberculous patient is usually a liability on the public and so they do not want any of our sick. They are right in asking us to care for our own.

The issue is, therefore, squarely before us. Can Michigan take care of her own tuberculous patients? We believe that we not only have to do so as a community responsibility but also that we have the natural facilities for doing so successfully.

What have we done in Michigan to cope with this problem? In several of our counties we may be somewhat proud of our accomplishment. We have very splendid sanatorium facilities, efficient diagnostic clinics, and helpful social service. No one is refused for lack of money, as the indigent are cared for through public funds raised by taxation.

Dr. Pattison, of the National Tuberculosis Association, made a survey of sanatorium facilities in our state. He found that we lack 800 beds and that a good proportion of our present beds are in poor sanatoria which should be replaced. Our State Department of Health has given considerable attention to this problem and has instituted a program commensurate with our needs. Generally speaking this new

program consists of the replacement of our present state sanatorium by two modern structures, and the development of numerous county sanatoria.

Such a plan for Michigan offers many attractive features. It would be comprehensive without being cumbersome. It would bring a sanatorium within the reach of every citizen of our state and would be of untold educational value. It would go far toward answering in the affirmative the far-reaching question: Can Michigan care for her own tuberculous patients?

CERTIFICATES OF INSANITY*

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The subject assigned to me for a ten minutes' talk is the preparation of certificates of insanity. I am inclined to believe, however, that some of you older practitioners are better fitted to discuss this subject than I, as you have had the actual experience in making certificates of insanity, while I have had only the opportunity to read a great many hundred which have been sent to the hospital.

It is not an easy matter to determine on a single visit whether a patient is sane or insane. It has been my experience, however, extending over a great many years of hospital work, that not many mistakes are made by examining physicians on the positive side. Sometimes, however, cases are certified to as sane who afterwards make violent assaults and are definitely shown to have been insane. Such mistakes are more often made in the paranoid types and occasionally in the dementing types without delusions or hallucinations. Those of you who have had experience with the former types must realize that they show wonderful ability in covering up their delusions or making them appear sensible and based on real solid ground. Often the sanity or insanity of such cases can only be determined after a period of observation. In the second type, namely the dementing types, I think mistakes are made because some physicians seem to have the idea that an insane person must have either delusions or hallucinations. It is a misfortune that doubtful cases cannot be sent to the State Hospital for observation. Patients not voluntarily committed can only be sent to our hospitals on the positive

* Meeting with Tri-County Medical Society, March 29, 1927.

statements that they are insane. They may, however, be sent to the Psychopathic hospital in order to determine as to whether they are sane or insane. Voluntary patients and chronic alcoholics and drug cases do not require physician's certificates for their commitment. The following is a brief abstract of the law covering certificates of insanity:

"Certificates must be made by two reputable physicians under oath, appointed by the Probate court of the county where such person resides or is an inhabitant to conduct the examination. The physicians must be permanent residents of the state, duly registered according to law and the qualifications prescribed by the laws of this state for the practice of medicine and surgery therein and shall not be related by blood or marriage to the person to be examined, nor to the person applying for such certificate. Neither of such physicians shall be trustee, superintendent, proprietor, officer, stock-holder or have any pecuniary interest directly or indirectly or be an attending physician in the institution to which it is proposed to commit such person. Such physicians are empowered to go where said person may be or make such personal examination of him as to enable them to form an opinion as to his mental condition and no certificate shall be made except after such personal examination. Certificates of such physicians to authorize commitment must show that it is their opinion that the person is actually insane, feeble-minded, epileptic or mentally diseased as the case may be, and shall contain the facts and circumstances upon which the opinion of the physicians is based and show that the condition of the person examined is such as to require care and treatment in an institution for the care, custody and treatment of such mentally diseased persons.

Physicians should also be aware of the fact that the justice of the peace or judge of any court of record, may on the certificates of two physicians cause the superintendent of poor or any peace officer to take into custody and remove to any hospital or other place of detention any person believed to be insane against whom no proceedings have been instigated, but such detention shall not exceed five days unless the time is enlarged by the Probate court. Another important law governing the admission of patients and of special interest to physicians who have been legally appointed official physician of any municipal corporation of the state reads as follows:

"The legally appointed official physician of any municipal corporation of this state who shall find after careful examination that any person in such municipal corporation is insane and that the immediate detention of such person for examination, is necessary for the public safety, shall make a certificate to that effect and deliver the same to any peace officer of such municipal corporation, whose duty shall be forthwith to take such person into custody and transfer him to such hospital or such other place of detention in case a hospital

is not available. Such a person may be detained until the Probate court takes action provided that the period of such temporary detention shall not exceed five days unless enlarged by the Probate court and provided further that no person arrested under this Act shall be confined in a jail or other lock-up unless such a person manifests homicidal or other violent tendencies."

It is important in making certificates of insanity to state definitely that the patient is insane or sane and then give reasons for arriving at this opinion. It is not necessary to make a diagnosis of the type of insanity; unless one has had considerable experience with the insane, the diagnosis is apt to be wrong. While a physician should not be governed entirely by members of the family, or friends, in arriving at his opinion, it will conserve a great deal of time if he would get a description (provided he is a stranger), of the personality of the patient before his mental ailment, in order to better determine how far he has departed from his normal standard, also a brief account of the peculiarities of his ideas. Having obtained this information the physician must determine by examination whether the person is sane or insane. How should he go about this: First, observe the patient's actions and record in simple terms anything which he believes to be evidence of a mental disorder, such as undue restlessness, over-activity, abnormal slowness of movement, stereotyped movements, peculiar mannerisms and violent tendencies. Second, (examine for orientation) for time, place and person; that is, does he have a normal comprehension of the people about him, does he realize where he is and has he a normal or abnormal conception of time. These can be determined very quickly by asking a few questions. Third, determine his emotional reactions. You have, either from personal knowledge or from information from his relatives, a knowledge of his former mental characteristics. Now is his emotional state the same or has it changed? Is he mildly or greatly elated, or on the other hand, is he depressed and worried apparently without good reason? Or, possibly, which is very common in some types of insanity, is he indifferent to his own welfare or that of his family? Some insane persons are so indifferent to the realities of life that if they were told that all of their family had met sudden death, would merely exclaim, if at all, "Is that so?" Fourth, determine his intellectual status. Here again your previous information of the patient is of value in determining if there has been (a) a deterioration of mental faculties; (b) do his

thoughts come quickly, one idea crowding rapidly on the other and failing to reach any goal, being distracted by new sights and sounds, as so frequently in the manic; (c) do his thoughts come slowly, requiring repeated questioning in order to get an answer, although the patient may be apparently trying to get his mind to work. This retardation of thought, together with the slowness of movements, is spoken of as psycho-motor retardation and is commonly found in the depressed type of manic depressive insanity; (d) has he delusions or hallucinations? I find that a great many physicians in writing certificates use the term hallucinated when they really should use the term delusional. Briefly stated a delusion is a morbidly falsified belief which cannot be corrected either by argument or experience. Hallucination is a false sense impression without any recognizable external stimuli. There may be as many different types of hallucinations as we have special senses. In some cases it is a very easy matter to determine the presence of delusions and hallucinations, in others, very difficult. Here again much time may be saved by first obtaining a history. It is wise, as a rule, to gain the patient's confidence, if possible, and lead him along gradually and not to ask direct questions. Following are some of the types of delusions which you may endeavor to bring out: (a) Delusions of increased personal ability, either physical or mental. (b) Delusions of wealth and influence. (c) Delusions quite the opposite from the above, expressing inadequacy. (d) Delusions of having committed some sin. (e) Delusions of persecution. Neighbors against him, trying to get rid of him. (f) Delusions of poisoning, or as more frequently expressed, being doped. (g) Delusions of unfaithfulness on the part of a mate; a common delusion in chronic alcoholics and seniles. (h) Delusions of a religious nature.

It is not sufficient for you to determine that a patient believes he has been poisoned by a neighbor. You must determine whether this idea is absurd or whether it has any real basis on fact? Hallucinations are usually demonstrated, if present, during your endeavor to bring out delusions, or you may have observed him apparently answering questions of some unseen person. If not, I think it is a very good plan to question the patient about his ability to sleep, if he is disturbed at night. Quite often, he may complain of disturbance on the street, of people talking about him,

blowing automobile horns to annoy him, or he may tell you that people are upstairs and he can hear their voices through the ceiling or the radiator. A common hallucination of hearing is that God's voice may be heard. You must be careful to determine whether this idea is a religious belief or whether voices are actually heard. Determining hallucinations of other senses should be taken up in turn. Here I wish to say that a person may be insane and not have any delusions or hallucinations. Frequently a demented patient may be quite incompetent, but free entirely from delusions. Also, if you have not already done so, make a brief physical examination, at least. It is wise to observe his general appearance. Has he a temperature, normal pulse rate? Any evidence of lung involvement, etc.? Not uncommonly patients with delirium of the infectious diseases, especially pneumonia, have been committed. Recently we had two typhoid cases committed. Lastly, but not the least important, do not fail to examine the patellar reflexes and pupillary reactions. The result of these examinations may be sufficient to at least arouse your suspicions of a nervous disease. To briefly recapitulate; in examining a patient, first, observe his actions; second, is he oriented; third, determine his emotional reaction, (a) depressed, (b) elated, (c) indifferent; fourth, intellectual characteristics, (a) constitutional defective, (b) deteriorated, (c) delusional, (d) hallucinated; fifth, physical and neurological.

Having made your examination, write the certificate something like the following: "In my opinion, said John Doe is an insane person and in such a condition as to require care and treatment in an institution for the care, custody and treatment of such mentally diseased persons, and the facts and circumstances upon which such an opinion is based are as follows: He is over-active, partially disoriented as to time and place, exceedingly happy and talkative, rapidly passing from one subject to another and distracted by new objects and sounds. Possesses a false idea that he has great mental and physical power, which is untrue, and he also has the idea that a neighbor poisoned him, basing his belief on the ground that his neighbor did not seem so free with him as formerly and that he had at one time expressed a desire to buy his farm and he now thinks he is trying to get rid of him so that he may get possession. He believes the neighbor blows this poison at night under his

bedroom door. Or if other symptoms are present, for instance an organic demented case, one might say the following: He is inactive, careless about his person and unable to name the day of the week, the year or the month. He is emotionally dull and gives physical evidence of weakness of the right side. Has speech defect and unequal knee jerks.

TREATMENT OF THE LATE TOXEMIAS OF PREGNANCY

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For many years medical scientists have endeavored to determine the exact etiology of toxemias of pregnancy. Theories have been advanced and the treatment applied in accord with their principles has been largely empirical and quite unsatisfactory. Further study of blood chemistry and metabolism has added much to improve methods of treatment so that it is now possible to provide care for cases of toxemia that achieve more favorable end results.

Improvement has been made in the reduction of the number of these cases. Davis, at the New York Lying-In Hospital, reports that in 5,400 labors there have been only eight cases of eclampsia with one death, and adds that the toxemias are becoming so scarce in obstetrical clinics that internes hardly have an opportunity to study them. Polak, of Brooklyn, reports only one death from eclampsia in 7,000 labors and states that he has reduced stillbirths from 80 per thousand without prenatal care to 19 per thousand with it. DeLee, of Chicago, reports that there have been no deaths among women receiving prenatal care. Many other obstetrical clinics report that the material death and stillbirth rates have been materially reduced.

However, the number of deaths from toxemia each year is still very high. It is estimated that 5,000 eclampsia deaths occur annually in the United States. In 1926, Michigan had 106 deaths from eclampsia, which was 11 less than the year previous. Last year Grand Rapids had eight eclampsia deaths, five of which occurred in Butterworth hospital, the majority entering the institution in serious condition with histories of inadequate prenatal attendance.

The late toxemias or those occurring in

the last three months of pregnancy, namely, pre-eclamptic toxemia or pre-eclampsia and eclampsia, are the types causing the greatest material mortality, which at present ranges from 2.6 per cent (Stroganoff) to 45.7 per cent (Buttner), with an average of 25.5 per cent. The foetal mortality is from 3.62 per cent to 42 per cent (Peterson).

In general, the treatment of all toxemias is based upon medical, laboratory and obstetrical principles and should be studied by the internist and biochemist as well as the obstetrician. Not knowing the exact cause of toxemias, the treatment has been so diversified that the results have varied widely. Review of the literature and study of cases have caused me to believe that a definite routine treatment should be adopted if better results are to be obtained.

TREATMENT OF PRE-ECLAMPSIA

Early recognition of pre-eclampsia is important. This is first denoted by a rise in blood pressure. The normal pregnant woman averages a systolic blood pressure of 120 and when this is over 130 it should be regarded as suspicious of early toxemia. The weight of a normal pregnant woman increases from 20 to 25 pounds. More than this is suggestive of nephritis or toxemia. Frontal headache of a boring nature, gastric disturbances varying from slight nausea to vomiting and severe epigastric pain may soon appear. Associated with these are a furred tongue, persistent constipation, spots before the eyes (*muscae volitantes*) and edema of the lower extremities, hands and face. Edema of the lower extremities may not be toxic, intrapelvic pressure and varicosities causing the swelling. The amount of edema depends upon the residual kidney damage from chronic or former involvement. Visual disturbances may indicate toxemia before the urinary findings appear. Eye grounds should be examined in all cases of acute toxemia.

The urinary findings are never constant, necessitating daily urine examination. Albuminuria is an important finding and is usually never without some toxic symptoms. There is 24-hour diminution in secretion and the total solids are likewise decreased. Granular and cellular casts may be found without albumin. Urea percentage is low and is a valuable index to the progress of the case. Blood chemistry consisting of tests for N. P. N., blood sugar, blood chloride and carbon-dioxide combining power, is helpful but is usually not

within the reach of the doctor located in outlying communities.

The patient's history should be reviewed, noting the existence of eclampsia in the mother, if the parents had mental or alcoholic tendencies and whether there was an hereditary instability of the nervous system leading to disorders of metabolism. Previous renal disease suggests chronic involvement of the kidneys. Acute infections leaving residual foci in the tonsils, teeth, sinuses, gall-bladder, appendix and other organs may be the cause of lowered resistance, according to investigations made by Rubel.

The treatment of a case in the early stage should consist of complete rest in bed, which improves renal circulation and favors diuresis. For 24 hours water only should be allowed, then a non-protein diet with low fat content. Salts are interdicted, but alkaline carbonates may be increased. Fresh and cooked vegetables, fruits, cereals, bread and sugar with a small amount of cream and butter are allowed in the diet. Spices, tea, coffee and alcohol are forbidden. An absolute milk diet may be given. Restriction of protein and fat in the diet of pregnant German women, made necessary by lack of food stuffs during the war, gave a minimum in the number of eclampsia cases.

There should be increased elimination through the bowels, kidneys, skin and lungs. A saline purge of magnesium sulphate by mouth should be given at the start and the bowels kept open each day by its further use unless dehydration begins to appear, when vegetable cathartics may be alternated. Free administration of water acts as both laxative and diuretic, hot water favoring diuresis. Colonic flushes with sodium bicarbonate solution removes fecal material from the rectum, diminishes toxic absorption and favors peristalsis. If more fluids are desired, it is best to inject 500 c.c. of 10 per cent glucose solution intravenously without previous venesection in those instances where the blood pressure is not above 160 mm. mercury. Where there is a higher elevation, 50 c.c. of 50 per cent solution of glucose may be substituted. Glucose is very beneficial in overcoming toxemias, particularly those due to carbohydrate deficiency of the liver. Titus uses glucose in eclamptics with good results. Pathological examination of livers removed at autopsy from patients dying of eclampsia who had been treated with glucose, shows that there was less damage and depletion of liver cells than in those

who had not received this form of treatment. Venesection in pre-eclampsia gives only temporary improvement. Bathing the skin promotes elimination. Fresh air aids in excretion by the lungs and supplies oxygen which the pregnant woman needs, lack of it causing dyspnoea, edema, headache, convulsions and toxemia. This is in substantiation of the sub-oxidation theory as being a cause of eclampsia. Eclampsia seldom occurs in women having a dead foetus in the uterus.

When there is lack of improvement under this treatment and the blood pressure is steadily rising, insomnia and twitching of muscles present and epigastric pain, the patient should be given magnesium sulphate intravenously. The inhibitory action of magnesium sulphate was first observed by Wood in 1884. Meltzer, in 1905 and again in 1916, made experiments proving that the use of this drug intravenously was a safe, conservative method of treating diseases characterized by convulsions, namely, tetanus and eclampsia. Other investigators, especially McNeile and Vruwink, have employed it so that within the past year several of the large obstetrical clinics have adopted it in the treatment of pre-eclampsia and eclampsia, reporting a reduction in the mortality rate of about nine per cent. When given in eclampsia it produces a distinct drop in blood pressure from 20 to 30 points, controls the convulsions, reduces edema (possibly including cerebral edema) and increases the output of urine. It is given intravenously in doses of 20 c.c. of 10 per cent sterile solution and is obtainable in ampoules of this dosage from certain pharmaceutical chemists. This amount may be given without danger and repeated at intervals of four to six hours until the symptoms have abated. Its administration is indicated where there is an increase in toxemic symptoms shown by blood pressure elevation above 160. It has been said that there is a risk of producing respiratory failure so that some clinics recommend that 5 c.c. of calcium chloride solution be at hand to inject immediately should such symptoms develop. This is considered by some as an unnecessary precaution. Loomis and Sherrick use a more dilute solution, two per cent magnesium sulphate with 0.7 grams of calcium chloride to the liter being given in 250 to 300 c.c. of solution.

The obstetrical problem should not be overlooked in the treatment of toxemias. Toxemias exist in no other condition than pregnancy and therefore they must be due

to pregnancy for the reason that they usually cease when the uterus is emptied. Every case of pre-eclampsia is a worry and even though magnesium sulphate seems to be effective in treatment, all is not completed until after delivery. If the foetus has become viable, it is my opinion that labor should be induced, particularly so in any case where the symptoms are not improving. Partridge states that indications for induction of labor are a blood pressure over 180 or albumin in the amount of 0.2 to 3 per cent in the urine. Induction may be effected by the use of castor oil and quinine, introduction of the Voorhees' bag or Caesarean section. Castor oil and quinine administered to the patient near term usually brings on labor. It is given in the evening in a dose of one ounce followed in one hour with five grains of quinine, which is repeated every hour until a total of 15 grains are taken. Two minims of pituitrin hypodermically may be added with each dose of quinine. The Voorhees' bag requires aseptic precautions and is best introduced with the patient in a hospital. Caesarean section involves a grave surgical risk to the patient already toxic. Her kidneys are damaged and her liver metabolism unstable so that she is a poor subject for anesthesia. The mortality rate following Caesarean section in eclampsia patients is from 25.79 per cent (Peterson) to 36.23 per cent (Charity hospital). The conservative method of Stroganoff and the Rotunda method mortality rates give 2.6 per cent and 10.29 per cent respectively. Caesarean section should be performed only upon those cases of pre-eclampsia having definite indication for such procedure by reason of a contracted pelvis or some physical impossibility of delivery without great risk.

TREATMENT OF ECLAMPSIA

Once the pregnant, parturient or puerperal woman has had the first convulsion, the case becomes one of eclampsia. Damage to the vital organs during convulsions is so great that many pathological changes occur chiefly consisting of multiple hemorrhagic thrombi in the brain, lungs and liver, particularly the latter. There is great need of systematic treatment which should consist of certain medical and obstetrical procedures.

Of the medical there should first be active treatment to control the convulsions. This should consist of intravenous injec-

tions of magnesium sulphate in doses of 20 c.c. of 10 per cent solution, given as soon after the first convulsion as possible and repeated every hour until the convulsions are relieved, or until a total of six or eight injections have been given. Morphinzation by doses of $\frac{1}{4}$ grain hypodermically to the point of slowing the respiration to at least 12 or 14 per minute may be added according to the method of Stroganoff. Chloral hydrate may be given orally to conscious patients in milk or if unconscious rectally in 100 c.c. of oil or starch solution and repeated as indicated. It acts as an effective sedative.

Elimination should be begun at once. In patients not unconscious light nitrous oxide anesthesia may be given and the stomach lavaged with a large amount of five per cent sodium bicarbonate solution. Before removing the tube two ounces of saturated solution of magnesium sulphate may be instilled, which acts as an active cathartic. Repeated instillations consisting of one quart of cream of tartar lemonade containing glucose may be given through a stomach tube under nitrous oxide anesthesia if necessary. Lemonade acts as a diuretic and assists in overcoming toxemia. Colonic flushes of solutions containing sodium bicarbonate, sodium chloride and glucose may be given provided the patient is not having convulsions. The least stimulation may provoke one.

Reduction of toxemia is accomplished by the intravenous administration of 500 c.c. of 10 per cent glucose solution, recalling the fact that the blood pressure should not be elevated too much by injecting excessive amounts of fluid into the vessels. Venesection may be performed, withdrawing 500 c.c. of blood before introducing the glucose solution. Here it is well to remember that the loss of large amounts of blood may not be wise because of the possibility of loss at delivery. The blood of eclamptic patients clots readily as shown by thrombi in autopsies of these cases. Greenhill of the Chicago Lying-In hospital states: "It is a common belief that the blood of eclampsia patients clots easily and not infrequently interferes with the therapeutic withdrawal of blood." He states that in 56 cases 30.4 per cent of them lost at least 500 c.c. at delivery.

The obstetrical considerations of treating eclampsia consist first of the conduct of labor already begun, the same as in any

other case. There is no need for unusual procedure hastening the delivery to such an extent that the patient is submitted to unnecessary trauma or infection. Eclampsia patients are very susceptible to infection. The same principles should be practiced here as in a normal case, especially if the patient is a multipara. If she is a primipara it may be necessary to assist dilatation by using a Voorhees' bag. Eclampsia occurs in 60 per cent of cases in primiparae.

In every case of eclampsia when the convulsions have ceased, it is wise to induce labor. The method selected should depend upon the condition of the patient, cervix, size of pelvis and foetus. In primiparae with viable babies and undilated cervixes, it may be preferable to terminate pregnancy by Caesarean section under local anesthesia, nitrous oxide-oxygen or ethylene gas. In patients having easily dilated cervixes, the use of the Voorhees' bag is better. In general practice these methods cannot always be carried out, first because of lack of facilities and second because of the delay in obtaining the services of a competent surgeon. In the presence of convulsions, the indications are not surgical. Once convulsions have ceased and the blood pressure has fallen, labor can usually be induced by the introduction of the Voorhees' bag under light anesthesia. Exhausted and hypersensitive patients are poor risks. Accouchment force, version and extraction and other difficult operative obstetrical procedures through the vagina are as serious as Caesarean section. Forcible delivery through the partially dilated cervix of an eclamptic patient usually results in lacerations with severe hemorrhage and subsequent infection. Any vaginal method should be performed with great care.

In those cases requiring anesthesia, the choice is nitrous oxide-oxygen or ethylene gas. Rectal ether is next and where none of these are practical then use light ether anesthesia. Chloroform should not be given to eclamptics. It produces pathological changes in the liver similar to those of fatal toxemias. Titus states, "A healthy human adult of 75 kilograms (165 pounds) body weight possesses a liver weighing 1700 grams. Chloroform anesthesia during a fasting period will destroy one-half or more of this liver tissue, perhaps 800 grams. However, under favorable circumstances complete repair can be effected in from seven to nine days or approximately 100 grams per day."

Foetal mortality in eclampsia is high, necessarily so because of toxemia and radical procedures in treatment. Usually the child stands large doses of morphine and has better chances for life by early delivery as proven by statistics. Foetal mortality with radical treatment is 55 per cent while that with the use of morphin is 34 per cent.

A study of some statistics of toxemia cases are as follows:

Greenhill of Chicago reports maternal mortality 7.7 per cent.

Los Angeles General hospital reports the reduction of mortality rate from 60 to 14.8 per cent with magnesium sulphate treatment.

At Butterworth hospital, I have been able to personally observe and supervise the treatment of a number of cases of pre-eclampsia and eclampsia. Statistics of these cases seem to compare with those obtained from obstetrical clinics using methods of treatment similar to the one here described. The cases are as follows:

Number of toxemia cases 32.

Number of maternal deaths 7 or 22%.

Number of deaths of babies 11 or 33 $\frac{1}{3}$ %.

(Twins in 1 case raise percentage.)

Magnesium sulphate treatment in 12 cases.

Caesarean section in 6 cases.

Voorhees' bag in 6 cases.

Ages ranged from 19 to 40; average 25.

12 received prenatal care.

Blood pressure ranged from 132/80 to 250/130.

27 had albumin, 3 only a trace and 2 negative.

15 had convulsions.

CONCLUSIONS

In conclusion, it may be stated that the following principles should be carried out in cases of pre-eclampsia and eclampsia:

1. Recognition of early symptoms of pre-eclampsia.
2. Prophylactic, medical and obstetrical treatment.
3. Magnesium sulphate in cases of hypertension and convulsions.
4. Induction of labor if there is no improvement.
5. Hospitalization if possible.
6. Conservative surgical methods, especially relative to Caesarean section.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

PRINCIPLE CAUSES OF DEATH

The principal causes of death in 1926 show some interesting comparisons with the same conditions in 1925.

As has been the case for a good many years, organic heart disease leads the list with 7,528 deaths as compared with 6,638 in 1925. In the consideration of this cause of death it must be regarded that this undoubtedly represents either misdiagnosis or failure of diagnosis. In a great many diseases it is common to have an involvement or heart lesion and this is the only condition marked on the death certificate and consequently the death is classified to this cause when it should perhaps go to the primary condition.

The second cause is cerebral hemorrhage showing 4,295 deaths or only 13 more than occurred during the preceding year. While it is probable that this condition cannot be regarded as preventable, it may perhaps be regarded as postponable and we should see the age of death for this disease gradually advanced.

The third cause of death was cancer which caused 3,975 deaths, an increase of 213 deaths over the preceding year. This includes all types of malignant neoplasms. There has been so much said and written on this subject that it seems unnecessary to more than mention its relative importance at this time.

The fourth cause is accidents of all kinds. This shows an increase of 249 deaths over the preceding year. When it is considered that more than 1,000 of these deaths were due to automobile accidents it can be readily seen that grave importance must be attached to this cause of death.

The fifth place in death causes is occupied by chronic nephritis. For some reason this showed an enormous increase over the preceding year, an increase of almost 30 per cent. We are unable at this time to account for this increase.

The sixth place is occupied by tuberculosis which showed an increase of 209 deaths over the preceding year. When it is considered that only a few years ago tuberculosis occupied second place in the important causes of death, the fact that it has dropped to sixth place is certainly

an encouraging comment on the educational efforts of the past few years.

Lobar pneumonia is seventh, showing an increase of over 600 deaths over the preceding year, but it must be remembered that there was quite a sharp epidemic of influenza in the early part of 1926.

The eighth cause was premature birth and injury at birth. This is just slightly above 1925.

Broncho-pneumonia stood next with 1,851 deaths or an increase of over 500 deaths as compared with 1925. This increase was undoubtedly due in a measure to influenza, as the term broncho-pneumonia is not a satisfactory statement of the cause of death because it is nearly always a secondary infection and the preference would always be to the primary cause. Where this cannot be ascertained the department has no option except to give it to the cause of death as shown on the death certificate.

The tenth cause was influenza which was responsible for almost 1,500 deaths. In these cases, influenza was stated as the primary cause.

The eleventh place was occupied by diarrhea and enteritis under two years of age. This cause is very largely preventable and should be very greatly reduced.

The twelfth place was occupied by diseases of the arteries which caused more than a thousand deaths.

Next comes congenital malformations, a cause of death that is altogether too high and could undoubtedly be reduced by good prenatal work.

Diabetes occupied the next place, followed by appendicitis.

There was a considerable rise in the number of deaths from diphtheria, this disease in 1926 appearing to be more malignant than for several years past.

The puerperal causes which include all conditions due to pregnancy and childbirth caused 628 deaths. This shows a very slight decrease from the preceding year.

Angina pectoris caused 589 deaths or an increase over the preceding year of 88 deaths.

This was followed by measles which rose from 79 deaths in 1925 to 577 deaths in 1926. This disease of known periodicity

was exceedingly prevalent in 1926, there being almost 40,000 cases reported.

Measles was followed by suicides which showed a considerable increase over 1925.

Possibly in the entire group of twenty causes which are shown, the greatest decrease is in diarrhea and enteritis under two years of age. While this is still unnecessarily high there was a decrease of about one-third in 1926 as compared with 1925. It is of interest to note the relative changes in the rank of the various diseases as shown by this list. Of course, the accidental variations which happen from year to year have a considerable effect but in a general way it will be found that among the more important causes there is relatively little change in rank.

The list below shows the number of deaths in order of rank in 1926 compared to the 1925 figures:

Causes	1926	1925
1. Heart Disease	7,258	6,638
2. Cerebral Hemorrhage	4,295	4,283
3. Cancer (All Forms)	3,975	3,762
4. Accidents (All Forms)	3,589	3,340
5. Chronic Nephritis	3,098	2,253
6. Tuberculosis (All Forms)	3,039	2,830
7. Lobar Pneumonia	2,589	1,985
8. Premature and Injury at Birth	2,352	2,340
9. Broncho Pneumonia	1,851	1,306
10. Influenza	1,497	944
11. Diarrhea and Enteritis (Under two years)	1,106	1,742
12. Diseases of Arteries	1,023	963
13. Congenital Malformations	764	805
14. Diabetes	743	747
15. Appendicitis	704	728
16. Diphtheria	676	358
17. Puerperal (All Forms)	628	633
18. Angina Pectoris	589	501
19. Measles	577	79
20. Suicides (All Forms)	568	495

PROGRESS IN MOUTH HYGIENE

Some interesting Michigan conditions and at least a start toward their improvement are shown in the report of the first fifteen and one-half months' work of the Bureau of Mouth Hygiene and Preventive Dentistry.

Thirty-three towns have some school dental program, according to replies to a questionnaire sent out at the beginning of the work. Twenty-seven have a yearly dental examination and 20 have one or more school dental equipments. There are 15 full-time dentists, 44 half-time dentists, and 11 hygienists doing school work in the state.

One of the first activities of the bureau was a survey of the dental work being done in state institutions, and the draw-

ing up of recommendations as to type of work needed, equipment, and handling of supplies.

The preparation of educational material was an important first measure. Three leaflets were issued, one on mouth hygiene for prospective mothers, one on baby teeth, and the third on the child's permanent teeth. The popularity of these can be judged by the fact that from August, 1926, to May, 1927, a total of 160,697 were sent out in answer to 607 requests. By far the larger proportion went to schools or to public health nurses for distribution to parents.

Another line of work was the preparation of record cards and blank forms for school dental work. More than 50,000 of these have been sent to schools throughout the state.

Requests for assistance in local programs have kept the director of the bureau almost constantly in the field. In addition to giving talks before various groups, he has made demonstration examinations in 28 schools in 24 towns. The actual examination, with mouth mirror and explorer, of a roomful of children is undoubtedly one of the best methods of bringing home existing conditions and the need for their improvement.

A number of interesting developments in mouth hygiene work throughout the state are noted in the report. In Berrien County a full-time dentist was started in Benton Harbor in February. From there he went to Niles. Effort is being made to secure a budget to continue this work next year through the whole county.

A successful dental health week was observed in Port Huron in April, with wide publicity and excellent results.

The inspection of 25,503 school children in Grand Rapids under the supervision of Dr. C. C. Slemmons, health officer, was the outstanding event of the year. It was one of the most complete and thorough examinations ever attempted in Michigan, and the results were illuminating. Of the 25,503 children inspected, only 872 were classed as needing no attention. Practically one-half were pronounced urgently in need of dental care. The survey showed, among the 24,631 children needing attention, 51,924 cavities in deciduous teeth, 12,191 abscessed deciduous teeth, 39,336 cavities in permanent teeth, 2,307 abscessed permanent teeth, and 41,571 incipient cavities in pits and fissures.

When conditions such as these exist in

a city like Grand Rapids, there can be no question as to the need for mouth hygiene emphasis.

ANOTHER TYPHOID CARRIER

The attention of this department was recently called to the prevalence of typhoid fever in a small village near Lansing. There were two cases at this time. Upon investigation it was found that since September, 1926, five families in this village have had the disease, the total number of cases being ten. This number assumes a greater significance when we note the village has only one hundred inhabitants.

It was further revealed that Mrs. A., a resident of this village, had been ill with typhoid fever in one of the larger cities of the state in September, 1926. A review of our record shows that this case was reported on September 13, 1926. The record also shows that a microscopic widal had been reported by our laboratory on September 18, 1926 as follows: "Partial clumping, specimens of feces may confirm this finding." We, however, were unable to find any report of the release of this case, or any other laboratory reports. According to information obtained, we learned that this patient was discharged to return home as soon as she was clinically well, and that she was told she was all right.

Not long after the return home of Mrs. A. some of the members of Mrs. B's family developed typhoid fever. Mrs. B's family had been close friends of Mrs. A and often visited there. During the winter of 1926-27, Miss C developed typhoid fever. Miss C had likewise been on intimate terms with Mrs. A.

Following Miss C came the two present cases who had also been frequent visitors of Mrs. A. Because of the reliability of the milk supply and the lack of evidence of water contamination, and of the above history which was well put in Mrs. A's own words, namely, "It seems that everyone who visits us gets typhoid fever," we made several laboratory examinations from specimens obtained from Mrs. A. These specimens included blood, urine and feces. The blood was negative, urine and feces were both positive, showing the presence of typhoid bacilli.

In conclusion we might quote from the Rules and Regulations of the Michigan Department of Health: "Isolation of patient shall continue until two specimens of feces taken at intervals of not less than one week after clinical recovery have been found free from the typhoid bacillus. Such

specimens shall be collected by the local health officer and shall be examined in a laboratory approved by the State Commissioner of Health." The rules and regulations here set forth were not observed in the case of Mrs. A.

STREAM POLLUTION

Members of the Executive Committee on waste treatment representing the tanners of Michigan, and officials from the departments of Health and Conservation, held a conference on April 26th at Lansing. Arrangements were made for the finishing of the experimental work on tannery waste which has been in progress at the J. K. Mosser Tanning Factory at Holland, Michigan. It was believed by those present that this work should be finished within the next three months. Ten tanning companies operating in Michigan have subscribed upwards of \$4,000 toward this work.

Another step was taken toward the solution of stream pollution problems when members of the Michigan Allied Dairy Association and departments of Conservation and Health met at Standish during the latter part of April. At this meeting arrangements were made to jointly establish two experimental treatment plants for milk wastes. The Dairy Association is to furnish a trained man to carry on the work under the supervision of the technical staff of the Health Department. It is hoped that this work will find an economical and satisfactory method for the treatment of milk wastes. The experimental plants will be established at Standish and Bad Axe.

VISITS OF ENGINEERS DURING APRIL

Inspections of Railroad Water Supplies, 9 cities:

Benton Harbor	Manistee
Edmore	Muskegon
Grand Haven (3)	Port Austin
Ionia	Traverse City
Ludington	

Inspections and Conferences on Sewage and Sewage Disposal, 10 cities:

Adrian (2)	Northville, (Detroit
Detroit	T.B. San.)
Flint (2)	Romeo
Hillsdale	Stanton (2)
Kalamazoo	St. Joseph (2)
	South Lyon

Inspections and Conferences on Water Supplies. 19 cities:

Adrian	Big Rapids
Anchor Bay Beach	Cassopolis
Benton Harbor (3)	Comstock

Detroit (2)	Maybee
Dexter	Reed City
Hillsdale	St. Clair (4)
Holt	Tecumseh
Jonesville	Three Rivers
Lansing	Wayne
Marine City (2)	

Inspections of Swimming Pools, 2 cities:
 Lansing Ypsilanti (6)

Inspections and Conferences on Stream Pollution, 7 cities:

Detroit	Reed City
Grand Rapids (3)	Standish
Kent City	Walled Lake
Leslie (3)	

Inspections and Conferences on Camps:
 Brighton (Fresh Air Camp)
 Detroit (Y. M. C. A.)
 Flint (Boy Scouts)
 Port Huron (Girl Scouts)

Miscellaneous Inspections and Conferences:

Bangor—Insanitary Pond.
 Berkeley—Drainage (2).
 Detroit—Drainage.
 Dexter—Public Comfort Station.
 Marion—Sheep Nuisance.
 Midland Park (Gull Lake)—General Sanitation.
 Niles—Piggery Nuisance.
 Oxford—Inspection of Filter Sand.
 Richmond—Cases of Trichinosis (4).
 St. Clair—Cases of Trichinosis (2).

VISITORS

Dr. Luke Young, a graduate of the Pekin Union Medical College (1917) and until recently a member of the Department of Dermatology and Syphilology of Shantung Christian University, is spending three months in the laboratories of the Michigan Department of Health. His aim is to master the technic of the Kahn test with a view of applying it in China. He also plans to translate Dr. Kahn's volume, "Serum Diagnosis of Syphilis by Precipitation" into Chinese.

Dr. B. Abadjieff, director of laboratories of the National Health Department of Bulgaria, who spent several months last summer in the laboratories of the Department learning the Kahn test, and who is at present working at the Robert Koch Institute in Berlin, writes that the Kahn test is now used in a routine manner parallel with the Wassermann test at that institute.

The Robert Koch Institute is one of the great medical research institutions of the world, corresponding to the Rockefeller Institute of New York and the Pasteur Institute of Paris.

Dr. Abadjieff, who helped in the establishment of the Kahn Test at the Robert

Koch Institute, believes that it is quite a victory for the American test to have it used "right in the birthplace of the Wassermann test."

PREVALENCE OF DISEASE

	April Report			
	Cases Reported			
	March 1927	April 1927	April 1926	Av. 5 Years
Pneumonia	662	663	1,204	823
Tuberculosis	419	554	493	575
Typhoid Fever	39	29	18	43
Diphtheria	439	409	304	407
Whooping Cough	609	536	811	633
Scarlet Fever	1,636	1,078	1,396	1,281
Measles	1,302	1,027	6,526	3,273
Smallpox	191	120	28	209
Meningitis	16	13	11	14
Poliomyelitis	4	0	2	3
Syphilis	1,620	1,591	1,352	1,116
Gonorrhoea	879	801	853	757
Chancroid	9	15	12	12

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health
 April, 1927

	+	-	+ -	Total
Throat Swabs for Diphtheria				1306
Diagnosis	30	345		
Release	121	220		
Carrier	4	573		
Virulence Tests	7	6		
Throat Swabs for Hemolytic Streptococci				813
Diagnosis	159	172		
Carrier	86	396		
Throat Swabs for Vincent's	12	363		375
Syphilis				6365
Wassermann	1	1		
Kahn	1176	5117	68	
Darkfield	1	1		
Examination for Gonococci	128	1159		1287
B. Tuberculosis				416
Sputum	63	328		
Animal Inoculations	4	21		
Typhoid				143
Widal	12	41		
Blood Culture	3	21		
Feces	9	43		
Urine		14		
Dysentery				44
Intestinal Parasites				34
Transudates and Exudates				213
Blood Examinations (not classified)				169
Urine Examinations (not classified)				441
Water and Sewage Examinations				627
Milk Examinations				113
Toxicological Examinations				
Autogenous Vaccines				
Supplementary Examinations				145
Unclassified Examinations				638
Total for the Month				13129
Cumulative Total (fiscal year)				131383
Decrease over this month last year				4388
Outfits Mailed Out				13580
Media Manufactured, c.c.				215750
Typhoid Vaccine Distributed, c.c.				1315
Antitoxin Distributed, units				20164000
Toxin Antitoxin Distributed, c.c.				22110
Silver Nitrate Ampules Distributed				4296
Examinations Made by the Houghton Laboratory				1712
Examinations Made by the Grand Rapids Laboratory				6217

Official Program, 107th Annual Meeting, Michigan State Medical Society, Mackinac Island, June 16-17-18th, 1927

CALL

The Michigan State Medical Society will convene in Annual Session, on Mackinac Island on June 16, 17, 18, 1927. The order of business as provided by our Constitution and By-laws and official program will be observed.

J. B. Jackson, President.
R. C. Stone, Council Chairman.
W. K. West, Speaker.

Attest: F. C. Warnshuis, Secretary.

CONDENSED PROGRAM

Thursday, June 16th.

- 10:00 a. m.—House of Delegates.
- 1:30 p. m.—House of Delegates.
- 7:30 p. m.—House of Delegates.

Friday, June 17th.

- 8:45 a. m.—Section Meetings.
- 12:15 p. m.—Unveiling Ceremony—
Beaumont Monument.
- 1:30 p. m.—Out Door Sports.
- 6:30 p. m.—Dinner Main Dining Room.
- 8:00 p. m.—General Session.
- 10:00 p. m.—Dancing.

Saturday, June 18th.

- 8:45 a. m.—Section Meetings.
- 1:30 p. m.—Outdoor Sports.
- 6:30 p. m.—Dinner.
- 8:00 p. m.—General Session.
- 10:00 p. m.—Cabaret.

Sunday, June 19th.

Recreation.
Special trains leaving at 4:00 p. m.

All meetings will be held in the Grand Hotel.

HOUSE OF DELEGATES

Theater of Grand Hotel
Thursday, June 16, 1927

FIRST SESSION

10:30 a. m.

Speaker, W. K. West, Painesdale.
Vice-Speaker, Henry R. Carstens, Detroit.
Secretary, F. C. Warnshuis, Grand Rapids.

ORDER OF BUSINESS

1. Call to Order.
2. Report of Credential Committee.
3. Speaker's Address—W. K. West.

4. President's Address—J. B. Jackson.
5. Report of the Council—R. C. Stone, Chairman.
6. Appointment of Reference Committees.
7. Election of Nominating Committee of five. No two members shall be from the same Councilor District. The duties of the Nominating Committee are:
 - (a) Supervise Ballot for President.
 - (b) Nominate.
 1. Four Vice-Presidents.
 2. Delegate to A. M. A. and Alternate to succeed Carl F. Mol and W. E. Chapman terms expiring.
 3. Delegates from 7th, 8th and 9th Councilor Districts will meet the State Secretary in Caucus to nominate Councilors for these districts whose terms expire.
8. Reports of Committees.
 - (a) Medical Education
—A. P. Biddle.
 - (b) Hospital Survey.
—R. R. Smith.
 - (c) Public Health
—R. C. Mahoney.
 - (d) Legislation
—H. A. Haze.
 - (e) Tuberculosis
—B. A. Shepard.
 - (f) Venereal Prophylaxis
—W. F. Martin.
 - (g) Civic and Industrial Relations
—L. S. Farnham.
 - (h) Nursing Education
—C. E. Boys.
 - (i) Medical History
—C. B. Burr.
 - (j) Delegates to the A. M. A.
9. Unfinished Business. Amendments to Constitution.
10. New Business and Resolutions.
11. Recess.

SECOND SESSION

1:00 p. m.

1. Roll Call.
2. Reports of Reference Committees.
3. Unfinished Business.
4. New Business.
5. Recess.

THIRD SESSION

7:30 p. m.

1. Roll Call.
2. Reports of Reference Committees.
3. Report of Nominating Committee.
Report of Secretary.
4. Election.
 - (a) Four Vice-Presidents.
 - (b) Councilors for 7th, 8th and 9th Districts.
5. Unfinished Business.
6. Adjournment.

DELEGATES TO ANNUAL MEETING

NOTE:—Delegates in Capitals.
Alternates in Regular.

ALPENA COUNTY

C. M. WILLIAMS, ALPENA
W. B. Newton, Alpena

NORTHERN MICHIGAN MEDICAL SOCIETY
ANTRIM, CHARLEVOIX, EMMETT,
CHEBOYGAN COUNTY

HARRY SHAVER, BOYNE CITY
FREDERICK MAYNE, CHEBOYGAN

BARRY COUNTY

B. C. SWIFT, MIDDLEVILLE
R. W. Gridwold, Freeport

BAY, ARENAC, IOSCO COUNTY

V. H. DUMOND, BAY CITY
J. W. Hauzhurst, Bay City

BENZIE COUNTY

BERRIEN COUNTY

W. C. ELLET, BENTON HARBOR
R. H. Snowden, Buchanan

BRANCH COUNTY

W. A. GRIFFITH, COLDWATER
W. W. Williams, Coldwater

CALHOUN COUNTY

C. S. GORSLINE, BATTLE CREEK
GEO. C. HAFORD, ALBION
A. F. Kingsley, Battle Creek
W. L. Godfrey, Battle Creek

CASS COUNTY

CHIPPEWA, MACKINAC COUNTY

C. J. ENNIS, SAULT STE MARIE
G. A. Conrad, Sault Ste Marie

CLINTON COUNTY

R. D. BOSS, WACOUSTA
A. C. Henthorn, St. Johns

DELTA COUNTY

W. B. BOYCE, ESCANABA
W. A. Lemire, Escanaba

DICKINSON-IRON COUNTY

EATON COUNTY

P. H. QUICK, OLIVET
Stanley Stealey, Charlotte

GENESEE COUNTY

C. F. MOLL, FLINT
H. E. RANDALL, FLINT
J. G. R. Manwaring, Flint
J. C. Benson, Flint

GOGEBIC COUNTY

W. ELLWOOD TEW, BESSEMER
Louis Dorpat, Ironwood

GRAND TRAVERSE-LEELANAU COUNTY

H. B. KYSELKA, TRAVERSE CITY
F. P. Lawton, Traverse City

HILLSDALE COUNTY

W. H. SAWYER, HILLSDALE
G. R. Hanke, Ransom

HOUGHTON-BARAGA-KEWEENAW COUNTY

A. C. ROCHE, CALUMET
M. D. Roberts, Hancock

HURON COUNTY

INGHAM COUNTY

EARL McINTYRE, LANSING
MILTON SHAW, LANSING
Fred J. Drolette, Lansing
O. Bruegel, East Lansing

IONIA-MONTCALM COUNTY

R. R. WHITTEN, IONIA
George E. Horne, Entrican

GRATIOT-ISABELLA-CLARE COUNTY

C. F. DU BOIS, ALMA
M. J. Budge, Ithaca

JACKSON COUNTY

HAROLD L. HURLEY, JACKSON
Corwin S. Clark, Jackson

KALAMAZOO-VAN BUREN-ALLEGAN
COUNTY

WALTER den BLEYKER, KALAMAZOO
W. E. SHACKELTON, KALAMAZOO
Sherman Gregg, Kalamazoo
O. D. Hudnutt, Otsego

KENT COUNTY

A. V. WENGER, GRAND RAPIDS
G. H. SOUTHWICK, GRAND RAPIDS
J. D. BROOK, GRANDVILLE
H. J. PYLE, GRAND RAPIDS
E. W. Schnoor, Grand Rapids
W. E. Wilson, Grand Rapids
J. S. Brotherhood, Grand Rapids
R. H. Spencer, Grand Rapids

LAPEER COUNTY

C. D. CHAPIN, COLUMBIAVILLE
F. E. Dodds, Silverwood

LENAWEE COUNTY

H. H. HAMMELL, TECUMSEH
R. G. B. Marsh, Tecumseh

LUCE COUNTY

H. E. PERRY, NEWBERRY
R. E. L. Gibson, Newberry

MACOMB COUNTY

A. A. THOMSON, MT. CLEMENS
J. E. Curlett, Roseville

MANISTEE COUNTY

HARLAN MAC MULLEN, MANISTEE
C. L. Grant, Manistee

MARQUETTE-ALGER COUNTY

MASON COUNTY

MECOSTA COUNTY

B. L. FRANKLIN, REMUS
Donald MacIntyre, Big Rapids

MENOMINEE COUNTY

W. S. JONES, MENOMINEE
Edward Sawbridge, Stephenson

MIDLAND COUNTY

C. V. HIGH, MIDLAND
J. H. Sherk, Midland

MONROE COUNTY

D. C. DENMAN, MONROE
James Humphrey, Monroe

MUSKEGON COUNTY

W. F. GARBER, SR., MUSKEGON
A. F. Harrington, Muskegon

NEWAYGO COUNTY

WILLYS GEERLING, FREMONT
Dr. Moore, Newaygo

OAKLAND COUNTY

F. A. MERCER, PONTIAC
R. H. BAKER, PONTIAC
A. V. Murtha, Pontiac
C. J. Sutherland, Clarkston

OCEANA COUNTY

OTSEGO-MONTMORENCY-CRAWFORD,
OSCODA, ROSCOMMON-OGEMAW COUNTY
FRANK E. ABBOTT, STERLING
C. G. Clippert, Grayling

ONTONAGON COUNTY

E. J. EVANS, ONTONAGON
F. W. McHugh, Ontonagon

OSCEOLA-LAKE COUNTY

OTTAWA COUNTY

S. L. DE WITT, GRAND HAVEN
H. C. Irwin, Holland

PRESQUE ISLE COUNTY

SAGINAW COUNTY

A. R. McKINNEY, SAGINAW
J. T. Sample, Saginaw

SANILAC COUNTY

D. D. McNAUGHTON, ARGYLE
G. S. Tweedie, Sandusky

SCHOOLCRAFT COUNTY

A. R. TUCKER, MANISTIQUE
W. J. Saunders, Manistique

SHIAWASEE COUNTY

COLIN McCORMICK, OWOSSO
W. E. Ward, Owosso

ST. CLAIR COUNTY

A. L. CALLERY, PORT HURON
D. W. Patterson, Port Huron

ST. JOSEPH COUNTY

TRI-COUNTY

WEXFORD, KALKASKA-MISSAUKEE
W. JOE SMITH, CADILLAC
S. C. Moore, Cadillac

TUSCOLA COUNTY

JOHN G. MAURER, REECE
R. A. Townsend, Fairgrove

WASHTENAW COUNTY

THERON S. LANDFORD, ANN ARBOR
JAMES D. BRUCE, ANN ARBOR

WAYNE COUNTY

GEORGE J. BAKER
A. P. BIDDLE
G. V. BROWN
A. E. CATHERWOOD
JOHN L. CHESTER
H. F. DIBBLE
G. B. GARBER
L. T. HENDERSON
L. J. HIRSCHMAN
FRANK A. KELLY
CHAS. S. KENNEDY
J. C. KENNING
J. A. KIMZEY
C. L. McCLINTIC
W. W. MAC GREGOR
R. M. McKEAN
F. M. MEADER
E. B. RICHEY
HOWARD W. PIERCE
F. D. ROYCE
S. E. SANDERSON
CLARE L. STRAITH
R. V. WALKER
L. F. C. WENDT
WALTER J. WILSON
A. Amberg
L. P. Breitenbach
C. D. Brooks
F. G. Buesser
H. R. Carstens
W. J. Cassidy
H. L. Clark
F. H. Cole
M. A. Darling
J. E. Davis
J. H. Dempster
D. Donald
W. A. Evans
G. E. Frothingham
Hugh Harrison
A. F. Jennings
N. O. La Marche
B. H. Larsson
B. C. Lockwood
L. Reynolds
G. C. Penberthy
E. D. Spaulding
W. J. Stapleton, Jr.
C. K. Valade
H. W. Yates

GENERAL SESSIONS

Theater of Hotel

June 17th, 8:00 p. m.

1. Call to Order—President Jackson.
2. Invocation.
3. Announcements—Secretary.
4. Nominations for President.

5. President's Annual Address—J. B. Jackson.
6. Arthritis: Ralph Pemberton, M. D., Philadelphia, Pa. (By invitation).
7. Entertainment—Ball Room and Grill.

SECOND GENERAL SESSION

June 18th, 8:00 p. m.

1. Call to Order—President Jackson.
 2. The History of Goitre Pathology — Dean Lewis, M. D., Baltimore, Md., (By Invitation).
 3. Professional Vagaries.
Morris Fishbein, M. D., Chicago; Editor Journal of the A. M. A. (By invitation).
- NOTE—The Evening Dinners at 6:30 p. m. in the Main Dining Room will be a fellowship function, followed immediately by the General Sessions.

UNVEILING CEREMONY

BEAUMONT MONUMENT

June 17, 12:15 p. m.

Grounds of Old Fort Mackinac.

1. Introductory Remarks,
President J. B. Jackson.
2. Unveiling of Bronze Tablet.
3. Address,
Victor C. Vaughan, M. D., Washington, D. C.

SCIENTIFIC SECTIONS

MEDICAL SECTION

Chairman, C. F. Karshner, Grand Rapids.
Secretary, W. R. Vis, Grand Rapids.

Friday, June 17, 8:30 a. m.

1. Chairman's Address—C. F. Karshner, Grand Rapids.
2. "Pertinant Facts Concerning Hemoglobin"—C. E. Roderick, Battle Creek.
3. "A Study of the Dietary Treatment of Pernicious Anemia."—John Huston, Ann Arbor. Discussion opened by Collins H. Johnston, Grand Rapids.
4. "A Comparison of Undulant Fever in Man with Bang's Abortion Disease of Cattle. (Etiology, Symptoms and Diagnosis.)"—I. Forrest Huddleson, Lansing. Discussion opened by O. H. Bruegel, East Lansing.
5. "O-iodoxybenzoic Acid in the Treatment of Arthritis."—J. B. Youmans, Ann Arbor. Discussion opened by Wm. L. Bettison, Grand Rapids.
6. "The Treatment of Angioneurotic Edema."—Frank R. Menagh, Detroit.

Saturday, June 18, 8:30 a. m.

Election of Chairman.

1. "Ovarian Insufficiency in Its Relation to Obscure Abdominal Complaints, Its Diagnosis and Treatment."—C. J. Marinus, Detroit.
2. "The Field of Usefulness of Iodine in Goitre."—A. F. Jennings, Detroit.
3. "The Pathology of Pulmonary Radiographic Opacities."—P. M. Andrus, Pathologist Queen Alexandra Sanatorium, London, Ontario.
4. "The Value of Gain in Weight as an Indication of the Healing of Pulmonary Tuberculosis."—J. Burns Amberson, jr., Northville.

5. "The Power of Sunlight to Destroy Bacteria."—F. M. Meader, Detroit.

PEDIATRICS

Chairman, R. M. Kempton, Saginaw, Mich.
Secretary, D. J. Levy, Detroit, Mich.

Friday, June 17th, 8:45 a. m.

"Tuberculosis in Childhood"—Bruce H. Douglas, Northville.

By means of Ranke's classification of tuberculosis and Krause's explanation of the altering of the defensive mechanisms in the child and the adult many of the differences between the manifestations of the disease during childhood and adult life are explainable. The diagnosis and treatment of tuberculosis in childhood can be soundly based on these principles.

"Diagnosis and Treatment of Acute Osteomyelitis in Children"—Grover D. Penberthy, Detroit.

Acute osteomyelitis is an inflammatory bone disease seen most often in children between the ages of 2 and 12 years, among the poor class.

The presence of fever, acute bone tenderness, a history of trauma and a previous infection should arouse suspicion, as regards the possibility of acute osteomyelitis.

Treatment is dependent upon a correct diagnosis and consists of surgical drainage, which should be instituted early.

"Postural Defects in Children"—Carl E. Badgley, University Hospital.

"Biophysical Principles of Light The-



DAVID J. LEVY
Detroit

Secretary, Section on Pediatrics

rapy"—Ernest A. Pohle, University Hospital.

Light therapy has been in use for centuries, but only recently the entire physical therapy, of which light therapy is a part, received official recognition as a branch of medicine by the American Medical Association. Little is known, however, regarding the effect of light on cells, tissue, organs and organisms; no standard method of dosage has so far been adopted. It seems desirable, therefore, to present a brief selected compilation of the facts scattered throughout the literature, which form the beginning of a foundation for scientifically conducted light therapy.

"The Choreas, with Special Reference to Their Etiology and Treatment"—Carl D. Camp, University Hospital.

Choreas in children differ in etiology, prognosis and treatment. Infectious type, type due to hereditary syphilis, type due to encephalitis and hereditary defect. Conditions simulating chorea such as multiple tic or habit spasm, also hysteria.

Saturday, June 18th, 8:45 a. m.

Election of Chairman.

"Comparative Vitamin Content of Human and Cow's Milk with Pathological Demonstration"—Miss Icie Macy.

"The Behavior of Children in Relation to Medical Treatment"—Homer T. Clay, Grand Rapids.

The Medical treatment of children must be considered in its relation to the behavior and conduct of that individual. Various apparent medical conditions may be found to be behavior disorders only and when corrected from the latter standpoint the medical aspect disappears.

The public is being educated through a vastly increasing literature in child training and a demand is being created for behavior correction and habit training. The pediatricist should take cognizance of this trend and train himself to cope with this situation.

"The Relative Importance of Certain Qualitative Variations in the Composition of Infant Foods"—Grover F. Powers, Detroit, Mich.

"The Relative Importance of Certain Qualitative Variations in the Composition of Infant Foods." (Lantern slides).

(A discussion of the known factors of importance in the artificial feeding of infants with the intent of stimulating interest in a direct and simple approach to the problem involved.)

"Urology in Children"—Walton K. Rexford, Detroit, Mich.

Urinary conditions in children, a much neglected field. Malformations and anomalies. Lithiasis—New growths. Renal infections—pyogenic and tubercular. Methods of diagnosis and treatment of urinary infections in children. Lantern slides.

SURGICAL SECTION

Chairman, G. H. Southwick, Grand Rapids.
Secretary, F. J. O'Donnel, Alpena.

Friday, June 17th, 8:45 a. m.

1. Chairman's Address—G. Howard Southwick, M. D., Grand Rapids.

2. "Illustrated Lantern Talk on Empyema."—Frederick A. Collier, M. D., Ann Arbor.
3. "Surgery of Bronchiectasis, Pulmonary Abscess and Tuberculosis."—John Alexander, M. D., Ann Arbor.
4. "Non-Operative Treatment of Ureteral Calculi."—Frederick H. Cole, M. D., Detroit.
5. "Management of Goitres with Cardiac Decomensation."—Max Ballin, M. D., Detroit.
6. "Technic of the Operation for Thyroidectomy."—Walter E. Sistrunk, M. D., Rochester, Minnesota.

Saturday, June 18th, 8:45 a. m.

Election of Chairman.

1. "Factors Interfering with Good Results in Ano Rectal Surgery."—Louis J. Hirschman, M. D., Detroit.
2. "Symposium on Diagnosis and Treatment of Head Injuries."
 - (a) Etiology and Diagnosis.—R. D. McClure, M. D.
 - (b) Treatment and Results.—Albert S. Crawford, M. D., Detroit.
3. "Acute Appendicitis With the Appendix Located in the Pelvis."—Richard R. Smith, M. D., Grand Rapids.
4. "Surgery of the Peripheral Nerves,"—Dean Lewis, M. D., Baltimore, Maryland.

OPHTHALMOLOGY—OTO-LARYNGOLOGY

Chairman, B. N. Colver, Battle Creek.
Secretary, A. R. McKinney, Saginaw.

Friday, June 17, 8:45 a. m.

Chairman's Remarks—B. N. Colver, Battle Creek.
Lecture—Ophthalmological Subject. — W. H. Wilder, Chicago.

Lecture—"Frontals, Ethmoidals and Sphenoidals"—Anatomy Diseases and Treatment.—F. J. Pratt, Minneapolis.

Following the lectures questions will be presented for Round Table discussions.

Friday, June 17, 6:00 p. m.

Section Dinner.

Saturday, June 18th, 8:45 a. m.

Election of Chairman.

1. "Enucleation with Rib Cartilage Transplant in the Capsule of Tenon."—W. T. Garretson, Detroit.
2. "Management of Strabismus Cases."—Parker Heath, Detroit.
3. "Some Problems of Intra-Nasal Surgery, with Special Consideration of Submucous Resection."—J. M. Robb, Detroit.
4. "Tuberculous Laryngitis—Its Treatment with Chaulmoogra Oil."—Carl F. Snapp, Grand Rapids.

GYNECOLOGY AND OBSTETRICS

Chairman, A. E. Catherwood, Detroit.
Secretary, Harold Henderson, Detroit.

FIRST SESSION

Friday, June 17th, 8:45 a. m.

1. "Gynecologic Bleeding." — B. Friedlander, Detroit.

2. "Diagnosis and Treatment of Sterility."—Lawrence McCaffery, Ann Arbor.
3. "The Cancer Problem in Michigan, with Special Reference to the Early Diagnosis and Treatment of Cancer of the Uterus."—Reuben Peterson, Ann Arbor.
4. "Conservative Pelvic Surgery." — Howard Cummings, Ann Arbor.
5. Subject to be announced.—E. D. Ploss, Professor of Obstetrics, University of Iowa.

SECOND SESSION

Saturday, June 18th, 8:45 a. m.

Election of Chairman.

1. "Indications for Caesarian Section."—C. Boys, Kalamazoo.
2. "Treatment of Pernicious Vomiting."—Robert Kennedy, Detroit.
3. "Late Non-Convulsive Toxemias of Pregnancy."—W. E. Sisson, Detroit.
4. "The Treatment of Eclampsia with Reference to the Use of Magnesium Sulphate."—Milton Darling, Detroit.

ENTERTAINMENT

This year's program has been arranged to afford opportunity for outdoor sports. Each afternoon from 1 to 6 p. m. has been set aside for golf, archery, tennis, quoits and scenic rides about the island.

At 6:30 p. m. each evening we will all meet in the main dining room for dinner. Fisher's Orchestra will play during the dinner hour.

At 10:00 p. m., following the General Session, Fisher's Orchestra will play for dancing and cabaret functions.

REPORT OF PUBLIC HEALTH COMMITTEE

We are pleased to say that since the last report of the Public Health Committee, one new county tuberculosis sanitarium has been opened, namely Oakland, and the people of another county, namely Berrien, have voted to have a tuberculosis sanitarium. Dickinson county has voted to buy a third interest in the now existing sanitarium at Powers, Michigan. A survey of the tuberculosis situation of the state therefore indicates gratifying progress in the public care of those afflicted with this disease. Before next year cannot more beds be added to this number? At present there is good reason to believe that the state legislature will make great improvements at the Howell Sanitarium, and build a new one at Ann Arbor in connection with the State University Medical School, thereby ultimately assuring a better understanding of this disease in the medical profession and perhaps earlier diagnosis of tuberculosis than is now generally the case.

This Committee has further endorsed the efforts of State Health Commissioner Kiefer in his survey dealing with maternal death rate in this state. We hope as a result of this, information may be obtained which will help us all in greatly reducing the maternal death rate in Michigan.

We have also given our support to the Public Health Legislation—especially in the attempt to establish county Health Units, thereby placing efficient health officers in charge of the rural districts as well as the cities.

John H. Wessinger,
R. C. Mahoney,
Chairman.

REPORT OF COMMITTEE ON MEDICAL EDUCATION

It should go without saying that the justification for the existence of any medical school is found in the service it renders to the community. This is especially true in the case of tax supported institutions. This public service involves the development and maintenance of a constantly increasing range of activities such as instruction in personal and group hygiene and sanitation, given more or less directly to the laity, the hospitalization and medical care of appropriate disease conditions and the training of men and women for lives of service in the various branches of medical and closely allied sciences. These tasks are at best very imperfectly performed and in their accomplishment questions of great variety arise. The answers to these can be developed only through the accumulated experience, not only of the teachers in the medical schools but of the actual workers in the various fields of endeavor in question.

The medical schools of Michigan have during the past year been greatly aided in their efforts by constructive criticism emanating from a considerable number of sources, the chief of which has been the Michigan State Medical Society. As these suggestions have been received efforts have constantly been made to profit thereby and it is felt that these efforts have met with a considerable measure of success, in itself, an earnest of still greater improvements in the future.

Much of the development along medical teaching lines has been in connection with the training of students for the practice of medicine, the effort having always been in the direction of better prepared medical graduates from both technical and ethical viewpoints. As the result of a forward-looking policy on the part of appropriating bodies in the state, the resources available for the giving of instruction in the medical sciences have been materially increased, so that, while much remains to be done in the way of development and improvement along these lines, the state of Michigan has no occasion to feel disheartened in the efforts made and the results achieved.

Among the most important problems with which the medical schools are now called upon to deal is their responsibility to the men already graduated, who seek the opportunity, not only to freshen their professional knowledge by frequent review, but also to keep abreast of the present day advances in medicine in as an efficient a manner as circumstances will permit.

In addition to these obligations, the medical schools have before them the task of providing facilities whereby well qualified men may secure an opportunity to engage in original investigation and whereby physicians, desirous of limiting their practice to some particular kind of work, may be enabled to devote several years of continuous study, under favorable conditions, to the undertakings of their election.

Steps have already been taken in the direction of the solution of these problems. A school for graduate study has been established in Detroit and it is expected that the University of Michigan

will soon create a division of Post-Graduate Study in Medicine and appoint a director to develop such an organization. This important phase of medical education is only in its beginnings with tremendous demands and possibilities for future growth.

It is hoped that the medical schools of the state may in the future enjoy the privilege of the same helpful criticism on the part of the Michigan State Medical Society that they have received in the past.

Respectfully submitted,
 Hugh Cabot,
 W. H. MacCracken,
 Andrew P. Biddle,
 Chairman.

REPORT OF THE COMMITTEE ON NURSING EDUCATION

To the House of Delegates:

Following the recommendation of the committee report of last year, the present committee arranged a meeting with representatives of the Michigan State Nurses Association for the discussion of various problems of interest to both nurses and physicians.

The State Nurses Association was represented by the following members:

Adelaide Northam, R. N.,
 Supt. Sparrow Hospital, Lansing.
 Shirley C. Titus, R. N.,
 Director of Nursing, University Hospital,
 Ann Arbor.
 Mary A. Welsh, R. N.,
 Supt. of Nurses, Blodgett Hospital, Grand
 Rapids.
 Katherine M. Bradt, R. N.,
 Lansing.
 Emelie G. Sargent, R. N.,
 Supt. Visiting Nurses Association, Detroit.
 Mary C. Wheeler, R. N.,
 General Secretary Michigan State Nurses
 Association, Detroit.
 Grace Ross, R. N.,
 President, Michigan State Nurses Associa-
 tion.

The State Medical Society was represented by the members of the Committee on Nursing Education, as follows:

F. C. Witter, M. D., Detroit.
 F. W. Garber, M. D., Muskegon.
 J. G. R. Manwaring, M. D., Flint.
 C. E. Boys, M. D., Kalamazoo, Chairman.

Due to an illness, Dr. W. K. West of Painesdale was unable to be present.

Following a luncheon at the Hotel Olds, Lansing, April 21, 1927, an informal discussion was held by those present. In general the subjects considered were those given in the report of the Committee on Nurses and Nursing Education of the A. M. A., given at Dallas Texas.

All agreed to the suggestion of the need for the "basic trained nurse" to which should be added further training for those who desire to go into special lines of work.

The physicians rather felt that there is at present too much class room work. The nurses felt that while the total number of hours, now averaging about 600, are not too many, a better balancing of the course should be an objective. Both nurses and doctors agreed that the clinical teaching and demonstrations on patients is at present too much neglected, and should be improved. There should be more teaching by "precept and example."

There was further complete accord by all present that, generally speaking, there is too much lack of co-ordination between the class room instruction and that given on the floors of the hospitals. In so far as a standardized technique is possible it should be taught in the class room as carried out on the floors.

All agreed that supervisors of floors, or special department heads, such as those in charge of obstetrics and surgery, or class room work, should have more than the basic training as a preparation for their duties. The committee is of the opinion that nurses employed as class room teachers should have a teacher's training similar to that demanded of public school teachers in addition to the basic nurse training.

The nurses gave expression to the feeling in Michigan as a whole, there is a shortage of applicants for nurses training, this being especially true in the larger hospitals. They further declared that there was little chance to choose their students, and that the student nurse of today refused to do either the quantity or quality of work that was obtained in former years. For the shortage, they blamed in part the poor housing and recreational facilities on the part of the hospitals.

It was agreed that training schools should not be recognized in hospitals having an average of less than 50 occupied beds. The distribution of nurses was discussed. In general the larger cities are satisfactorily supplied, while it is usually a very difficult matter to obtain nurses for service in small towns and rural places. It was also brought forth that an increasing number of nurses are occupying salaried positions with fixed hours of duty, as in charity organizations, factories, welfare or public health work.

Outside of the absolute inability to get nurses in some places, the cost to the patient is of serious moment. It was agreed that a shortening of the nurses' course of training would in no wise lessen the expense to the patient, and even the establishment of a short term, one year's training nurse, would be likely to also fail in this regard.

Regarding hours of duty, the nurses present felt that a 12-hour duty is correct, and conducive to the best work on the part of the nurse. While from the nurse's viewpoint this is correct, yet the increased cost to the patient is often embarrassing, and may deprive him of much needed nursing care. The doctors present stated that in most cases a 20-hour day is not unreasonable, as usually after three or four days, at least in surgical cases, the nurse is not overworked, and the paying of even one nurse is often a serious burden to many patients who really need special nursing. They agreed, however, that where constant attention is demanded by the seriousness of the case, the physician should see that proper relief is forthcoming. The committee feels that this should be determined in each individual case rather than to be a matter for state legislation.

Group Nursing—All representatives present heartily endorsed the plan of group and hourly nursing. Group nursing is for hospital practice where two nurses on 12-hour duty care for more than one patient. This provides such care as is needed in most cases, wastes no time on the part of the nurse, and gives her an adequate time off duty for rest and recreation. The cost to the patient is also reduced.

The plan of hourly nursing is now being tried in some places, but it is believed that this type of service must be provided by a registry rather than

by an individual. The registry employs all nurses on a definite salary, and for definite hours of service. By districting a city or even a rural community a great saving of time can thus be made. The really necessary service can be rendered at a greatly reduced cost to the patient. It will require some education by the physicians, however, to overcome the desire of the patients to have some nurse of their choice, and to be willing to accept whoever is sent by the registry. The nurses present expressed the opinion that hourly nursing could be employed to relieve the busy hours in the hospital, as well as for use in the home.

The committee therefore recommends the following:

1. A nurse's training of not less than 28 months, with a preference for a three years course.
2. Better preparation—college or normal training—for class room teachers.
3. More clinical teaching by floor supervisors, even at the expense of some of the present class room work.
4. The endorsement of group and hourly nursing.
5. Improvement in floor nursing generally, to the point where even the severely ill patient can be safely cared for without special nursing.

C. E. Boys,
Chairman.

COMMITTEE REPORTS ON MEDICAL HISTORY

Flint, Mich., March 23, 1927.

To the House of Delegates,
Michigan State Medical Society.

The Committee on Medical History of Michigan appointed in obedience to a resolution adopted at the last meeting of the society reports as follows:

Progress has been made in a somewhat limping fashion in the compilation. Some little time has been devoted almost daily to the matter and results though small are not unsatisfactory considering that the committee is without secretarial assistance and has not been provided with funds for this or any other purpose. As to the lack of appropriation, however, the committee chairman is wholly responsible. Inquiry was early made by the secretary of the State Society as to what amount would be needed and the answer given that while the work was in an embryonic stage it was not the intention to incur any expense. The small disbursements thus far made for stationery, postage and traveling items is quite negligible.

This committee or its successor, however, will eventually require funds for office expenses, that is to say, secretarial, etc., if the incorporation of numerous biographies and, as is doubtless the case, extensive historical material is contemplated.

Reference is made above to "its successor." With no intention to cross the bridge prematurely it is to say the least conjecturable by certain members of the present committee that their working days may not be sufficient for an accomplishment of this character and importance.

Indeed it is inexpedient to hurry it to completion. Much water will flow under the bridge in the next two or three years and lessons learned one day to be unlearned the next are all too familiar to those of many years in the profession. It may be confidently stated that permanent medical superstructures on firm foundations while not as rare as the white blackbird are at least not

sufficiently numerous to cover a large portion of the landscape.

However, in passing, it is of extreme interest to record some of the hopes, the aspirations, the perplexities and misgivings, the trials and discouragements as well as the achievements of those who have gone before and whose, in the main, useful lives have been a benefaction to the neighborhoods in which they have toiled and struggled, have overcome or unhappily have battled with adverse conditions unsuccessfully.

Hence the desirability of accumulating data of an anecdotal and humanistic quality and if this present committee can accomplish no more, it hopes to assemble much of this and pass it on to successors. To this end a request was made in the February number of the Journal for contributions of professional or general interest concerning physicians. Previous to the publication of this appeal a note-worthy biography of a pioneer physician had been furnished by the competent and painstaking president of this society, and recently some interesting reminiscences of the Council by Dr. Dodge have been received.

With these the inventory is at the time of this writing complete, and it need scarcely be added that the response has not proven surfeitingly satisfactory. The time is not far distant when participants in 19th Century Medical activities will have passed from the stage. If it is desired to read from the book of their experience, to consult its pages at once is expedient.

The committee is anxious to obtain a picture, (photograph, painting, drawing, tin-type, whatever is available) of a pioneer physician of Michigan with his equipment, horse, saddle bags, accoutrements. Is there any such in existence?

It would like also a picture of the physician wearing snowshoes who is often dependent upon these aids in making his daily round. Pictures of ministrations of the early physicians, of their offices and the scenes of their ministrations are also most desirable. Diaries, journals, letters, jottings, prescriptions are all of interest and would be welcomed by the committee. Obviously memorials, biographies and manuscripts already published need not be duplicated or forwarded but attention should be called to where they may be found.

For the information of members as to the scope of the history as proposed, the following outline is given. Under headings are filed, "Activities" (extra professional), "Anecdotes", "Army Service", "Biographies", "Books to Consult", "Books for Review", "Controversies", "Correspondence", "Diseases and Epidemics", "Early Physicians", "Experiences and Hardships", "Hospitals and Sanitariums", "Indians", "LaSalle and Other Early Explorers and Missionaries (the physicians in their company)", "Malpractice Suits and Litigation", "Medical Education", "Medical Institutions and Foundations", "Medical Journals", "Medical Societies", "Miscellaneous", "Outstanding Discoveries" and "Training Schools".

May the committee have the satisfaction of placing in one or more of these pigeon holes something from each member of the society?

With thanks in advance for what it is hoped to receive.

Very respectfully,

C. B. Burr,
J. H. Dempster,
W. J. Jay,
W. H. Sawyer,
J. D. Brook,

Committee.



G. H. SOUTHWICK, M. D.
Grand Rapids
Chairman, Section on Surgery



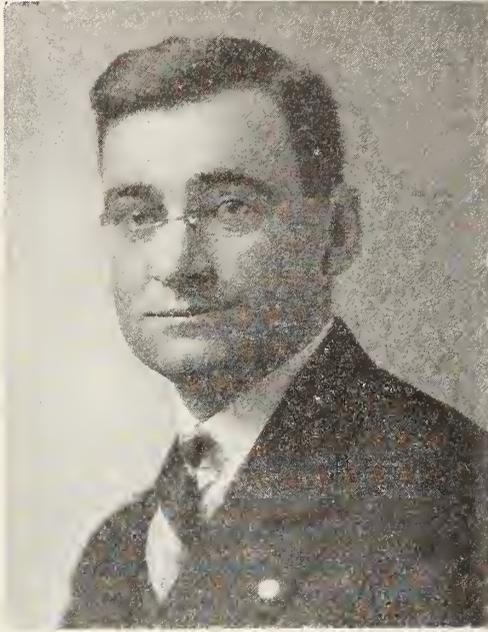
F. J. O'DONNELL, M. D.
Alpena
Secretary, Section on Surgery



R. M. KEMPTON, M. D.
Saginaw
Chairman, Section on Pediatrics



A. E. CATHERWOOD, M. D.
Detroit
Chairman, Section on Gynecology and Obstetrics



A. R. McKINNEY, M. D.
Saginaw
*Secretary, Section on Ophthalmology and
Oto-Laryngology*



B. N. COLVER, M. D.
Battle Creek
*Chairman, Section on Ophthalmology and
Oto-Laryngology*



CLYDE F. KARSHNER, M. D.
Grand Rapids
Chairman, Section on Medicine



W. R. VIS, M. D.
Grand Rapids
Secretary, Section on Medicine

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

PUBLIC RELATIONS AND EDUCATION*

C. F. DE VRIES, M. D.

What I have to say in regard to public relations as applying to our local society, applies without a doubt to medical societies in general. I believe we can truthfully state that our public relations are showing marked improvement in every way. We in Lansing are at present experiencing a delightful relation with our public in at least two respects.

The first is in regard to necropsies. We have recently made a more serious effort in obtaining autopsies and have met with what we consider a fair degree of success. The hospital deaths in Lansing during January, February and March totaled 62, with necropsies done in 26 of them. This is a post-mortem percentage of approximately 42 per cent and I feel that this can be raised to 75 per cent. The failure to obtain necropsies is due to the lack of interest of the physician, rather than to any reluctance on the part of the laity. We have, however shown that necropsies can be obtained and to my mind it reflects the confidence of the laity in the medical profession. Further than that we have found that necropsies arouse more interest in staff meetings, more interest in discussion of our cases and a greater endeavor to work up our cases properly. Let me recommend that all of you make a greater effort along this line.

Our next accomplishment, as far as the public is concerned, also concerns us personally, as it bears directly on our financial relations and should be of interest to your individual societies.

We have during the past winter organized what is known as the "Physicians and Dentists Accounting Bureau."

The function of the organization is to educate the people in general and the delinquent in particular that the professional man is entitled to the same consideration as the merchant when it comes to the distribution of the pay envelope.

While primarily the organization de-

votes its entire attention to collections, its functions take in two other important features:

A. The interchange of credit information among the profession.

B. Acting as arbitrator on disputed accounts.

Under A, the plan we are working is effective in that in the office of each member there is a two drawer filing unit in which is filed the name and address of the delinquent, the doctor or doctors he might owe and the amount. The doctor having a new patient come in refers to this file and if he is a delinquent, either arranges to get his fee or sends him back to the doctor owing.

In this way he protects himself and his colleague and eliminates the class of people who "shop" around from doctor to doctor.

The moral effect on the delinquent of having his name posted hastens the settlement of the bill owing, and if properly approached leaves no ill feeling against the doctor.

You probably are thinking that your local credit exchange covers that ground already, but we have found that an organization unless devoted entirely to our interests, does not render effective service because such an organization devotes its time to the merchant whose accounts are larger in volume and therefore neglects the professional man.

Our organization does not resort to form letters or any other mail campaign, but makes personal calls on all delinquents within reasonable driving radius of Lansing. By having practically the entire membership of each society, the number of accounts eliminates the long drives without a call and therefore cuts the collection charge down to minimum.

We have found that if the delinquent could pay some one, two or three dollars on pay day, which amounts he hates to come to the doctor with, he is more than pleased, and this personal call plan allows this to happen.

Under B, we have a board of governors made up of three of each profession who

* Read at the County Secretaries Conference.

acts as arbitrators on disputed accounts and who control the policy of the organization. This board also has access to all records and control the money on deposit to the organization credit, which is distributed monthly, less collection charges.

We are further protected by bond filed under Act 217 of Public Acts 1925, which required a \$5,000 bond for all collection agencies.

As to our efforts in public education we are co-operating with the Extension Division of the University of Michigan.

We have in our society five doctors who this winter have given five lectures each in the public high schools on Pasteur, Reed, Trudeau, Lister and Jenner. This makes a total of 25 lectures covering at least 700 students.

Judging from my personal experience in this work I feel that Junior High school students are too young for this work. I should like to hear some discussion on this point. We have also taken advantage of every opportunity in presenting medical problems to our various civic clubs.

The recent political controversy in regard to the new Tuberculosis sanitarium gave us an opportunity of discussing modern medical progress before several of our civic clubs and I cannot help but feel that this effort helped us educate representative men in our so-called mutual admiration clubs.

This brief paper I trust gives you an idea of the progress we have made during the present year and I sincerely hope it may offer some helpful suggestions to other societies.

MINUTES OF THE EXECUTIVE COMMITTEE MEETING

The Executive Committee of the Council met in Jackson following the County Secretary's Conference on April 27th, at 4 p. m.

Present—R. C. Stone, J. D. Bruce, B. C. Corbus, J. B. Jackson, F. C. Warnshuis and Councilors Henry Cook and J. Hamilton Charters.

1. On motion of Dr. Corbus, supported by Dr. Bruce, the secretary was instructed to conduct two Post-Graduate Conferences in the Upper Peninsula during the summer months, one at Escanaba and the other at Marquette.

2. On motion of Dr. Bruce, the Council will have its first session in connection with the Annual Meeting at Mackinac Island, on June 16, at 8:30 a. m.

3. On motion of Dr. Corbus, supported

by Dr. Bruce, the secretary was instructed to invite Dr. Victor C. Vaughan to deliver the address at the unveiling of the tablet on the Beaumont monument at Mackinac Island, at noon on June 17.

4. The secretary was instructed to not furnish stenographers for section meetings, but to instruct section officers that if those who discussed papers presented at section meeting desired to have their discussions printed at the time of publication of the paper that they be requested to furnish a synopsis of their discussion to the secretary, and that one stenographer will be employed for the meetings of the House of Delegates and the General Session.

5. On motion of Dr. Corbus, supported by Dr. Bruce, the expenses of Caroline Bartlett Crane in attending the National Meeting of the Woman's Auxiliary are to be defrayed by the State Society.

6. That the Executive Committee hold a meeting on June 1st in Grand Rapids at which time Dr. R. R. Smith's committee be invited to attend for the purpose of discussing the report that they are to submit to the House of Delegates.

The meeting adjourned.

F. C. Warnshuis, Executive Secretary.

MORPHINE AND OSTEOPATHS

For sometime we have been pursuing several government officials with the result that the following ruling and instruction is now in force:

Dr. Frederick C. Warnshuis,
Secretary-Editor,
Michigan State Medical Society.

Grand Rapids, Michigan,
May 19, 1927.

Sir:

Further reference is made to your letter of March 17, 1927, addressed to the Commissioner of Internal Revenue relative to the legal rights of osteopaths to use narcotic drugs in the practice of their profession in Michigan.

It has been ascertained by correspondence with the Attorney General of Michigan, that in his opinion osteopaths are not authorized by the laws of his state to dispense, distribute, or prescribe the narcotic drugs coming within the purview of the Harrison Narcotic Law. The Collector of Internal Revenue at Detroit, Michigan, has therefore been advised that persons qualified as osteopaths only, under the laws of the State of Michigan, should be refused registration as practitioners under the Harrison Narcotic Law.

Respectfully,

L. G. Nutt, Deputy Commissioner.

PRESIDENT JOHN B. JACKSON

That which our State Society has attained, the influence it has wielded and the

membership benefits that accrue must be credited directly to those members who have given of their time, thought and self to achieve organizational ends. We boast, and rightly so, that through the years such leaders have stood out in our history. We

contributed to our Society's welfare and for the membership. He has given of his time in abundance, he has constantly made available a dependable judgment, he has proffered over and over advice that was most helpful. Of high individual profes-



John Burt Jackson

point with pride to such men as McLean, Connor, Walker, McGraw, Carstens and their associates as well as to those who have served as Presidents and Councillors. To that array we now add the name of John B. Jackson of Kalamazoo—our retiring president.

Our official minutes and records for the past 12 years record repeated instances that reveal all that which Dr. Jackson has

sional attainment, self effacing in conduct, unselfish and a true friend he has honored our Society and its members. We record our appreciation and express our thanks for all that he has achieved.

WHO SHALL PERFORM CAESAREAN SECTION

Inasmuch as caesarean section involves both surgical and obstetrical considera-

tions, the question occasionally arises as to who shall perform the operation—a surgeon or an obstetrician.

Standardized general hospitals provide for a number of clinical divisions representing each of the major specialties, namely, surgery, medicine, obstetrics, pediatrics and eye, ear, nose and throat. Gynecology seems to be losing its distinctiveness and is fast becoming associated with surgery and obstetrics so that surgical operations formerly classed as gynecological now fall into the field of surgery, and obstetrical procedure formerly classed as gynecological is now obstetrical.

Dr. Walter Gossett in the June 1926 issue of the Kentucky Medical Journal in an essay entitled "Obstetrics as a Specialty," presents a clear conception of each side of the question. Inquiries were mailed to ten prominent obstetricians and surgeons. Only one classed caesarean section as surgical. He was a surgeon, stating that "Caesarean section should be performed by a surgeon who is working daily in the abdomen and therefore is supposed to be familiar with all conditions with which he may have to deal."

No one disputes that the obstetrician knows most about the pregnant woman and that he should care for her throughout her pregnancy, labor and puerperium. His care is largely medical in the prenatal and postnatal periods and obstetrical at the time of delivery. His familiarity with the female pelvis makes him proficient in rendering decisions involving this part of the anatomy. He must be able to meet certain surgical conditions arising at any moment during the stage of labor. His skill in operative obstetrics must be of the best quality. His work is a specialty, consisting of both medical and obstetrical practice. Should he perform surgical operations involving the opening of an abdomen as does the surgeon? Caesarean section is only indicated in from 2 to 5 per cent of obstetrical cases. It does not seem that the obstetrician qualifies as a capable abdominal surgeon when he only occasionally operates such cases. Conditions may at any time be present in the abdomen necessitating keen judgment and expert technique for the removal of a gallbladder, appendix, uterus or intestinal resection. The average obstetrician lacks experience in handling these cases and certainly does not qualify to do such work and should not be permitted to operate upon abdominal organs unless he has been especially trained to do so.

The average surgeon, on the other hand, opens many abdomens each week and from his experience no one questions that he is not qualified for all kinds of abdominal surgery. However, he is not skilled in obstetrics. There are more surgeons incapable of delivering obstetrical cases than there are obstetricians not able to perform an appendectomy. A surgeon usually chooses the easiest route and resorts to caesarean section more frequently than is indicated. His knowledge of the pelvis and the mechanism of labor is not sufficient to qualify him in passing judgment upon cases having relative indications for section. Surgeons do their work by appointment when the patient is ready for operation and usually cannot be interrupted by the necessary irregularity for caring for obstetrical cases. For these reasons the surgeon is not best suited to deliver obstetrical cases.

The solution of this problem may be logically solved in either of two ways. First, by allowing the obstetrician alone to take the responsibility of deciding the route, whether it be caesarean section or delivery through the birth canal. Where caesarean section is indicated, a competent abdominal surgeon shall take the responsibility of performing the operation. Co-operation between the two should consist of the obstetrician as consultant and the surgeon as operator. The second solution would be to create a new specialty, namely, that of obstetrical surgery. Obstetricians and surgeons with aspirations along the lines of surgery and obstetrics could be given special training to render them highly proficient in such practice.

Harrison S. Collisi.

MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION HELD AT ANN ARBOR, MAY 9, 1927

1. Present: Doctors Jackson, Haynes, MacCraken, Sundwall, Stapleton, Huber, Dempster, Biddle, Bruce, Henderson, Sinai, Mr. Werle and Miss Ross.

2. In the absence of Dr. Little, Chairman of the Committee, Dr. Jackson was asked to act as temporary Chairman of the meeting.

3. Reading of the minutes of the last meeting, Mr. Henderson.

4. It was moved and carried that a statement of appreciation of the Joint Committee for the effective service rendered to the Publicity Division of the Committee by the Michigan Tuberculosis As-

sociation be added to the minutes of the meeting of January 24, 1927.

5. Report of the Committee on Publicity by Dr. Jackson and Mr. Werle. At the January meeting the Committee on Publicity was asked to report on the possibility of interviewing the various publicity activities as represented by the Fishbein health articles, Gorgas Memorial articles, and the publicity activities of the Joint Committee. Dr. Jackson's report consisted of three parts, as follows: (a) Communication with Dr. Fishbein revealed the fact that his (Dr. Fishbein's) health articles were released to the press as personal publications. This was taken to mean that his articles were not available for use in our Michigan Publicity Program. (b) Dr. Jackson reported that in the judgment of his Committee it would not be wise at the present time to undertake to co-operate with the Gorgas Memorial Committee on Publicity, because of some differences which exist between the Gorgas Memorial organization and the American Medical Association. (c) At the last meeting the Committee on Publicity was authorized to consider the advisability of arranging with Mr. Shoenfield, the official representative of the Detroit News, for a series of health articles to be published daily. A conference with Mr. Shoenfield brought out the fact that there were certain difficulties which had arisen in securing interviews with physicians of authority on the various subjects to be treated. It appeared that the Detroit News was willing to compensate some person who was approved by the Joint Committee to collaborate with Mr. Shoenfield in the preparation of articles and interviews for the News. Dr. Sundwall suggested that Mr. Albert Renwick, a graduate student in his department, was eminently qualified, both by experience and training, to do such work. It was recommended that the local members of the Publicity Committee, (Doctors Sundwall, Bruce, Haynes, Cabot and Henderson), take up the matter of finding someone to work with Mr. Shoenfield in the proposed publicity project.

Mr. Werle then made a report of the number of articles furnished the papers of the state since the last meeting, together with the number of "takes" as reported by the Publicity Bureau.

Number of Joint Committee articles submitted since the January 24 meeting.....	14
Number of "takes".....	77

Mr. Werle pointed out the fact that this number (77), was probably far below the number of actual acceptances, because of the fact that the Clipping Bureau was frequently unable to determine what articles were sponsored by the Joint Committee.

In this connection Mr. Werle then brought up the matter of a uniform slug heading for the papers of the state which use our publicity material. It was moved and carried that this slug bear the caption, "Michigan Health Service." Mr. Werle stated that these slugs could be obtained in lots of 100 at 18 cents apiece. It was also moved and carried that Mr. Werle be instructed to communicate with the papers of the state to find out how many were willing to use the Joint Committee health articles, with the understanding that those who expressed a willingness to co-operate should be furnished with slug headings. The Committee was authorized to draw upon the Publicity funds to meet the expense of purchasing the slugs.

6. Report of the High School Health Education Program by Dr. Sinai and Mr. Henderson. During the past year an intensive program of high school health lectures has been carried on under the personal direction of Dr. Sinai.

Total number of schools where lectures were given.....	91
Number of health lectures chosen for high school service	117
Total number of student contacts made through health lectures	114,000

During the year Dr. Sinai not only visited all the schools in question and had personal contact with the speakers, but he made one or more additional trips to the various centers to check up on the progress of the work. One of the most significant statements in his reports was the fact that every school in the present circuit had requested that the health lectures be continued next year.

Mr. Henderson called attention to a number of letters which had come in from the high schools of the state relative to the high school health programs. In practically every case the reports thus made were favorable. In many of the schools students who listened to the lectures were required to write out brief synopsis of the addresses. For example, in the Cass Technical High School of Detroit, the Physical

Director requested that copies of health lecture outlines be furnished to him so that he might personally make a class study of their contents. The English teachers in the Hillsdale High School stated that Dr. Sawyer's lecture on Pasteur was taken up by the English class for special study. The pupils of the Sherwood High School were required to make notes and prepare papers for their English exercises. A number of letters also were received from the Grand Rapids High Schools containing essays of health lectures delivered there. "Colt", the official publication of the Northwestern High School of Detroit, stated in a lengthy report of Dr. Charles Kuhn's lecture on Trudeau that this lecture was one of the most interesting talks ever given to the pupils at Northwestern High School. Mr. Henderson also read a communication from the Jefferson Junior High School of Port Huron, in which the following statement occurs: "Inspired by the various lectures given us in this city on the accomplishments of Lister, Pasteur, Jenner, and Trudeau, we are seeking pictures of these great scientists to post in our school rooms. We would like also to secure health education slides in connection with high school hygiene in the seventh grade." Dr. MacCraken stated that the Detroit College of Medicine and Surgery would be glad to furnish such slides and if proper material were supplied he would be glad to prepare enlarged pictures for use of the high schools. Mr. Werle also stated that the Tuberculosis Association was prepared to furnish lithographs of Trudeau and a limited number of lithographs of Pasteur.

It was moved and carried that the Joint Committee express its appreciation to Dr. MacCraken and the Detroit College of Medicine and Surgery for the valuable service rendered in the production of slides and for Dr. MacCraken's offer to furnish additional slides and prepare enlarged pictures for use of the schools of the state.

It was also moved and carried that the Secretary be instructed to furnish the desired pictures and slides so far as such matter is available.

7. Report of the Committee on Social Hygiene lectures by Dr. Sundwall. On behalf of the Committee consisting of Dr. Sundwall, Dr. Biddle and Dr. Olin. Dr. Sundwall read a carefully prepared report covering the subject in hand. On motion of Dr. Bruce, seconded by Dr. Stapleton, the report of the Committee was accepted and placed on file, with the understanding that the Committee was to be continued,

with instructions to report at a later meeting as to ways and means of carrying on an effective educational program in social hygiene.

8. The question of the admission of the American Red Cross to membership in the Joint Committee was introduced by Dr. Huber. He read communications from Mrs. Vaughan and Mr. Baxter of the Red Cross organization. After a brief discussion of the advisability of admitting the Red Cross to membership, it was moved and carried that this organization through its Michigan representative, be invited to become a member of the Joint Committee on Public Health Education.

9. It was moved and seconded that the next meeting of the Joint Committee be held in Ann Arbor next fall upon call of the Secretary.

The meeting adjourned.

W. D. Henderson, Secretary.

THE JOURNAL
IS
YOUR FORUM—
WE INVITE YOU
TO UTILIZE
IT FOR THE
EXPRESSION OF
YOUR VIEWS
ON
MEDICAL SUBJECTS

MONTHLY COMMENTS

Medical—Economic—Social

Members driving by auto to our annual meeting are reminded that no automobiles are permitted on the Island. Cars may be parked in the garages and state park in Mackinac City.

No cult legislation was passed by the legislature. Active work by the State Society directed by Senator Greene and Dr. Guy L. Kiefer accomplished this end. Full details will appear in July Journal.

Delegates should be present at the opening session of the House of Delegates on the morning of June 16. A delegate assumes a definite responsibility to his local society. He can only acquit himself of that responsibility by attending all the sessions of the House of Delegates and participating in its deliberations.

The program for our annual meeting will be found in the forepart of this issue. Once more do we urge attendance. This promises to be a most interesting meeting—one you cannot well afford to forego. Ample hotel accommodations, beautiful environment, a scientific program of practical discussions, opportunity for fraternal intermingling, a program of sports and a chance for relaxation. What better could you ask for? Plan to be there.

The annual meeting of the Upper Peninsula Medical Society is to be held at Iron Mountain August 3rd and 4th. Our plans at present call for registrations and introductory addresses on the morning of the 3rd, scientific papers in the afternoon of this day, with dinner and dance in the evening. A handicap golf tournament, with appropriate prizes will occupy Thursday morning. Thursday afternoon will be given over to the presentation of scientific papers.

Time did not permit including in this issue a report of the Washington Session of the A. M. A. It will be commented upon in our next issue. Dr. W. S. Thayer of Baltimore was elected President-Elect. Minneapolis was selected for the 1928 meeting. Your editor was re-elected as Speaker of the House of Delegates. Michigan was represented by a goodly number of members including our delegates Doctors Brook, Moll, Gorsline, Hirschman and Chapman.

Mrs. Caroline Bartlett Crane of Kalamazoo is the Chairman of the Committee that is perfecting the organization of a Woman's Auxiliary for our state. Mrs. Crane attended the national Auxiliary meeting in Washington. She is now active in organizing County Society Auxiliaries. Mrs. Crane is very eager that the State Auxiliary organization be perfected at our Mackinac Island meeting. To that end do we urge that county organ-

izational committees come to our annual meeting. Every members wife is eligible, so bring your wife to Mackinac Island and urge that she aid in this organizational program.

"Asleep at the switch"—we feel sorry for the sleeper. We have laughed at the auto driver who falls asleep and lands in the ditch—it seemed so foolish and careless. But, we live and learn and as years roll by the saturation of experience induces sounder opinions and softens appraisals while also causing increased tolerance. A night of but four hours sleep, a busy day and then the necessity for a 100 mile drive commencing at 11 p. m. Rain, windows almost closed, heat and hum of the motor, steady gaze at the road ahead, all induced a drowsy mental alertness—when bump, bump, bang—we're in the ditch, but fortunately not turned over. Fell asleep at the wheel—it can and does happen. We know; it's a helluva sensation.

Communities have spent billions in the purchase of fire-fighting apparatus, engine houses, water systems and firemen's pay rolls. Then someone woke up and found that fires could be prevented, losses reduced and insurance rates lessened. There resulted a fire prevention campaign, education of the public in prevention measures and our fire loss and cost is being steadily reduced each year.

This leads us to make a comparison. Millions are being spent each year in caring for and treating crippled and defective children. The Shrine, Masons, Elks, Knights of Columbus, Rotary and maybe a dozen other organizations are collecting funds, building hospitals, providing clinics and are rounding up hundreds of crippled and defective children into these clinics and hospitals. Sob sisters and sob brothers are wailing and bemoaning these unfortunates and "workers" who are on salaries join in the chorus. Now we do not deny that these "kiddies" merit some help and require some aid, but we do hold that there are a sufficient number of organizations engaged in the work. New organizations are not needed; new clinics are not required.

What is required is a virile, well organized, aggressive movement of prevention and education. As fires can be prevented and losses reduced, so too, can the number of crippled and defective children be prevented and their economic loss reduced. The time is here when someone should wake up these fraternal and charity organizations to this fact. Let them compile the preventative methods and then set forth in a campaign to educate the people so as to reduce the number of defective children that are being born faster and in greater numbers than these hospitals and clinics are curing. We decry all this treatment propaganda and sympathy sobs and plead for facts and action that will be preventative.

O U R O P E N F O R U M

Affording Opportunity for Personal Expression

Editor of The Journal:

At the time of the Sectional Meeting of the American College of Surgeons for the states of Ohio, Michigan, Kentucky and Indiana, held in Dayton, February 21 and 22, it was decided that the Executive Committee for your state, of which you are Secretary, should stand for another year. The Committee consists of the following members:

Chairman—Walter R. Parker, Detroit.

Secretary—Frederick C. Warnshuis, Grand Rapids.

Counselors — Charles E. Boys, Kalamazoo; Joshua G. R. Manwaring, Flint; Ray C. Stone, Battle Creek.

Your very truly,

Allan Craig.

Dear Doctor Jackson:

Dr. Warnshuis has written, asking us to send you a copy of the last issue of our State Journal, giving a report upon our successful battle to amend our medical practice act so it will be enforceable. At Dr. Warnshuis' suggestion, we are sending you a copy of this Journal and you will find the report referred to upon pages 149 to 152. The passage of our act was due to a complete and active organization of the state medical profession.

I am showing the letter received from Dr. Warnshuis to our state president, Dr. Frank Cregor, whom I believe is better prepared to give a resume concerning legislative organization work in Indiana than almost any other man. A brief outline of our organization work follows:

The basis for our legislative organization started four years ago with the appointment of legislative committees in each county society. These committees are responsible for the legislators elected from their counties and are at the beck and call of the state committee at Indianapolis. These committees are legally appointed by each county society each year and their names certified to the headquarters office. They prepare slates during the primaries and get the legislative candidate's view upon scientific medicine even before they are nominated. Following the nomination they receive a blank from headquarters similar to the one enclosed. This blank is filled out by the committee following an interview of the candidate. It is then sent to the headquarters office and filed. By the time the legislators are elected we know each candidate's family physician, we know his general attitude towards scientific medicine and, most of all, we should know what layman has the most influence with him.

Starting in the summer before the legislature, just after the nominations, the president and the secretary of the state association make a trip into each of the thirteen districts. A special district meeting is held upon the call of the district councilor. Invited to this meeting are:

1. Secretary and president of the county societies composing the district.
2. The members of the legislative committees composing the district.
3. Officers of the district society.

The district meetings usually are dinner affairs. The executive secretary of the state association has a program arranged which may be followed at the discretion of the district councilor. Reports are made on each individual candidate. A general outline is laid for the legislative program.

These district society meetings held last summer and fall before the election were of immense value and put headquarters of the state association in direct touch with the various county societies. So far this is all preliminary work. Following the preliminary work comes the real legislative battle. The story of how the battle was fought in Indianapolis this last winter is given in the report which appears in The Journal we are sending you.

Don't hesitate to call upon us for any other information you think we can give you.

Yours sincerely,

Thomas A. Hendricks,

Executive Secretary, Indiana.

Editor of The Journal:

At our last annual meeting the suggestion was made and adopted that we send a delegate to your meeting at Mackinac Island, June 14th to 17th. This delegate, Dr. John R. Minahan, Green Bay, Wisconsin, comes to you looking for information that he can carry back to us on activities which we may adopt. Specifically, he does not visit your meeting to tell you of Wisconsin activities.

At your convenience I know that Dr. Minahan would appreciate a copy of your program and other information on the meeting plans. Thank you so much.

Cordially and sincerely yours,

J. G. Crownhart, Secretary, Wisconsin.

Editor of The Journal:

Following is a copy of a telegram from Dr. John McMullen, Senior Surgeon, U. S. Public Health Service, detailed to the American Red Cross at Memphis, Tennessee, on account of the flood disaster.

"Flood disaster has developed urgent demand for experienced health officers with administrative ability, sanitary engineers, epidemiologists and enormous need for biologics. We know we can count on your state for help. In order to answer calls it is necessary to know in detail names, qualifications, salary or how long, two weeks, a month, two months and so forth, for each person available. Also advise quantity and kind of biologics available now and later conference of state health officers of seven affected states with U. S. Public Health Service here. Agree that requests for and offers of professional service and material be cleared by state health officers through Medical Service, American Red Cross, which will bear expenses when necessary."

I have written Dr. McMullen that I have appealed to you, asking that you try to obtain volunteers from the general medical profession for the purpose of helping out in the struggle that they are having in the south and southwest.

Unfortunately, we are unable to do much from

this department because we have no excess of men nor have we sufficient money to spare for biologics.

I hope you will be able to help me obtain some volunteers because it would look bad if Michigan were to lag behind at a time of this kind.

Very sincerely,
Guy L. Kiefer, M. D.,
Commissioner.

Editor of The Journal:

Thank you very much for your very prompt letter giving us information on your Endowment Foundation and the articles of its creation.

This information will indeed be of help to us in drafting our Endowment Fund, and if we can ever be of service to you, please call upon us.

Very truly yours,
W. J. Burns, Executive Secretary.

Editor of The Journal:

The Federal Government has made a rate for the care of Federal prisoners confined in county jails as follows:

For the first prisoner seen in any one day, \$2.00.

All other prisoners seen in the same day, THE LARGE SUM OF \$.50. The attending physician is to furnish the medicine used and send in the medicine bill at the same time. Now the government does not pay the bill as sent in but as they think the medicine is worth.

Is this right?

I have tried to find out WHO MADE SUCH RATES but I can't find out a thing. First I took it up with the U. S. Marshall and he told me the rate was made in Washington. I then asked the Federal District Judge (Arthur Tuttle). He said it was a shame but he could not tell me who made the rate. I then asked our Representative, Bird J. Vincent and he did not have the courtesy to answer my letter but he could ask me for all kinds of help when running for office.

Now can you, as State Secretary of the Michigan Medical Society, find out who it is that made such rates? Do you believe that a doctor who will make calls for that sum should be a member of either County, State or the A. M. A.?

But some of the doctors that do this work and for the amount stated are members. If they will work for such cut rates what is the use of the Association? Dr. Baird of Bay City does the work in Bay County. I did it here only until I found out what the pay was, then I resigned.

You should take this matter up and see that the rates are changed. Our Society here are afraid to do anything about it. I think it a damn shame and am not afraid to say so. Will you let me hear from you on this matter?

Sincerely,
Dr. B. F. A. Crane,
County Coroner.

Editor of The Journal:

You may see I received this just after writing you. Now if the doctors will just go after this thing the rates will soon be made right. It is more often the doctors fault than the laity that we do not get what is our just dues. Please that this matter is taken up in the right way. I have fought this thing alone and am slowly getting results but if the Michigan Medical Society takes it up we can make better time. Yes, and get better rates. For rates see my last letter.

Two dollars first call and \$50 for all other calls that day for care of federal prisoners in county prisons.

Sincerely,
Dr. B. F. A. Crane.

Dr. B. F. A. Crane,
821 Stephens Street, Saginaw, Michigan.

My Dear Doctor:

I apologize for not acknowledging at an earlier date your kind letter of April 30th. I had hoped to be able to get the information you asked for and send it to you in one letter. I have not yet been able to secure the information needed. I am taking this occasion therefore, to acknowledge receipt of your letter and to say that just as soon as I am able to get the information, I shall be more than glad to forward it to you. I agree with you that these rates for medical services, as stated in your letter, seem unreasonably low.

With kind regards,
Yours sincerely,
Bird J. Vincent.

Editor of The Journal:

I understand that the American Medical Association is collecting data to be used as a basis for approval of schools for laboratory technicians. In view of this activity on the part of the committee for Medical education, I wonder if it would not be wise for the council of the Michigan State Medical Society to take some action in support of the new course of study at Michigan State College.

The college faculty are about to approve a requirement for a Doctor's Degree in this course which requirement will consist of a Bachelor's Degree, and two years of preceptorship in approved hospital, public health or research laboratory with a final year of resident work at the college. The preceptors under whom the candidates for this degree will be placed are to be approved by the college faculty, and must also be approved by the American Medical Association in much the same way as hospitals are now approved for interne training.

Those of us who are interested in this new educational venture feel that men who have secured the training required for the Bachelor Degree and in addition have been apprentices in high class laboratories would have all of the ground work necessary for Clinical Pathology.

One of the objects of establishing this course was to supply the field of pathology, bacteriology, and clinical laboratory work with men equany well trained as doctors of medicine, but who because of their highly specialized training and the possession of a strictly science degree would never be permitted to practice medicine, thus assuring their remaining in laboratory work.

I understand through Dr. Cook, that there is some possibility of a council meeting next Wednesday at Jackson, and I hope that in view of this course being somewhat in the nature of a "child" of the Michigan State Medical Society, that the council assists in its recognition by the American Medical Association. It seems to me that every effort should be made in with holding recognition from privately owned schools no matter what their standard may be.

With kindest personal regards, and assuring you of my great appreciation of your interest in this matter, I am,

L. R. Himmelberger,
Toledo, Ohio.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. Gordon Bahlman will spend the summer in London, England doing post-graduate work.

Dr. and Mrs. G. J. Curry are sailing June 11th for three months post-graduate work abroad.

Dr. R. G. B. Marsh of Tecumseh will spend the month of July in post graduate work at Harvard.

Dr. A. S. Warthin has been elected president of the American Association for Cancer Research.

Dr. S. K. Church of Marshall has been re-elected health officer of that community.

Dr. A. P. Biddle of Detroit has been elected Commander of the Michigan Naval and Military Order of the Spanish-American War.

The work on the new Hurley Hospital is progressing rapidly, the third story is about completed.

Doctors F. T. Edwards, University of St. Louis, 1915, and Wm. Keating, North Western Medical School, 1906, have been appointed to the Interne Staff of Hurley Hospital.

The Medical Staff of Hurley Hospital will meet Monday, May 8, 1927, 6:30 p. m. at the Nurses Home. The following program will be rendered: Dr. P. Leucocia, Physician in charge of X-ray Therapy, Harper Hospital, Detroit, Michigan, on "Results of X-Ray Therapy in Inoperative Malignancy." The above program is in connection with Cancer Week activities.

DEATHS

Dr. A. L. Jacoby, director of the psychopathic clinic of the Detroit Recorder's court, died May 2nd at a hospital in Springfield, Mass., following an acute attack of appendicitis. He was well known for his knowledge and study of criminals.

Dr. Sven Jespersen, Battle Creek, died Friday, May 15th, following a week's illness. He was for many years a member of the staff of the Battle Creek Sanitarium, severing his connection with them four years ago to enter private practice. Dr. Jespersen is survived by his widow, Dr. Lydia Jespersen, and one son.

The Journal has just received word of the death of Dr. L. W. Toles of Orlando, Fla. Dr. Toles moved to Florida two years ago and before that was a resident of Lansing, where he was active in civic affairs and also in affairs pertaining to the medical profession. He was a member of the Ingham County Medical Society, the Michigan State Medical Society and also of the American Medical Association.

Dr. Frank T. F. Stephenson, 901 First National Bank Bldg., Detroit, died in Providence Hospital, Saturday, May 21, of complications following an operation. Dr. Stephenson was born November 20, 1874, in Burlington, N. J. He came to Michigan at an early age, attended the Michigan Agricultural College and the Detroit College of Medicine and began practicing medicine in Detroit in 1901. For many years he was a member of the staff of Providence Hospital, and in 1916, 1917 and 1918 he was head of the department of medicine and for twelve years he was professor of chemistry at the Detroit College of Medicine. Dr. Stephenson was active in the various medical associations and also was a member of several fraternal orders.

Dr. Robert LeBaron needs no eulogy from press or pulpit. His eulogy is written deep in the hearts of his friends by his kindly acts. We feel our inability to say what is in our hearts about this great friend of ours, whose hearty voice and cheering smile is still with us, but in memory only. His going away is felt as a keen personal loss by the entire community. He was more than a good physician—He was a man.

All of the good qualities which go into the make-up of those men whom the people respect and revere were his in infinite quantity. Scarcely a home within a radius of many miles of Pontiac but has been cheered in time of trouble by his kindly smile and his gentle ministrations, and in every one of these households he is mourned as more than a friend.

Dr. LeBaron was born near Batavia, N. Y., June 27, 1838. He passed his early school days in Wayne and Oakland Counties, Michigan, and when eleven years of age went to Livingston County, where he made his home for fourteen years with Dr. C. W. Haze, under whose direction he commenced the study of medicine. After a preparatory course he entered the Medical Department of the University of Michigan, from which he was graduated in March, 1861. He immediately began practice in Livingston County, continuing for two years in association with Dr. Haze. About this time he received the appointment of Assistant Surgeon of the 4th Mich. Vol. Inf. Reg., and later acted as surgeon of the Regiment. He continued in the service until July, 1864, when he was mustered out at Detroit.

The 4th Mich. Inf. belonged to the Army of the Potomac, the grandest army that ever bore arms in defense of a nation's honor. He who knows the history of the Army of the Potomac knows the history of the 4th Mich. Vol. Inf. and can imagine some of the hardships through which our subject passed to keep the old flag floating in a Union sky.

In August, 1864, Dr. LeBaron located in Pontiac, where he spent the remainder of his life in service to his fellowmen, building up a large and lucrative practice. He was a man of great strength of character and stood high in public esteem.

With all the grief his passing brought to us, we should feel grateful that for so many years we have been blessed by the presence and services of this able physician and kindly man.

The lives of such men live after them, a blessing to the community in which they have been spent. May his reward be as great as his life deserved, and may his memory be always with us as an example to be emulated.

It is truly worth having lived, to be so sincerely mourned.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EATON COUNTY

The Eaton County Medical Society held its regular monthly meeting on the evening of April 29th at the Community Hospital, Charlotte, Michigan.

The minutes of the last meeting were dispensed with and as there was no new business to be considered the Society at once proceeded to the program of the evening.

Dr. Guy L. Kiefer, State Health Commissioner, then addressed the society on "Immunization Against Scarlet Fever." He gave us a very instructive outline of the work done in the working out of the Dick test, of its accuracy and its need in determining one's natural immunity to scarlet fever, and the 100 per cent immunizing power of the Dicks toxin. He emphasized that the immunization was without danger and should be used more generously throughout the state.

There were about 18 physicians present and all felt highly repaid for their effort put forth to attend.

H. I. Prall, Secretary.

MUSKEGON COUNTY

Regular monthly meeting of the Muskegon County Medical Society was held at the Occidental Hotel at 6:30 p. m., May 6, 1927.

After a short business session the meeting was turned over to Dr. R. Earle Smith of Grand Rapids, who gave an excellent illustrated lecture on "Recent Methods of Treatment and Diagnosis of Syphilis."

The meeting was attended by thirty-one members and a liberal discussion followed the lecture.

A. W. Mulligan, Secretary.

GOGEBIC COUNTY

Mr. Charles M. Humphrey, an Ironwood attorney, addressed the Gogebic County Medical Society in the regular meeting held on Friday, May 13. The subject of the address was "Medical Jurisprudence." The address was highly instructive and was prefaced by a very interesting and humorous comparison of the progress made by the legal and medical professions. Dr. A. J. O'Brien, Dr. D. C. Pierpont, and Dr. R. I. C. Prout were chosen to serve as members of the board of directors together with the president, Dr. P. R. Lieberthal, and the secretary, Dr. Louis Dorpat. Dr. E. B. Stebbins, chairman, Dr. W. L. Maccani and Dr. C. C. Urquhart were chosen as a committee to visit members of the society who are ill. At the next meeting to be held June 19, Dr. A. J. O'Brien will read a paper on "Endocrinology." It is planned to arrange a picnic in the month of July.

Louis Dorpat, Secretary.

ALPENA COUNTY

On April 21st the Alpena County Medical Society was honored by having as their guest Dr. Guy L. Keifer, State Commissioner of Health and there were assembled some twenty physi-

cians from Alpena and surrounding towns for this meeting.

Dr. Keifer motored up from Lansing and was accompanied by his most charming and gracious wife and were met by a goodly number of the Alpena physicians and their wives at the hotel, where a 6 o'clock dinner was enjoyed. After dinner all present adjourned to the high school auditorium where Dr. Keifer delivered a public address to a good sized audience on "Matters Pertaining to Individual and Community Health"—a wonderfully fine address, strikingly delivered and well received. Following the meeting at the high school a social hour was had with Dr. and Mrs. Keifer, in the grill room of a local cafe, at which were present all the local and visiting physicians together with their wives and sweethearts and following a whitefish dinner, Dr. Keifer addressed the physicians on the subject of "The Acute Infectious Diseases, Especially Scarlet Fever, Its Prevention and Treatment by the Use of Serum." Following Dr. Keifer's address a round table discussion was entered into and Dr. Keifer was called upon to answer many questions which he did to the satisfaction and enlightenment of all present.

Being loath to let Dr. Keifer leave our community without further opportunity to spread his wonderful message of Good Health, he was prevailed upon to remain over until the following morning and address the high school assembly, which included every student and the faculty of our high school.

Again, Dr. Keifer delivered a wonderfully inspiring address, bringing a message of clean habits and right living to a group of young and receptive minds and we feel that great good will result therefrom.

Alpena feels honored by having Dr. Keifer with us, if only for a brief stay. It did us good to know him and his most charming and gracious wife and we feel that his coming was of inestimable value both to our profession and to our community.

Wm. B. Newton, Secretary.

ST. CLAIR COUNTY

A regular meeting of Saint Clair County Medical Society was held at Hotel Harrington, Port Huron, Michigan, April 21, 1927. Supper was served at 6:30 p. m. The program began at 7:30 p. m. Members present: President Ryerson, Doctors Smith, Vroman, Ard, Kesl, Attridge, Treadgold, Burley, Patterson, Morris, Callery, Windham, Waters, Derck, Wellman and Heavenrich. Miss Josephine Halvorsen, Miss Elizabeth White and a body of student nurses from Port Huron Hospital were present as guests of the Society.

Dr. Don M. Campbell of Detroit read a paper on "Otitis Media, Mastoid Infection and Complications Thereof." His talk was illustrated by lantern slides. At the conclusion of his paper discussion was opened by Dr. M. E. Vroman, followed by Doctors Smith, Treadgold and Callery. Dr. Campbell closed the subject in the usual manner. A rising vote of thanks was given the

speaker by the Society. Meeting adjourned at 9:55 p. m.

A regular meeting of Saint Clair County Medical Society was held at Hotel Harrington, Port Huron, Michigan, May 5, 1927. Supper was served at 6:40 p. m. The program began at 7:45 p. m. Members present: President Ryerson, Doctors Smith, Vroman, O'Sullivan, Kesl, Morris, Ard, Waters, Heavenrich, Callery, Windham, LaRue, Haight, Ney and Wheeler. Miss Marie Fouchard, Superintendent of Port Huron Emergency Hospital and a group of supervisors and student nurses from Port Huron Hospital were guests of the Society.

Meeting called to order by President Ryerson. A motion was made by Dr. Reginald Smith, supported by Dr. M. E. Vroman, that the Society send a box of cigars to Mr. Wallace of the staff of the Desmond Theatre for his services as lantern operator for Dr. Don M. Campbell at the last meeting. Motion carried and the Secretary was instructed to comply therewith. Dr. Gertrude O'Sullivan asked the members of the Society not to make diagnosis of Varicella by telephone because the state law required an actual visit by a physician. Dr. Heavenrich demonstrated the latest device for resuscitation from gas poisoning and invited the members of the Society to call upon the Detroit Edison Company at any hour in emergencies if the apparatus could be used. Dr. Heavenrich stated the matter of transfer of telephone calls for physicians had been considered by the local manager of the Michigan Bell Telephone company, and a common point to clear all such transfers might be had for a small extra charge each month. The Secretary read a telegram from the State Society relative to chiropractors bill being reported out by the Senate Committee. No action was taken by the Society.

Dr. Boersig of Park, Davis & Co., then showed a two reel motion picture of the manufacture of biological products at the laboratories and at Parkdale. Following the picture Dr. Boersig answered many questions upon the subject by members in attendance. Meeting adjourned at 9:10 p. m.

George M. Kesl, Secretary.

BERRIEN COUNTY

The Berrien County Medical Society held its April meeting at the Hotel Vincent in Benton Harbor on April 26th, with dinner at 6:30, followed by the business meeting.

Dr. W. A. Smith of Berrien Springs was voted into the Society. Dr. W. C. Ellet of Benton Harbor was elected as delegate to the State Convention at Mackinac, and Dr. R. H. Snowden of Buchanan was elected alternate. A committee was appointed by the president to form the Women's Auxiliary in Berrien County. Mrs. C. A. Mitchell of Benton Harbor, Mrs. B. D. Giddings of Niles, and Mrs. H. G. Bartlett of St. Joseph.

Two excellent papers were given, one by Dr. Foshee of Grand Rapids on "Treatment of Thyroid Toxemias," and the other by Dr. Harrison Collisi on "The Toxemias of Late Pregnancy." Although the meeting was only 50 per cent attended those present were well pleased and expressed their appreciation to the men from Grand Rapids.

Cancer week will be observed in Berrien County May 9th to 14th, following the Blossom Festival. Dr. C. N. Sowers of Benton Harbor has Charge of arrangements and is planning clinics and pub-

lic meetings for the dissemination of cancer information.

W. C. Ellet, M. D., Secretary.

OAKLAND COUNTY

A meeting of the Oakland County Medical Society was held at the Board of Commerce March 18th, 1927.

Twenty-five members and two guests were present.

The meeting was called to order by President Colvin.

Minutes of the last meeting were read and approved.

A letter of tribute to the late Dr. LeBaron was read by Dr. Sutherland of Clarkstown. It was moved by Dr. Ferguson and seconded by Dr. Fox that the condolences be accepted by this Society and placed on Society record. A copy to the family and to the State Medical Journal for publication.

A letter of similar character to the late Dr. Bradshaw of Royal Oak was read by Dr. Morrison of that city.

It was moved by Dr. Sibley, seconded by Dr. Fox that a copy be placed on Society records, a copy sent to the family and one to the State Journal for publication.

The proposition regarding the program to be held by this Society at Flint was referred to the Board of Directors.

The paper of the evening was one of "Pituitary Tumors," given by Dr. Max Peet of the University of Michigan at Ann Arbor. Dr. Peet's talk was learned and valuable. It was highly appreciated by the members of the Society and subjected to discussion and questions.

There was a meeting of the Oakland County Medical Society at the Board of Commerce April 28th at 6:30 p. m. Dinner was served.

The business of the evening included a motion picture by Dr. Robert H. Baker, seconded by Dr. Cobb that a proposition of creating a Physicians Exchange in Pontiac be referred to the Pontiac Physicians Society, action to be taken by them.

A communication from the Boy Scout's Executive of Pontiac, asking for aid to the extent of approximately \$200 for the building and placing at Tommy's Lake a shack to be used as a first aid station for the Boy Scout's organization was referred to the Board of Directors.

Bills were checked and allowed.

There was a report made by the Chairman of the Legislative Committee, Dr. E. V. Howlette of Pontiac.

The program for the evening consisted of motion pictures representing the mode of manufacture and the handling of biological preparation. This was presented to us in motion pictures by Dr. Boersig, a representative of Parke, Davis & Co., Detroit.

The meeting was adjourned.

Frederick A. Baker, Secretary.

INGHAM COUNTY

Report of Post-Graduate Conference, Lansing, April 26, 1927 at Elks' Temple is as follows:

The Post-Graduate Conference held in Lansing, was a decided success, judging from the remarks of those in attendance. The program was carried out in every detail and our registry showed an attendance of 70. We felt that the program covered points of practical significance to the men in practice.

Much interest was manifested in Dr. Youman's paper on the "Newer Treatment of Pernicious Anemia." Dr. W. J. Cassidy's paper on "Fractures" deserved credit for showing practitioners, in a very improved manner, many common sense procedures in the treatment of the more common fractures. Dr. Alexander Campbell's paper was very interestingly demonstrated by moving pictures and demonstrated many helpful hints to the obstetricians. Dr. P. M. Hickey of Ann Arbor, gave two papers in his usual interesting manner. The one of special importance being on the "Evaluation of Gastric X-ray Report."

Doctors were registered from Ann Arbor, Lansing, Grand Rapids, Charlotte, Fowler, Eaton Rapids, Detroit, Reading, Mason, Jackson, Hillsdale, Cadillac and East Lansing. We are certain that the Ingham County Medical Society recommends these Post-Graduate Conferences as a wonderful aid to the general practitioner as well as specialists.

C. F. DeVries, Secretary.

MICHIGAN STATE MEDICAL SOCIETY POST-GRADUATE CONFERENCE, LANSING, APRIL 26, 1927—HOTEL OLDS

PROGRAM

- 11:00 a. m. Opening Remarks,
B. F. Green, Councilor.
- 11:00 a. m. Treatment of Peptic Ulcer,
John B. Youmans, M.D., Ann Arbor.
- 11:30 a. m. Evaluation of Gastric X-Ray Report,
Preston M. Hickey, M.D., Ann Arbor.
- 12:00 m. Luncheon—Hotel Olds.
- 1:15 p. m. Newer Treatment of Pernicious Anemia,
John B. Youmans, M.D., Ann Arbor.
- 1:45 p. m. Cancer of the Esophagus,
Preston M. Hickey, M.D., Ann Arbor.
- 2:15 p. m. Fractures,
W. J. Cassidy, M. D., Detroit.
- 2:45 p. m. Preservation of Interuterine Life,
Alexander Campbell, M. D., Grand Rapids.
- 3:15 p. m. Acute Abdominal Conditions,
W. J. Cassidy, M. D., Detroit.

WASHTENAW COUNTY

At our meeting last night the Washtenaw County Medical Society unanimously voted Dr. Victor C. Vaughan to Honorary Membership.

Proposal for similar recognition by the State Society is to be made in regular manner for action at Mackinac Island.

Kindly see that there is no break in Dr. Vaughan's files of The Journal. Bill for interval if received by us will be honored by our Society.
Theron S. Langford, Secretary.

LENAWEE COUNTY

We have made final arrangements for our June meeting for Lenawee County.

The meeting will be held at Morenci on June 9th, at the Morenci Hotel, jointly with the members of Fulton County, Ohio. There will be a dinner at 6:00 p. m., eastern time, followed by the scientific program, which will be as follows:

"The Bedside Diagnosis of Diseases of the Upper Abdomen," by Dr. C. H. Heffron of Adrian.

"The Surgical Treatment of Diseases of the Upper Abdomen," by Dr. L. J. Stafford of Adrian.

The discussion will be opened by two members of the Fulton County Medical Society.

While this meeting is going on the doctor's

wives will meet in Morenci with Mrs. C. H. Westgate for the purpose of organizing the Women's Auxiliary of the Lenawee County Medical Society.

There will be no meeting of the Society in July. The annual picnic will be held in August at the cottage of Dr. and Mrs. L. J. Stafford at Sand Lake.

I would appreciate having this report included in the report of the April meeting which I have already sent to your office.

The April meeting of the Lenawee County Medical Society was held in Adrian on Thursday the 21st, 1927.

This meeting was held jointly with the Lenawee Bar Association at the Dobbins Tea Room on South Main street. Dinner was served at 6:45 p. m. There were 10 lawyers present, and 33 physicians including Doctors Tibbals and Jackson. Dr. Johnson, a member of Hillsdale County Medical Society, was a visitor.

After the tables were cleared, President Hammel introduced Dr. Frank B. Tibbals of Detroit as the first speaker. Dr. Tibbals spoke on the topic, "The Cause and Prevention of Malpractice Suits." He gave a very clear idea of what he believes to be the three main causes of malpractice suits, namely the "hungry lawyer," the "jealous doctor," and the "dissatisfied patient." He cited numerous examples of different cases with which he has been familiar during his 17 years experience as a member of the Medical Defense Committee. He gave his opinion that the best means of preventing these cases was for closer union and better fellowship between physicians in their respective communities. He also stated that a change in the present system of expert medical witnesses would help to keep cases of this kind out of the courts.

President John B. Jackson was the second speaker and after outlining the program of the State Society for the coming year, telling us some of the things that are being done now, he gave a very fine talk on the benefits of organization.

Mr. James H. Baker, President of the Lenawee Bar Association, expressed the appreciation of the members of the Lenawee Bar, in being invited to the meeting and extended a cordial invitation for the Members of the Medical Society to meet with the Lawyers on May 9, 1927, at the Lawyers Club in Ann Arbor.

The routine business of the Society was dispensed with until the meeting in May.

The June meeting will be held jointly with Fulton County Medical Society of Ohio. The meeting will be held either in Morenci or Adrian. The speakers will be Doctors L. J. Stafford and C. H. Heffron of Adrian. Their papers will be discussed by two members of Fulton County.

R. G. B. Marsh, Secretary.

TRI-COUNTY

Members registered at Michigan State Medical Society Post-Graduate Conference, held at Mercy Hospital, Cadillac April 19, 1927 were:

E. B. Miner, C. F. Inch, M. Velkoff, L. Swanton, Traverse City; E. B. Babcock, Kalkaska; G. M. Brooks, Tustin; Earl Fairbanks, Luther; S. E. Neihardt, South Boardman; G. O. Switzer, L. J. Goulet, Ludington; J. D. Buskirk, A. R. Hayton, Shelby; H. S. Collisi, Grand Rapids; A. A. McKay, Manistee; E. A. McManus, Mesick; J. F. Douma,

Lake City; Willis Geerlinga, N. DeHaas, Free-mont; A. Holm, Leroy; T. Y. Kimball, Manton; E. L. Eggleston, Manly J. Capron, Battle Creek; W. L. Chandler, Ward Giltner, East Lansing; David Ralston, J. F. Carrow, W. Joe Smith, Otto I. Ricker, J. F. Gruber, G. D. Miller, S. C. Moore, Cadillac.

Dr. Ralston (Honorary Member of State Society) just returned from spending the winter in New York City.

Report of Michigan State Medical Society Post Graduate Conference held at Cadillac April 19, 1927.

Councilor Dr. Otto L. Rickers' Opening Statement enclosed under separate cover. Also complete registration list.

The complete program was carried out on schedule time with the one exception of Dr. E. L. Eggleston's paper on "Disorders of the Colon." Dr. Eggleston's paper on "Test for Liver Function" in the forenoon was so interesting and brought out such general discussion that he was forced to continue same in the afternoon and gave the time of his "Colon" paper to further liver discussion, with the understanding that his hour for this would be taken up later, but the time would not permit, which was a severe disappointment to all, as they knew something of what he had in store for them. It was very evident that physicians are anxious to learn as much as possible about the various varieties of liver cases and the various tests for liver function, which must be carried out in laboratories equipped for same, and the hospitalization of patients to determine the numerous abnormalities of the liver, and as far as possible to separate the operative from the non-operative cases and treat them more intelligently.

W. L. Chandler, Ph. D., met all the things expected of him in giving a brief history of his six and one-half years of work in perfecting his Colloidal Iodine. He is so full of his subject that time will not permit one to even suggest the wonderful scientific achievement he has worked out for medical science. The possible uses of this wonderful preparation are too numerous to mention and the future possibilities of this one preparation will revolutionize the entire practice of medicine and surgery. Its uses in both the animal and human family will certainly be a God-send to this and all future ages. The writer had the pleasure of having a side visit with Professor Chandler and Professor Giltner for an hour up in the Look-Out on his Fox Ranch in the morning. I only wish that all of those in attendance could have been there and met these gentlemen in their element, or field, namely, biology, bacteriology and parasitology.

Professor Ward Giltner in his two appearances made some very dear friends for his work. His discussion of "Animal Diseases Transmissible to Man" and his description of their department at the state college, and especially of the four year course in medical biology and what it means to the medical profession was well received. His explanation of the specific type of training, and the fact that they are not turning out M.D.s but aids to the medical profession, and that this is to be their life work, and hence are not to be compared to the usual M. D. student who has taken a short course in laboratory work and starts out to do this in some small hospital only until such time as his acquaintance made in said city will enable him to hang up his shingle and become a

competitor of all those he has been working for. All present were happily surprised to learn that this branch of the state college was the best of its kind in the United States if not the world and that they had students enrolled from every state in the Union and from foreign countries.

Dr. Manley J. Capron of Battle Creek took the hour on the regular program as assigned to Dr. Eggleston and gave a paper on "Treatment of Primary Anemia." This was declared to be the best and most complete treatise on the subject ever listened to. His symptomatology and etiology together with the treatment with special reference to the diet brought out many questions and hence added to the interesting discussion. The writer thinks that more publicity should be given to the diet suggested by Dr. Capron.

Dr. H. S. Collisi with his two papers on "Prenatal Care and Treatment of the late Toxemias of Pregnancy" could not have chosen two more interesting and practical subjects. The doctor was full of his subjects and his subjects were full of the things that all wanted to know and as he dealt with the treatment side of his subject, he at once had the ear of every M. D. as they all feel that they get too little of this side of the profession in the majority of papers.

Noonday luncheon at Hotel McKinnon as guests of a union meeting of the Rotary and Exchange clubs for the specific purpose of meeting with the doctors. The Rotary club had a Eulogy given for one of their deceased members, i. e., Mr. Sanborn, city librarian for the past 22 years. This, of course, did not tend toward much joviality or frivolity, but Professor Chandler and Professor Giltner were well received in their talks, and of course had a very large audience.

Three o'clock luncheon at Mercy Hospital, where the meeting was held was enjoyed by all and from the things devoured during the short intermission I think that all went away feeling that the day had been well spent and that the entire program was a decided success.

Mercy Hospital was open for inspection and the Sisters of Mercy did themselves credit for the part they had in making things pleasant and having the doctors feel at home and comfortable during the entire session.

S. C. Moore, Secretary.

RE: DR. RICKER'S OPENING REMARKS

Members of the Ninth Councilor District of the State Medical Society, guests, and friends, I welcome you here today as councilor of the Ninth District and as representative of Michigan State Medical Society; and also as a member of the Staff of Mercy Hospital, and the Tri-County Medical Society, Michigan State Medical Society, of which most of you are members, doubly welcomes you to this Clinic, and they wish you to feel that it is your Clinic. They have put forth every effort possible to give you a program today that is in harmony with every effort to please. I am proud to speak to you today concerning a State Society. Its officers, Council as well as House of Delegates, are making every effort to make and keep a Society that is well up in the front ranks of every state in the Union. If you read The Journal, you will find every day of the week, month and year we are pushing forth with the one object, and that is to help the physicians. These Clinics are only a small part of what your state is doing for you. Might I not mention Post Graduate Programs at the Uni-

versity Hospital, your Legislative Programs, education of the public by means of lectures. etc.

I must say that your attendance here today is greatly appreciated by your Councilor and your State Society; for the success of these clinics depends upon the attendance. Any meeting of the Medical Society depends upon the ability to secure attendance. Any meeting of a Medical Society that is well attended is a successful meeting because everybody likes to be in a crowd. These men who come here like to have a crowd, because a larger audience carries a mental stimulus—not only to speak, but to come again. Along with attendance comes a good program, and I believe we are going to have that today. I hope we may have every person stay through this meeting today and when the day is over, I am sure we will be able to take back to our patients some one thing which will help us to make better physicians for the local community in which we practice, better members of the State and American Medical Societies, and I assure you if such is the case, the efforts of the speakers will not be in vain. I must remind you of the meeting of the Secretaries at Jackson on April 27th, of the State Meeting at Mackinaw Island, June 15, 16 and 17, and of the great American Medical Association at Washington, May 16-20.

Otto L. Ricker, Councilor 9th District.

KALAMAZOO COUNTY

The April meeting of the Kalamazoo Academy of Medicine was held as an all-day session at Fairmount Hospital on the 19th. In the forenoon a ward walk was conducted by Dr. G. L. Bellis, Medical Director of the Maundale Sanatorium, Wauwatosa, Wisconsin. At noon a delightful lunch was served by the hospital staff. In the afternoon a chest clinic was given by Dr. Bellis and a ward walk through the contagious department conducted by Dr. J. D. Gordon from the Herman Kiefer Hospital of Detroit. The complimentary banquet served by the hospital in the evening was followed by the regular business meeting.

The minutes of the last meeting were approved as printed in the bulletin.

Motion was made that F. W. Hyle and Wilbur B. Payne be elected to associate membership in society. Seconded and carried.

The matter of increasing the amount of insurance carried on the academy room equipment was referred to the board of directors for action.

Dr. Boys spoke about the plans of the cancer committee to give diagnostic clinics in the local hospitals for a two-day period in place of the talks which have usually been given during cancer week. The plan is under way here under the direction of the clinical program and program committees.

Dr. Andrews desired the names of men who would be willing to devote time to these clinics.

The president expressed a desire to have the public health committee co-operate with the program and clinical program committee, Dr. Andrews to act as chairman of the combined committees.

Dr. Jackson spoke about the new osteopathic bill introduced in the last legislature, which is an effort to create a fifth school of medicine based on "The Structural Integrity of the Body Mechanism."

Dr. Thompson, in behalf of the hospital board and staff, welcomed the members of the society and expressed their pleasure in having the society spend the day at the hospital.

Dr. Stewart in behalf of the society expressed appreciation for the entertainment and work presented during the day.

Dr. Shepard seconded Dr. Stewart's remarks and made a motion, which was supported and carried, that the society extend a rising vote of thanks to Dr. Thompson, the hospital board and staff for the entertainment of the day.

There being no further business the scientific program was carried on as printed in the bulletin.

GRAND TRAVERSE-LEELANAU COUNTY

This Society met in regular session Tuesday evening, May 3rd, at the General Hospital. The Wexford County Society were our guests, and furnished the scientific program. At 6 o'clock we were entertained at dinner given by Dr. and Mrs. George Inch in their apartments at the State Hospital. It was a delightfully social affair. After dinner we went to the General Hospital where the following program was given:

"Ectopic Pregnancy"—Dr. W. Joe Smith, Cadillac.

"Goitre, Its Classification, Diagnosis, etc."—Dr. G. D. Miller, Cadillac.

"Sinusitis"—Lantern slides and X-ray demonstrations—Dr. Otto L. Ricker, Cadillac.

All of these papers were freely discussed by the members and altogether it was a very profitable evening, socially and professionally.

Last month the Cadillac bunch were hosts to the men from Traverse City, and they did the trick in true Cadillac fashion. These inter-society meetings are becoming quite popular in our section, and they are very satisfactory, affording us the opportunity of a better acquaintance and understanding of our neighbor physicians.

G. A. Holliday, Secretary.

GENESEE COUNTY

The following is the Scientific program of the Genesee County Medical Society from December 15, 1926 to April 20, 1927, inclusive:

December 15th, 1926, Dr. Hugh Cabot, University of Michigan, spoke on "Disease of the Gall Bladder, With Particular Reference to the Use of the Dye."

January 12th, 1927, Dr. H. Cummings, Ann Arbor, Michigan, spoke on "Caesarian Section."

January 26th, 1927, Dr. Robb, Detroit, Michigan, spoke on "Headache, of Oculo-Nasal Origin."

February 9th, 1927, Dr. Mortmer, Herman Kiefer Hospital, Detroit, Michigan, spoke on "Meningitis."

February 23rd, 1927, Dr. Baker, University of Michigan, spoke on "The Heart in Goitre."

March 9th, 1927, Mr. Visick, F. R. C. S., London, England, spoke on "Peptic Ulcer."

March 23rd, 1927, Dr. Shawan, Detroit, Michigan, spoke on "The Clinical Aspects of Thyroid Surgery."

April 6th, 1927, Dr. Chandler, University of Michigan, spoke on "Colloidal Iodine."

April 20th, 1927, Dr. R. McKean, Detroit College of Medicine, spoke on "Pneumonia."

Cancer week was observed in Genesee County from May 11 to 14, inc., and the clinics were held at the Flint Board of Health dispensary. These clinics were conducted by volunteer members of the Genesee County Medical Society and were held daily from 10 a. m. to 12 m. They were arranged by Doctor Max Burnell, chairman of

the Genesee County Cancer Prevention Committee and publicity was given to insert same through the columns of the Flint Daily Journal. About two hundred patients were examined and many cases of various types of malignancy were discovered and treatment in those cases where a probable cure could be effected. All cases were placed under the observation of the patients family physician. Genesee County Medical Society feels that the Cancer Prevention week was a success.

The delegates to the State Society are Doctors C. F. Moll and H. E. Randall. Alternate delegates being Doctors J. G. R. Manwaring and J. Benson.

Spring meeting of the Michigan Trudeau Society, held jointly with Genesee County Medical Society at Hurley Hospital, Flint, Michigan, May 11, 1927. The program was as follows:

PROGRAM

2:00 p. m.—Nurses' Home, Hurley Hospital
Bronchiectasis in Children (Clinic),
Dr. E. B. Pierce, Flint.
Tuberculosis of Bone and Joint (Clinic),
Dr. C. E. Badgeley, Ann Arbor.
Dr. George Curry, Flint.
Exudative and Productive Tuberculosis
Pathological Demonstration,
Dr. Max Pinner, Northville.
Symposium on X-ray of the Chest,
Dr. J. B. Amberson, Detroit.

NOTE—Members are asked to bring any interesting chest films they would like to have discussed. We cannot promise that all will be discussed, but bring them along for the symposium.

6:00 p. m.—Nurses' Home, Hurley Hospital
Dinner (One dollar per plate)
Results of Light Treatment in Surgical
Tuberculosis,
Dr. Clarence Hyde, East Akron, Ohio.
Some Mistakes in the Diagnosis of Pulmonary
Tuberculosis,
Dr. M. Lewison, Chicago.

THE MICHIGAN TRUDEAU SOCIETY

Organized in 1916 with the object of promoting, among medical men, an interest in the study of tuberculosis. Two meetings a year are held—one in the spring and one in the fall—at which scientific programs are given, and where members may meet those from other communities in friendly discussion of their work. The secretary will gladly discuss membership with any interested physicians not now members.

Geo. J. Curry, Secretary.

KENT COUNTY

The Kent County Medical Society held its regular meeting on April 4, 1927, in the Italian room of the Pantlind Hotel, where a dinner attended by 62 members was held preceding the evening meeting, which was addressed by Dr. Fred H. Albee, Professor of Orthopedic Surgery in the New York Postgraduate Medical School. His subject was "Ununited Fractures," and his address was accompanied by several reels of moving pictures descriptive of his operations, and demonstrations of recoveries accomplished by these operative measures.

The next regular meeting was held on April 28, 1927, also in the Pantlind Hotel. This meeting was a joint meeting with the Holmes Dental Club of Grand Rapids, and was addressed by Dr.

E. C. Rosenow of the Mayo Clinic upon the subject: "Further Studies on Focal Infection and Elective Localization."

The meeting was preceded by a dinner in the Colonial room of the Pantlind Hotel, which was attended by 102 members of both societies. There were over 200 members present for Dr. Rosenow's address. In addition to the local discussants of this paper, it was also discussed by Dr. W. G. Rickert, Professor of Physiological Chemistry and Hygiene in the Dental Department of the University of Michigan. It is proposed to make this joint meeting an annual affair, and it is hoped by this means to promote better co-operation between the dentists and physicians of Kent County.

On May 11, the Postgraduate Conference of the Michigan State Medical Society for the Fifth Councillor District, comprising the counties of Ionia, Montcalm, Barry, Ottawa and Kent, was held in the solarium of Butterworth Hospital for the afternoon session, and later in the Italian room of the Pantlind Hotel for the evening session. There were 72 members of these constituent societies present at the afternoon session, 45 of whom remained for the dinner in the Pantlind Hotel, and the addresses of the evening. Numerous members expressed their appreciation of the value of this conference, where the following program was rendered:

"Caesarean Section and Other Operative Procedures"—Alexander M. Campbell, M. D.

"Interpretation of High Blood Pressure and Its Treatment"—Burton R. Corbus, M. D.

"The Phophylaxses of Infancy"—Frederick J. Larned, M. D.

"Local and Regional Anesthesia for the General Practitioner"—William H. Veenboer, M. D.

"Scarlet Fever Immunization"—Guy L. Keifer, M. D.

"The Medical and Surgical Aspects of Biliary Tract Disease"—James D. Bruce, M. D.

"Neurology of Peripheral Nerve Lesions"—Lewis J. Pollack, M. D.

"Animal Diseases Transmissible to Man"—Professor Ward Giltner.

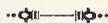
The week of May 8 to May 13 was set aside by the Kent County Medical Society as Cancer Week. In collaboration with the Councillor of the Fifth District a "Diagnostic Survey of Possible Cancer Cases" was carried out in the three hospitals of Grand Rapids, namely, Butterworth, Blodgett and St. Mary's. It was arranged to have teams of four men present in the out-patient departments of these hospitals, where patients who presented themselves were examined without cost to them, for possible cancer. Over 450 persons applied at these hospitals for examination during the week.

The Grand Rapids Herald and the Grand Rapids Press co-operated in publishing material concerning cancer, and articles descriptive of the purpose and motive of this Cancer Week program. On the evening of May 11, an address to the public on the subject of "The Menace of Cancer" was delivered by Dr. James D. Bruce, Professor of Internal Medicine at the University of Michigan, in Press Hall.

The Kent County Medical Society feels that this movement was highly successful, that it promoted an interest in the early diagnosis of cancer among the laymen, and helped to promote a feeling of altruistic concern for the medical welfare of the public. It is proposed that this program should be carried out each succeeding year, under these auspices.

H. T. Clay, Secretary.

County Society Secretaries' Annual Conference, Michigan State Medical Society



April 27, 1927, Hotel Hayes, Jackson, Michigan

WEDNESDAY MORNING SESSION

April 27, 1927

The Annual Conference of the County Secretaries of the Michigan State Medical Society was called to order in the Ballroom of the Hotel Hayes at Jackson, Michigan, at eleven o'clock, April 27, 1927, J. B. Jackson, President, presiding.

President Jackson: If the members will come to order we will get the meeting started.

The first number on the program this morning is opening remarks from the Chairman of the Council, Dr. Stone.

Dr. R. C. Stone: Mr. President and Gentlemen: You will notice that our president is feeling very humorous and good natured this morning. He didn't have much time to think about what he wanted to say and neither have I. He thought he would pass the buck to me.

I don't know what I can say to you men that you do not already know about the functioning of the Michigan State Medical Society in co-operation with our County Society work. Your parent body is always anxious to render every assistance which it is possible to render to your County Societies. Its officers and its Council are always considering ways and means of furthering departments in medicine with a hope of improving the general standards of medicine throughout Michigan.

To review briefly over the last year or two some of the activities which have been undertaken and consider them, you will then agree with me, I believe, when I say that much progress has been made. We believe that very much good has come from our post-graduate conferences throughout Michigan.

We felt—by "we" I mean the Council and your Michigan State Medical Society—in recommending the minimum program for County Society work throughout Michigan (which is now in operation in most of the County Societies) we were taking a step forward in the right direction. If there is anything that I would like to em-

phasize to you this morning in particular in conjunction with that minimum program it is that you should, to the fullest extent possible, work to meet that program and go even farther if you can.

One of the most important features, as we see it, is for progressive medicine and education of the public as well. On that program is the feature of periodic examination of the apparently healthy. As to how much progress has been made in the various County Societies in that line I am not able to say. I know that in some localities they have adopted it and they are working out a definite program and are going about it very liberally. I think we should all take it upon ourselves as individuals and as part of our County and State Societies to put that program over generally throughout Michigan.

We have in mind other features which we hope to develop from time to time. We hope you will render the same hearty spirit of co-operation that you have always exhibited. As I said a moment ago if there is any time you want help from the Council or any part of your State Medical Society and want assistance for furthering your individual County Society problems we will always be most glad to help you. (Applause).

President Jackson: I would like to second what Dr. Stone has said as far as the State Society organization is concerned. I have a feeling that sometimes we think that the State Society is one thing and the County Society is another thing. We should be a unit organization and the State Society and County Society ought to work in close co-operation.

It has been my hope that general policies for the State Society work might originate to a great extent in County Societies. You men who are secretaries know and appreciate the difficulties that the County Society works under. It is usually a mad scramble to get a program and considerable effort to get the men out to hear it. There isn't much time when County Societies are in session to consider general plans and policies of organized medicine.

It seems to me aside from the work of

your County Society, which is your prime responsibility as secretaries, that you ought to consider matters of general policy for organized medicine in the state of Michigan. You know that there are various problems which come up from time to time. You are besieged, as secretaries, by the State Society organization to send telegrams and to get in communication with your representative. You get a good deal of this detail work.

I didn't plan to make a speech here this morning, but there are certain things which I think might be all right to discuss at this time. I don't know just what the secretary plans to say but I don't want to steal all his thunder.

Just yesterday evening I was talking with some of the men who are interested in State Society work as to what our policy towards this legislation program should be. I have a feeling that it is time for organized medicine in the state of Michigan to take some definite stand toward our Medical Practice Act. I would like to know how secretaries and presidents of the County Societies feel about it. What should we do?

Personally, I do not approve of going down and asking every session of the Legislature to please not do this or please not do that. I have almost gotten to the point where I think if the state of Michigan wants a chiropractic law, or wants to make osteopaths full-fledged physicians, I am perfectly willing they should do it. As one interested in the practice of medicine I have about reached the point where I want to let the dear public have what they want.

I know that might perhaps be considered rank heresy and that the rank and file of the doctors of the state probably wouldn't agree with me, but it seems to me that the efforts we have been making since I have been interested in the State Society organization have been rather unsatisfactory. I wonder if the time hasn't arrived when organized medicine in the state of Michigan should make some effort to bring about some change in our Medical Practice Act and means for its enforcement.

You know, and we all know, that there are various irregular practitioners practicing throughout the state of Michigan who are practicing outside the law. Sporadic efforts are made to put a stop to it. Somebody makes a complaint and if he has enough influence with the prosecuting attorney he may succeed in getting a case to court and the offender is fined. But,

we don't get far, if anywhere, with that.

About two or three weeks ago some of us went down to Lansing to appear before the Committee on State Affairs concerning a bill which the osteopaths brought into the Legislature asking that they be made full-fledged physicians. Our present Medical Practice Act recognizes four schools of medicine: Regular, homeopathic, eclectic and physiomedic. As a matter of fact in our organized medicine we don't recognize any such schools, we are all one school and we are all regulars. We all try to pick out what is best in medical practice.

The osteopaths brought in a bill to have a fifth school of medicine recognized in addition to the four already in the Act. That school is the school of osteopathy. I have been very much interested in the evolution of the osteopath. Fifteen or twenty years ago, or whenever it was that osteopathy was conceived and born, the osteopaths didn't know very much. They had very poor training and were about on the same level with the chiropractors who are practicing today. Their training was very imperfect. But, things have changed. A man who graduates from an osteopathic school today has to have a high school education and four years of college work. He studies the sciences. He knows about anatomy, physiology, pathology and bacteriology. These young men graduating from osteopathic schools, having spent four years of their time in training are not willing to confine themselves to adjusting people's backs.

I was quite interested in this bill which they introduced giving them a right to practice medicine and surgery on an equal footing with other doctors of medicine. I was quite interested as to how they define their system of practice. They didn't say anything about the backbone or the spine or any adjustments. They said their school of medicine was based on the structural integrity of the body mechanism, whatever that means. They didn't limit themselves to adjusting the back.

These men want to practice medicine like you and I. They want to be recognized as a fifth school of medicine. It is quite inconceivable that a man who wants to spend four years in the study of the sciences wants to confine himself to the old definition of osteopathy. Like Will Rogers said about the Methodists "When they get to a certain point they are no longer Methodist." I haven't any bone to pick with the Methodists, I am just illustrating this point that when the osteo-

paths are educated to a certain point they are no longer osteopaths. They have come before the State Board recognizing that they are no longer osteopaths and they demand that they be admitted to the practice of medicine.

Dr. Woodward of the American Medical Association who is the secretary of the Bureau of Legal Medicine and Legislation has written a paper which a few county secretaries and presidents aren't familiar with and it would be a good idea to give you the plan of what he calls the "Basic Science Law" or, I think the title is "Ineffectiveness of the Present Medical Practice Act and the Basic Science Law as a Solution of It."

His plan is to have each man who wants to practice the healing art have an examination in the basic sciences including pathology and diagnosis, the recognition of diseases, physiology, bacteriology, anatomy—the basic sciences and the matter of diagnosis. His plan is that anyone who wants to practice the healing art, whether he wants to be a chiropractic, osteopathic, or any of the other "ics," or a graduate of medicine must pass an examination of the basic sciences, and the model which he provides in the paper provides that the examination in the basic sciences should be given by a commission of three or five who are not men in active practice of the healing art but men who are authorities in these basic sciences.

It seems to me that some such law has very much to commend it. It seems to me that there must be some fundamental legislation in the state of Michigan to take care of these demands from various men who want to practice the healing art so that we can all be more or less on an equal foundation or basis. This law provides further—and it seems to me that that is one of the features which especially commends the law—for enforcement of this basic science law and it provides that the enforcement of the basic science law should be vested, not in the prosecuting attorneys, but in the attorney general of the state. There are to be one or two, or as many men as necessary, associated with the state attorney general's office whose business it should be to see that this law is enforced and no man can practice the healing art without having a knowledge of the fundamental sciences. If they do practice without that knowledge they are to be prosecuted.

You know the difficulties in getting prosecuting attorneys to enforce Medical

Practice Acts. The trouble is that these so-called "professional" men who are practicing outside the law have a certain standing in their community. They have friends who are influential sometimes and it isn't pleasant for the prosecuting attorney, who has to live with the men and their friends and perhaps depends on their votes for his re-election, to undertake the prosecution of these cases. If enforcement of this Medical Practice Act could be taken out of the hands of prosecuting attorneys or any individual in the community who interests himself in the enforcement of it, it seems to me that our Medical Practice Act might be of more value and more efficiently administered.

I wrote to Dr. Woodward asking his advice as to what the state of Michigan should do in regard to the Medical Practice Act and I had a very interesting letter which he wrote back. He said that it was not his intention in proposing this basic science law to have this introduced in the licenses of practitioners of the healing art. He called attention to the fact that in the state of Michigan we weren't exactly in the class where there was one board which administered the Medical Practice Act but that we had only two, in which respect we were much better off than many of the states where there were several such boards.

His suggestion was this: You know that the present board of registration in medicine does license chiropractics and drugless healers on the passage of certain examinations. His suggestion for the state of Michigan—and I would like to pass this along for your consideration and discussion—was that inasmuch as the osteopaths had already admitted that they wanted to practice medicine, by the legislation which they introduced into our Legislature; and inasmuch as they were no longer satisfied with the practice of osteopathy, that we do away with the osteopathic examining board in the state of Michigan, and if it seems wise, let them have a representation on our board of registration in Michigan and then require men who want to practice medicine, even if they are graduates of osteopathic schools, take exactly the same examination that other men, who are graduates of these other schools of medicine, take.

That is, inasmuch as the osteopaths have admitted and recognized to themselves, the fact that they are ready to practice medicine if they are going to practice medicine they put themselves under the same restrictions as men who want to practice

medicine who are graduates of medical schools.

It seemed to me that that suggestion was worthwhile. Of course, the basic science law which Dr. Woodward has suggested provides that after these men have passed this basic science board that then they be registered and licensed by each individual board, a board of chiropractic, a board of osteopathy and a board of medicine. It is his idea that we have little advantage of the osteopaths on account of their having come forward and declared that they wanted to practice medicine. He says we should allow them to determine their own qualifications as they do through the individual board but that they should join with us and pass the same examinations that we do.

Whether we should have a basic science law in Michigan, or whether we should have a single board as we now have with the exception of amalgamating with the osteopaths and have the whole thing administered by a single board, is a question I should like to submit to you men this morning for your consideration, and if you please, for your discussion.

There are other matters of general policy in organized medicine which I should like to discuss with you but perhaps there will be time later for that. I present to you the suggestion that it is time that organized medicine took some definite stand in the matter of our Medical Practice Act, and that we try, not at this session of the Legislature, but perhaps at the next, at any rate that we get ready, consider and make up our minds as to what is the best thing to do and then set the machinery in motion to bring it about. As it is now, every two years we say it isn't time to do it this time. We put it off into the future. It seems to me that it is time that organized medicine in the state of Michigan took serious thought and conference as to what is the best thing to do about our Medical Practice Act.

I would like to hear from you on this subject, Dr. Warnshuis.

Secretary Warnshuis: Mr. President and Officers of the County Societies: I thought that I would prefer to have the officers discuss the subject first and present their viewpoints. Then if I was permitted to do so I would like to summarize, or probably correlate some of the remarks that have been expressed with the experiences we have encountered, as well as experiences that have been encountered in other states.

Therefore, I would like very much if some of the members would take up the discussion and allow me, if you would, to close for you.

President Jackson: The matter then is open for discussion. I would like to hear from some of the men.

Dr. Morris: I was at the Elkhart County Medical meeting—their annual meeting—just a short time ago. Their representative, Hoffman, brought up the Hoffman Bill and he was there. He gave a very wonderful resume and talk on the Medical Practice Act of Indiana. He brought out the features of the Hoffman Bill, which were really condensed and would be a fine example for Michigan to follow. Representative Hoffman would be glad to come to Michigan and give his talk, I know, because I have talked with him personally on that.

President Jackson: What was their solution in Indiana, Dr. Morris?

Dr. Morris: Their solution in Indiana was that they had a law that goes into effect this next month which gives them authority to bring men not practicing under the Medical Practice Act into court and start proceedings. It provides for an injunction as a starting point. He also brought out the fact that in Indiana there were 280 cults. I think we have as many here in Michigan.

Dr. Shackelton (Kalamazoo): If the amendment is made here, what effect would that have on enforcement of the present law? Would there be any provision made for that? It seems to me we wouldn't be any further ahead by putting through an amendment and bringing the osteopaths under the present Medical Practice Act than we are at the present time. It will be only a few more years and the chiropractors will want special legislation to take care of their problems.

It seems to me that the basic science law has a very decided advantage in that the preliminary requirements of the practice of medicine will be properly taken care of and it will do away with this problem of other cults being added from time to time. It seems to me that we are not going to gain anything taking the osteopaths in as they desire to come in unless there are provisions made, as would be made under the basic science law, to see that irregular practitioners are properly prosecuted. That is not being done at the present time, at least not effectively.

I know that in Kalamazoo a few years ago there were a number of chiropractors who were arrested. They were under indictment but they were released. That is one of the problems that will have to be taken care of.

Dr. Marsh (Jackson): Another question that comes to me is this: If the osteopaths are licensed and practice medicine, will that also admit them to our medical society, our hospitals, on the same standing with the rest of us? There is one thing in that that if you get the osteopaths with us we can put through a basic science law with their help rather than have their opposition.

President Jackson: I should like to say for the officers of the State Medical Society, I don't think we are quite ready to admit osteopaths to the State Medical Societies.

Dr. Knapp (Battle Creek): It seems to me that this biennial effort to keep back legislation

has gotten us all stirred up to the point where there is the strongest desire on the part of medical men to see something basic done in the way of a law. If this basic science law proposition which is brought out here shows signs of filling the bill the psychological moment seems to me, in this state, to be within the next two years.

I do not like to ask what feature there is in this law to admit these different cults on the same examination basis but what is there in it regarding admitting to practice those already in practice? Is it retroactive? Would it take in the whole gamut of the cult practitioners who have slid in the back door and have gotten going? Or, would it merely apply to the new recruits that are just coming through the modern school?

President Jackson: I think it would be very difficult to enact a law which would be retroactive. I think that those who are practicing the healing art at the present time, whether they be chiropractors or osteopaths or doctors of medicine—it would be very difficult to pass a law which would put them out of the practice which they are already in.

I think the plan of this basic science law—by the way there is such a basic science law which was first introduced in Wisconsin. I think they were the first to have a basic science law. Connecticut adopted such a law soon after that and then I think there is one other.

It seems to me Nebraska has a similar law. The plan is not to make it retroactive. Of course, chiropractics who are practicing outside the law at the present time—and there are about one-half or two-thirds outside the law at the present time—would come under this basic science law. But those who are duly qualified by the laws of the state at the present time probably would not be reached by this law. That is a matter which is to be decided. These are matters for discussion and I would like to know how you men feel about it.

Dr. Stone: Dr. Jackson and several other members of the Council and myself have had numerous discussions of this subject. As some of you may know I served for two years on the state board of registration and I am well aware, just as the rest of you are, that that board is not functioning to its fullest extent and cannot under the present Act.

Two weeks ago when we were in Lansing at this hearing, several representatives and senators in the houses at the present time, talked this matter over with me, not so much this particular bill which is being discussed but the proposition in general. The consensus of opinion among those men seems to be that they are just about as tired of having numerous bills

before each session of the Legislature from chiropractors, osteopaths and doctors which keep them busy with discussions and hearings and arguments, as the doctors themselves are.

Two or three of them have said to me what amounts to practically that the time has come when the medical men of Michigan should come forward with something constructive which will eliminate all of this discussion at this time and all of this argument.

I am heartily in favor of Dr. Jackson's comment. I believe that the time has come when the Michigan State Medical Association should make the step and spend this next year or year and a half in getting ready to present, at the next session of the Legislature, something in the shape of a bill which will take care of the situation as it exists and conditions which will probably come up for a long time to come. I would like to hear, with Dr. Jackson, a much more free discussion of it.

Dr. Langford: I was wondering what per cent of osteopaths are appearing in defense of their proposed bills, that is, what per cent of them are a product of the new regime in their education? Are they of sufficient numbers to be counted with to help put the new proposition over? None of us are in favor of opening the doors and letting the osteopaths in as we know them in our communities today. I think that by and large the osteopaths who are aiming to get recognition are those who are not themselves well prepared and we couldn't get the co-operation of a very large number of them. Could you tell about how many have come through with the newer education?

President Jackson: The men who are being graduated at the present time represent the new school of osteopathy. The osteopaths present at this meeting were half of the old school and half of the new school. The older men who are practicing osteopathy as we understand it are not in favor of this present bill that is before the Legislature. They say they don't want it. "We aren't doctors and we don't intend to be. We haven't been educated in these things and we don't want to practice medicine." That is what the older ones say. It is the newer graduates, the men who are graduated from the schools today who are causing the agitation. They are doing this in many other states. They want to be recognized as regular practitioners. They want to take out tonsils and other things and do things that we do. Therefore, I should say that the profession in the state of Michigan is about half for and half against. The two representatives from Kalamazoo opposed the bill because they weren't educated to be doctors of medicine and surgery but were educated to

adjust the back and that is what they wanted to do. The newer men are not in that class. So I should say that the profession of osteopathy was fairly evenly divided. I think that is what killed the bill; because the older men didn't want the bill the Legislature felt if they didn't know what they wanted themselves and if they weren't agreed they couldn't put over the legislation. I think if they had presented a united front the situation might have been very much more difficult to handle.

Dr. Langford: I haven't seen the curriculum of these new schools of osteopathy. To what extent do they give training in surgery, such as the removal of tonsils to which you referred?

Secretary Warnshuis: Mr. President and Members: I just want to speak on the question of the osteopaths. Those of you who attended the hearing recall very vividly that their spokesman kept reiterating that "We as osteopaths have arrived. We are full-fledged, educated persons able to take care of the sick." Preparatory to that meeting, and I thought through the course of the hearing, that we might inject some very personal questions that might be embarrassing to them. After hearing what took place as the hearing progressed we saw that the camp was divided and we concluded it was wise policy not to say very much. Yet the thing that stuck in my mind were the allegations that this man was making regarding the fact that "they had arrived." I made some effort of securing some information regarding their education.

I wrote to Dr. Caldwell, the secretary of the Council on Medical Education and Hospitals of the American Medical Association, and cited the instance together with some of the statements the gentleman had made. I asked him to make a comparison between the requirements of the Council on Medical Education for Class A. Medical Schools and their course and curriculum and the curriculum of the osteopathic schools that now exist in this country. Last week I got a very voluminous, interesting, comparative statement which will appear in this coming issue of the Journal, comparing the methods they employ in their schools, equipment of their schools, the faculty, laboratories, clinics and things of that kind. The comparison that Dr. Caldwell has drawn up refutes damnably every statement that they made that "they have arrived" or "that they are our equal." They are still far, far behind us in the methods of anatomical instruction, the organization of their faculties, their laboratories, their clinical material

and they have a long way to go before they can even be rated as a Class C school. That comparison, which will appear in the next Journal, is going to be very interesting. I don't believe that we are anywhere near the point where we are going to recognize osteopaths as partly or almost equal to graduates of our Class A. Medical schools of the country today.

This question of legislation and legislative battles is one that we have experienced in Michigan every two years. It has been experienced by every organized society in every state in the union. As a result of these experiences we have all been marking time and watching how the sentiment drifted. We have gotten tired of fighting and combating the attempt that these various cults have made, seeking the right to almost equal us in the extent and scope of their practice. As Dr. Jackson has said the time is now here when we should undertake some organized effort that is going to circumvent this every two year struggle in our Legislature.

Four years ago Wisconsin attempted to remedy the condition that existed in Wisconsin. They first introduced the basic science law which was defeated at that session of the Legislature. Then the State Society got very busy and started an educational campaign in every county and with the assistance of the County Societies in the following session of the Legislature, two years ago, they passed the basic science law in Wisconsin.

Connecticut followed the same year. Then New York state, seeking to solve the problem, had a commission appointed and drew up a bill that met with the approval of the State Medical Society members, approval of the health workers of the state and the approval of the governor and some of the executive and the board of regents of the state of New York. They drew up a bill that is fairly good and seems to solve the situation as far as New York is concerned and has the feature in it of annual registration of all doctors.

Then comes Indiana which has just gone through a rather terrific battle at their legislative session with the Hoffman Bill. I don't know of any state organization that has presented such an intensive, well-directed campaign against pernicious medical legislation as did the state of Indiana during the last two months. In their last Journal there is considerable discussion and extended report of their bill and the Hoffman Act which seems to solve the situation for Indiana.

Missouri got into a mix-up, as you know, two or three years ago with their selling of licenses and their so-called "outlaw medical colleges." Demand came from the legislators of Missouri that the profession of medicine in Missouri should present to them some solution of the situation in the form of a law. They now have a bill that has been passed and is waiting for the signature of the governor, which they anticipated to be attached to make it a law. That seems to solve the situation somewhat in Missouri.

Ohio is battling along the same line.

Throughout the whole country this problem of medical legislation and solution of recognition of cults or their non-recognition, has received a lot of attention. Just at the present time there is no standard plan that has been set forth that we can take as an actual guide. Each one of these states have seemingly solved the problem in their own state but none of them are the same. They have gone at it in a little different way and as the result of that experience the Legislative Bureau of the American Medical Association has developed, or has evolved this new bill that Dr. Jackson has mentioned, which they are sending out for consideration by state societies as a model bill to cover the situation.

It is time for us here in Michigan—and we must during this next year and a half, before the next Legislature, come forward with some bill that is going to be supported by the profession and that is going to be supported by all those who are interested in the welfare of the public as far as their health is concerned and the treatment of the sick.

I think, Mr. President, that at the Mackinac Island meeting some member of this County Secretaries Conference should cause the introduction of a resolution in the House of Delegates that will convey authority for the appointment of a commission, a group of our members, who shall take this under consideration and who shall gather the necessary data and who shall then, with proper legal advice, draw up the bill that is going to end this problem in Michigan. But I don't think that we are going to recognize the osteopaths or the chiropractors or any of these other 287 cults that do exist and take them in as full-fledged doctors or members of our County Societies, or as members of our hospital staffs or anything of that kind. They have a long, long way to travel.

The feeling seems to be that if we have this basic science law that causes each

man who wants to practice medicine or treat the sick to become proficient in certain basic fundamentals of science. When he has mastered those fundamentals he is not going to go from that course into an osteopathic school or chiropractic school or any other cult school. He is going to go into the regular medical college, Class A. That seems to be the big feature of this basic science law. The mere fact that he has passed the basic science board doesn't give him the right to practice. He must still take his examination in medicine in osteopathy or chiropractic or any other school he wishes to follow in his practice or his daily work. It doesn't give him the right to practice. It is the preliminary requirement to his examination and then he has to pass these other boards or these other examinations. It is the sentiment that one board should then exist that will conduct these examinations and that board will have nothing to do but make the examinations. The enforcement of the Act will be a matter for the attorney general and the county prosecutors. That seems to be the situation, and that seems to be the problem that confronts us in Michigan today.

During the next year and a half a very intensive study must be made of these bills that are being introduced into other Legislatures. We must correlate their experiences and formulate from that a plan that is going to be applicable for Michigan and put it across. As Dr. Stone has said those men who have had years of experience there and who have been in the senate or the house for a number of years are becoming just as weary of this continual bickering between these cults and their desire for recognition and the rights of the medical profession as we have.

Dr. Powers (Saginaw): From the discussion I have heard I think there is one point that is slipping by us a little. While I wasn't in practice when the board of registration was formed, I believe that they had the same problems in regard to doctors that we have in regard to osteopaths now—that they couldn't make it retroactive. I know very well that it took from five to ten years before the real value of the registration board was shown.

I know there was a little medical school in the city I come from at that time that eventually went out of existence purely through the act of the state board of registrations. I believe any law we enact now should be enacted with the idea that its full value will not be felt here in the state of Michigan in less than ten years, that there will be a lot of things that cannot be made retroactive and that the present practitioners will have to be accepted as they are accepted at present. I don't see any possible way of making it retroactive. Also the law which we enact now will be of value in ten or fifteen years from now and the genera-

tion of doctors that come in then will thank us for putting that law into effect.

We can't expect any sudden or great change in the existing circumstances of the practitioners as they are practicing now, but ten or fifteen years from now—it may take longer—or even twenty years from now, it is going to raise the standard of the healing art in the state of Michigan if we put such a thing across.

I would hate to have—as some of the discussion seems to point out—the idea advanced that there will be an immediate change in conditions. I don't believe there will be any immediate change. I think we should look forward into the future some ten or fifteen years.

Dr. C. F. DeVries (Lansing): I just want to answer a question that was asked here before or mentioned about osteopaths in hospitals. In Lansing we know that there are osteopaths who are ministering with drugs and a short time ago I observed one giving an anesthetic in one of our leading hospitals for one of our leading surgeons.

President Jackson: I shouldn't like to be misunderstood in what I said about the osteopaths. I was more or less speaking in a humorous vein when I said we weren't ready to admit them into the State Medical Society. On the other hand we have to look this question in the face. It looks one way to us as doctors and another way to the public at large and the Legislature.

Here are these men who have had four years of teaching, instruction, in matters pertaining to the healing art. We aren't ready to admit them to our state Medical Society or the hospitals. We don't believe, as Dr. Warnshuis said, that they are equally trained with us. But these men go before the public and the Legislature and say "we have spent four years learning the healing art" and they have some influence. They didn't get very far this time but they are going to.

It seems to me we have to look this question squarely in the face. The passage of this basic science law isn't going to solve the problem, as far as the osteopath is concerned. We still have another problem. I think the osteopaths are trained to pass a basic science law at the present time. The recent graduates have had enough instruction so that most of them can probably pass this basic science law.

For the benefit of those who were not present at the hearing, I will say that Dr. Kiefer presented, it seemed to me, very fairly our side of the question, our attitude in the matter. He said to this committee: "In order for a man to be a doctor of medicine he has to have a high school education, he has to have two years of pre-medical work in a recognized college or university, he has to have four years in a medical school, he has to have a year of internship in the state of Michigan, and then

he has to pass the examination before the state board. What the osteopath asks is that a man who has a high school education and four years of training in a Class C medical school should be admitted to the practice of medicine without an examination. That is a very unfair situation because these men are asking that they be recognized on a par with the other four schools of medicine, which of course no longer exist to any great extent. That is our side of it. That is a fair presentation. It isn't a fair bill to have introduced."

You can be very sure, however, that men who spend four years in a school learning the healing art are not going to sit still and say that they will just adjust backs. They won't do it. They are going to keep pushing in the Legislature. That is a matter that we have to face. I would like to hear from some of the other County secretaries.

Dr. Ellis: I want to know if there is any machinery in the new proposed basic science law providing for prosecution afterwards. It seems to me it might slip back to where it is today if the osteopaths and the chiropractors are not licensed under their own board. It seems if the thing went through and they wanted it the thing could slip back to where we are now. That is, if there is no enforcement. You made the suggestion that it might be the state attorney general's business to round them up. He might get some place. But, when the local societies start to prosecute they begin to cry out that we are jealous that they are making more money than we are and they get all excited. If there were some way of keeping this going it would be a good thing.

President Jackson: The model bill presented by Dr. Woodward provides a machinery of enforcement through the attorney general's office. This is part of the model of the basic science law.

Dr. Cook (Flint): It seems to me that we have discussed two sides of this question. We have discussed the osteopath's side and the doctor's side. There is also going to be another side and that is going to be the deciding side. It seems to me that in Wisconsin it was two years after they attempted to introduce the bill before it was actually adopted. I have a feeling that the reason for that was that the people themselves had not given sufficient investigation to the matter. It might be wise to have the people putting in some investigation because they are the ones who are most interested.

It might be well for the state of Michigan to set up some machinery and study this problem itself and have the report in whatever form it comes before the Legislature be the people's act. I believe it would have a little more chance before the Legislature. You are expressing a desire to solve this problem. I think they are looking for Moses to lead them out of the wilderness the same as we are looking for it. I believe there is a way of doing it so we will receive the fair consideration which the subject needs. Whatever this commission would be we would have an op-

portunity to present the facts so that they would be reported back in a fair way. They would know what the people of Michigan want of the men who practice the healing art, what they should do and know. They will be able to report on the different cults and the regular practitioners. I think such a thing would have more bearing than our statement.

I make that as a suggestion, that possibly some machinery might be set up through the state Legislature to study this problem in order that it might be presented in a fair way.

Dr. Corbus: You will remember that in the old directories you would see a name of a man and it said "Licensed under the years of practice law" under which the doctor who had no education at all was permitted to practice in this state. That isn't so very long ago. There are still men practicing under the "years of practice" law.

I think we are confounding two things, one is a thought that seems to me some of you have that there is a suggestion of changing the status of the osteopath of today. I don't think that is in our minds. There is a question of establishing the status of the osteopath who is to graduate or who has recently graduated from a school that is offering the best they can offer. I have heard it stated that the better osteopathic schools of today are offering satisfactory courses that are as efficient as the medical courses of twenty or twenty-five years ago. I do not think we need be concerned about the status of that man who is going to come from the school of today and go before a board that is going to make an examination based on his qualifications in the basic sciences. It is going to be as Dr. Jackson has said that once they are sufficiently educated as osteopaths they no longer are going to practice osteopathy as we know it.

Perhaps there may come a time when we will be willing to take them into the Medical Societies as we have taken in men of the schools other than the regular schools in the past. The fundamental thing is that if we can have a single law which provides that the man have the fundamental knowledge to appreciate the disease with which he is confronted so that he may practice intelligently the healing art we don't have to be worried that the patient may not receive the proper care. It seems to me that this will solve the question of the future in a more adequate way than anything that has previously been suggested.

President Jackson: My object in presenting this matter to you today is to get you to thinking about it and to get your County Societies thinking about it. I believe this is something that we have to give serious attention to. I believe that the legislation which has been presented at this present session of the Legislature gives us a basis for trying to get some sort of fundamental law to establish in the state of Michigan.

If you could get your County Societies to discuss this—as I said in the beginning I thought it was very desirable that questions of general policy should come from County Societies rather than from the State Society, that we should crystallize the ideas which originate in County Societies. I would like to ask that each of

the secretaries get this matter talked about in your own local County Society. I should like to present this matter at the session in Mackinac.

I wish each one of you, after you have thought the matter over—you secretaries and presidents of County Societies—would write to me and let me know what you think about it. There probably won't be time in all cases for future meetings of the society for this, but talk with some of your men, find out their ideas and write to me and let me know what the feeling in your community is, what the doctors of the state of Michigan want us to do about this.

As Dr. Stone has said, I am sure that that is the whole object of a State Medical Society, to carry out the wishes of the doctors of the state of Michigan.

We are now to have an address by the secretary of the State Society on "Organizational Policies."

Secretary Warnshuis: Mr. President, County Officers and Members of the Council: This is only an informal talk and not an address as your President has said. It is a talk in which I want to discuss things concerning your state association.

Every person who has ever burst forth into print on the subject of the problems of a Society has stressed the point that the most important individual in our plan and in the scheme of a medical organization is the County Secretary. That has stood out prominently in every advancement that has been made in organized medicine in the United States. That is the reason why organized medicine in the United States today is advancing with such rapid strides and is accomplishing those things which organized medicine stands for.

As you are the servants of your County Society, subject to the mandates of your members, your officers and your various committees, so too, is the secretary of the State Society the servant of the officers and Council and members of the State Society and he but carries out their mandates. The labor, the work that is delegated to your state secretary is not of any small inconsequential nature. It entails a host of details. It is voluminous far beyond the zone of conception of the average individual who has not had any intimate contact with the work. I am not going to discuss the organizational policies and tell just how these policies emanated, but I want to impart to you some of the things that are made requisite upon us in carrying out the mandates of the House of Delegates, the Council and your state officers.

Of course, membership starts with the County Society. You, as secretaries, know the problem you have in collecting the membership dues. The constitution and by-laws of the American Medical Association, our State Society and your County Society state that the County Society is the only door by which a man may gain entrance into organized society. They are obliged to act as censors and appraisers of the qualifications of their membership.

When the man has been elected to membership a certain machinery is set into motion. You record his application in your file, upon your membership roster and you collect his dues. In the collection of those dues there is entailed the collection of the state dues. State dues, as you know are \$10. We have supplied to each County secretary blanks for the remittance of the dues. This blank is part of a system. It is a very convenient method of keeping our records straight.

I wish you could be at the office, especially from January to April when due come in and see how few of the secretaries use this blank. We receive dues listed upon prescription blanks, upon circulars that doctors receive in their mail and practically every type of paper or style of paper comes in. The names are sometimes spelled out, sometimes only the initials are recorded, sometimes they do not have the surname or the address and things of that kind.

Just to show you the importance of that system; we are compelled each month to make a report to the American Medical Association, because by reason of a man's affiliation with the County and the Michigan State Medical Society he becomes a member of the American Medical Association without the payment of further dues. The American Medical Association requires us to make a report to them monthly of the members in good standing and those who have paid their current dues. They require also that we give the full name, the correct spelling of the name, the correct address, because that material is used for the compilation of the directory of the American Medical Association, of the medical profession of this country and therefore it must be very accurate.

That is one of the first problems that we have to contend with. The first request I make in the remittance of dues is that you give us not only the man's name—full name—but that you also give us his street address. You would be surprised at the number of changes in address that are

made every month. Practically every month's mailing of the Journal requires the cutting of anywhere from 250 to 400 stencils. Last month, because of some considerable movement in Detroit and a few of the other places where medical buildings have been erected for the profession, we had 600 changes of address. If the changes of address are not reported to us the Journal goes out to them and is returned to us with the simple statement on the wrapper "Moved—address not known" or "Address changed." The Post Office Department will not give us the change. The Journal comes back to us and it costs us four cents a copy. Then we have to write to the County secretary and find out where the man has moved to and then correct his address.

The first thing, then, that I would like to ask is that in the remittance of dues and in the reporting of members you use the blank that has been supplied and when these dues are received it is an easy matter for us.

The handling of the dues requires approximately six distinct transactions in our office. First on receipt of the blank we check over the check that comes in with the names reported to see that they agree. You would be surprised at the number of times that seventy names are reported and remittances are made for only sixty-five. Or, on the other hand when seventy are reported remittances are made for seventy-two. After that is checked over a receipt is mailed back to the County secretary in the form of the second page of that blank. The names are then entered upon the card index, which gives a record, by county and by city, of each member, his name and his payment of his dues and the time of the payment of his dues are recorded upon that card. It is essential that the time of the payment of his dues be recorded because of our medical legal defense feature which provides that a member in good standing only is eligible for this protection and if he has lapsed in his dues for the period for which he is being sued he is not eligible for this service.

After the dues have been recorded upon the membership card then the membership certificate is made out and is mailed to the individual and not to the County secretary. We have approximately 3,300 members. It costs us three cents to mail out the certificate. You see then what a considerable amount of work is entailed by having to insert the man's name into the certificate and in the addressing of the envelope and

stamping it and sealing it. It must be mailed first class—it cannot be mailed second class.

After that is done the name is transferred to the addressograph, or the cabinet which contains the metal clips from which we do the mailing and the stamping of the wrappers. His accurate address is rechecked. Also we make certain that he is on the mailing list and that he is going to get the Journal every month. After that we have to make out the list for the American Medical Association, which is done on a blank form which they send us. The name has to be transferred to that blank and finally we have to make out the remittance list to the chairman of the Medical Legal Defense Committee. There are just seven transactions that we have to go through in regard to each. A slip-up on any one of them will throw out our machinery. That is why I want to stress as the first thing this morning that you, in making your remittance, cause this accuracy to be observed.

By direction of the House of Delegates and also by the Council, all members whose dues are not paid on or before April 1 are placed upon the delinquent list and their Journal is discontinued. They are also without the benefits of the medical defense and they are reported to the American Medical Association.

That is rather a difficult thing and I have sometimes wondered whether we should lay the limitation at April 1. Why make it April 1? Why not make it February, 1 or March 1? During January, February and March those members are receiving the full benefits of our organizational work and our organizational activities and they are receiving the Journal, which in actual cents costs us approximately thirty-eight cents per member, per copy. Why shouldn't a man pay his dues by January 1, or at least February 1? Establish that policy and so obviate the taking off, as we had to do yesterday, of 581 names because of unpaid dues this year. The suggestion has been made by Dr. Ricker, one of the councillors, that we publish a roster of our members. Dr. Ricker's suggestion has a lot of merit to it.

He said it would be a good policy and would have a stimulating effect and would induce those members who are lukewarm to become affiliated if every member had on his reception room table one of these books where all the doctors who belong to the County Medical Society and the State Medical Society would have their names

listed. There is a certain prestige attached to that membership which it is well to have disseminated through the community and which creates in the community more or less confidence in the man who is a member of organized medicine and who attends the meetings of organized medicine, more than the confidence that is placed in the man who is content to pursue a cloistered existence and practice along independently of any organized effort.

I have been instructed by the Council to prepare such a list and publish it. We were hopeful of presenting that list in connection with this issue of the Journal but it was wholly impossible to do so because you can readily perceive that if a man who has paid his dues finds his name omitted from that list that goes out and lies on your reception room table, he is going to holler louder than a castrated steer.

Therefore, we have asked for a little leniency in getting out that list. We are attempting to get it out by the June issue. During the course of the next week we are going to inflict upon you secretaries a little additional work because we are going to send you a copy of the list of members in your County who have paid their dues and also a list of those who have not paid their dues, in order that you may verify this list and return it to us so that the roster of your County Society may give full credit to all the members who have paid their dues. That is another part of the activity that we are going to ask you to help along in.

The next thing we come to is the correspondence in the office. Our average mail—outgoing mail—runs about a hundred letters a day. Some of them, true, are merely form letters, some of them are just questioning the County secretary as to initials or the street number or an address, yet there is a considerable amount of correspondence. That correspondence varies and covers every conceivable thing you could imagine.

The last letter I received yesterday afternoon was from a certain doctor, a member of one of our larger County Societies who wanted to know our opinion as to whether it would be proper for him to put out a cough mixture, and if he did whether he should put his name on the cough mixture, and if he used his name whether he should precede it with "doctor" or conclude with M. D., whether it should be patented or not patented, and whether or not he should have the formula filed with the State Medical Society.

That is one type of question that we get.

We have tried to answer every letter that comes in to us every day. We try to have and hold available for all the members and officers of the Society all the information that they may call upon us for and if we haven't got it we have several avenues by which the information may be gotten.

I am not mentioning this average of a hundred letters a day to say that we are being over-worked. I welcome the hundred. I wish there were two hundred, because it is in that way that we feel your State Society can be of service not only to the County units but also to the individual members. We like to have that correspondence come in. In return when we write to you we would like to have you evidence the same promptness we try to evidence and answer our letters within a week after they are sent and not expect us to write three or four times in order to get one point or get the answer to one question.

There is one County secretary—he is not here and I didn't expect him to be here—whom we know at the office. We are wasting money when we write to him. If we want definite information or important data we don't write him letters, we use the long distance telephone. That is the only way we can get the data from that County. Those are just a few of the incidents we have to put up with in regard to correspondence.

The House of Delegates and the Council give us some definite duties to perform and definite, general policies and principles to carry through, some of which are, supervising the post-graduate conferences that are being held in each Council district, and we are also supplying speakers for County Medical Societies. I supplied one yesterday for a church service in Big Rapids on Sunday night. The preacher up there called over the 'phone and wanted to know if we could get somebody down there to take his place in the services and give his congregation a public health talk.

Those are things we welcome. That is the service we want to offer and want to give. We welcome all those applications. That is what we are doing in conjunction with the other work of the joint committee on public health education which you know and of which you read reports about in the Journal. Also, under the joint committee plan we are providing speakers for the high schools. Some of you who have this work in your counties have arranged for this locally, in Wayne County particularly and in some of the larger counties, but in

some of the smaller counties we have had to supply these speakers for the high schools from adjacent towns and we have had to make the arrangements for these high school addresses on public health to the senior students.

As far as the legislative work is concerned, that has taken most of our time during the last month and we have been working intensely on it. Dr. Jackson and Dr. Stone have imparted to you some of the activities that have been gone into in regard to that legislative work. It all sounds very simple when we ask you to send a telegram to your senators and to the committee, and I want to say that the majority of our County Societies respond nobly, but that is a tremendous influence in accomplishing what has been accomplished at the Lansing session. I think a little later in the day some of the members who were present at that session will tell you about the osteopathic and chiropractic bill and the cult situation that exists at Lansing. The next Journal will also contain a brief resume of some fifty odd bills that pertain to medicine and to doctors that we went over and studied personally to see wherein the rights or the interests of the doctor were involved. Where the interests were involved proper steps were taken to protect those interests. It is no little job to run through those bills and read some of the clauses that look innocent on the outside but have an inner meaning that is very detrimental to our interests. Dr. Langford just this morning showed me one of those.

Then there is the question of the prosecution of irregularities. You know that at the last session of our House of Delegates the Council stated that arrangements were now being made to institute a modest, quiet campaign to free communities where our members were being unjustly imposed upon by unqualified and irregular practitioners. An appropriation of a certain amount of money was made for that purpose.

The minutes of that meeting were read and the action became known throughout the state, and yet we got something like seventy-five or eighty complaints from different parts of the state regarding illegal practices. The majority of them were against chiropractors. Your executive committee in considering these complaints thought it would not be the best policy, at the present time, to start any generalized campaign against these chiropractors because that would give them an argument

and a plea before the Legislature that we were now engaged in a campaign of persecution.

I can say this, however, that under that policy of the executive committee and the Council during the last six months we have been the means of causing the discontinuance of practice of some fourteen irregular practitioners throughout the state. That may not have affected you in Lansing or in Flint or in Kalamazoo, yet we have done it and we have also caused the arrest of a man who is now in jail and is awaiting his trial. He is a notorious abortionist, an osteopath who had been coming to a certain community every week where a "fence" of his would line up six or seven or eight subjects, or patients, and he would do from six to eight abortions before train time and then beat it back to Chicago. They couldn't get him, but one of his cases died and that is going to cause his conviction for manslaughter.

There is a priest in the upper peninsula who has a larger practice than the doctors in that county. He has a larger waiting room practice than the doctors in that county combined and he has a hold upon the people by saying that he is giving them medicine imported from France. That complaint was filed. The matter was taken up with the church authorities. The Bishop of Marquette was told of this. He has written to this Father to tend to his saving of souls and let the care of the physical well-being of the parish be in the hands of doctors. The Bishop of that diocese has assured us that if this priest did not conform to his instructions he would be removed from the church.

I just cite one or two, or a few of those instances to show you that your State Society, through its executive officers, is working along lines like that. We are necessarily limited because we haven't the force, we haven't the personnel to make any intensive campaign. We are building and building strongly and the benefits of membership are more and more apparent each year. The membership is of more value each succeeding year.

At this time I want to urge that if you have not already done so that either at one meeting, or at two or three meetings, or through the medium of your notices that you send to your members of the meetings, you record and call to their attention the somewhat generalized statement that appeared in the March Journal setting forth the activities of your State Society.

I feel this, and I think that most of

you men have sensed the same thing, that as your individual members know of what your County Society, your State Society is doing for them they are going to come into the fold. I think this year we are going to show a larger membership than ever before. Our average membership has been around 3,100. My estimate for this year is about 3,350. That will be a gain of about 250 members just because we have been doing some work for the benefit and value of your members.

Your executive committee meets every month. Up until the Mt. Clemens meeting three years ago the large part of the work, its application and administration of the executive duties of the State Society were left in the hands of the secretary. Being but human and frail there were acts probably of omission and sins of commission that occurred. As the responsibilities became greater I suggested that the Council create an executive committee and now every month five members of your Council go over the various plans and policies and what we have accomplished during the past month and what is to be accomplished during the coming months. In that way we map out the month's work. Working in that way with a definite schedule in mind and assisted by the judgment of five men and not with the judgment of one only, we get farther along.

I am not going to say anything more on that but I wish in this whole matter of your State Society you men here this morning, between now and the time this afternoon's session starts, or when the round table discussion comes on, would prepare or write out any questions that you may have that you want information upon or that your members want information upon, or something that you would like to carry back to your County meeting regarding what your State Society is doing for the individual member as well as regarding the general policies that prevail through the state, and present them at that time. (Applause).

President Jackson: I will now declare a recess for luncheon.

They recessed at twelve-fifty o'clock.

WEDNESDAY AFTERNOON SESSION

April 27, 1927

The meeting convened at two o'clock, President Jackson presiding.

President Jackson: I have the very great honor of introducing to the County secretaries and other officers the chairman

of the County Societies Committee of the Medical Society, Dr. Corbus.

Dr. Corbus: Mr. President and Secretaries: I ought to be permitted a good deal of liberty in the sort of talk I want to give you because I didn't know it was coming. The subject which Dr. Newton was to give was "Interchange with Neighboring Counties." I will come to that if you will listen to me for a moment or two.

If you look back over your activities of the State Society you will be impressed with the fact that the activities show that the state body was a sort of mutual protective society in the beginning. That is a good enough objective as far as it goes. It was further a forum in which men could give some of their ideas, some of their discoveries on medical subjects, which was all right as far as that goes. It was apt to be a place, also, for debate and often furnished opportunity for the exercise of the talents that some men possess and desire to use in that playful game, politics.

If you will look back over your transactions or the activities of your Society for the immediate years, I think you will find that our objective has changed materially and the greater part of our activities have been directed to the accomplishment of what we feel is our duty and obligation towards the public. While fulfilling this obligation to the public in giving better medical help, educating the public to appreciate better medical service, we have at the same time given the doctors of the state the opportunity to improve themselves.

Of course, it is a correlary that if the public is to get better medical service it must get it from men who are better doctors. Our first step in this direction was the formation, with the assistance of the University, of the committee on public health and education instigated by the State Medical Society and now taking in a group of members coming from various allied organizations such as the Anti-Tuberculosis Society, the nurses, the State Board of Administration, the State Board of Health and others.

Through the committee, using the University extension department machinery, we have tried to put before the public the knowledge of what better medicine should be. I think that that committee has accomplished a good deal through the talks by the persons whom they have sent all through the state, through the talks which have been given by members of the profession to the school children of the state.

Our next step of note was the promotion of these post-graduate conferences by which a day of post-graduate work is given to the doctors in their immediate community.

The next step, following that, is the effort that we are making now to have established at the University of Michigan as a center but not necessarily limited to the University of Michigan, courses—post-graduate courses—which we hope will begin in a very simple manner and in the near future will be brush-up courses, courses which will be offered a man for two or three or four weeks in not only Ann Arbor, but Detroit and other places so that the man who has gone out and in the course of his business practice has been unable to keep up but wants to perfect himself in some certain branch—I do not mean highly perfect himself in a specialty—so that he may carry on the work he is doing and may have the opportunity of going to these centers and brushing up and making himself more competent.

That leads me to what I consider to be a branch of this post-graduate work, that is the interchange of programs between the County Societies. To start with, the County secretaries have to have a planned program for the year or they are not in position, of course, to interchange programs with other Societies unless they are producing good programs in their own Societies. The man who is to talk should be notified early enough and stress should be laid on the necessity of a reasonable amount of preparation if you want to have good meetings well attended by your members.

When you have had good men come before you of your local Society and they have given good talks pick out those men and bring some men in from other communities to give talks before your Society in their place. It has worked out very well in the places where it has been tried. That gives you new ideas, makes a closer contact between the neighboring towns and counties, but sufficient preparation is necessary.

As chairman of this committee I am normally supposed to be in charge of post-graduate conferences although the work is handled from the secretary's office. I would like to have a discussion as to how far you think we should proceed with these conferences. Are you getting tired of them, do you want their methods changed, do you want to be able to plan and carry out the change, is there some other scheme that you think would be better?

We are trying to modify it a little bit now, we are trying to draw the County Society in a little bit more than we have before. We are prepared to offer our assistance. The secretary is prepared to offer the assistance of his office in sending you men. But, if the secretary's office sends you a man it is your obligation to see to it that he gets an audience. It is not fair to send a man out to a County and have twelve men at the meeting.

I would like to see the County Society take more of a prominent place in the activities, particularly as far as it appears public, if you see what I mean. I have in mind the individual layman who is fond of his doctor. The laymen, as a group, don't seem to have such a very high regard for the medical profession as a group. If your County Society can get before the public in furthering plans for public betterment it will be well and your position will be stronger.

The American Society for the Control of Cancer proposes to put on a campaign which they have put on before in the state. Dr. Peterson is the chairman. Very wisely, it seems to me, he came before the Council to talk the matter over. The Council felt very strongly that in movements of that sort there should be a very close co-operation, that the State Society should be behind this movement and should have a certain amount of control of these things. So when this so-called "Cancer Preventive" week is put on it will be put on with the State Society and the Councillors of the district immediately behind it. But, I think the County Societies should put this thing on as far as being an authority behind it for local publicity. I would like to see the public of the community in which this thing goes on look to the County Society as the motive power behind it.

In the publicity that is to go on in the counties during this week, it is the Kent County Society that is putting on what we shall call there a "Diagnostic Survey for Possible Cancer." We want the County Society to have the credit for that sort of thing. It seems to me a wise move that the profession shall get closer to the public

in these movements for health betterment. (Applause).

President Jackson: Dr. Corbus has brought up some very interesting points for your discussion and I hope that we may have a free discussion of these various County Society activities.

Dr. Martin: I don't know why I should be called on. I don't know that I have very much to say except to express my interest in what has been said and my sympathies with what has been said.

In listening to the discussion this morning I was impressed with this idea, that there is a difference between what people want and what they need. People are willing to pay for the thing that they want, but they are not always willing to pay for the thing that they need.

If you don't believe that, just think for a moment of the difference between your bootlegger and your bootblacker. You wouldn't pay your bootblacker five cents above the price of blacking your shoes, but the bootlegger you will pay anything in order to get what you want.

For the ladies—just take the difference between the milliner and the miller. You wouldn't pay more than necessary to the miller for the flour but go out and pay any old price for a few cents worth of ribbon if it is in style.

You see in that way the people are willing to pay for the thing they want. That is the reason why some of these irregular schools of medicine can flourish. People like to be rubbed and patted and made a fuss over. They cater to a certain psychological need that the medical profession is, I think, a little shy on. It seems to me that the whole thing reverts back to the same thing that exists in religion. You can't legislate religion. You have to have the spirit of religion in your religion in order to make a man religious. You have to have the spirit of service in the medical profession in order to make the medical profession appeal to the public.

If we, as doctors and as organized medicine, will see to it that our education is such and our service that we render the public is such as to be beyond question we won't need to worry so much about these other fellows cutting into our business.

I was thoroughly in sympathy with the facts of this basic science law. It seems to me that is going to solve the whole problem; if we can see that everybody that practices the healing art is fundamentally trained in the basic sciences the rest of it will work its own way out. The public will regulate that.

In my mind what Dr. Corbus has been saying hits the basic principle. The people are going to recognize the service that we render them. Organized medicine can contribute more to the prevention of diseases than any other branch of the healing art has or ever will be able to contribute. Where we have fallen down in the past is that we haven't made that thing known. We haven't shown the public our activity in attempting to prevent communicable and contagious diseases and to educate themselves as is now being done in the prevention and control of chronic diseases.

What Dr. Corbus has said, I think, is basically sound, that if we will get out more and teach the public what is helpful to them for the prevention of diseases and manifest to them our interest in their physical welfare more we will attract a

greater attention from them and a greater love and admiration to our organized work.

I think this is fundamentally sound, and as far as the County Medical Societies are concerned the same principle are true. If the officers of the Society are interested in the welfare of that Society and take their office seriously, recognizing their responsibility and getting down to "brass tacks" and attempt to arrange a program that is helpful and attractive the doctors are going to come out. If you don't give that some thought and attempt a program that is helpful and interesting they don't come out. They will come out for the thing that they want as well as the thing they need. I think it has proven so in our Society.

We have been fortunate in having as our chairman of the program committee, Dr. Stone, who has made very wonderful suggestions for our speakers and our secretary, Dr. Knapp is a wide-awake fellow who gets out a little bulletin that makes the doctors open their eyes and think. As a result of that we have had the largest percentage of attendance this year that has been known in the history of the Battle Creek Society—92 per cent in a membership of 107. That is a pretty fair record of attendance. That is because we have had attractive programs and the programs have been put on in an attractive manner.

Another thing our County is doing which is attracting the attention of the local people is that we have put on an educational campaign. We have complied with the request of the state officers in putting on this program of health lectures to the senior students of the high schools and colleges in the County. The reports I have from the students who have heard the lectures is that they have been very pleasing. They have enjoyed them and have profited by them very much.

In addition to that the chairman of our publicity committee has put on a systematic course of health lectures in the big public auditorium which has attracted I should say, on an average, about 400 people to these lectures. There has been no pokus or bunkum game put on. It has been good, classical, scientific material that has been handed out in a way that the public could grasp. I am sure that this is winning the admiration and the respect of the local people for the work of organized medicine.

My own personal opinion is that if we will give more attention to this type of work to show the public that we are interested in their welfare and that that is our mission on earth we won't have so much trouble about legislative measures to protect them when it comes to selecting the type of men who should look after them when they are ill. (Applause).

President Jackson: I am sure that this Secretaries Conference would be glad to hear from the secretary of the County Society that can get out 92 per cent of the membership. Dr. Knapp.

Dr. Knapp: I think Dr. Martin has covered the subject very well. I do think, however, that to get out a big attendance at medical meetings requires, as Dr. Martin suggested, a little forethought and foresight on the part of the program committee. I know that when we figured out for this year what we were going to do we sat down at the December meeting and elected officers and mapped out nine or ten meetings for the year. We wanted a meeting on surgery and medicine and we wanted a meeting on orthopedics, one on public hygiene and so on. We covered the whole

of scientific medicine and then we looked around for somebody to fill those subjects.

I believe that is the only way to do it. I don't think you can just trust to luck and wait until the time comes for the next meeting and then see who you can get. The thing to do is to name your subject and then get somebody to cover it. As a rule when you have a subject it isn't hard to get somebody to fit the subject. Big men generally are willing to come and cover the subject if you have the time and the place for it.

As far as bulletins go, I believe that that is quite important. I think something should be said in every bulletin about attendance. The average doctor doesn't care much, he just comes to the meetings most of the time and tries to tell those who are there why he doesn't come oftener. It seems to me that in a bulletin you can publish and keep a record of the attendance of every member during the year. We do. I have a schedule and I can tell every man whether he has been there 100 per cent during the year or not. I have made up a form, a sort of a class record of every man's attendance in the Society.

We run our meetings a little bit on the order of the Rotary and Kiwanis Clubs as to attendance. I don't think that is a bad plan. I think if the state secretary would work out some standard forms of secretary's blanks to keep the records on that wouldn't be a bad stunt. If the State Society would offer prizes for the best attended County Society it wouldn't be bad.

There are a lot of things along that line that would stimulate attendance. If the attendance business is called to a man's attention by means of good programs and enthusiastic meetings, I think on the whole the attendance is going to be better.

Dr. Martin: I just want to interrupt to say that I think Dr. Knapp spoke of the Rotary and Kiwanis methods. I think he got a little of the thunder from the Sunday school. I am not quite sure where he got it. He put into practice something that the Sunday schools use that I happen to know is good. If a man isn't present at the County Medical Society he gets a little letter in which it is stated he was missed and it is hoped nothing will interfere with his coming the next time. It has done a lot of good.

Dr. Langford: I don't think Washtenaw County can contribute very much. We have our own problems with the University clinic every day. Because of that, I don't think the diagnostic conferences can be put on in the immediate vicinity of Ann Arbor to advantage.

I think the bulletin sent out by Calhoun County has set a mark for all other County Societies. We can do best by imitating, perhaps as closely as we can, the plan of Dr. Knapp.

Dr. Knapp: I think Dr. Clay of Grand Rapids could tell us some very interesting things about how he publishes the bulletin at a minimum of cost.

Dr. Clay: We have, of course, a somewhat larger membership than the rest of the Societies. I have an arrangement with the person who publishes the programs for the Powers and Regent Theaters and several other theaters in town whereby she gets the advertising which we place in our bulletin and she gets full revenue from that advertising. She gives us the bulletin free. We figure that that saves us a total of about \$350 to \$400 a year. That is something that was just instituted in the last year and seems to have been working out very nicely.

I don't think the secretaries of the medical Societies are perhaps such good advertising men. I don't think it is the secretary's duty to solicit advertising for the bulletin. I think you should turn it over to somebody who is in the advertising game. This particular woman does practically nothing but that and she is quite adept at it. I think we can save more money by obtaining our bulletin free than we could by the secretary attempting to get the advertising and then attempting to collect it and trying to make money off that sort of proposition. It obviates a good deal of unnecessary work on the part of the secretary. He has plenty to do anyway. I think it is quite an advantageous scheme.

We find the bulletins of considerable interest and value. The men seem to be sufficiently interested so that they miss it when it doesn't arrive, or if anything happens to it in the mail they call up and inquire what the trouble is. We try to put matters of interest in there in addition to the program list. I have been attempting lately to reproduce either a synopsis of the previous speaker's report or some of his actual paper, as much as I could include in the small bulletin, so that members who were not present at the last meeting could at least get more benefit from the bulletin.

I think we will propose next year, if things go along satisfactorily, to make the bulletin somewhat larger so that we may include a somewhat larger article and include papers in the bulletin more than we are able to do at the present time. We are somewhat limited now because the present amount of advertising and the present amount of space makes it impossible for articles to exceed 1,000 words on an average. I think the average paper for medical Societies contains more than that.

I don't know whether that sort of system can be worked out in other communities or not. I presume it could in some of the other larger cities like Battle Creek and others of that size. We feel it is quite a saving. We have been able to put that money, which we ordinarily would have spent on the bulletin, into bonds which we are saving for some future use.

Dr. Corbus: The organization must have a soul if it is going to live and be successful. It must have ideals and it must have an objective which is worth while. The executive committee of the Council gives a considerable amount of time to the activities of the State Society. I, for one, should not be willing to give up that time if I did not feel that we were doing something which would give to the people of this state something better in medical work, and if I did not feel it would add to the sum total of health and of happiness.

I think there is something wrong with the doctor who objects to the dues that he is paying at the present time. I think there is something wrong if he looks on those dues as simply money paid in for which he expects to get some personal return. He ought to be willing to give something towards a larger objective. He is bound to get returns. The man who is made a better doctor by taking advantage of the opportunities which are presented to him by the State Society is going to have returns that will increase his practice. However, the money that he spends should be thought of as only an incidental return to him in actual dollars. It is a bigger thing than that and the little that he pays towards the furthering of an objective which looks towards the improving of health for the communities in this state is certainly to be considered as money well expended.

President Jackson: At our meeting in Lansing the House of Delegates approved the organization of a woman's auxiliary along the lines of the organization of these auxiliaries in some of the other states throughout the United States. I think the Michigan State Society should be very happy and feel very fortunate for having as our chairman of this committee the wife of one of our doctors in Kalamazoo. She is here today and will present to you the general subject of the woman's auxiliary and plans for its organization in this state.

I have great pleasure in introducing Dr. Caroline B. Crane.

... They all arose and applauded as Dr. Crane came forward ...

Dr. Caroline B. Crane: Mr. President and Gentlemen: I wish to assure you that that Dr. before my name has nothing to do with medicine.

I want to take less than the time assigned me, if possible, in order that we may have time for discussion of this matter. Just a word as to the origin of the Woman's Auxiliary. It began in the year 1922 in Texas. The very first auxiliary was the Dallas County Auxiliary which is the County in which Dallas is located.

When the American Medical Association met—they met in Texas last year didn't they?—a great deal of enthusiasm was developed among the women who were present with their husbands for an auxiliary which has already been started in a few states, beginning with, as I said, the Dallas County Auxiliary. Preliminary steps for organization of auxiliaries have been made in twenty-one states, mostly in the middle and western states. There are very few in the east. I think there are one or two east of Pennsylvania; Pennsylvania however is one of those which is organized.

There is to be a meeting—a national meeting—of the Auxiliary in Washington from the sixteenth to the twentieth of May in connection with the American Medical Association and I would like very much to get far enough along in the Michigan organization so that we could be counted in. I hope we may have some delegates attending from the state. I hope we will find wives of doctors who are sufficiently interested in the idea to actively sponsor this for Michigan and who may represent us at that meeting.

The organization is far enough along now to have published several pamphlets and brochures of one sort or another, among them the quarterly bulletin. The Woman's Auxiliary, and the Kentucky State Journal gave practically all of one of its issues to the problems of the Auxiliary in that state. Here are one or two other pamphlets explaining the aims and purposes of the organization.

You have been told of the status of the Auxiliary here in Michigan, the president having sent out a letter to each of the county secretaries asking him to nominate a committee or at least a chairman for the committee in his county and he directed that the reply should be sent to the secretary in Grand Rapids. As they have been received—these nominations—they have been turned over to me. Thus far I have received twelve letters from this source and I have sent out, in each case, a letter which was typed in the Grand

Rapids office, but which I wrote, explaining what it is that we want to do and asking for active co-operation. I will presently report on the replies that I have had.

I will read first the object of the organization as stated in the by-laws—the national by-laws—of the Woman's Auxiliary.

“The object of this Auxiliary shall be to extend the aims of the medical profession to the wives of doctors, to other organizations which look to the advancement of health and education, to assist and entertain at all American Medical Association conventions and do such work as may be assigned from time to time by the American Medical Association.”

In the letter which I have sent to each of the twelve nominees, I have made the following suggestions which I would like to read to you because I want to amplify them in the future from the suggestions which I receive from you today. I stated that I thought it would be well, prior to the next meeting of the County Medical Society, for the woman who is acting as chairman, or organizer, to get them together for a luncheon or a dinner—the doctors and their wives—in order that after the meal they could call a separate meeting for the women. They could ask the County Medical Society president to express briefly his approval and his reasons for approval of the Auxiliary and bring forth the specific thing that women might do in their various counties to help their organizations—the medical organizations composed of medical men.

For their aims I have suggested interesting women's clubs and lodges, Y. W. C. A.s, Parent-Teachers Association and various organizations of that kind, either women's organizations or those in which both men and women have membership, in arranging various health programs.

I had a talk with the three members of the committee from Jackson and they asked for suggestions with regard to medical programs. I said I thought it might be interesting to have someone give a talk on a subject that they were very familiar with, such as having Dr. Gladys Dick (the wife of Dr. Dick) give a talk on the Dick Test and how it came about and what it means and how it should be applied, and confidentially, why it should be applied free at the expense of the doctors to all of the school children of the town, as has been proposed in some places I know of. I think that subject is going on the program of one of the greatest women's clubs in Jackson this fall.

There are many topics of medical and public health interest which would be gladly received and placed upon the program of women's societies if there were some one who knew about it and proposed it. I think you ought to be able to do that if McFadden can have his men go before men's and women's clubs—I have attended some of the meetings where they were—where they will tell you that you must never eat fruit and vegetables at the same meal or you will have cancer, or at least that was the implication. A great deal of applause followed the man's speech, and that was the best time for him to tell them about buying his book at \$7 a copy.

There is room for better and more scientific and more interesting propaganda along health lines and along the lines of discoveries of medical science which might just as well be gotten before women's organizations and such organizations of men and women as the Parent-Teachers Associa-

tion, if we have the women who know about it and who are always on the program and entertainment committees of any sort and who have in mind getting these things over to the people.

Another suggestion was, co-operating with the Medical Society in conducting open meetings at which important aspects of public health and sanitation, or new discoveries in the field of medicine are to be presented to the general public. I mean by that getting big men and women—Mrs. Dick for example—possibly an authority upon a subject which can challenge the public interest and get all the organizations together to sponsor it. Get a big meeting in a big place and get some big message about medicine or public health to all the people.

Then there is the subject of promoting, in co-operation with other organizations, clean-up campaigns, sanitation and food and water supply campaigns, granting that those things are needed in some community. They may be needed in one community but not in another. Also there is the child welfare movement of which there are various kinds.

Then there is the proposition of securing a wide circulation for Hygeia, the official health journal of the Medical Association, among teachers, librarians and educators. I call attention to the fact that the Hygienic Clip Sheet will be sent to any editor asking for it. I think that in that magazine we have a wonderful instrument for the rational education of the public in matters of health. I wish that we might extend its circulation as far as possible.

Then there is the establishing, where they do not already exist, of social service committees in the public schools and offering school prizes for essays on health and sanitation. Then, furthering the acquaintance and fellowship among doctors' families and carrying out special pieces of work which may be, from time to time, requested of your Auxiliary by your County Society.

I remember Dr. McCormick, whom you all knew and many of you loved as I did, telling in a meeting which he addressed of the old-time lack of friendship and friendliness and confidence which was notorious among the doctors in many localities and how it lessened the confidence in medicine and in the medical profession among the people because there seemed to be a lack of harmony and co-operation and mutual esteem and respect within the profession.

It seems to me that if we made a special effort to get the doctors and their families together on stated occasions and have some program which wouldn't be beyond the understanding and appreciation of the lay women, as well as of the medical profession, that that might be a very good thing. I believe there is a real need of that in most communities, probably not in all of them.

I remember in talking with the Jackson women today they thought there was an extraordinary fine spirit of co-operation and good fellowship among the men of the medical profession in this town. I think we can say that in Kalamazoo too. I doubt if it can be said in every county and especially in some of the rural counties where the doctors are not continually associated as they are in the larger centers. I believe there is a distinct field of usefulness for the women.

Then the next is to do other species of work which from time to time you might be requested to do by the County Society. We want you to remember that we are an auxiliary and no organization could undertake or sponsor anything except at the request, or at least with the approval,

of the County Society. In making that suggestion we had in mind a number of things. For example, in helping in legislation from time to time. I think the Legislature never convenes but that there is a cry for or against some bill in which the profession is interested. Now that women have the vote, and now that they are so largely organized and have so many ramifications of organizations, belonging to many different societies, many of them, if they were thoroughly acquainted with the nature and the purport of legislation which you want to have carried or defeated could be very helpful indeed.

The next point is in regard to various forms of social and semi-charitable—we say philanthropic—organizations in the various counties and towns which are mainly carried on by women, although they are mainly financed by men. There certainly is a great need that women should understand the limits of professional units in the care of charity patients. As some physician said to me "When a clinic case drives up in a better car than I drive and the woman has on a better fur coat than my wife, I don't feel I ought to take care of it." Also, it has been brought to my attention that many philanthropic organizations don't know when they have done enough along a certain line. I have in mind a certain organization which was founded some twenty or twenty-five years ago and which was extremely useful for many years. It was founded at a time when there was no public health nurse in the whole county and no full-time health officer either in the county or the city and when they were lacking almost all of the agencies which we now take as a matter of course and which no up-to-date, well-organized community is without. This organization served a very useful purpose. It taught the people the need of public nursing, it taught people the need of full-time health officers and various other officials because it brought to the public attention the misery and the ignorance and the insanitation of people that were previously hidden because it was no business of anybody's.

I am informed that that society at the present time, in order to keep up its reputation and its character and its size is doing work and putting burdens upon physicians in the way of charity work for many people who should be self-supporting. Such a society instead of being a boon can become a curse to a community. It has largely contributed to the condition which was described in Harper's in the article "The Doctrine of the Poor House." If you haven't read that I would advise you to do so. It gives this man's idea on whither we are tending in medicine. He is a layman but he has profound sympathy for the physician who is asked to contribute in service and money. Nobody spares him from the subscription list. He more than anybody else in any business, is asked to contribute to everything.

Then you can take into consideration this basic science bill or proposal which is up now. All of those things could be taken into consideration. If women thoroughly understand them—and you may be sure of the sympathy of the doctor's wives for the predicament in which the profession is driven by the unthinking public—there are thousands and thousands of ways in which both informally and incidentally and through their membership and official connection with the various kinds of organizations they can get over to the public the very things that should be presented to them.

I don't suppose the public wishes to victimize

the medical profession. They have taken us—because I am a doctor's wife—at our own weight, doing what we are asked to do because we are asked. I sincerely believe that women could help to release the profession from some of these overly burdensome tasks and to help win various kinds of legislation which will give justice to the physicians.

The next thing is with regard to the responses I have received. I have had replies thus far from eleven counties and two have not been heard from out of thirteen. Of those: Barry County is already organized. It anticipated Michigan as Dallas did Texas, or the United States for that matter. Mrs. Keller is the chairman of Barry. I have not heard from her but I know they have organized and no doubt I will hear. Mrs. Earnstein of Bay County thinks it is a very good idea. The others there are Mrs. Foster and Mrs. Ross.

In Calhoun County Mrs. Kolword is chairman. She is also one of the three members of the state committee. She is present and I wish she would stand up and be introduced.

... They all applauded as Mrs. Kolword arose...

Mrs. Kolword will see to the organization of her county and I sort of count on her.

I have not heard from Chippewa County, Gogebic, Mackinac County. In Iron County, Mrs. Seeger is very much interested and thinks it will be a useful organization and will do all she can for it.

Mrs. Clark, Mrs. Sebore and Mrs. Smith, all of Jackson I met today and I am sure they are going to be a good influence and will get along fine.

Mrs. Sweitzer of Mason and Mrs. Ludington respond with great interest. I have not heard from Newaygo and Wayne County has not, so far, shown signs of co-operation. The lady who was first nominated there was unable to serve. Mrs. Brooks was made a second nomination and I received word from her that she will be unable to serve so that we have no one in that county.

In Genesee County Mrs. Knapp thought the field was thoroughly covered in all of the things that we would ask from her. However, I am to be up there tomorrow and she expressed her willingness to be convinced.

In Washtenaw County Mrs. Washburn wrote briefly that she was sorry she couldn't undertake it.

That makes seven acceptances for three who do not accept, and two from whom I have not heard. That doesn't tally up with what I have said before but that is the way it is.

I wanted to suggest something for the counties that have full-time officers and clean-up campaigns and public health nurses and everything of that sort. A beautiful work for them to do is to help the less fortunate county neighbors. They should be within easy reach of those who are not so perfectly organized. This one thing of getting over the right knowledge and the right spirit with regard to the physicians holds just as much in Wayne County as it does in Gogebic. The more doctors and the larger the population the more work there is to be done in having the medical profession and its aims and the limitations of its charity work, which is forced upon it, drawn to the attention of the public, tactfully and effectively.

That is about all I have to offer. I hope we may get suggestions of other things to be done. I want to say that I had letters from the national organization a year ago and declined to undertake

the work because I felt that it would be better for Mrs. Cabot or some one at the University of Michigan to do that. But it wasn't done. I don't know whether they were approached or not but no organization was made. Then my brother-in-law, who is in the profession—Dr. Jackson—became president and asked me to do this, so I couldn't refuse. I will do the best I can, but we do ask your help to nominate women and find out if you can before-hand whether or not they will accept so we can have a good report to send down to Washington next month.

I thank you! (Applause).

President Jackson: Mrs. Kolword, do you want to say something on the subject?

Mrs. Kolword: I have nothing to say because I am as ignorant about this as anyone can be. That is the reason I came, especially to hear about this.

President Jackson: I shouldn't like to make any public confession of my private affairs but I think I can make a general statement that most of us have our professional life largely controlled and directed by a woman. I don't see any reason why as an organization, as well as individuals, we shouldn't depend, to a large extent, upon the counsel and advice and help of our wives.

It seems to me that Dr. Crane has given us some very practical suggestions as to how a woman's auxiliary may function in the state of Michigan. Most of this day we have been talking about the relation of the medical profession to the public trying to get ourselves properly oriented before the public, trying, to use a commercial expression "Sell ourselves" to the public, show them our purposes and ideals. It seems to me that there is a real need, a real use, for such an auxiliary. In legislative matters, in public health education matters, in matters of mooted questions about clinics and charities and various things in which a woman's organization is a factor, the women might be of great service to us as an organization.

I should like to hear a discussion from County secretaries and officers of the Council as to how this woman's auxiliary can be properly organized in the state of Michigan and what advice and help it can give to our commission. I would like to hear from the secretary of the State Society, Dr. Warnshuis.

Secretary Warnshuis: Mr. President, Dr. Crane, and Gentlemen: We are indeed fortunate in having Mrs. Crane undertake this organizational effort and sell it to the County Societies because we have to sell it to them first, this idea of the Woman's Auxiliary. She has set forth rather briefly the experience of the Dallas Auxiliary and what was accomplished with the Texas

State Auxiliary and the activity that has since been going on. Mrs. Crane also mentioned some of the things accomplished by some of the other states.

There is no question in my mind but that the organization of a Woman's Auxiliary in every County Society in Michigan is going to establish the medical profession before the public a good deal better and a good deal easier and as Dr. Jackson has said "Sell ourselves" to the public in a way we aren't selling ourselves today.

Then it is going to make the public see us in a different light and it is going to relieve us of a good many trying burdens the public attempts to thrust upon us because they don't understand our viewpoint. Mrs. Crane has very ably set forth what can be accomplished. Letters have been sent out to each County secretary asking him to nominate one or a committee of the wives of members of the County Society and report these names in.

We know that one letter doesn't always bring a reply. You may have been more fortunate than we in that. We expect to send out a half dozen before we get some of them to answer and in the case of the one I mentioned this morning we will call him on long distance telephone eventually and get the nomination from him in that way. As soon as Mrs. Crane has this contact with the County Societies I am quite sure she will cause the organization of these auxiliaries just as she has inspired it in Jackson and in Barry County.

What has been said and what has been outlined, both by Mrs. Crane, by the officers of the other state auxiliaries and by the national officers, of which Mrs. Bunce of Atlanta, Georgia is the president at the present time, is going to help us in the problems we have been discussing. I think we would overlook one of the best bets we have if we didn't utilize these women to help us in our medical organization work. This work is one of big moment and five years from now you will wonder why we didn't start it five years ago.

Dr. Charters (Wayne): I am sorry our secretary is not here, but Dr. McKeen left for Europe yesterday and couldn't be here. I believe Wayne County stands in a peculiar position. It is easy enough to get the women in the smaller communities, possibly, but I think if Mrs. Crane would come to Detroit to our home, we have a beautiful one now, and get all the women together, talk to them and explain this in person she could do a great deal more than if she wrote to one individual.

Dr. Crane: I will come any time that I am invited.

Dr. Charters: You will be invited. The last thing Dr. Dempster, our secretary, said was to

be sure to invite any member of the State Society to Detroit to make the Wayne County Medical Society their home. Dr. Jackson, and I don't remember who else, has been in our home. We have one of the most beautiful homes you could conceive of for a County Medical Society. We serve luncheon from eleven to two. The prices are very conservative. The place is very beautifully decorated and furnished.

I was asked to extend an invitation to any members of the State Society to make the Wayne County Medical Club their headquarters while they are in Detroit. All you have to do is go in and make known to the secretary who you are and where you are from and you will be taken care of properly. When I invite Mrs. Crane down there I am sure that she can use the Wayne County Medical Society as her headquarters. It is a place she will be delighted with. I know if we get Wayne started we will have a very good organization there.

I think when you write letters to individuals in a big community like that it doesn't take hold. They don't realize the importance of the auxiliary. Dr. Crane spoke about organizations overdoing this clinic business. As chairman of the Board of Health of Detroit I was asked in conference two weeks ago with the women's clubs in regard to examination of pre-school age children. The women came up with the request that doctors of Detroit should examine every child before he enters school. They wanted them to give a complete physical examination free. Absolutely free! I asked the woman what she considered was a complete physical examination and she told me. Of course it meant nothing. She said a doctor should be able to examine twenty or thirty children every morning. I questioned her on it and then told her what we considered a complete physical examination for the records. It would take a great deal of time and a great deal of expense would be involved. She felt the doctors should be willing to give that to the community, their time and all that, and go up to the schools and examine these children gratis.

It is just such awful things as that that this ladies' auxiliary can surely offset. The women are well-meaning but when they ask such a thing as that for the city the size of Detroit it is tremendous.

As I said before we are peculiar inasmuch as we are so large we are apart from the state activities to a certain extent. We do not have to pay attention to the minimum program because we have our meetings every Tuesday night. We have speakers of note practically every Tuesday. Last night we had Dr. Kennedy who is a pupil of Dr. Joseph Price of Philadelphia and we have such men as that. Our attendance is growing to double what it used to be because we have such beautiful quarters that it is a pleasure to go there. The women folks are invited. We invite all of your wives to come up there. It is in the new Maccabee Building in the Art Center right near the public library and the public art institute. You can spend the day or the evening there. We do not serve evening meals any more. We found that was impracticable. We only serve the noon luncheon. We would be delighted to have you come there.

As far as the women's auxiliary is concerned, I think that is of prime importance throughout the state. In Texas they are putting up the framework for it. I believe in our desire to make a doctors' organization more efficient we leave out, seemingly, the all-important thing because

we can't always have scientific meetings. We cannot be all work and always keeping on in the same hum drum way that we do every day. Our social meetings should really play a part in our work.

I have Oakland County in my district and if you ever saw a Medical Society that co-operates with the townspeople there surely is one. Dr. Warnshuis knows of that. They play golf with the lawyers there. They play baseball with the preachers and it gets them in more intimate contact with the laymen. I think we stress the scientific part a little bit too much. That is where the Rotarians and the Kiwanis and all the other societies really get ahead of us—from the social side of our life.

I believe it was either in Grand Rapids or in Jackson where the doctors had a picnic and they were fined ten cents each time for calling one another "doctor". They had to call each other by their first names. I think those are the things that are going to take the jealousy and enmity away. You find that in the smaller communities, but in larger communities, like Jackson and Detroit and Kalamazoo and places of that size you don't find that so much. There aren't so many narrow ideas there. But in the northern part of the state where there are so many smaller communities you will find that sort of thing. I think social intercourse is the thing that the woman's auxiliary can bring about along with the help they can give in the scientific work.

Dr. Crane: May I just tell a story? It is the story of Mary and Charles Lamb. Charles Lamb always said "Mary, I always hate that man."

Mary would say "But Charles, you don't know him."

Charles would say "How could I hate him if I knew him?" (Laughter and applause).

President Jackson: I don't like to keep calling on you. I think you ought to give Dr. Crane your judgment and your views.

Dr. Langford: I pledge the full support of our county to this movement. I called up the lady who declined in our county and she then accepted with some enthusiasm.

I feel this organization can do a great deal of good. In our community the men and women feel that they are over-organized now. There is too much of social and club work, but this will undoubtedly have its place and can be made to function. Those of us who are members of the Service Clubs for the men, Rotary and one or two others, as clubs we do not take part in community activities but each member is encouraged to carry the Rotary message into his organizations. I think that ultimately this auxiliary can function quite effectively that way.

Whether or not this organization should attempt to function publicly in activities under its own name is questionable. Some time ago we heard something of the organization known as the Friends of Medical Progress. Whether it was still-born or is now moribund or is dead, I don't know. But, if such an organization could be fostered and developed with the help of this organization it would be a tremendous step in the direction we are all trying to go.

Dr. Crane: Don't get Friends of Medical Freedom mixed up in there. (Laughter).

Dr. Marsh: I came from a little place. I hear

a lot of things about what some of the larger counties are doing. I feel that down in our county we are making a little progress. A few years ago Lenawee County Medical Society—to be exact about three years ago—was almost dead. I think they had two meetings that year. Then there was a little stimulation there and things began to pick up. During the past two years things have been progressing and we have instituted—it was done by our president—the practice of holding the meetings in the homes. We were getting eight or ten men out. Now we have practically outgrown the home meetings and we have to have something else.

Dr. Jackson was present at our last meeting. We had about thirty-two members present out of a membership of thirty-four. We had the attorneys there. Only ten of them came but their secretary tells me they only get about fourteen out to their own meetings now. We had one meeting with the attorneys last December. It has promoted a better feeling.

This year we had a malpractice suit started there against a man who was not a member of the County Society. A number of members of the County Society backed him up and helped him in every way they could. The reason it was done was that we happened to know that there were two other cases waiting to see what happened to this one. If this was won they would start others. For our own protection we endeavored to keep them out. The one that came to court was dismissed for no cause for action. It was fundamentally and purely a malicious affair.

We have had picnics to which the ladies have been invited. Each time we have had them out they wanted to know why they couldn't come to more meetings. I purposely waited till today to hear about the woman's auxiliary before I sent anything in regarding that. I am sure we could have one down there because we have good co-operation among the doctors and I don't know why we shouldn't have it among the wives of the doctors. We have increased our membership this year and have meetings regularly. Our next meeting we have planned for. At our June meeting two of our local members are going to prepare a paper to be given jointly. At that meeting the Fulton County Medical Society will be our guests. They will bring along two men who will open the discussion of the paper given by our men.

The object of this is to prepare a team from this meeting that we will have ready to go out and trade meetings with some other Society. That is the extent of our plans till September. No active plans are being made for the meetings after August. Our program is laid out and we have the meetings prepared, but as yet we haven't obtained speakers. We are mixing in our own local men with the outsiders this year.

As I said before we have increased our membership and have increased our attendance every meeting. Whether or not the residence idea of meetings will continue, I don't know. It is getting so that there aren't very many men in the county who have houses big enough to accommodate all of us.

We introduced the social idea following the scientific meeting. They enjoy the scientific meeting but they come because they know there will be a good time after the meeting. After one of the meetings we had a musical program.

President Jackson: I would like to con-

gratulate Dr. Marsh on that report. I think that was a good one. I wish there were more county secretaries in the small communities who showed the same amount of enthusiasm that Dr. Marsh shows.

Is there any other discussion of this presentation by Dr. Crane?

Dr. Crane: I want to emphasize the fact that we, at least according to our Michigan committee, are not like any other club, like any other organization. My own view of the matter is that we should do exactly what has been suggested by Dr. Marsh and by the gentleman from Detroit, enlarge the social side of an occasional meeting. If you do have a medical program, have a dinner or a luncheon and invite the women. That gives the women an opportunity to have a meeting afterwards. Do that three or four times a year. They can then plan what they want to do and consult the men if necessary. They do not need to have regular or frequent meetings at all.

I think you can readily see that the need of more social life is felt by a great many of the men. You feel it more now that you have had these expressions from the doctors. The attendance is greater and the interest, but all that is lost until you inject some social features into your meetings. Then the attendance is so big the house isn't big enough to hold them. There is the long-felt need of social contact. The meeting with the women will come just as an incidental matter without taking time for other duties.

I want to say that I will—and I can speak for Mrs. Kolword too—be glad to go where you think we are needed, as far as possible, to take up this matter and help form an organization. (Applause).

President Jackson: I am sure, Mrs. Crane, that I voice the opinion of all those present here today that we are very grateful to you and your committee for what you have done.

Dr. Crane: I am very grateful for the hearing.

President Jackson: We will be very glad to do everything we can to make this work go on the very best possible.

We are now to hear from one of our county secretaries on "Public Relations and Education," by Dr. C. F. DeVries. Dr. DeVries is from Lansing. (See Editorial pages).

President Jackson: Is there any discussion of this paper? I want to congratulate the County Society on the twenty-seven necropsies in sixty-two deaths, or something like that. I think that is pretty hard to beat. I think all of you have something to shoot at.

Dr. Clark (Jackson): I would like to ask Dr. DeVries if he has been co-operating with the undertakers in Lansing in getting this high percentage of autopsies. We find in Jackson that the undertakers as a whole are absolutely opposed to autopsies and use their influence many times before we get to the family to get permission.

Dr. DeVries: We are getting wonderful cooperation from every undertaking establishment in Lansing. They have invited doctors to attend them. Their main request seems to be to do the autopsy within the first two or three hours. The problem of cleaning up following these post-mortems and so on they are always very glad to do. I have seen their cars wait two or three hours at the hospital for a post-mortem. I don't think we have any trouble with any of them.

Dr. Clay: Are you charging the members a certain amount in that matter of collecting their bills? What is the arrangement?

Dr. DeVries: This credit bureau thing is working out nicely. It has been going on for about six months. You would be surprised at the number of names in the delinquent list whom you would consider all right. You will find them in the file. The bureau charges each doctor \$2.50 a month if he is alone, or if he is in any group or partnership it is \$18 a year. The money collected is all collected on a flat rate, that is, 15 per cent commission. A layman runs the organization and acts as secretary. Three doctors and three dentists act as a board of governors.

President Jackson: The next number on the program is by another county secretary, "The Work of Committees" by Dr. George Curry of Flint, Genesee County.

Dr. George Curry: Webster defines a committee as "a group of people who investigate problems." The function of every committee, the purpose of every committee is to investigate several different kinds of problems. Those problems which are of long standing, the stereotyped problems, current problems, anticipated problems and emergency problems come under this investigation. I am sure that every County Society has all four of these types of problems. The personnel of the committee should be composed of men who are particularly interested in the problem which they are given to study.

The chairman of the committee should be a man who is well acquainted with that particular problem, he should have associated with him men who are well-acquainted with it, they should meet, they should study carefully, they should analyze and they should report in the form of a conclusion or a resolution to the organization which they represent.

I think those standard facts hold true for probably every organization and certainly for a County Medical Society. Dr. Corbus made the statement that every organization has a soul. I think every County Society should have a soul. I think that soul should have its manifestation in committees. I think the more committees you have the more successful is your organization. The relegation of responsibilities to various members of the Society is one way to have a successful Society. All of us bolster up under responsibility. We have a mutual admiration society of which we are a very prominent member when we are given the responsibility to investigate something. I am sure that that is the case with the County Medical Society.

I am sure you will pardon me if I make reference to my own County Society in this regard. It seems to be the routine here this afternoon to refer to your County Society. That is the one nearest to our hearts. After four years of observation as a county secretary I think the most

successful year that we have ever enjoyed in Genesee County is this present year. I believe it is due entirely to the fact that we have a lot of committees. Our president has never seen fit to decide an issue by himself. I have no record that he has ever made such a decision. When an emergency problem comes up in the interim between Medical Society meetings our president calls his committee by telephone and I am always present as secretary of the organization. We meet, have a lunch and iron out the problem. If it is important enough to bring before the County Society we do so. If it is not we don't. We relegate it to the wastebasket.

I believe the scientific part of a County Society is the primary object of a County Society. It is the thing that ought to stimulate interest. Social functions are adjuncts and they have their place. Along with the administrative side of the running of a County Medical Society should be the formation of committees and the appointment of committees at the beginning of the year just as our scientific programs are all arranged at the beginning of the year to conform to the idea of a postgraduate course of instruction over a period of perhaps ten months; in some organizations that would be ten meetings, but in our particular instance it is twenty because we meet twice a month.

The officers of an organization are only a part of it and I think perhaps the smallest part of it. The success of any organization is dependent entirely upon the interest of each individual member. Next to that I think the success of every organization is dependent upon its committees. I think these committees can be likened to the various departments of a large industrial concern. The executive office of the Buick Motor Company would certainly be at sea if it attempted to solve all the problems of the various departments. I believe the same thing holds true of the medical organizations.

I am tempted here to enumerate the committees. Our first committee is the legislative committee. We chose, as our chairman of that committee a man whom we think understands politics, a man whom we think has diplomacy and foresight in handling problems of a political nature, some one who is acquainted with the powers-that-be at Lansing and can do so to the best interests of our own Society. We have five members on that committee. That is the largest committee we have. I think five is about the largest number to put on a committee because the larger you get a committee the more nearly you approach the size of the organization that you represent. Problems brought up at a meeting become unwieldy. There is usually a lot of confusion in trying to arrive at some conclusion. If the discussion of that problem is relegated to a few members then a conclusion can be arrived at more quickly. The other men on the committee are such that we think they understand the same problems that we believe the chairman understands, perhaps not quite as well, otherwise they might ruin the chairman.

The next committee is the public education committee. As chairman of that we have our health officer. We believe he is best acquainted with the public education committee problems, more so than any other man in the profession.

Then we have the public health and civic relations committee of which our school physician is chairman. That explains itself.

Next we have a committee which we have called the research committee. That is composed of three men and we propose to take up a research problem each year in conjunction with the activity of our County Society and investigate that problem over the course of a year's time and then present the findings the following year. This particular year we have chosen to have all of the physicians co-operate in reporting stillbirths to the chairman of this committee. We have arranged with the board of health to get these bodies and bring them to the board of health or to the hospital and autopsies are done, autopsy reports are recorded. We are keeping a list of these over the course of a year. If at the end of a year's time we have enough cases so that it is worth while it will be published, otherwise we will wait two years. I presume after this problem is studied and is found to be worth while, and the results are worth while, there will be a new problem.

There is the tuberculosis committee of three members. There is the library committee which has to do with our hospital library. That is maintained by Genesee County. Then there are the entertainment and program committees. Right here I will say that I have nothing to do with the programs. My function is to receive the program from the chairman of that committee. I call up the Flint Mailing Bureau and cards are sent out. That program is all arranged at the beginning of the year, just as these committees are appointed in the beginning of the year.

Then we have the ethics committee.

We have two so-called scientific teams. These are formed for the purpose of exchanging meetings with other County Societies. We have successfully done this with the Alpena County Society and in two weeks there will be another with the Oakland County Society. We are going down there and exchange meetings and they are coming to Flint the first week in June. We have a senior scientific team composed of senior interns and physicians of the city, and there is a junior team composed of lesser lights. If the seniors cannot go the juniors are asked to go.

We feel with the appointment of the committees at the beginning of the year we can relegate any problem that comes up during the course of the year to these committees with success. (Applause).

President Jackson: Is there some discussion on this very interesting paper about committee work? Are there any questions that any of you would like to ask Dr. Curry? I feel that this is a very valuable contribution to our discussion of ways and means in County Society work.

The next item on the program is a round table and I will ask Dr. Warnshuis, who is our secretary, to conduct this round table.

... Dr. Warnshuis took the chair ...

Secretary Warnshuis: The object of this conference was first to receive reports and second to impart reports so that you, as field men so-called, may know what your state organization, as a centralized group, is attempting to do and that those who

are in charge of the state organization, the central group, may also learn what you field men need. Therefore, to that end I have listed on this program a few subjects that we want to touch upon, just by asking questions and answering questions and if there are any other questions, as I suggested this morning, that may occur to you that are not mentioned here or that haven't been covered you should feel perfectly free to ask them.

I said a little about dues this morning and about the membership roster. Has any member here at the present time any question that he wants to ask regarding this subject or the problems that may have arisen on this subject in his county?

Dr. Corbus has said so and Dr. Jackson and members of the Council have stated from time to time what the dues were. We have set forth from time to time just what we are trying to give in return for the dues. However, no man can count the dividend in actual dollars and cents. I don't feel that we are asking for exorbitant dues when we ask for \$10 a year for membership in the State Society, especially when \$2 goes to the Medical Defense part of it and \$2.50 is for the Journal publication and the balance for defraying organization expenses.

However, we have not always expended all that has been collected. We are putting up a little nest egg, or a reserve fund, which I think it is well for every organization to do. Our State Society, in comparison with other states, has probably the lowest reserve capital. There are some states, comparable to Michigan, that have a reserve of something like \$60,000 or \$70,000. I don't believe we should ever attain that amount, but I do think we ought to have at least \$25,000 or \$30,000 reserve to take care of the problems that will arise in the future.

Has any member any questions to ask on dues? Any on the roster? The roster, as I told you this morning will be compiled and probably gotten out for the June number of the Journal. A list of the members of your county who have paid will be sent to you in the course of the next week. We ask that you return that promptly.

The second item is monthly reports. I know they are a task to every secretary. It means writing up the minutes of your meeting and imparting the items of medical interest in your county. We want these reports for the Journal, first, to show other County Societies what you are doing in order that they may gain inspiration

and probably institute some of the things in their county. The second is that it serves as a historical record of the profession of our state.

Some of you may have read with some interest the historical paper that we had on George Washington and also the one where we reported the letters of the doctor who first came to Pontiac. Those are interesting things and what we are doing today may be just as interesting to those that are coming after us a hundred years from now. We want to make such record. That is why we want the monthly reports. It is a task but if you will sit down shortly after you come home from your regular meeting and send us the report we will appreciate that very much.

President Jackson: I would like to say a word in connection with this matter of medical history. I would like to say this to you, as county secretaries, that at the last meeting of the House of Delegates a committee on medical history in Michigan was authorized. I appointed such a committee and Dr. C. B. Burr of Flint, whom you all know, is the chairman of that committee. If any of you men as county secretaries or officers of our local organizations have available interesting facts and medical history in your county, I wish that you would take the pains to communicate with Dr. Burr and make him familiar with the history in your county as you come in contact with it.

Secretary Warnshuis: The third thing is the minimum program. Is there anything that has been developed in your county that warrants a change in this minimum program? Or, is there anything else that we should do that will put this minimum program over to more effectiveness and produce more results? I will say that our minimum program policy plan has gone over the country and has been imitated by a good many state societies.

The fourth item is that of legislation. We have been told somewhat about legislation this morning. The present situation is that the two bills that are rather of concern to us are the osteopathic bill and the chiropractic bill. We had proper representation and a presentation was made at the hearing in Lansing. Other political methods were employed in interviewing the members of the committee. We feel quite sure, and quite safe, that the osteopathic bill is in the committee and is going to stay there. If by any chance it should leak out I don't think it will ever be signed by the governor.

You will probably hear of the chiropractic bill within a few days. Then it will pass the house and go to the senate. President Jackson and I saw the Lieutenant-Governor and he gave us his word that the bill will be handed to the committee on public health of the senate and the public health committee of the senate will take care of it. They will furnish a graveyard for it. Don't worry if you hear about the chiropractic bill being reported as passed by the house.

Other pieces of legislation that has come up during this session will be fully reported on in the Journal that is coming out this week. You will find some two or three pages of report thereon which will acquaint you with the various types of legislation that have come forth. Does this conference want to take any action, or pass any resolution, by way of a recommendation to our House of Delegates relative to the appointment of a commission by our State Society to take up the question of the basic science law and the introduction of some bill at our next Legislature two years hence for which we must do a large piece of educational work among the people of the state? Do you want to recommend to the House of Delegates that such a resolution be introduced creating such a commission and studying the problem and preparing such a bill for the next session of the Legislature two years hence to solve this biennial fight that we have on our hands?

Dr. Knapp: I would like to make a motion covering that resolution—the one which you now stated, and not only the question of drafting the bill from the angle of the medical profession but that a draft be submitted perhaps to the Council by a lay organization or by the legislators who might be interested in it and that the Council also take such steps as necessary to prepare the public for the proper viewpoint on this subject when it comes up two years hence in the way of education.

... The motion was variously seconded and unanimously carried ...

Secretary Warnshuis: There is just one other matter regarding legislation that you may care to hear about. Senator Gansser introduced a bill amending our Medical Practice Act whereby chiropractors who were ex-service men of the World War and who had been trained in the government training schools by the training board should be granted licenses by our state board upon presentation of certificates of such training.

On the face of the thing it looked very vicious because if that piece of legislation

went through it would make it mandatory upon our board to issue licenses to these vocationally trained men of the United States government and it would make Michigan the dumping ground for a horde of these chiropractors who couldn't practice anywhere else. We saw Senator Gansser on two occasions and when we came down to the true motive of his introduction of that bill it came out that there are two chiropractors in the state of Michigan who were trained by this board. They live in the upper peninsula and are friends of Senator Gansser through the Legion. On that basis he was trying to get authority for them to practice.

On account of other problems that were before the Legislature we thought it was wisdom to compromise because we know what Senator Gansser is—some of you probably know—and we know that the cry of patriotism for the men who served in the war and who were trained by the government would probably win sympathy among the senators and the people of the state and would cause that act to become law. That would negative the present protective features of our Medical Practice Act. When we found out that there were only two of these men in the state, though there are a lot of others who are practicing who weren't trained by the government, we said to the senator "If these two men should by any chance or happening receive licenses to practice would you withdraw and not present your bill?" He agreed and these two men will be given licenses and that ends the fight. Michigan won't be the dumping ground for chiropractors of that sort. That is wise politics.

That is about all there is on present legislation except what you will find in the Journal this week.

Dr. Marsh: Is Representative Culver's bill to change the law in regard to probate judges still up?

Secretary Warnshuis: Those two bills are still in the committee. The purpose of both those bills is to give the probate judge authority to send indigent people to other than the university hospital. That is the whole purpose of the thing. The last reports I have from Lansing do not say that these bills have been enacted. They do not affect us very particularly except in some counties.

Dr. Marsh: Some counties are taking care of their own indigents. They are keeping them out of the public court.

Secretary Warnshuis: I don't know whether they have been passed or not.

They are still in the committee. Are there any other questions you want to ask on legislation? I don't think we have to call upon you for any more telegrams. I think the situation is pretty well in hand. I think our protest has been well recorded at Lansing.

The next point is the annual meeting. A great deal of publicity will be given in the Journal to this matter. It will be at Mackinac Island on June 16, 17 and 18, Thursday, Friday and Saturday. The entire Grand Hotel, which has a theatre and large ballroom, and two or three rooms like this, is available for our meeting. The program has been arranged. The first day will be given over to the House of Delegates. On Friday and Saturday there will be the so-called scientific days. The several scientific sessions will meet in the morning from eight forty-five to twelve-thirty. The afternoon is given over to sports and pastime, golf, tennis, and handball, rowing and swimming. They have a heated swimming pool. Dr. Marsh is an exponent of archery. He will come forth with a group of archers that are going to challenge the archers of Michigan. They will challenge the golfers. We are trying to arrange an afternoon of friendly sports and an arbitration committee is going to be appointed which will settle all difficulties and prevent any physical battles.

At six-thirty we will meet for dinner. That will be an informal get-together, good fellowship meeting. After the dinner, at eight o'clock, we will have our general session in the theatre of the hotel. On the first evening we will have the president's address and also a paper by Dr. Pemberton of Philadelphia on Arthritis. You know the work that Pemberton has done. He is going to give us a very extensive as well as a very interesting and up-to-date report on the present attitude towards arthritis.

On the second day there will be sessions in the morning and in the afternoon there will be sports, a dinner in the evening and after the dinner Dr. Fishbein of the the Journal of the A. M. A. is going to give us a talk, also Dean Lewis of John Hopkins is going to give us a talk. That will be in the general session on the second evening. After these general programs in the evening there will be an opportunity for dancing and any other games that you may care to get into. I would advise you to stay out of the gambling room. I have been in there and I know that the wheel is against you every time you play it.

That completes the program. We fig-

ure that on Saturday evening and Sunday the men could all stay over and have another day of sport. On Sunday afternoon there will be special trains arranged for with the Pennsylvania Railroad to take you home so that you will be home either late that night of early Monday morning. The Detroit men will get into Detroit at six o'clock on Monday morning ready to go to work.

I think this is one of the most unique programs we have ever had for an annual meeting. Those of you who have never been on the island have a wonderful and interesting time awaiting you. It is going to afford a splendid opportunity for the development of professional fellowship. Is there anything you want to know regarding the annual meeting besides that?

The sixth one put down is the endowment foundation. Some publicity has been given this in the Journal. I don't know how many of you have read the editorials and the information imparted on that subject. The idea originated with one man who wanted to contribute a fund to the State Society to be used for the education and the advancement of doctors. Under our organization charter we could not accept such a fund. It was necessary, therefore, to organize an endowment foundation. I am not at liberty to impart the name of the man but the first donation amounted to \$50,000 and was received during the last month. When you come to the problem of an endowment foundation and what can be done, I think that it can be built up so that eventually we can have an endowment foundation of probably a quarter of a million dollars. If we can do that then the earnings from the money invested can be expended for the advancement of post-graduate instructions and Society activities and also for the advancement of the doctor. That is going to answer your dues problem eventually.

I don't know how many men there are who can give us \$50,000 but we do feel that judiciously approached—and the Council has instructed that no particular stress be laid upon this plan—when the opportunity presents itself and we see somebody among our number who has been blessed with more of this worldly filthy lucre than you or I and who can give us \$1,000 or \$5,000 or \$10,000, then we can in the course of a few years build up a handsome endowment that will be to the advantage of the Society and through the Society to each individual member. I just want to impart that information to you

so that when the question of endowment foundations comes up in your Society you can tell what the idea is. We will give this some publicity from time to time.

The next subject listed is that of district and county clinics. Under the instruction of the Council and Committee on County Societies we have been directed to conduct district post-graduate conferences in each Council district, one each year. Some of the counties or districts desire two or three. It has been the feeling of the Council that these district conferences must not take the place of the County Society program and on that basis we are only to supply one district conference for each Councillor district of the state. We have already conducted four. Another one will be conducted the first of this month, making five. Then we will have to take a vacation for about thirty days because with the closing of the schools, examinations in the schools, the meeting of the A. M. A. the middle of May and with the state meeting coming on the first of June, it wouldn't be advisable to attempt to hold any post-graduate conferences because many of our members will be attending these meetings. Right after the state meeting we will be ready and able to put on the conferences in the other Councillor district. This matter has always been arranged with the Councillor district in conjunction with the state secretary and the wishes and plans and conveniences of each district are being met as far as possible.

Then in reference to the county clinics. To aid the County Society and for their stimulation, especially in those counties that are of a smaller size and away from the larger civic centers, the Council has instructed that we supply and arrange an afternoon program for the County Societies, or arrange a clinic. I make the announcement that each County Society desiring such an afternoon program or clinic indicate when and where they want that program or clinic and we will endeavor to supply the speakers. We have just conducted one at Tuscola County to which we sent Dr. Shawn of Detroit and his assistant who gave a very splendid—from the reports—clinic on goiter and the diagnosis of goiter with a demonstration of cases. That is the type of work we stand prepared to provide for your county programs so as to make your County Society not lose its identity but keep up a standard of education among your immediate members and not fuse it into your district program.

Are there any questions that you would like to ask on this?

Dr. Charters: May I interrupt here for just a moment? Dr. Whittaker called me up last night. As some of you know we have a surgical bulletin which is issued around four o'clock in the afternoon. Dr. Whittaker is the chairman of that bulletin work. His co-workers are members of each hospital in the city of Detroit and we, who are doing the surgical work, are to report to Wayne County, or to the hospital to which we are attached, the operation bulletin for the following day. Every day practically we are listing 200 operations. Last year we listed 30,000 operations in the city of Detroit. These operations are from the hospitals and any man who is doing surgery is listed on this bulletin. We will be more than pleased to have any member of the State Society visit us and see the work that is done. All you have to do is communicate with the secretary of the Wayne County Medical Society and state the day you are going to be in Detroit and the bulletin for the day will be mailed to you. In that way you can take advantage of your stay there and see as many operations as you wish or any varied amount. If any of you contemplate visiting Detroit let our secretary know—that is the house secretary. You can get her and she will mail you the bulletin. Or, if for any reason you want the bulletin sent to your Society we will send it free to any Medical Society that requests it.

We have had a great struggle in Detroit trying to keep this bulletin going. You would be surprised at the amount of quarreling and the upheaval we had in trying to get this bulletin established. The interns fought us from every point. They were like the dog in the manger. They didn't care to list their work, still they didn't want the surgeons to list their work. We have been under quite a strain financially. We have been helped out very wonderfully by the State Society in that regard. The bulletin is a working thing. It is free to you for the asking. We hope you will avail yourselves of the opportunity whenever you happen to be in Detroit.

Secretary Warnshuis: Is there any question that you want to ask regarding these district and county programs or clinics? If not, we will go on to the next subject which is medical defense. Is there any question you want to ask regarding medical defense? Michigan stands out unique in its defense committee, more so than any state in the Union. Some of the other states that have had medical defense, probably because of mismanagement, have discarded it. Michigan today is still defending its members through the last court. We have been able to do it under the fee or the apportionment of our annual dues. The amount that has been allotted to defense is \$2.50 of each member's dues. The defense committee still has a balance to its credit of something like \$10,000 reserve, with all bills and all expenses paid. They have sent the personal attorney of the committee and of the state society to each suit or trial that has taken place. It is a serv-

ice for which we owe a lot to Dr. Tibbals who has been the director of this defense committee from the day of its inception some twenty-two years ago.

The next item on the program is the Journal. Are there any questions you want to ask regarding the Journal? I would like to have Dr. Bruce who is chairman of the publication committee of the Journal say something about the Journal.

Dr. Bruce: This is rather unexpected, Mr. Chairman. Those of you who know me and those of you who do not may suspect that I am at least equal in modesty to the gentleman who has just been addressing you, and inasmuch as I have the good fortune this year to be the chairman of the publication committee I don't know that it would be a modest thing to talk about myself or ourselves.

I do wish to say in connection with the Journal that the changes that have been brought about in the last year—and which we owe entirely to the secretary-editor—are very desirable ones. I refer especially to the new cover page and to the rearrangement of space. The Journal should become more and more the recognized and official organ of the Society. I think as time goes on and our organization becomes more complete and each of us in turn is converted to the absolute necessity for a very complete understanding between ourselves, and a more complete organization, that through the Journal we will develop very much more worth while work than we have in the past.

Personally, I am tremendously impressed with the program that has been developed during the last three or four years. The program on clinics on post-graduate work and along all lines is having the tendency that is so much to be desired, a more complete understanding between ourselves, a solidarity which we at no time before possessed and which for our own self-preservation as well as for the welfare of the community is certainly extremely desirable.

Secretary Warnshuis: Are there any other questions on the Journal that you want to ask? Dr. Curry asked me during the lunch hour why we had the green cover. You may have noticed the little squib that we wrote in the editorial comments relating to the fact that somewhere we had gained the idea or the impression that green was symbolic of the medical profession. I know that some of the universities in the gowns of their medical students have a green piping in the caps or have green tassels.

I went to a person whom I always thought was the source of all medical knowledge, Dr. Fishbein and asked him if he knew the origin of that color as being the sign of the medical profession. You will remember his comeback that he didn't know except that it reminded him of the squib about what turns green first in the spring—Christmas jewelry or something along that line. However, just because he

didn't know I didn't conclude that that was the end of the inquiry we should make. I finally got in correspondence with a foreign concern in London that had been making caps and gowns and things of that kind and asked them for the origin of the color. The engineers have theirs and the lawyers have theirs, and the various other trades have their piping in their gowns. So I got the reason why green is the color of the profession. I am going to announce it in a succeeding issue of the Journal. After we have done that we will change the color to pink or something else if you like that, Dr. Curry. Is there anything else on the Journal?

Illegal practitioners is the next subject. I stated something on that this morning but will say again on that question this afternoon that the appropriation made by the Council for the investigation of illegal practitioners is being expended somewhat judiciously and somewhat slowly because we did not want to create an impression throughout the state, especially during the session of the Legislature, that we as an organized group of medical men are attempting to take the place of the police authorities or the police powers of the state. We didn't want that to be used as any argument in the Legislature.

However, we have investigated and we have made progress and we have accomplished something in a number of complaints that have been filed regarding illegal practitioners. The policy of the Society should be one of—shall I say—reserve, that is, the Society must be held in reserve. As a County and State Society we cannot afford to go out and be known as policy officers or that we are proceeding against any one class or group of individuals. By the authority of the Council we have employed a young attorney who is associated with and is a member of a well-recognized firm of attorneys. And it is the purpose as these reports come to us and the more flagrant ones are evidenced to us to send this man there to interview the prosecuting attorney of that county and the sheriff or police authorities of that county and cause them to secure the evidence and make the prosecution and not have the State or County Society appear as the prosecuting agent at all. In the event that the local prosecutor or the local police authority will not perform the duties that belong to him, the contact is made whereby the attorney general of the state will write a letter which will probably cause the local prosecuting attorney

to sit up and take notice. All I can say and all I have authority to say now is that we are in a modest but progressive and expanding way doing something for the protection of the individual member from unjust competition by those who have not met the requirements that our members have been made to meet in regard to practice.

Is there anything else that you want to know on that?

Dr. Martin: I want to ask a question. It doesn't pertain so much to the prosecution of the irregular practitioners, but the looking after some of the things that occur within our own house and what to do with those who are legally allowed to practice medicine and who do illegal things.

We have a man who practiced abortion. A girl testified against him just before she died. What is our duty in a case of that kind? I hesitated as a member of the County Society to enter into any public activity that would prosecute that man. Isn't there some way that we could solicit outside our local organization for help that would cause this doctor to sit up and take notice and perhaps not bring it into the limelight of a prosecution? Just have some pressure brought to bear upon him to correct him in the error of his ways. Perhaps it would be better to do something of that sort rather than prosecute.

Secretary Warnshuis: I would say in answer to that, Dr. Martin, as it was stated this morning, the County Society is the judge and the censor of the conduct of its own members. If you as a County Society have evidence showing that one of your members has transgressed and is engaged in practices that are not approved or that are in violation of the ethics of our organization or in violation of the statutes or laws of our state, I believe it is the duty of your County Society to first, in a friendly way, work with that man and try to convert him and cause him to turn from his path of waywardness. If it is a criminal procedure I believe it is your duty to place the evidence before the local prosecuting attorney. I may be wrong in that attitude but I think that is the attitude that ought to be taken.

President Jackson: I have an idea that the case of illegal practice among our membership places a serious responsibility upon us. This is one of the things I had in mind when I spoke this morning about the modification of our present Medical Practice Act. I believe that if we want to appear in the right light before the public we are in duty bound to come with clean hands. I think it is pretty hard to expect the public to accept us for what we estimate ourselves to be worth if we do not very seriously disprove of such illegal practices

among our own membership. I have an idea that this is one of the things that proper machinery for the carrying out of our Medical Practice Act could take care of.

I believe that when you have in your community a man who is known by the rest of the profession to be doing such things, his right to practice medicine in the state should be withdrawn. I don't believe the mere fact that the State Board of Registration has registered him entails any obligation upon them to keep him within the ranks of licensed practitioners. I know that dealing with these individual cases by each County Society is a rather delicate matter because all of these men have friends and they will feel that such and such a man is being dealt with unfairly. I have an idea, however, that if the evidence is fairly conclusive and you are satisfied in your own mind that it has happened more than once and it is a regular practice, he shouldn't be carried on your membership roll. I offer that as my own private view.

Dr. Ellis: What do you do in a case where one of his patients does not complain but boasts about him? He doesn't belong to the Society and you don't want to go after him yourself.

President Jackson: I think the State Board of Registration should have machinery to take care of that.

Secretary Warnshuis: In a certain community in the state there was a man who had been running a cancer institute and had been preying on the poor victims of cancer who are hopeless. He had been obtaining large fees for cancer cases. We knew of his pernicious practice and we knew of his defrauding these people and the promises that he had made. The question was to get the evidence against the man. However, things eventually shaped themselves around nicely.

He foolishly went to Connecticut and gave his treatment, or rendered his treatment to one or two people in Connecticut and was promptly arrested by the Connecticut Board of Registration and Medicine, haled into court, fined \$600 and costs. During the course of the year he had been apprehended five times by the police department for drunkenness and had been fined twice in police court for drunkenness, once in a gambling den. We got the evidence of conviction in Connecticut, and we got the two evidences of conviction in police court for drunkenness, which covered the charge of moral turpitude and with that evidence presented to the State Board of Registration he has been cited to appear in June to give cause why his li-

cense should not be revoked. We can then get an injunction for the cancer institute.

We are doing some things but sometimes it takes a little time to get around to where you can get the man where you are safe.

Dr. Marsh: Is it necessary for a man to be convicted of a felony in order to have his license revoked?

Secretary Warnshuis: The law says they will revoke for the following causes: Undue, or unwarranted promises of cure; the employment of cappers; moral turpitude; infraction of the criminal law and a few other things of that kind. Advertising to cure venereal diseases is one of the other grounds upon which a license may be revoked. But you have to get your certificate of conviction on these charges in the other court, and that is sufficient cause for the Board to cause revocation of the license.

Dr. Marsh: What about abortions?

Secretary Warnshuis: I told you about the one that came from Chicago this morning. These men producing abortions are simply causing it through a hemorrhage or some other way. Then the individual goes home and the doctor is called. That is a problem that every hospital has to contend with. I know that we have had to contend with it at Grand Rapids. Then they are admitted to the hospital as an incomplete or a partially completed abortion, or one with a very severe hemorrhage. You as a doctor or a staff man have to take care of it. Under our present method of treatment today these people get along without difficulty and when they are out of their trouble they won't swear to any warrant to anybody else and you can't get evidence. If you could get any evidence, even presumptive evidence, affidavits that this individual is doing this as a routine practice and that you have knowledge that so and so, or a certain number of people have done it, I think you might be able to put a scare into that individual. But the hard thing to get is the evidence. When you think you have the evidence and you put the individual on the stand they will backwater every time.

Dr. Marsh: It seems to me that under the fear of death the securing of an ante-mortem statement is about the only evidence that is worth a dime.

Dr. Martin: Is an ante-mortem made just before death satisfactory evidence?

Secretary Warnshuis: It is usually so construed by the courts.

Dr. Stone: The question that comes up, if my information is correct, is whether or not the patient knew that she was dying when that statement was made.

Secretary Warnshuis: You want to have included in the statement "in fear of death" or "in view of impending death."

Dr. Martin: That has to be in the statement.

Dr. Knapp: Suppose it is simply a voluntary statement that the patient received the initial operation for abortion at the hands of a certain doctor in a town. She signs it in the presence of witnesses, what then?

Secretary Warnshuis: If she will substantiate that thing it is all right, but you can't get that girl to substantiate it in court. She may say she will but when it comes to a court trial she won't do it.

Dr. Martin: Such a statement is no good after the girl is dead unless it states fear of death.

Dr. Marsh: You can get a notary public to put her under oath.

Dr. Martin: What if she doesn't die?

Secretary Warnshuis: She may revoke her statement and say she didn't do it. That is the problem you have with one like that. I want to say in conclusion on this subject that your Council, through its officers, are not unmindful of your interest in this and we are going as fast and as far as we can. We don't want to make a misstep or get into any difficulties. Are there any other questions regarding the County Society and its administration that some of you men may have on your minds as a result of this conference or as the result of your experience in your local county?

Dr. Clark: When Dr. Crane was talking about the auxiliary it occurred to me that more use might be made of a closer co-operation between the graduate nurses association and the State Society. I wondered if that might not be worked out.

Secretary Warnshuis: A year ago when the State Association of Registered or Graduate Nurses had their meeting at Traverse City I appeared before them and gave them a talk on the status of organized medicine and what we were doing in Michigan. I asked them that inasmuch as they were in such close contact with the patients and their families to a greater extent than the doctors, that they make it a point to cause each nurse to impart some truth or statement or fact regarding scientific medicine and some information or truth regarding these various cults and the Bernar McFaddens and all that sort of thing. They agreed to do that but since that time in spite of correspondence with them no further definite activity has been taken. They haven't gone further with it. The thing with them seems to be how much more money they can get and how many less hours they can put in.

They have, however, within the last year employed a full-time secretary who is now

in Lansing. Maybe we can secure some opportunity to make connections and come in closer contact with them. I will say, however, that this organization of what we call our joint legislative committee or commission, which has representatives on it from the State Society, the University, the State Department of Health, the State Dental Society, State Nurses and the State Tuberculosis Society, have through their nurse representative shown some interest in our medical problems and I think we are a little nearer than we have been in the past. However, nothing definite has been accomplished. I think that is one of the points where our auxiliary may be quite valuable to the County Society and profession by maintaining liaison with the local nurses' organization and influence them to activity along these lines.

President Jackson: I'd like to supplement that by saying that the State Nurses' Association has for several years taken a very active interest in the work of our joint committee on public health education. A representative is always there and a number of nurses have taken part in this extension program. We have that cooperation from the nurses. They have done some very good work in that extension program.

Secretary Warnshuis: Mr. President: Some years ago, in fact, a good number of years ago when Dr. Schenck was state secretary he conceived the idea of these conferences of county secretaries. It was my privilege, at that time, to have joined in organizing the first county secretaries organization in Michigan and to have been its first president. Our meetings were held, like today, each year in conjunction with our state meeting. Then things came on, there was the war and after the war these meetings were abandoned. It was about four years ago that the Council again authorized and instructed the calling of these conferences. They felt that these conferences should be held at a time away from our annual meeting when there were so many other things that detracted attendance at this meeting. Therefore, it has been held on a day like this.

I would suggest to you that this group of secretaries convened here today, reorganize by the election of their own president and secretary of a County Secretaries Association and that the conferences in the future be conducted by the officers elected by the secretaries themselves and that they be joined by the officers of the State Society and the Council. I think

this County Secretaries Association can be of value to each of us, because after all it is as you and I manifest and record our enthusiasm that we are going to progress in the line of professional activity. Unless we band ourselves in this way for mutual helpfulness we are going to have a harder row to hoe than we have had in the past.

President Jackson: The president is willing to entertain a motion, or hear a discussion of the plan of the secretary-editor.

Dr. Corbus: I move we adjourn and leave the County secretaries to take care of this matter.

Secretary Warnshuis: You men can take that up by appointing a temporary chairman and you can perfect plans of organization. We will try to comply with your wishes whatever they are.

President Jackson: Dr. Curry, I will ask you to take the chair. You men can perfect your own organization.

* * *

... Dr. Curry took the chair as the secretaries went into session ...

Chairman Curry: You have heard the question, it is on the formation of a County Secretaries Association. What is your pleasure on that?

Dr. Finton: May I say that we should put this into effect, that is, that the suggestion made by Dr. Warnshuis should be carried out at this time.

... The motion was variously seconded ...

Chairman Curry: You have heard the motion. Is there any discussion of it?

Dr. Clay: I am not so sure that I think this is a good idea myself. I think the chairman of the Council and the secretary of the State Society are in very close touch with matters that are going on, such as have been mentioned here, legislative matters and things of that sort. Unless those things are communicated to the president of such an organization as this it would not be of very much value. I think the men who are in touch with those things are the men who should present them to the secretaries. We might have an organization, but I am not so sure that it would be of very much value.

Chairman Curry: Is there any further discussion?

Dr. Langford: It seems to me that the secretary has the right attitude with regard to a permanent secretary who would be on the job to keep in touch with. But our offices being only tentative, usually for one year only, I think the situation would be better handled if it continued as at present.

Dr. Ellis: I think that is another reason why Dr. Clay's suggestion is a good one. Inasmuch as the secretaries change from year to year it would be a pretty hard thing to have a president of the association keep it going. I don't believe the organization would hold up very much. There would be a lot of correspondence to take care of. I don't think it would be a working organization at all.

Dr. Finton: There seems to be sentiment

against this and with the permission of the second I will withdraw my motion.

Chairman Curry: The motion has been withdrawn.

Dr. Langford: I move that it is the sense of this group that the present organization be continued with the same management as before.

... The motion was seconded and carried...

Dr. Knapp: In order to make it possible to do more efficient work and be of more help to the Society which we represent, I would like to suggest or offer a resolution that it is the consensus of opinion that secretaries, at least in County Societies, serve more or less continuously in their jobs. Organizations seem to feel that it is an honor that should be passed around or for some other reason they elect a new secretary. It takes about a year for a secretary to get going. It is true that as we become experienced in our work we can do better work and if efficiency is wanted in each local Society a man has to have training to be efficient. If it could be arranged that men would serve year in and year out then perhaps an effective organization could be perfected among ourselves and it might serve some purpose. At the present time, however, with the personnel changing almost entirely every year we don't get anywhere.

Chairman Curry: Do you mean that you are offering a resolution that the County Societies be offered a suggestion that their secretaries be appointed for more than one year at a time as a result of this meeting today? Also do you mean for us to carry that back to our County Societies?

Dr. Knapp: Put it through the proper channels to get it to them. That might not look well coming from us. However, I will make that as a motion.

... The motion was seconded and carried...

Chairman Curry: About three years ago we formed a secretaries organization or association in Kalamazoo. That is all that it ever amounted to. (Laughter). It has not been disbanded as far as I know.

Dr. DeVries: There is one suggestion I have. Several of us are also serving as treasurers. I think if you can shift that responsibility to another man you can devote more time to your job as secretary. In that event I think it would be possible to serve more than one or two years.

Chairman Curry: In view of Dr. DeVries' remarks I will entertain a motion that we suggest to our County Societies that we abolish the position of secretary-treasurer and make two jobs out of that. I will entertain such a motion at this time.

Dr. DeVries: I will make a motion that the office of secretary and treasurer now be given to two members of each individual Society.

Chairman Curry: Our motion is in the form of a suggestion to our County Societies.

Dr. Marsh: In our County we have a separate secretary and treasurer and it works out beautifully. I will second that motion.

... The motion was unanimously carried...

Chairman Curry: Is there any further discussion or any further business to come before us?

Dr. Ellis: I move we adjourn.

... The motion was seconded and carried...

... The meeting adjourned at four-forty-five o'clock.

ARCHERY FOR RECREATION

The numbers that are attracted by the universal appeal of archery, are increasing by leaps and bounds. Time was, when to most disinterested folks, archery or "bow-and-arrowing" was merely juvenile pastime, and placed in about the same classification as marbles, kite flying, and "shinny."

Today, the grown ups, are, if anything the more enthusiastic over the pleasures of shooting the long bow. It is an ideal form of recreation for those whose occupation confines them through the most of the day. The pulling of the long bow is particularly good for people of sedentary occupations, as the attendant exercise brings into play the muscles that do not receive their "daily dozen." Doctors and other professional men and women seem to find in archery that which they need in the way of recreation. It is a unique and virile sport, and the loosing of a shaft brings an exhilaration difficult to describe. "That dead center shot at 50 yards!" will always be a topic of conversation.

Today in many sections there seems to be a tendency toward shooting at rovers, archery, golf and open field work rather than the range or target shooting. Many do not find that target shooting produces the thrill, and enjoyment that the roving type seems to supply. Courses may be laid out similar to those used in golf, and the purpose is for each archer to complete the prescribed number of "holes" in the minimum number of shots, as in golf. This form of shooting furnishes some keen competition, and close scores.

Another method of archery is to shoot at rovers, which consists of using for a target any mark such as an old stump, or tuft of grass. The archer coming nearest to each successive target selects the next mark to be shot at.

The equipment of the archer consists of a long bow and a half dozen or more arrows, a quiver and arm guard. The men's size bow should weigh around 42 pounds, and 28 inch arrows should be used. For the ladies, five foot six inch sizes seem to be preferable, and 26 inch arrows are proper. The latter should weigh around 30 pounds. In either case it is a distinct drawback to the archer to be "overbowed."

Arrows are brightly decorated to facilitate finding in long grass and bushes. The arm guard should be worn to receive the recoil of the bow string which is severe, and would otherwise make shooting painful. The quiver may be worn around the waist or baldric style, with the strap coming across the chest, so that the arrows may be withdrawn from over the shoulder.

The expense involved in the selection of a full equipment is very moderate. On the other hand if one is comparatively handy with tools and enjoys fashioning things, much pleasure can be had from making ones own equipment.

So, if you would engage in a sport fit for kings—get yourself a good long bow and a quiver of arrows and hie yourself to the hills and fields for—
"Here's to the bow and the well sent shaft,
Flung straight from the bow—sunk up to the
haft—

There is no sound appeals more to me—
That seems to sort o' set me free—
Than the music of the well sent shaft!"

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ORIGINAL ARTICLES

MEDICAL LEGISLATION*

(President's Annual Address)

J. B. JACKSON, M. D.

KALAMAZOO, MICHIGAN

The profession of medicine has made great progress in recent years. With the advancement of scientific learning it has increased the educational requirements for those who wish to enter its ranks. Today there is practically no profession which requires more in the way of education and preparation than does ours. Two years of pre-medical work, four years in a medical school and a year in a hospital is the least possible time in which a high school graduate can be prepared to begin the practice of medicine in Michigan. Many of those who enter our medical schools have had four years of pre-medical work, and hospital service after graduation is often extended over a period of two or three years or more. The man who enters the practice of medicine at the present time is well trained.

In spite of this fact, the public is no better protected from incompetence and ignorance in the practice of the healing art than it was before the days of such careful training and preparation for the practice of medicine. The raising of the standards of education in medicine has resulted in the development of a class who practice the healing art without having undergone this long course of preparation. There have arisen the various cults represented by osteopaths, chiropractors, sanitarians, and others who have taken a shorter cut to treating the sick. Some of these are lawfully practicing in the state

of Michigan. Many are practicing without any legal right to do so. These have largely taken the place of the poorly trained physician of a half century ago.

Dr. Wm. C. Woodward, Executive Secretary of the Bureau of Legal Medicine of the American Medical Association, has pointed out the ineffectiveness of medical practice acts in protecting the public against those who have not knowledge or skill for treating the sick. Our situation here in Michigan is not unlike that in other states. The osteopaths have a separate board. Their educational requirements are much higher than those of any other of the cults or schools. The chiropractors at each session of the legislature are using all possible influence to have a separate licensing board. Up to the present time, our own state has kept itself above the average in the matter of education required by law for the various cults. It has failed, however, to enforce the laws which it has made with regard to these irregular practitioners. You all know that a large number of chiropractors are practicing without a license. It is also a fact that itinerant irregular practitioners are seldom made to comply with our state medical practice laws.

In this connection, I wish to review briefly the present status of our medical practice laws.

Our present act was written on the statutes of our state in 1899. It has since then been amended from time to time, the

last time in 1913. This law provides that the governor shall appoint a Board of Registration in Medicine consisting of ten members. The law states: "Not more than five of the persons so appointed shall be from the school of medicine known as regular; not more than two persons so appointed shall be from the school of medicine known as homeopathic; not more than two of the persons so appointed shall be from the school of medicine known as eclectic; not more than one of the persons so appointed shall be from the school of medicine known as physio-medical, and the governor may select such appointees from the latest lists filed in the office of the Secretary of State at Lansing by each of the four legally incorporated State Medical Societies of the Schools of Medicine as herein mentioned aforesaid." Thus our state law recognizes four schools of medicine which no longer exist. Medicine is no longer a matter of beliefs or schools but is established on a firm basis of science. Allopath, homeopath, eclectic, physio-medical belong to the past generation.

The law provides that this board may examine and license physicians to practice medicine. No person is licensed to practice on a diploma. One must, however, present a satisfactory diploma before he can be licensed. In addition to this diploma he must take comprehensive examinations in all subjects. It also provides for reciprocity with other state boards of registration in medicine. It further provides for the examination and licensing of "any person who desires to practice a system of treatment of human ailments or diseases and who does not in such treatment use drugs or medicine internally or externally or who does not practice surgery or midwifery under the provisions of this act." This provision is for the so-called "drugless healers." It provides "for an examination before the State Board of Registration in Medicine upon the following subjects: Anatomy, histology and embryology, physiology, chemistry, bacteriology, pathology, diagnosis, hygiene and public health." Although the law states that such examination shall be equivalent to the examination in these subjects provided for practitioners of medicine, there is a general feeling among medical men throughout the state that the examination given these "drugless healers" has required of them only a very superficial knowledge of the subjects mentioned. The explanation of this is that the board, made up of medical men, has felt that if these examina-

tions were made too difficult it would furnish grounds for drugless healers to demand a repeal of the act. Few of them could pass a thorough examination and, if they were held to it, they could come before the legislature with the plea that a medical board was treating them unfairly.

The law further provides for the revocation of a license to practice medicine for "grossly unprofessional or dishonest conduct." The only provision for the enforcement of this act is, that "it shall be the duty of prosecuting attorneys of the counties of this state to prosecute violations of the provisions of this act." As has already been suggested, prosecuting attorneys have made little or no effort to prosecute violators of this medical practice act.

In 1903, the osteopaths secured an independent law governing the practice of osteopathy and creating a separate board, the State Board of Osteopathic Registration and Examination consisting of five and appointed by the governor. This law was amended in 1916. Osteopaths may be registered by the board upon giving evidence that they have the equivalent of a high school education and have taken a course in a reputable school of osteopathy, said course to be of not less than four years of eight months each. If the qualifications of the applicant as to osteopathic training are not satisfactory, the board may require "an examination which shall include the subjects of anatomy, physiology, chemistry, toxicology, pathology, bacteriology, histology, neurology, diagnosis, obstetrics, gynecology, surgery, hygiene, public health laws in Michigan, medical jurisprudence, principles and practice of osteopathy and such other subjects as the board may require." This is truly an imposing array of subjects. Of course the joker is that the applicant does not have to take the examination, because he is a graduate of a school of osteopathy.

The law provides that the certificate of registration issued by this board "shall entitle the holder thereof to practice osteopathy in the state of Michigan, in all of its branches as taught and practiced by the recognized colleges or schools of osteopathy, but it shall not authorize him to practice medicine." The law makes osteopaths subject to state and municipal regulations relating to the control of contagious diseases and gives them the right to certify to births and deaths. This law also provides that, "it shall be the duty of prosecuting attorneys of the counties of

the state to prosecute violations of the provisions of this act." The law does not define osteopathy further than to state that it is not the practice of medicine or surgery.

The osteopaths were first recognized by statute in Michigan in 1897. The law recognized the preparation for osteopathy as a course of four terms of five months each. At this time, the idea that disease was due largely to vertebral subluxations was the foundation of their system of practice. Since that time their educational requirements have been advanced. In 1903 the course was three terms of eight months, and in 1916, four terms of eight months each. With this increase in the scope of education and preparation of its practitioners, there has been a tendency to depart from the old teachings of osteopathy and to embrace the facts of science which do not bear out their former ideas. It is quite inconceivable that an intelligent young man who has spent four years in the study of anatomy, physiology, pathology and bacteriology should wish to confine his practice to the adjustment of vertebral subluxations. This is exactly the reason why there was introduced into the last legislature a bill—sponsored by the younger graduates of osteopathy, in which osteopathy was designated as a fifth school of medicine with equal rights and privileges in practice with the other so-called "four schools of medicine." These men who have been trained in the basic sciences no longer wish to practice osteopathy. They wish to practice medicine and surgery. In this bill no mention was made of subluxations but instead the expression used was "the structural integrity of the body mechanism." That there is some justice to their demand we must admit. The more education in the basic sciences, the less reason for confining practice to a single method of therapeutics which cannot possibly be applicable to many of the common ailments and diseases of mankind. The newer graduates in osteopathy are too well educated to be thus limited.

On the other hand, when osteopaths make the claim that their education and preparation is equivalent to that of those now entering the practice of medicine, their claim can not be substantiated. In the May Journal of the Michigan State Medical Society, Dr. N. P. Colwell has made a careful analysis of these claims, showing that their course in the basic sciences is far below that of our class A medical colleges. The Secretary of our

Society has letters from many of these osteopathic schools stating that little or no attempt is made to teach materia medica. In spite of this, a serious attempt was made to put their bill through the last legislature. The bill provided that graduates of a reputable osteopathic school having a course of four years should be allowed to practice medicine and surgery on an equal standing with medical men who had not less than seven years of preparation and had passed an examination by the board. Four years of inferior preparation and no examination were offered as of equal weight with seven years of work in first class schools and a careful examination.

The osteopathic bill did not secure passage by the last legislature. The chiropractor bill was passed by a rather large majority in the house, but was defeated in the senate. Only by vigorous effort was this chiropractic bill prevented from passing the senate and going to the governor for his signature. The osteopaths stated in the committee hearing that if their bill failed of passage at this session they would most certainly make further attempts during future sessions. The chiropractors have made attempts to put through their bill at every session of the legislature for ten years or more and will continue to do so until they succeed.

As I have already stated, the situation here in Michigan is not unlike that in most other states. Boards of medical registration are holding their candidates to high standards. The various cults are gradually being legalized to practice with inferior standards of preparation and learning. It has occurred to me that the Michigan State Medical Society might well give serious consideration to this matter and make some definite plans as to its future policies in this regard. Do we as a society wish to continue the hand to mouth policy of fighting these bills every two years, knowing that if we succeed in having them defeated we shall have the same problem to meet at the next session of the legislature? Some of us are getting weary of this biennial jousting. Is it worth the effort? In the May 17th number of the Wayne County Medical Bulletin, the Editor very pertinently raises this question. Would it not be better to drop the fight altogether? Personally I feel that incompetent irregular practitioners of the healing art increase the business and income of the well trained physician. These short cut practitioners are not in competition

with the medical profession. Our only reason for continuing this fight is because of a wish to protect the public from incompetence and ignorance in the practice of the healing art.

The medical profession has fought and won its fight against typhoid fever, yellow fever, malaria, and many other former scourges of humanity. In the same spirit we have been fighting against incompetence in the practice of the healing art. It seems to me that the first question for this society to decide is whether or not we shall keep up the fight.

If it seems best to continue our efforts to insist that other practitioners of the healing art shall be held to standards of education somewhere near that maintained by medical men, then this seems to me to be an opportune time for us to take stock of the present situation and study carefully our problem and its solution. Other states, Wisconsin, Connecticut, Nebraska, Indiana, Minnesota, New York and others have led the way and I believe that it is time for us to fall in line.

In the consideration of a solution of this problem we must recognize the fact that these matters appear differently according to the point of view from which they are seen. The trained physician sees these irregular short cut practitioners as an uneducated and incompetent class who are lowering the standards of practice. The public and often times the members of the legislature see the physician as fighting the cultists from a motive of self interest. The osteopath who has spent four years in study feels that some recognition should be given to his educational attainments. The chiropractors and the other irregulars look upon themselves as more or less in the role of martyrs. It is even possible that some of them believe that their system of therapeutics is superior to all others. If we are to continue our fight against incompetence in the practice of the healing art we must present a solution that will have an appeal of fairness and justice for all. We must be prepared to allow a great variety in the therapeutic means used in practice. If we can be sure that practitioners are well educated in the basic sciences, they may be allowed to work out the problem of therapeutics. In the long run, the methods which produce the best results will prevail.

Our present medical practice act seems to have some serious defects. As I have already mentioned it recognizes four schools of medicine which no longer exist.

The osteopaths have seized on this anachronism to justify the establishment of a fifth school—the osteopathic school. A second defect in our medical practice act is that the examination of so-called drugless healers by practitioners of medicine is open to the charge of unfairness. The public asks why the doctors should examine those who practice chiropractic, sanopractic or naturopactic.

Wisconsin and other states have a so-called basic science law. Anyone who wishes to practice the healing art must pass a thorough examination in the basic sciences. In Wisconsin, this board is not made of practitioners of medicine, but is made up of non-practitioners, men of the highest standing in the basic sciences. One must have a thorough preparation to pass these examinations. This is for all; doctors, osteopaths, chiropractors, everyone who wishes to treat the sick by any means. The board made up of non-practitioners is not subject to the charge of prejudice as is our present board, made up of practitioners of medicine. Such a law would guarantee that those who undertake to practice the healing art would have a foundation of scientific training. In this connection, I should like to call attention to the very excellent model basic science law prepared by Dr. Woodward. There are however, some objections to be thought of in such a law. It provides that after candidates have passed this examination the matter of licensing to practice shall be left to separate examining boards in medicine, osteopathy, chiropractic and the other cults. This means a multiplication of licensing boards each making its own rules of practice independent of other boards. New York has placed the entire matter of licensing practitioners of the healing art in its State Board of Education, made up of twelve members. It supervises the entrance requirements and the licensing to practice of the professions of medicine, osteopathy and the other cults and also that of dentistry, veterinary medicine, pharmacy, optometry, chiroprody and nursing. Thus the whole matter of licensing is taken out of the hands of the various professions and put on the basis of proper education, and the acts of this board are not subject to the charge of prejudice.

The third defect, as I see it, in our present law is the inadequate provisions for enforcement. I have already called attention to the fact that prosecuting attorneys have failed to enforce our present laws.

An illegal practitioner is usually a resident of the county in which he practices. He has his social connections and may have influential friends in the community. A prosecutor is loathe to incur the ill will of any considerable number of the citizens of his own community. Local situations make it difficult to enforce laws through the prosecutor, who has to live in the same community. It has seemed to many of us that some means of enforcement of the law should be created which would be effective. Just what is the best method should be determined by serious study. A state board of education or a basic science board with state wide authority might be commissioned to enforce the law; or the duty of enforcement might be delegated to the attorney general's office. The Indiana law contains an injunction clause making it possible to enjoin all illegal practitioners from further practice. My contention is that enforcement of a medical practice law cannot be done through county prosecuting attorneys.

These, then, are some of the things in connection with legislation to which I wish to call your attention tonight. I have no panacea to offer. I believe that it is time seriously to consider these problems. I would recommend that we appoint a legislative commission, made up of men who will take their task seriously. It should be their task to study this problem and outline a policy and a program for our society. This next year there will be no regular session of our legislature. If a definite program can be outlined, we shall be ready to propose legislation during the 1929 legislative session. Legislation along the lines suggested will require: first, a careful study of the situation and the adoption of a definite program; second, a campaign of education for our own members, for the laity, and for legislators; third, a careful political campaign to bring what influence we have to bear on the members of the legislature in securing the passage of such legislation.

LACTIC ACID MILK IN INFANT FEEDING

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Among the best medical minds of today, it is universally accepted that under ordinary conditions human milk is the best, the safest and the ideal infant food. When for any reason the supply of human milk

is inadequate for proper nourishment of the baby, one has to look for a substitute which will produce results equally as good. For just such a food, physicians have been searching from time immemorial, the aim being to find one which simulates human milk in constituency, nutritional value and digestibility.

As cow's milk is so readily obtained, one naturally turns to this milk when a shortage of breast milk occurs. Some young infants may be satisfactorily fed on whole undiluted cow's milk given in the same amounts as human breast milk. The majority, however, when so fed, fail to thrive in a normal manner and develop gastrointestinal and nutritional disturbance. Various modifications have been used to overcome this difficulty and this has led to the common practice of feeding infants lesser amounts of cow's milk than of breast milk and making up the deficiency in calories by the addition of some form of carbohydrate. The total volume of the food is made up by the addition of water. In other words, the milk is diluted and sugar is added. Such modifications apparently meet the development and nutritional demands of most normal babies. But in many abnormal cases, especially the premature or athreptic baby the amount of milk required is more than can be efficiently cared for by the gastro-intestinal tract. These cases require the use of a method whereby the quantity can be reduced to a minimum, but yet retain a high caloric value to meet the nutritional requirement.

Various theoretical explanations have been advanced to account for the fact that the infant cannot digest cow's milk in as large a quantity as human milk. The most accepted is that the infant is incapable of digesting protein in the concentration of 3.5 per cent as it occurs in cow's milk, but can digest it when its concentration amounts to only 1.25 per cent as it occurs in breast milk and the diluted cow's milk.

The old theory of infant feeding totally ignored the mineral or inorganic salts of cow's milk. These salts, chiefly the phosphates and calcium caseinate, act as a "buffer substance" which neutralizes to a great extent the hydrochloric acid of the gastric juice. Thus the gastric juice is lowered and peptic digestion is at a minimum. Physiologists hold that a definite hydro-ion concentration is necessary for gastric digestion. Also that the hydrochloric acid stimulates intestinal and gastric motility, opens the pylorus, inhibits

bacterial growth, stimulates the flow of the bile and intestinal secretions, and promotes the absorption of fats. It is quite obvious then, that anything which will neutralize the hydrochloric acid of the gastric secretion, will greatly interfere with digestion. This is precisely what the mineral salts in cow's milk do, consequently there is interference with gastric digestion when cow's milk is taken. This does not happen when human milk is taken, as it does not change the acidity of the gastric secretion.

The problem was to find an infant food which could be given to the baby undiluted, thereby retaining its high caloric value and at the same time, one that would not neutralize the acidity of the gastric juice. Marriott of St. Louis, Mo., found that these properties were possessed by whole undiluted lactic acid milk. This preparation with the addition of Karo Syrup has a caloric value of nearly 30 calories to the ounce, while mother's milk has a caloric value of only about 20 calories to the ounce. The lactic acid neutralizes the buffer substances in the cow's milk and thus there is no interference with the hydrochloric acid in the digestion of the food. The gastric contents of infants fed on lactic acid milk, removed at the height of digestion have been found to maintain the same acidity as those fed on human milk. Marriott and Davidson made experiments on the gastric contents with respect to acidity. They found that the gastric contents of normal infants fed on ordinary cow's milk, show a hydrogen-ion concentration of only 1-20 that of normal infants fed on breast milk. The same applied to lactic acid milk as breast milk. They also showed that in the gastric contents of infants with acute infections the hydrogen-ion concentration was only about 1-10 that of normal infants fed on the same food. This is probably the reason for the low food tolerance of sick infants and is an added indication for an acid milk with a high hydrogen-ion concentration.

Acid milk furthermore, is usually free from pathogenic bacteria on account of the inhibiting effect of the acid on bacterial growth. Cultures of *B. Coli* and *B. Dysenteria* added to the acid milk have shown no growth in 24 hours. This would strengthen the fact that acid milk fed to infants with intestinal disturbances would give beneficial results and if given routinely in the summer months, would prevent many cases of intestinal infection.

METHOD OF PREPARATION

This milk is being so extensively used, that in the larger cities, lactic acid milk can be bought prepared from the dairies. In Detroit, the Detroit Creamery sells it under the name "Lactic Acid Milk". Various names have been used by dairies as "Bulgarian Milk", "Fermilac" and "Lactase."

We have found at the Clinic that some babies do not tolerate the lactic acid milk from the dairy, but will take and thrive on the acid milk made at home. It is very simple to make and any mother with average intelligence can make it with ease.

One pint of whole cow's milk is boiled for five minutes, the scum removed and milk allowed to cool. When cool, the lactic acid is added from an eye dropper, drop by drop until a fine curd forms. It usually takes 20-30 drops. It is important that the milk be cool, the acid added slowly, and the milk stirred constantly while adding the acid. If these rules are not adhered to, large curds will form instead of fine smooth ones and the infant will be unable to get the milk through the nipple. To make up the deficiency in carbohydrates, three tablespoonfuls of Karo Syrup (blue label) are added to each pint of milk. This syrup contains a relatively high proportion of the difficultly fermentable dextrin and can consequently be added to the lactic acid milk feedings in large amounts without the danger of producing diarrhoea. It may be necessary to add larger amounts of syrup in cases which need higher caloric requirements, especially in the undernourished.

The entire day's feedings are made up at once and kept cool until feeding time. The amount of each feeding is gauged upon the age, weight, and appetite of the infant. A breast baby gets all he wants, so why not a bottle baby? Therefore, I think it better not to give any required number of ounces, but give the baby all it will take at a feeding in twenty minutes. Put a little more milk in the bottle than the baby usually takes. For the first two months, feed the baby every three hours, seven times daily. After that, every four hours, five times daily if the infant is gaining normally.

RESULTS

Regardless of all theoretical considerations the ultimate value of any method is estimated by the reaction of the infant receiving the food.

Marriott, the father of this method of infant feeding, has achieved brilliant re-

sults. He first used the acid milk in feeding athereptic babies, and his results were so satisfactory, that approximately 90 per cent of the infants in St. Louis Children's Hospital, are routinely fed on this formula. The average daily gain in weight was 9/10 ounces. The best results were obtained in athereptic infants. The mortality among these infants fell from 78 per cent in 1910 to 26 per cent in 1925.

At the Highland Park Clinic, we have been putting all babies routinely on lactic acid milk. Our results are quite satisfactory. The babies gain in weight, appear better satisfied, and diarrhoea is uncommon. Some of the babies have gained as much as 1 pound per week, the first three weeks on this milk.

THE DIAGNOSIS AND TREATMENT OF ESOPHAGEAL OBSTRUCTIONS*

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Stenosis is by far the most important disorder of the esophagus. During the past few years we have encountered 32 such cases. Five were cardio-spasm; eleven were due to scar tissue obstruction, seven of which followed the accidental or intentional swallowing of lye; twelve were due to carcinoma; one was a simple diverticulum; and three were due to pressure from without by aneurism.

The treatment of esophageal obstruction depends upon the cause, location and degree of stenosis. Early diagnosis is of great importance. Experience has shown that the condition is often overlooked or mistaken for a gastric or some other disorder. Few physicians seem to be able to handle such condition properly even after a correct diagnosis has been made.

The symptoms vary with the cause, degree and location of the stenosis. As a rule the patient first notices that deglutition is uncomfortable. Pain may be a prominent feature or may be absent. Dysphagia may set in suddenly or may begin insidiously and gradually increase. In organic stenosis especially, the patients state that they have been compelled to use foods of ever softer consistency until finally only fluids could be swallowed. Food is either regurgitated immediately or remains in the esophagus to be regurgitated later, perhaps in a decomposed state. In

these patients emaciation comes rapidly. Where there is a great variation in the ability to swallow, cardio-spasm or diverticulum should be suspected. Direct observation of the patient during the act of swallowing is often of great value in diagnosis.

Respiratory symptoms such as cough and dyspnea after eating are common and likely caused by pressure of the dilated esophagus upon the bronchi. Hiccough occurs occasionally. The pain of angina pectoris, gastric ulcer, or gall bladder colic may be confused with that of cardio-spasm.

Roentgen examination is of the greatest value to determine the presence of and the character of the obstruction, and it should be done in all suspected cases previous to instrumentation. Direct fluoroscopic examination with the aid of a thick barium suspension readily aids in differentiating the large diffuse, symmetric, fusiform esophageal dilatation of cardio-spasm, from the moderate, incomplete dilatation and filling with irregular contour of esophageal cancer. Usually it easily differentiates the presence of aneurism or other extra-esophageal masses producing pressure, or the presence and number of organic scar tissue stenoses, as well as traction or pulsion diverticula, stenosis due to foreign body, primary disease of the stomach, etc.

CARDIO-SPASM

In considering this condition it is convenient to divide it into three groups. Group 1 comprises those cases of temporary disorder of the esophageal peristalsis accompanied by obstruction at the cardia to the passage of food but no X-ray evidence of obstruction. The symptoms are more transient but the pain and distress may be as severe as in those cases which show marked obstruction at the cardia with X-ray. Relief from symptoms in this group is usually obtained on a soft bland diet, the administration of antispasmodic drugs as luminal or atropine, and a few passages of the stomach tube. Group 2 includes those cases showing definite cardio-spasm, accompanying organic disease at the cardia, usually early carcinoma. This rarely occurs but it behooves one to make every effort to exclude organic disease before forcefully stretching the cardia sphincter. Group 3 comprises those cases of true idiopathic cardia spasm. The etiology of the condition has not been satisfactorily explained. The numerous theories suggested fail to explain all cases.

* Presented at the 1926 meeting of the Michigan State Medical Society.

Among the theories advanced are primary spasm at the cardia, atomy of the esophageal musculature, irritative lesions of the vagus nerve, esophagitis, fissure at the cardia, kinking of the esophagus at the hiatus esophagi, extrinsic pressure of the liver, and the reflex spasm from lesions lower in the tract such as gall stones and appendicitis. Foreign protein sensitization has also been suggested as many of these patients also suffer from hay fever or asthma. The disease is more common in young adults although it may come at any age. It is not limited to any class of patients.

Treatment includes a soft bland diet, well chewed and taken slowly, combined with mental and bodily rest. Bromides, luminal and atropine aid in controlling the spasm. An emulsion of mineral or olive oil and bismuth taken before meals soothes the inflamed mucous membrane. To overstretch the muscular fibers at the seat of the spasm is the best treatment as yet devised. If there is a question of organic disease this should be preceded by direct inspection with the esophagoscope.

The dilator which we have made use of is the one devised by Sippy. It consists of a thin rubber bag four inches long and two inches wide enclosed in a silk bag to prevent over-distention. The upper end of the rubber bag connects with a long piece of rubber tubing. The whole is introduced into the cardia by means of a special whale-bone bougie. When in the proper place the bag is inflated by means of a rubber bulb and the blood pressure gauge, using sufficient pressure to raise the mercury to about 150 mm. Water pressure may be used instead of air, but is less convenient. A silk thread may be used to guide the instrument to the proper place if desired.

The procedure should not be painful and if carefully done is no more distressing than the stomach tube. The effect of the dilatation should be tested at once after dilatation has been accomplished. The patient is able to swallow perfectly as soon as the cardiac orifice has been sufficiently stretched. One good stretching may suffice for years, although some require several weekly stretchings before a cure is accomplished.

CICATRICAL STENOSIS OF THE ESOPHAGUS

The most frequent cause of cicatricial stenosis of the esophagus is the swallowing of the caustic alkalies, acids and other corrosive substances. Lye takes first rank.

More rarely cicatricial stenosis results from the healing of ulcers due to the impaction of foreign bodies, the peptic action of the gastric juice, and ulceration of the esophagus which occurs during typhoid fever.

During the first ten days subsequent to severe corrosion of the esophagus no attempt should be made to pass dilating bougies. Only liquid food should be given alternating with bismuth and oil. After the intensity of the inflammation has subsided bougies should be passed once or twice each week until the maximum size is obtained. This maximum dilatation should be maintained by passing the bougie every few weeks perhaps for years as experience with the individual case requires.

There is great danger in forcing any unguided bougie through a strictured esophagus. Perforation may be produced by forcing it through long, narrow, tortuous, or multiple strictures owing to the frequent formation of pulsion diverticula. To obviate this danger we use the apparatus devised and used by Sippy, utilizing the silk thread as a guide for the flexible piano wire over which are passed graduated conical bulbs. The patient first swallows a foot or more of Beldin or Corticelli, size D twister silk from the end of the spool. After an hour 3 or 4 yards are slowly swallowed during the first 24 hours, and 2 more yards during the second 24 hours. During this time the taking of small amounts of food and water facilitates the passage of the thread through the stomach and anchors it in the intestine. A small twisted thread will eventually go through any stricture that will permit the passage of even a small quantity of water. This assumes reasonable co-operation of the patient. When the silk thread is anchored tightly in the intestinal tract it is pulled taut and the small eye on the end of the flexible piano wire passed over it, through the tortuosities of the esophagus into the stomach. Conical metal bulbs provided with a central canal are safely passed over the wire and guided by a flexible spiral introducer through the strictures into the stomach. Several bulbs of increasing size are passed down through the stricture ending with two smaller bulbs threaded with point upward. The whole string of bulbs is now drawn back through the stricture by means of the wire guide. The stricture is thus gradually dilated both from above and below.

The rapidity with which strictures may be safely dilated is influenced by the char-

acter of the stricture, its length, the friability of its tissues and such factors as pain, haemorrhage, inflammatory reaction, and other conditions peculiar to the individual case.

It should be rarely necessary to perform gastrostomy for the purpose of feeding or dilating the stricture provided a small amount of water will pass. In some instances however, the patient comes under observation at a time when the stricture is so tight and starvation so far advanced that even the delay of a few days may be dangerous.

CARCINOMA OF THE ESOPHAGUS

Compared with carcinoma of other organs the esophagus stands fifth in frequency. About 50 per cent are located at the lower end of the esophagus, 40 per cent at or near the bifurcation of the trachea and 10 per cent in the cervical region. Its tendency is to produce stenosis and break down ulceration. After the first symptoms of difficulty in swallowing become manifest the average duration of life is eight months. Surgical treatment offers no hope. Deep X-ray therapy has been disappointing. Radium therapy, however, offers the possibility of good results. Time only can tell us how beneficial this form of treatment will be.

The method advised for dilating strictures due to cicatricial stenosis already described is largely applicable to the dilation of carcinomatous strictures. As a rule the carcinomatous tissue yields readily to the dilating force. One should be content with a small gain each treatment, dilating only once each week. Patients apparently on the verge of starvation may be enabled to take sufficient nourishment until death occurs from causes other than starvation. The procedure is palliative but is the least disressing of any of the forms of treatment. It allows the patient to live longer and with the least discomfort.

DIVERTICULA OF THE ESOPHAGUS

Such diverticula are pouch shaped sacculations involving a limited portion of the circumference of the esophagus. Inflammation, ulceration, stricture and even carcinoma may develop as a result of local irritation from food stagnation. According to the manner in which the pouch-like sacculations develop, three types are recognized; pressure or pulsion diverticula, traction diverticula, and traction-pressure or traction-pulsion diverticula.

Congenital defects may contribute to the development of a pressure diverticulum. A large bolus of food may lodge and cause a slight stretching or bulging of a circumscribed area, later food may accumulate at this point and finally cause the formation of a pouch. At the junction of the pharynx and the esophagus there is a natural weakness of the muscular structure making this the most common point for a pressure diverticulum to develop. Owing to the pressure exerted by the left bronchus against the esophagus food may lodge on the wall just above and lead to sacculation. Diverticula of the lower esophagus often form in the same manner just above scar-tissue or carcinomatous strictures.

Traction diverticula arise through the contraction of scar-tissue attached to the outer surface of the esophagus, usually arising from inflammation of the bronchial lymph glands in the vicinity of the bifurcation of the trachea.

Symptoms of marked obstruction rarely develop before the age of fifty, except when the condition originates from a congenital stenosis of the esophagus. The subject may however be conscious that food often lodges at a certain point in the esophagus.

Pharyngeal diverticula may often be treated surgically, but those having their origin below the sternum cannot be removed. The patient should be instructed to eat slowly and avoid coarse food. If food stagnates sufficiently to cause local irritation the sac should be irrigated once or twice daily with potassium permanganate. If obstruction occurs the condition should be treated much as a scar tissue stenosis making use of the silk thread and piano wire guide for dilatation and then inserting a small rubber tube and feeding through the tube until the inflammation has subsided.

FOREIGN BODIES

These may become impacted both in children and adults. By means of the X-ray and esophagoscope such should be determined and removed before pressure necrosis takes place. It often happens however, that the foreign body may pass on into the stomach producing slight traumatism to the esophagus leading the patient to believe that it is still lodged at the seat of the traumatism.

THE MANAGEMENT OF THE ASTHMATIC PATIENT

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In the course of this paper, the term "bronchial asthma" applies only to the definite disease which is characterized by allergic features as positive skin reaction, eosinophilia, response to adrenalin, not merely to the asthmatic symptom complex of dyspnea, wheezing and cough. By the word allergy is meant the constitutional abnormality which manifests itself by an attack of asthma, hay fever, urticaria or any other of the various conditions which will shortly be mentioned.

DIAGNOSIS

The diagnosis of bronchial asthma is easily made during acute attacks, but during the intervals it is much more difficult to differentiate this condition from other diseases. The following chart illustrates the errors which are often made. Among 62 patients, with asthmatic symptoms seen in our clinic during the first year of its existence, the following conditions were revealed:

Allergic asthma	34	55%
Chronic nonspecific bronchitis.....	13	22%
Thymus hyperplasia	4	6%
Bronchiectasis	3	5%
Tuberculosis	3	5%
Cardiac Asthma	2	3%
Pertussis	1	2%
Epilepsy	2	2%

In infancy and childhood, thymus enlargement, in adults chronic bronchitis, in senile cases cardiac asthma, are most commonly confused with allergic asthma. Epilepsy should always be kept in mind because at the end of an epileptic attack, wheezing noises, cough and cyanosis are frequently present. Both epileptics recorded in the chart, have been under treatment for asthma by physicians who unfortunately never had an opportunity of seeing the patient during his attack.

We differentiate bronchial asthma from other types of dyspnea by the following means:

1. The history.
2. Observation of the clinical picture, especially of the type of the attack.
3. Laboratory methods.
4. Skin sensitization tests.

HISTORY

The history plays by far the greatest part. For it not only secures the diagnosis

but also helps to determine the etiology and indicates the form of therapy to be instituted. During recent years the transmission of the allergic constitution in the family has been definitely proven by the splendid work of Cooke¹ and his school. Animal experiments (Lewis and Loomis)², also strongly suggest that allergy is inherited in accordance with the Mendelian Laws. In the following statistics collected on 2,138 patients, heredity is established in 48.3 per cent.

Author	Number of Patients	Allergic Diseases among ancestors
Cooke and Spain ¹	796	58%
Storm Van Leeuwen ³	500	50%
Walker ⁴	400	48%
Kammerer ⁵	108	36%
Goldschmidt ⁶	100	40%
Rowe ⁷	234	58%

It should be kept in mind that the tracing of the disease in the family is often extremely difficult because of asthmatic tendency though present, may not be sufficiently strong to produce active symptoms. For instance, Mr. J., the father of a child seen at the clinic, reported having once had a slight attack of wheezing and never since. A differential blood count revealed 10 per cent eosinophile cells, a definite sign of a dormant allergic condition.

It should also be taken into consideration that the other allergic diseases may substitute for bronchial asthma in previous generations.

These allergic diseases may be classified as follows:

1. Manifestations on Skin:
 - Urticaria.
 - Eccema.
 - Angioneurotic edema.
 - Dermatitis (as ivy poisoning).
2. Manifestations on Mucous Membranes:
 - (a) Respiratory—
 - Bronchial asthma.
 - Hay fever (rhinitis, conjunctivitis).
 - Perennial Coryza (vasomotoria).
 - Laryngitis and pharyngitis.
 - (b) Gastro-Intestinal—
 - Gastritis.
 - Enteritis.
 - Colitis.
 - (c) Genito urinary—
 - Cystitis.
 - Pyelitis.
3. Manifestations on Serous Cavities:
 - Allergic atropathia.
 - Migraine.
 - Some forms of epilepsy.

CLINICAL

The clinical observation embraces a thorough examination with particular attention to focal infection. The physical findings in the lungs are too well known to necessitate description in detail.

The X-ray usually reveals the signs of

chronic bronchitis and emphysema. A very useful diagnostic test is the injection of 8 to 10 minims of adrenalin or the oral administration of ephedrin sulphate. The degree of relief usually indicates the severity of the disease. Only very infrequently does the allergic asthmatic fail to respond to these drugs.

LABORATORY METHODS

Among the laboratory methods essential for the diagnosis of bronchial asthma, the differential blood count and the examination of the sputum are important. Spangler⁸ has used the determination of eosinophilia as a functional test for asthma suggesting that the degree of eosinophilia is in direct proportion to the severity of the disease. We should, however, be aware of the fact that there are numerous asthmatics on record not showing any increase of the eosinophil cells at all and many with high eosinophil count having no asthmatic symptoms. The same inconstancy is true for the Curschmann spirals in the sputum. They are of conclusive diagnostic value only when found associated with Charcot-Leyden crystals and eosinophil cells in the sputum.

In regard to the low blood calcium reported by Pottenger⁹, Azzi¹⁰, Brown¹¹, and others which has formed the basis for the intravenous calcium and parathyroid therapy of asthma, it is to say that this test is too uncertain to be of diagnostic value. (Coca¹²).

DETERMINATION OF SENSITIVE SUBSTANCE

After having definitely established the diagnosis the second step in the management of the asthmatic is the determination of the sensitizing agent. The methods to be used are again the history, particularly the history of the first attack, and the skin sensitization tests. For the substances known to be etiological factors, the following classification may serve of practical use:

Substances Introduced:

1. By Inhalation—
 - Epidermal Proteins—Animal hairs; feathers, human epidermis.
 - Pollens.
 - House dust.
 - Chemicals (sachet, face powder, snuffing mustard poultice).
2. By Ingestion—
 - Food.
 - Drugs (ipecac, quinine, aspirin, etc).
3. By Infection—
 - Bacterial products—Infectious disease; upper respiratory infection.
4. By Injection—
 - Animal serums.

When doing the skin tests it is neces-

sary to be aware of the fact that a negative skin test does not always exclude the sensitiveness to the tested substance. On the other hand, a skin positive substance does not always cause active allergic symptoms.

For the following reasons the skin test cannot be entirely depended upon:

1. The food extracts deteriorate very easily. Some pharmaceutical houses are marketing extracts of very low potency for fear that stronger ones may elicit severe reactions. Therefore, the extracts should be checked from time to time on definitely sensitive patients. (Peshkin¹³).

2. The asthmatic responds differently to skin testing at different times. A certain substance may yield a positive reaction today and a negative one tomorrow.

3. There are many substances, the presence of which is very difficult to discover. Their extracts are not on the market and must be prepared by the physician. Such substances, for instance, are the emanation of parasites, yeast-like bodies, as moulds, fungi, etc., products of putrefaction and disintegration. In fact there is scarcely any animal or any plant to which an asthmatic could not be sensitive. Storm Van Leeuwen³ found some asthmatics sensitive to a parasite which was discovered in grain. Others to a fungus like organism called *aspergillus fumigatus*. Ancona⁴ detected an organism in spoiled wheat, which was responsible for the attacks of many asthma cases.

4. According to Walker¹⁵ the skin tests are negative in certain patients who give delayed reactions, appearing 24 hours instead of 20 minutes after the testing.

These features explain why authors differ so greatly in their opinions on the value of skin testing. Some report as low as 10 per cent positive skin tests, others (Peshkin¹³) Rowe⁷ as high as 95 per cent.

Some clue for the proper selection of the extracts is obtained by the history of the first attack. On the 42 patients observed, the following conditions were found to have preceded the first attack of asthma.

1. Upper respiratory infection in about 50 per cent.
2. Acute infectious disease in about 20 per cent.
3. Physical and climatological changes in 20 per cent.
4. Internal secretion changes in about 5 per cent.
5. Injury or operation in about 5 per cent.

The exact figures shall be published in detail in a later paper. Our history records provide for a sufficient exhaustive investigation.

Upper respiratory diseases as tonsilitis, pharyngitis, sinusitis, ethmoiditis, septum deviation, are generally recognized as causes of asthma. For the frequent incidence of upper respiratory diseases in asthma, Mullin¹⁶ gives the following explanation:

(1) Nasal infection may cause either a secondary bronchitis or peribronchitis and so bring on the asthma by mechanical pressure on the vagus nerve. (2) The patient may develop sensitiveness against the bacterial present. (3) A nasal reflex may elicit the attack by way of the trifeminus and vagus nerves, the so-called reflex theory of asthma.

Asthma was found to originate after the following infectious diseases:

Typhoid fever, malaria, pneumonia, (Harkavy¹⁸), syphilis, (Kammerer¹⁷). In two of our patients, the first attack followed whooping cough, in another one measles. On the other hand, one patient was relieved for several years after whooping cough. We have the records of six children who developed severe asthma following toxin-antitoxin injections. Among tuberculosis cases about 0.5 per cent develop asthma according to Schroeder's¹⁹ statistics on about 5,000 tuberculosis cases.

The influence of the climate becomes evident if we realize that the causative substances are often present only in certain countries or at certain times or in certain altitudes. Storm Van Leeuwen demonstrated that in Holland there was considerably more asthma in the damp parts than in the dry sections of the country. One of our cases was feeling well, as long as she lived on Mack Avenue and had attacks as often as she stayed with her folks near the river. On the other hand, Leopold and Leopold²⁰ proved that changes in barometric pressure alone are liable to produce allergy. Certain seasons and even certain days seem to favor the production of attacks. During the time from November 20 to 25th, 1926, many of the patients formerly well, had a more or less severe attack. Duke²¹ produced the most exorbitant urticaria by heat, cold, light and pressure. Regarding internal secretions it is well known that puberty, lactation, climacterium, have great influence on the onset of asthma. There are records of patients (Curschmann²² having asthma associated with hyperthyroidism. They improved immediately after thyroidectomy. Other asthmatics with myxedema were cured by thyroid administration.

THERAPY

There are many different means of curing asthma and often we can establish cures of many years duration, if we happen to strike the right measure which is required for the individual case.

The following are the therapeutic procedures carried out at our clinic at the Children's Hospital. At the first visit, each patient is given an outline explaining the known facts regarding the cause of asthma, and recommending the hygienic measures necessary. He also is instructed to use 10 minims of adrenalin internally and fumes of stramonium and hyoscyamus leaves for immediate relief during an attack. If adrenalin is not effective, he is told to use one capsule of ephedrine sulphate. Morphine and other narcotics are avoided. They are indicated only in extreme emergency.

Before employing any other measure, we apply X-ray over the spleen; the rational and experimental basis for this treatment is outlined in a previous paper. (Waldbott²³). The method is based on empirical work done by Groedel²⁴ and Gerber²⁵ of Providence, R. I., who claim to have cured patients by this means. They base their reasoning on the fact that the spleen and the reticulo-endothelial system are involved in the formation of antibodies and anti-allergic substances which counteract the asthmatic poison. It is held that some form of an active desensitization may result by this therapy. In other words, X-ray of the spleen may do the same that the pollen extract injections are doing for the pollen asthma, antogenous vaccines for bacterial asthma, gradually increasing amounts of food for the food asthma. Others explain the results obtained as being due to action of the foreign protein which originates from disintegrated spleen tissue.

Although very much has to be done experimentally to clarify the matter and although the method is far from being ready for the use in general practice, the following statistic is sufficient to warrant the work taken up at our clinic.

Author	Year	Exposure to	Total No. of Patients	Results			Not Returned
				Splendid	Good	None	
Broedel (24)	1922	Spleen	41	18	12	8	2
Pohlmann (26)	1925	Spleen	42		40	2	
Ramirez and Cole (27)	1925	Spleen and Lungs	8		4	4	
Waldbott (24)	1925	Spleen	10		6	2	2
Gallino and Terrada (28)	1925	Spleen	26	12	10	2	2
Moner (29)	1925	Spleen and Lungs	22	7		1	5
Gasul (30)	1926	Spleen (Diathermy)	12	9	3		
			161	121	19	11	

The following are the results with X-ray treatment of the spleen obtained at the Children's Hospital of Michigan:

Treated	40 patients
Cured	12 patients
Relieved	18 patients
Not relieved	9 patients
Not returned	1 patient

The patients who do not respond to this therapy, are treated with the ordinary methods. A very careful search for focal infection is essential and any possible foci are eliminated, particular attention being paid to nasal infection. If this should not improve the condition, then the different types of asthma are treated according to their cause. The bacterial cases receive autogenous vaccine, the ones sensitive to pollen are desensitized by injections thereof. The patients with a strongly positive Von Pirquet reaction are given tuberculin treatment, as recommended by Van Leeuwen³¹. The dust cases can be desensitized by injection of extract of their house dust according to the method of Cooke. The food asthmatics must eliminate the offending articles from their diet; the patients sensitive to feathers and animal hair must discard mattresses, feather pillows, etc. There are also patients who respond to Potassium Iodide treatment. Very seldom do we advise a change of residence or of climate.

Treatment in our clinic has been satisfactory in approximately 80 per cent of the cases. There are, of course, patients who do not recuperate. We are satisfied that they all have obtained some degree of relief.

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FRAGILITAS OSSIIUM—ITS CLINICAL ASPECT*

(With case report)

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In the previous case of fragilitas ossium reported by us in the Michigan State Medical Journal, the hereditary aspect of the case and subject were considered. The hereditary factor in some cases definitely follows the Mendelian law.

The following case does not admit of analysis from an hereditary standpoint, but merits reporting.

R. B., a white American boy of nine years, enters the Children's Hospital of Michigan for the third time complaining of a recent fracture of the left forearm. He had had eight previous fractures; the first at the age of three years, one fracture of each femur and humerus, and two of the right forearm, also two of the left forearm. There had been an open operation on the right forearm. The present injury resulted from a fall on the left arm.

Family History—The patient had been placed

* From the Surgical Service of Children's Hospital of Michigan. We wish to thank Dr. Grover Pemberthy for permission to publish this case.



Figures 1 and 2.

Lateral and anterior-posterior views of left forearm, showing deformity at site of previous two fractures.



Figure 3

Refracture at site of deformity.

with an institution by his parents, and no information is obtainable except that the father was a cripple, possibly from multiple fractures.

Physical Examination—Shows a boy of nine, apparently of average size and development, and in good general health. The frontal bosses are prominent, and the skull somewhat flattened. There is no deafness. The sclera are leaden-bluish, (not as blue as the previous case reported by us). There is an outward deformity of the right forearm—two scars are present. There was a right-angle deformity of the mid-third of the left forearm with disability and swelling and loss of continuity of the bones of the forearm. This was reduced by Dr. Cooksey under the fluoroscope.

Laboratory Findings — Blood: Hemoglobin 94%; r. b. c. 4,620,000; w. b. c. 11,300; p. 57%; s. 40%; l. 3%.

Urine negative on several occasions.

Blood phosphorous	1.6 in mg./100c.c.	4.2	4.34.
Blood calcium	7.4	13.8	12.6.

The X-ray showed, besides the fractures and the deformity of the old fractures, an extensive porosity of all the long bones, and some coarseness of structure of the more cancellous areas, and increased cortical striation.

The recent fracture was through both bones of the forearm, at the previous old fracture area.



Figure 4

Showing increased cortical striation; coarseness of the cancellous portion; and increased porosity characteristic of this condition.



Figure 5

Showing increased cortical striation; coarseness of the cancellous portion; and increased porosity characteristic of this condition. Evidence of old rachitic changes also present.

Fragilitas ossium is a disease associated with multiple fractures, on slight provocation, blue sclera and, frequently deafness.

There are probably three groups of cases:

1. Osteogenesis imperfecta—fractures occur at birth and infancy, non-hereditary.
2. Osteopsathyrosis idiopathica—blue sclera and fragile bones—not hereditary.
3. Hereditary fragilitas ossium.

The classification of this case between groups two and three is impossible.

There are certain clinical aspects of such cases that are interesting, and may be summarized:

The shape of the skull is frequently reported as flat and with prominent parietal and occipital bosses.

The sclera are described variously as leaden, china or porcelain blue—the depth of the color is varied in different cases. The color is probably due to a transparency of the sclera, allowing the choroid to shine through.

Deafness is associated, and is likely to come on in later life. Otosclerosis is the cause.

Poor general development and small stature is frequently described, but has not been noted in our one family group and in this case reported.

Hyperextensibility of the joints is observed.

Multiple fractures are, of course, a prominent feature of the disease. These, however, heal very rapidly, in fact, Singer found fairly firm union in 4 to 8 days. Marked crippling deformities do occur, but rather from malposition and frequent fracture than from failure of union.

The X-ray frequently shows an abnormal cortical striation, and a coarseness of cancellous bone.

An increased porosity was also noted in the two cases seen by us.

It is to be expected that after puberty the tendency to fracture will be lessened, or will cease.

The calcium and phosphorus content of the blood and of the bone, and the hematology, as well as the metabolism, have frequently been reported normal.

Key suggests that hypoplasia of a mesenchymal anlage explains the symptoms of this disease, rather than a metabolic disturbance.

It is found that these cases often live to old age.

The treatment is prophylactic, and the immediate care of fresh fractures because of their tendency to quick healing. Cod liver oil and calcium salts and other remedies have been used empirically.

CONCLUSION

1. A case of fragile bones and blue sclera without deafness is reported.
2. No definite family history is obtainable.
3. Certain clinical points are considered.

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UROLOGY IN CHILDREN*

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The surgical lesions of the genito-urinary tract may be divided into two large classes:

1. Those in which inspection, palpation and the usual laboratory methods will give the diagnosis. This class includes—phimosis, hypospadias, epispadias, hernia, hydrocele, exstrophy of the bladder, tumors of the testicle, prostate and sometimes kidney, etc.

2. Those lesions requiring for their diagnosis special methods and instruments. They include most lesions of the kidneys, ureter, and bladder, and many of the urethra and prostate.

The lesions of the first class, in which the diagnosis is almost self evident, have received due attention in children as well as in adults. Many of these conditions are of such a nature that treatment is either urgently indicated, or, at least, best treated in childhood. Such lesions as epispadias and hypospadias are best treated before puberty, and certainly exstrophy of the bladder cries aloud for immediate treatment. Fortunately these lesions are not common. The commoner lesions, hernia, hydrocele, etc., are readily diagnosed and treated in childhood, whenever treatment is indicated.

But it is a different story when we consider the lesions of the second class. It has long been recognized that lesions of this class are fairly common in children, but the diagnosis is often obscure and frequently made only at the autopsy table, if at all. Some lesions are diagnosed almost routinely in adults, but in children the disparity between the size of the instruments required, and the size of the parts to be

* Read before the Calhoun County Medical Society, May 3, 1927, as part of a symposium on urology by members of the Detroit Branch of the American Urological Association.

traversed, prevents ready application of the usual diagnostic methods.

This branch of urology, therefore, has been neglected in the past. But for several years different men have had their attention drawn to this division of urology, and by means of which complete urological examinations can be made in children of any age. With the appearance of these smaller instruments and the spread of the knowledge of their existence, there is now opening up a large field in pediatric urology.

One of the most recent of these child cystoscopes was devised by Butterfield of New York. It is capable of carrying two No. 5 French catheters and its calibre is only 16 French. By means of it, both ureters can be catheterized and pyelograms can be made in the smallest children.

It is possible now, therefore, to make as complete an urological investigation in a child as in an adult, but in a child such an investigation is a major procedure and usually requires general anesthesia. This is especially the case in boys because of the length and course of the urethra.

Sometimes little girls of five years of age or over will tolerate cystoscopy without anesthesia, and for very young female infants it may sometimes be dispensed with. In our clinic at the Henry Ford Hospital on two occasions, cystoscopy has been successfully performed on little girls three months old without anesthesia. In both cases the ureters were catheterized. In the vast majority of children, however, general anesthesia will be found necessary. Therefore, this work should be in collaboration with and under the direction of the pediatrician or other physician caring for the child.

The lesions of the urinary tract belonging to the class we are here considering may be grouped into five divisions:

1. Infections—(a) Non-tuberculous; (b) Tuberculous.
2. Calculi.
3. Obstructive uropathies.
4. Congenital abnormalities.
5. Tumors.

Of course, some conditions found cannot be fitted into any single division, but may belong to two or more—calculi may cause infections—congenital abnormalities may cause stasis and secondary infection, etc.

The commonest lesion of all is, of course, the so-called pyelitis. We have all seen, especially in little girls, recurring short at-

tacks of pyuria associated with fever and malaise. These usually clear up promptly with alkaline therapy, and even in the recurring cases eventual complete recovery is the rule. But there are intractable cases with permanent pyuria, or frequent recurrences, associated with malnutrition, etc. In these instances cystoscopy is indicated to determine the underlying cause, which will usually be found to be a mechanical defect of some kind, causing stasis in the renal pelvis, which, if not corrected, may in time lead to complete destruction of a kidney.

Renal tuberculosis is rare in children, but does occur, and its possibility has to be always kept in mind. The diagnosis, of course, depends usually on the discovery of the organism, either in smears or by guinea pig inoculation. The intracutaneous tuberculin test may be of considerable aid in ruling out tuberculosis.

Calculi seem to be quite common in children, and there are numerous reports in the literature. Hill and Stevens, in 1921, collected 320 cases of renal calculus in children. Half of these were autopsy findings—140 of them were in infants under a year old. Stone has been reported in an infant 11 days old. In 1922, Thomas and Tanner collected reports on 203 cases of urinary calculi in infants and young children. Of these, 69 per cent were in the bladder and 23 per cent in the kidney and 7 per cent in the ureter.

The obstructive uropathies are hydronephrosis, hydroureter, chronic distension of the bladder, etc., and are due to obstruction in the course of the urinary tract. The commonest sites for obstruction are the ureteropelvic juncture, the uretrovesical juncture, and the urethrovesical juncture. This group is closely related to the group a congenital abnormalities, which are frequently the cause of obstructive lesions in children, and often make their presence known through dysuria and retention. Such abnormalities are congenital strictures, aberrant renal vessels, congenital megalo ureters, congenital posterior urethral valves in small boys, etc. All these cause obstruction, gradual dilatation behind the obstruction, and eventual destruction of one or both kidneys. In most cases the process is slow and insidious, and in some the discovery of the condition is brought about through the onset of uraemia. Usually, however, earlier symptoms are present, and if sufficient weight be given these symptoms to bring about a complete urological investigation, in many

cases the condition can be diagnosed and the proper treatment instituted.

There are other congenital abnormalities, some of which may cause symptoms; such as, reduplication of ureter and pelvis, horseshoe kidney, polycystitic kidneys, ectopic kidneys, etc. Rudimentary or solitary kidneys are of importance when nephrectomy is under consideration.

Tumors of the urinary tract in children are rare. Sarcoma of the prostate appears occasionally in the literature; scarcely tumours of the bladder are found occasionally, occurring usually in children under five. Probably the renal tumors are more common than either of these. They are rapidly growing tumors, variously referred to as sarcomata, adenosarcomata and embryonal carcinomata. The name makes no difference—they are extremely malignant. Usually cystoscopy is not necessary for their diagnosis, but occasionally it is. Operation offers the only chance of cure, though a small one, and the operative mortality is high. Wollstein recently collected eighteen cases between the ages of 3¾ months and six years, all of whom were dead except two. One of these was an adult, and the other well six years after operation. The prognosis is, therefore, not entirely hopeless, and earlier diagnosis may, in the future, increase the chance of cure.

The symptomatology of these various conditions has not been touched upon. In children the symptoms are similar to those in adults, though, of course, less in evidence. The indications for urological investigation in children are much the same as in adults, though they may be less readily recognized, and the symptoms probably need to be a little more urgent or persistent since cystoscopy is more of a procedure in children than in adults.

The following may be considered as indications for urological investigation:

1. Persistent pyuria.
2. Recurring attacks of pyelitis.
3. Hematuria.
4. Persistent or frequently recurring attacks of frequency.
5. Persistent or frequently recurring attacks of dysuria.
6. Obscure abdominal pain, persistent or recurring, particularly if associated with anaemia and malaise.
7. Abdominal tumor.
8. Stubborn enuresis—rarely.
9. Passage of sand or gravel.
10. Typical renal or ureteral colic.

A complete urological investigation consists of the following:

1. Routine urine examination.
2. Urine culture.

3. Intracutaneous tuberculin test.
4. Examination of urine for tubercle bacilli, including guinea-pig inoculation.
5. Combined phenolsulphophthalein test.
6. Urinary tract X-ray.
7. Determination of residual urine.
8. Cystography. This is of more importance in children than in adults. It can usually be accomplished without anaesthesia and in some cases will do away with the necessity of cystoscopy.
9. Cystoscopy.
10. Catheterization of ureters with examination of segregated urine microscopically and by culture.
11. Differential function tests.
12. Ureteropyelography.

In not many cases will it be necessary to use all these procedures. Usually the diagnosis will be given by a few of them. But with the instruments at our disposal now, a complete investigation can be made on a child of any age, when indicated.

The following table taken from Young's Urology will give some idea of the type and frequency of urinary tract lesions found in children.

The following list of the urologic cases admitted to the Harriet Lane Home, was obtained through the courtesy of Dr. John T. Howland, professor of pediatrics in the Johns Hopkins Medical School:

TABLE 187
Urologic Diseases in Children

	Total unnumber of cases	No. of boys	No. of girls	Deaths Boys	Girls
Pyelonephritis	376	55	321	17	34
Pyonephrosis	2	2	.....	1	.....
Pyelocystitis	151	24	127	7	8
Infarct of kidney.....	3	.....	.....	.....	2
Perinephric abscess.....	5	.....	.....	.....	1
Tuberculosis (sex not stated, 5).....	9	3	1	.....	1
Renal calculus.....	2	(not admitted)		.....	.....
Hydronephrosis	13	12	1	7	.....
Movable kidney.....	2	.....	.....	.....	.....
Prolapse of kidney.....	4	.....	.....	.....	1
Polycystic kidney.....	4	.....	.....	.....	2
Horseshoe kidney.....	2	.....	.....	.....	2
Hypoplasia of kidney (congenital).....	2	.....	.....	.....	2
Absence of kidney (congenital).....	1	.....	.....	.....	1
Stricture of ureter.....	4	(age: 5 months, 1 year, 8 months, 1 day, 8 months)			.....
Calculus, ureteral.....	1	.....	.....	.....	.....
Enuresis	789	454	335	.....	.....
Hypertrophy of bladder.....	5	.....	.....	.....	.....
Extrophy of bladder.....	2	.....	.....	.....	.....
Diverticulum of bladder.....	1	1	.....	.....	.....
Vesical calculus.....	1	.....	.....	.....	.....
Cyst of urachus.....	1	.....	.....	.....	1
Stricture of urethra.....	11	10	1	.....	.....
Gonorrhoeal urethritis.....	3	(age: 4, 6, 7 years)		.....	.....
Non-specific urethritis.....	16	13	3	.....	.....
Hypospadias	41	.....	.....	.....	.....
Undescended testicle.....	53	(unilateral)		.....	.....
Undescended testicle.....	14	(bilateral)		.....	.....
"Sarcoma" of testicle.....	1	1	(age 4 months)	.....	.....
Teratoma of testicle.....	1	1	(age 30 months)	.....	.....
	655				

Figure I.

Following are a few brief reports of illustrative cases:

CASE REPORTS

Henry Ford Hospital, No. 56147—The patient, a boy nine years old, complained of recurring attacks of pain in the right side and back, for

which he had had his appendix removed about six weeks before. Since the operation there had been a very severe attack of pain similar to that which he had had previous to operation.

Examination included X-rays, passage of wax-tipped catheter up the right ureter and pyelogram of the right side. A stone was found in the lower right ureter, the ureter was dilated, and a few days later he passed the stone. Figure 2 shows the pyelogram, the location of the calculus being indicated by the arrow.



Figure II.

Henry Ford Hospital, No. 88409—The patient, a little girl five years old, was sent in by Dr. W.



Figure III.

C. C. Cole, on account of persistent pyuria. Cystoscopy and pyelography showed an infected hydronephrosis on the left with almost complete destruction of the kidney. Left nephrectomy was done, since which the pyuria has disappeared, the urine gives negative culture, and her condition is much improved.

Figure 3 shows the left pyelogram; and Figure 4 shows a cystogram made with the foot of the table elevated, and shows how a cystogram may at the same time demonstrate renal lesions.

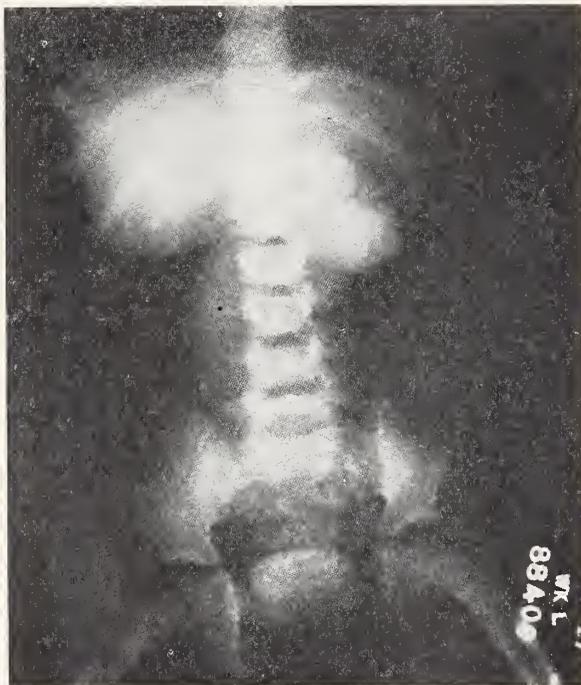


Figure IV.

Henry Ford Hospital, No. 76885—The patient, a little girl five years old, came to the hospital because of hematuria. Cystoscopic examination showed a rounded tumor at the site of the left ureteral orifice. Since bladder tumors in children are apt to be sarcomatous, a suprapubic cystotomy was done, the tumor found to be an ureterocele, and removed.

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CYSTITIS IN WOMEN—A SYMPTOM COMPLEX

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When we are confronted with the symptom complex of frequency, burning and painful urination and when the analysis of the urine discloses red corpuscles, shreds

or pus, we conclude naturally, that the condition is one of cystitis, namely, an inflammation of that musculo-membranous pouch which serves as a temporary reservoir for the urine.

But this conclusion only marks the beginning of an interesting search for the cause of the inflammatory reaction which induces these symptoms.

Pain during voiding may be due to an inflammatory mucosa, stricture or local infection of the urethral canal. Pain after the flow is probably due to a spasm of the bladder wall, and pain before voiding, to the distention of inflamed or ulcerated tissues. Likewise, external tumors or inflammatory masses causing pressure on the distended bladder, may give rise to this symptom.

Frequency of urination depends on the amount of fluid intake, habit, irritation, nervous disturbance, excitement, etc., and is only important when accompanied by the pain symptom. The bladder capacity varies with the individual, as does the necessity of its emptying.

Blood and pus cells in the urine must be examined from catheterized specimens. Their source may be the urethra, bladder, ureter or kidney. Pyuria and hematuria are usually the symptoms of growths, lithiasis or pathology in the kidney or ureters.

The bacteria most frequently found are the bacilli coli communis, gonococcus, bacilli tuberculosis, staphylococci and streptococci.

The micro organisms gain entrance into the bladder through the urethra, the blood or lymph channels, the kidneys and through the bladder wall itself.

The pathology of this type of inflammation depends on the stage of the disease, the etiology and the variety of the bacteria.

In the acute stage, the mucous membrane is swollen and intensely red and congested. The glistening appearance is lost and punctate hemorrhages are here and there.

Small ulcers may develop. The trigone may have the appearance of small cysts called bulbous edema.

In the chronic form, the wall is thickened. The mucous membrane is irregular, mottled from old hemorrhages and sometimes ulcerated. The urine is turbid and contains mucous and pus which forms a definite thick deposit at the bottom of a collected specimen.

Traumatism is a frequent etiologic factor. In an emergency ward, primary bladder inflammation is often associated with

the history of a fall, abdominal injury or pelvic fractures, usually of the pubic bone. Catheterization, lithotomy and instrumental delivery, as well as abdominal and vaginal operations often result in traumatism of the bladder and subsequent cystitis.

Operative trauma in the presence of infecting organisms may be visualized as a very definite cause. Freeing adherent pus tubes from the bladder or dissecting the bladder from the uterus in doing a hysterectomy, as witness my cases No. 1 and No. 2.

CASE REPORTS

Case No. 1—I. P., age 36. Had recurrent attacks of hematuria and pyuria, frequency and burning, bladder pain with sensation of mechanical obstruction during and between attacks. History of hysterectomy three years ago and symptoms followed.

Cystoscopic examination disclosed a scar formation of the fundus. Laparotomy was performed and a loop of small bowel found adherent to the bladder.

Case No. 2—L. P., age 25. Several months suffered with frequency and painful urination. Pus and colon bacilli in the urine.

Vaginal examination disclosed a normal vagina. The uterus was bound down and retroverted. The bladder mucosa inflamed. Ureters normal. Laparotomy was performed and the infected fallopian tubes freed from the bladder and removed. The patient was discharged improved.

Fatal cystitis directly due to catheterization is found in cases of urinary retention due to spinal column injuries, as witness my case No. 3.

Case No. 3—E. F., age 31. Patient fell from a tree landing on her back. Loss of function of both legs. Total anaesthesia extended to the costal margin. Cremasteric and abdominal reflexes present. Other reflexes absent.

X-ray disclosed a fracture of the seventh dorsal vertebra with posterior displacement.

Laminectomy was performed and the injured cord exposed. The bladder became markedly distended as is common in these injuries. Catheterization was instituted. Paralytic symptoms showed improvement, but a thick pus discharge from the urethra was present. It became progressively worse and the patient died one month after admission.

Spontaneous rupture is extremely rare from paralytic over-distention. The individual injured is confined to bed and free from danger of additional trauma, which is necessary in bladder rupture, so catheterization may be dispensed with.

Menstruation, menopause, and early pregnancy have no influence on the condition. The pressure on the distended bladder in late pregnancy, together with faulty diet and a disregard of hygienic rules may bring on the condition.

The relaxation of the anterior vaginal wall following labor causes a prolapse of the bladder often so severe that an abnor-

mal amount of urine remains in the pouch and stagnates, due both to the alternated position and the loss of tissue tone, which interferes with contraction and is a fertile field for neighboring bacteria. Repair by anterior colporrhaphy is the solution, but it is surprising how many women suffer with this condition. I believe many in the profession do not appreciate the vital importance of this correction.

It may be conceded that primary disease of the bladder is not common, excepting tumor formation, stone, trauma and certain infections. The greatest aid in its diagnosis, irrespective of etiology, is the cystoscope. This examination can be done effectively in a well equipped office. If catheterization of the ureters is indicated, it is advisable to make this examination in the hospital. With the aid of the cystoscope, the mucous membrane of the bladder may be examined, the orifices of the ureter and the trigone. During this examination, the urethral canal may be minutely inspected. The minute glands are often infected and are the cause of distressing symptoms. Venereal warty growths are not uncommon in the canal. In acute cystitis, the membrane is inflamed and swollen, in the chronic stage a deeper red and dull. Primary ulceration is more common than generally believed. Slight depressions surrounded and covered by muco-purulent deposits indicate ulceration. The discovery of tumor formation and a stone is quite evident if the bladder is properly examined, yet these conditions may not present the classic symptoms until the disease is far advanced.

Syphilis of the bladder is not uncommon. It, too, resembles cystitis, but its first symptom is usually haematuria. Illumination of the bladder may disclose multiple ulcers or small maculae, as witness my case No. 4.

Case No. 4—L. K., age 32. Admitted to the hospital complaining of frequency, incontinence and pain in the lower abdomen. Onset two months ago. Venereal history negative. Vaginal examination negative. No urethral discharge. Urine showed large amount of pus and some blood cells.

Cystoscopic examination—Entire mucosa was site of a subacute infection with several small ulcers near the ureter orifices.

Wassermann test returned positive.

Anti-luetic treatment gave immediate results. The subjective and objective symptoms disappeared.

Diagnosis: Secondary syphilis of the bladder.

In the tertiary stage, the lesions are either a gummatous ulcer or a palillomatous tumor. Any bladder ulcer or tumor is suspicious of syphilis and warrants a blood Wassermann. If positive and treat-

ment is instituted, the progression of healing may be observed by repeated cystoscopic examinations.

Tuberculosis of the bladder may be quite definitely considered secondary to tuberculosis of the kidney, intestines, lungs or genital organs. The lesion may take the form of an ulcer or clustered tubercles with characteristic local symptoms in addition to the systemic.

Women of advanced years frequently suffer with bladder disturbances and the condition is termed "Cystitis senilis feminarum". The symptoms resemble, in a general way, the symptom complex described, but do not respond as readily to treatment. The cause is a general atrophy and degeneration plus bacterial invasion.

TREATMENT

Since the cystitis is either a local or systemic infection, it is obvious that correct treatment can only be the outcome of a correct diagnosis. The character of the treatment will be as varied as the etiology. Proper hygiene, with due regard to muscle tone and proper diet, the removal of foci of infection, careful catheterization technique and extreme good judgment in surgical technique will do much to reduce the frequency of the infection. During the acute stage, the patient should be confined to bed. Attention must be directed to body elimination and proper diet.

MORPHINISM AND HYSTERIA IN DIFFERENTIAL DIAGNOSIS

O. R. YODER, A. B., M. D.

(Assistant Physician, Kalamazoo State Hospital)

KALAMAZOO, MICHIGAN

It is quite evident that in the differential diagnosis of any somatic complaint or physical disease, the psychic state of the individual is also of paramount importance and many times is overlooked. This is especially true in cases of hysteria and morphinism.

In the study of 35 women, consecutive and unselected cases of morphinism, without psychosis, admitted to the Kalamazoo State Hospital during the past nine years, the amount of surgical treatment before admission as shown by our records is of considerable interest. In reviewing these cases of morphinism those with psychosis, with psychopathic personality, or with mental deficiency were not included. These 35 women have a history of having had 45 major surgical operations for some somatic disease, or an average of 1.3 per patient. Thirty-two patients of this group

began the use of morphin under the direction and observation of a physician. One received it from a companion in a brothel, another from her husband who was an addict, and the last from her employer to relieve pain. Twenty-three of these patients had a family history of psychiatric interest. The average duration of the condition before admission was 9.2 years.

In the study of 45 women, consecutive and unselected cases of psychoneurosis, hysteria, admitted during the same length of time, our records are also of interest. Only the cases of true hysteria were considered. These individuals had 70 major surgical operations before admission, or an average of 1.5 per patient. Of these, 32 had a family history of psychiatric interest. The average duration of this condition before admission was 2.6 years.

Following is a typical story of a case of hysteria, relative to her medical and surgical history: A white woman, age 29, married, mother of one child, was admitted to the hospital because of convulsions which she had since the age of 14, following a vaccination against smallpox. Her family history was essentially negative. During childhood she had measles, whooping cough, and later typhoid fever. At the age of 14 she was vaccinated and during the process fainted. Since then she has had convulsions at regular intervals. At the age of 18 she had an appendectomy and at the age of 27 another laparotomy for adhesions was performed. Three months later a second operation for adhesions, and at the age of 28 a hysterectomy. One month later she had an operation on her eye, the nature of which is not known. She had had two minor mastoid operations, a surgical correction of ingrown toe nails, and a sewing machine needle removed from her finger on two occasions. Her present complaint is as follows: "Oh, I feel just awful. I have headaches in the top of my head and feel so light-headed sometimes. For two weeks I was completely deaf in both ears and then I woke up one morning and was all right. I have ringing there now. My eyes twitch at night and they smart and pain. My right cheek twitches too. I have catarrh in my nose that drops down in my throat all the time. The muscles of my neck are stiff, I guess it is a goitre; and since I took ether the last time there is a sore spot at the top of each lung. Then I have that awful weight on my back and hips. I have shooting pains through my breasts too. The food I eat turns to gas and it

crowds my heart so that I have palpation. I bloat after each meal and do not have a bowel movement unless I take oil. My liver is congested and I am jaundiced over my face and chest. There are some pimples on my chest now and a few on my back. I have a shooting pain in the right side that comes from the kidney and shoots down my right leg. It keeps shaking all the time. I don't menstruate since my last operation but I pass blood through the bowels. My arms and legs tingle and fall asleep. I have nervous chills at night and sweat something awful. I can't stand it for my husband to have intercourse with me because of the pain in the side and through my bladder. I have to urinate about every 15 minutes. On the 25th and 29th of every month I have a convulsion. A few days before these convulsions I get awfully nervous and then I know one is coming. I make everything ready for it and go to bed. At 10 o'clock the first one comes on. I grip the top of the bed to keep from hurting anyone. I stiffen out, froth at the mouth, and my husband says I am unconscious, but I never wet the bed. Sometimes I have another one at 2 o'clock in the morning and again a little later I have another. I have been examined so many times that I get discouraged. The doctor gave me morphin for three years and then I quit. Last year I took 12 gr. luminol to end it all. Six months afterwards I tried it again but I didn't even get drowsy."

COMMENT

The advisability of surgical treatment in the above cases is not questioned, but the large majority of patients seen by physicians either because of neuropathic heredity, or environment, or recent trauma, are in a constant state of fear or doubt and have a lowered degree of mental resistance. The influence then exerted by uninformed and hasty treatment is a definite step in the progress, and forms an important etiological factor in completing the individual's neurosis, or in fixing her drug habit. This, then, illustrates the importance of a careful and complete family as well as personal history. Sympathetic suggestion and assurance, especially in individuals who come for a periodic health examination, or in those unusually concerned about their physical welfare—as in the cases reviewed above, might be of some definite therapeutic importance. I feel that hysteria and morphinism at least should be given proper consideration in the differential diagnosis of any obscure and indefinite somatic complaint.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

Don M. Griswold, M. D., D. P. H., took up his duties as Deputy Commissioner of Health on June 1, 1927.

Dr. Griswold was born at Sherman, Wexford county, August 18, 1887. He attended the Sherman public school and Ferris Institute at Big Rapids, going from there to Michigan State College, where for two years he specialized in chemistry, bacteriology, and natural sciences. He then attended the University of Michigan, graduating from the Medical School in 1912. His internship was spent at St. Erik's Hospital, Crystal Falls, Michigan.

From 1913 to 1915, Dr. Griswold worked with the Detroit Department of Health under Dr. Kiefer, who was at that time Health Officer. In 1922 he received the degree of Doctor of Public Health from the Detroit College of Medicine and Surgery.

The three years from 1915 to 1918 were spent with the Rockefeller Foundation. In 1918 Dr. Griswold was Assitant Division Surgeon in the United States Army. He then went back to the Detroit Department of Health as Director of Medical Service, remaining there until 1920, when he accepted the professorship of Hygiene and Public Health at the State University of Iowa, serving at the same time as State Epidemiologist.

During 1926 Dr. Griswold was State Health Commissioner of Iowa, a position that he left to accept Dr. Kiefer's appointment as Deputy Commissioner of Health of Michigan.

NEW COUNTY HEALTH OFFICER LAW

A number of bills pertaining to the public health were passed by the legislature and have since been signed by the governor so that they have become laws. These various bills or laws will be considered at some length in the next number of the Journal but we desire to call attention to one of them at this time.

We refer to what is known as Senate Enrolled Act 153, usually spoken of as the County Health Officer Law. This law is short and provides for the establishment of county health departments. It gives any county in the state a right to establish a county health department, provided the board of supervisors agrees to do so.

This simple piece of legislation is, in our opinion, the most important bill that was passed by the legislature during the recent session. If counties in the state will take advantage of the opportunity now afforded them of establishing county health departments, the advance of public health will be assured.

It seems to us that physicians, members of the State Medical Society who are interested in public health work, should assist the Michigan Department of Health in its attempt to arouse enthusiasm and interest on the part of supervisors for the establishment of county health departments. Such a department, when established, would have the administration of all health laws and the control of communicable diseases under the advice and direction of the State Department of Health. This will be an immense help toward the promotion of health and the prevention of disease.

County health organizations are established in a number of states and Michigan has been far behind in this respect. Let us hope that we can get the co-operation of enough physicians so that at least a number of the counties of this state will take steps immediately looking toward the establishment of health departments within their limits.

TYPHOID WARNING

In view of the recent epidemic of typhoid fever in Montreal, special precautions in the matter of carriers are urged upon state health officers by the Surgeon General of the United States Public Health Service. A part of Dr. Cummings' letter follows:

"The epidemic of typhoid fever at Montreal, Canada, which began about March 4, 1927, is now reported as being under control. The source of the infection has been attributed by the Canadian health authorities to a typhoid carrier in the person of the foreman of a large milk pasteurizing plant in Montreal.

"Among the approximate number of 2,500 persons reported as having contracted typhoid fever in Montreal, there will be a number of carriers. An increase in carriers among the general population

of the city will probably also occur through unrecognized cases.

In view of the fact that many persons from Montreal will visit the United States during the vacation season and that some will seek employment in summer resorts, hotels and recreation camps as food handlers and in related lines of occupation, it is desired to emphasize the unusual care which should be exercised by health officials, resort owners and others, in regard to sanitation and the examination of food handlers, if disastrous outbreaks of typhoid fever are to be averted."

NEW CO-OPERATIVE SERVICE FOR RURAL DISTRICTS

A co-operative arrangement has been established between the Michigan State College Extension Division and the Michigan Department of Health for the examination of drinking waters in rural districts. The State College is sending out through the State two trucks, equipped and manned to give instruction in domestic science and farm engineering. Sanitary surveys will be made wherever samples of water are collected for examination by the State Laboratory. The trucks will begin their work at Fremont. One hundred water containers have been furnished the county agents in each of the following places: Fremont, Big Rapids, Hastings, Allegan and Grand Rapids.

The State Department of Health and the Department of Conservation are co-operating in making a survey of the character of both ground and surface waters that are available for domestic supplies. Not only the chemical and bacteriological analysis of constituents will be made, but the radio-activity of the waters will be determined. There is no definite available information as to the value of the radio-activity in drinking water, but it is quite possible that there might be some relation between metabolism and a small amount of radio-activity present.

The County Health Co-operative Committee of Ionia county has taken as one of its field of activity the collection of water samples from every school well in the county. These examinations are being made in the laboratory of the Michigan Department of Health. There are 120 rural schools in the county.

Dr. Leon C. Havens, Director of Laboratories of the Alabama Department of Health at Montgomery, spent May 31st to

June 2nd at the laboratories of the Michigan Department of Health, having been sent under the direction of the Rockefeller Foundation. Dr. Havens especially desired to investigate the methods of manufacture and distribution of biologic products. He also went over the various laboratory methods, particularly the Kahn test, and made a study of the system of records in use by the Bureau of Laboratories. Dr. Haven's visit was particularly gratifying as it gave an opportunity to the laboratory to discuss with him his method of typhoid diagnosis. The laboratory is adopting his procedure as he has been one of the most successful of laboratory men in that field.

College graduates who wish to learn procedures used in a public health laboratory are accepted as volunteer workers by the Laboratory of the Michigan Department of Health. They may register with either Michigan State College or the University of Michigan, and upon fulfilling the requirements are eligible for a year's work and study in the State Laboratory. Credit is granted toward a master's degree by the college in which the student is enrolled. This summer there are two graduates from the University of Montana and one from Albion College who have registered for a year's course as volunteer workers in the Michigan Department of Health laboratories.

U. S. NAVY DEMONSTRATES KAHN REACTION AT A. M. A. EXHIBIT

At the scientific exhibit of the recent American Medical Association meeting at Washington, the Kahn test was utilized to demonstrate the immunologic phenomenon of precipitation. The demonstration booth was under the direct supervision of the medical department of the United States Navy. Many charts were exhibited showing the value of the Kahn test, both in the diagnosis and treatment of syphilis in the navy.

The American Society of Clinical Pathologists had a symposium on the Kahn test on May 13, during their annual meeting at Washington. Dr. R. L. Kahn, immunologist, Bureau of Laboratories, Michigan Department of Health, took part in this symposium by invitation, and on May 14 demonstrated the Kahn test before this organization. Dr. Kahn also addressed the students and faculty of the George Washington University Medical School on May 16; the students and faculty of the Howard

University Medical School on the 17th, and the Section of Physiology and Pathology of the American Medical Association on the 18th.

Previous to the American Medical Association meetings, Dr. Kahn addressed the Ohio State Medical Society on the "Role of the Kahn Test in Clinical Medicine" on May 11th, and the Ohio State Society of Clinical Pathologists on the 12th.

THE ETIOLOGY OF SCARLET FEVER

It is the history of most communicable diseases that the etiological agent has not been accepted without question, and scarlet fever is no exception. Filterable viruses, mutation variants, Carconia's diplococcus, and the scarlet fever streptococcus, each has its group of adherents, and some have attempted to correlate several of these possible agents as together composing the true cause of the disease. Zlatogoroff, Kudriavtzeva and Palonte, in a Paris journal of May 13, 1927, for example, close their paper with, "We consider that the streptococcus which finds itself normally in the human organism, in contact with the filterable scarlatinal virus, acquires the specific properties of the organism of scarlet fever." Discussion and controversy are the more to be expected due to the fact that of these potential agents the one organism easily pinned down, as it were, the streptococcus, *is* a streptococcus, and *as* such is with difficulty separated into a well defined scarlet fever group type. The practical points of prevention and of cure are in a sense first in importance. Many types of serum have been used since 1903, and the balance of reports are in their favor, although the results are of course never clean cut as in the use of diphtheria antitoxin. Many types of vaccines or preventive products have been tried, these giving on the whole commendable results. Thus far, so good. Regardless of theory as to etiology we have preventive and therapeutic products of at least some value. But they must be better in efficiency per se and in method of control. To attain this goal further knowledge of the etiology is necessary, and it is well to hold an open mind on the question until our knowledge is unequivocally pointed toward a definite agent or correlation of agents.

MATERNAL MORTALITY STUDY

The Maternal Mortality study being conducted by the Michigan Department of

Health, at the request of the State Medical Society, is receiving splendid co-operation from the doctors already visited. Dr. Dorothy L. Green, who is conducting the study, has already visited 21 counties, and has seen 86 physicians in those counties. The counties visited to date (June 1), are as follows:

Berrien	Van Buren
Cass	Allegan
St. Joseph	Barry
Branch	Kent
Hillsdale	Eaton
Lenawee	Ingham
Monroe	Livingston
Jackson	Oakland
Washtenaw	Macomb
Calhoun	St. Clair
Kalamazoo	

ROADSIDE WATER INSPECTION

The survey of roadside water supplies on trunk lines started by the Michigan Department of Health in 1925, and taken up again in 1926, is being continued this summer.

A field party of two started June 1st on this work. Their route is south from Lansing to the borderline, then west to White Pigeon to old trunk line M-13, now U.S.-131. From White Pigeon they will follow U.S.-131 to Petoskey and then down the east side of the state.

Two weeks later a follow-up man will take this same route, placing the approval signs of the Department on the safe supplies and making recommendations for improvement of those sources which are not up to the standard required by the Department.

VISITS OF ENGINEERS DURING MONTH OF MAY, 1927

Inspections of Railroad Water Supplies: 18 cities.

Allegan	Kalamazoo (4)
Albion	Marshall
Battle Creek (3)	Monteith Jc.
Benton Harbor (3)	Owosso (2)
Detroit (5)	Port Huron (2)
Durand	St. Joseph (2)
Frankfort	South Haven
Ionia	Waverly
Jackson (5)	Wyandotte

Inspections and Conferences, Sewerage and Sewage Disposal: 18 cities.

Adrian (2)	Holland
Bay View	Lansing (2)
Cadillac	Lapeer
Caledonia	Mackinaw City
Custer (6)	Milford
East Grand Rapids	Muskegon
Flint	Muskegon Heights
Fremont	Northville
Grand Rapids	Zeeland (2)

Inspections and Conferences, Water Supplies: 19 cities.

Adrian (3)	Mackinaw City (2)
Alpena	Menominee (2)
Bay City (2)	Midland (4)
Beaverton (9)	Monroe (2)
Blissfield (2)	St. Ignace (7)
Crystal Falls	Trenton (4)
Dearborn (2)	Twin Lake
Escanaba	Wayne (2)
Flat Rock	Wyandotte
Iron Mountain (2)	

Inspections of Swimming Pools: 3 cities.

Perry	Coldwater (3)
Lansing	

Inspections of Nuisances: 3 cities.

Detroit (County Drain) (4)
Mt. Clemens (County Drain) (2)
Rockwood (Ditch Nuisance) (2)

Inspections and Conferences on Stream Pollution: 2 cities.

Grand Rapids	Jackson (3)
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Inspections and Conferences on Camps:

Three Rivers

THE "SUMMER ROUND-UP"

The "Summer Round-up of Children" that is arousing so much enthusiasm throughout the state, originated in 1925 with the National Congress of Parents and Teachers.

The round-up is, in the words of the founders, "a campaign to send into the First Grade, a class of children 100 per cent free from remedial defects. The responsibility for the health of the preschool child rests upon its parents. The home can make no greater contribution to the school than a scholar fully prepared to take advantage of what education has to offer him."

To produce this 100 per cent First Grade group, the local branches of the Parent-Teacher organization are urging the summer physical examination of all children who will enter school for the first time next fall, and the correction of any remedial defects found.

The growth of the idea in Michigan has been interesting. In the summer of 1925 only seven Parent-Teacher associations reported activity along this line. In 1926 the number increased to 42. So far in the summer of 1927, more than 300 associations have fulfilled the requirements laid down by the national headquarters for registration in the round-up program, giving Michigan the lead among the states.

It is safe to predict that there will be at

least a slight improvement when the school bell rings next fall.

PREVALENCE OF DISEASE

	May Report			
	Cases Reported			
	April 1927	May 1927	May 1926	Av. 5 Years
Pneumonia	663	526	590	596
Tuberculosis	554	506	628	673
Typhoid Fever	29	24	23	46
Diphtheria	409	381	349	383
Whooping Cough	536	751	645	616
Scarlet Fever	1,078	1,103	1,288	1,086
Measles	1,027	1,175	6,444	4,682
Smallpox	120	188	45	224
Meningitis	13	6	11	15
Poliomyelitis	0	0	4	2
Syphilis	1,449	1,325	1,212	910
Gonorrhoea	729	674	729	722
Chancroid	15	0	4	7

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health
May, 1927

	+	-	+ -	Total
Throat Swabs for Diphtheria	.....	.....	.....	1011
Diagnosis	32	310	.....	.....
Carrier	11	372	.....	.....
Release	73	205	.....	.....
Virulence Tests	4	4	.....	.....
Throat Swabs for Hemolytic Streptococci	.....	.....	.....	678
Diagnosis	99	196	.....	.....
Carrier	37	346	.....	.....
Throat Swabs for Vincent's Syphilis	11	331	.....	342
Wassermann	.....	.....	.....	5853
Kahn	1041	4743	68	.....
Darkfield	.....	1	.....	.....
Examination for Gonococci	144	1129	.....	1273
B. Tuberculosis	.....	.....	.....	405
Sputum	73	297	.....	.....
Animal Inoculations	1	34	.....	.....
Typhoid	.....	.....	.....	135
Feces	9	55	.....	.....
Blood Cultures	.....	31	.....	.....
Widal	11	25	.....	.....
Urine	1	3	.....	.....
Dysentery	.....	.....	.....	32
Intestinal Parasites	.....	.....	.....	14
Transudates and Exudates	.....	.....	.....	260
Blood Examinations (not classified)	.....	.....	.....	138
Urine examinations (not classified)	.....	.....	.....	379
Water and Sewage Examinations	.....	.....	.....	848
Milk Examinations	.....	.....	.....	123
Toxicological Examinations	.....	.....	.....	.....
Autogenous Vaccines	.....	.....	.....	2
Supplementary Examinations	.....	.....	.....	145
Unclassified Examinations	.....	.....	.....	658
Total for the Month	.....	.....	.....	12296
Cumulative Total (fiscal year)	.....	.....	.....	143679
Decrease over this month last year	.....	.....	.....	3681
Outfits Mailed Out	.....	.....	.....	15188
Media Manufactured, c.c.	.....	.....	.....	220195
Typhoid Vaccine Distributed, c. c.	.....	.....	.....	1893
Toxin Antitoxin Distributed, c. c.	.....	.....	.....	24920
Antitoxin Distributed, units	.....	.....	.....	36253000
Silver Nitrate Ampules Distributed	.....	.....	.....	5048
Examinations Made by the Houghton Laboratory	.....	.....	.....	1308
Examinations Made by the Grand Rapids Laboratory	.....	.....	.....	6496

Minutes of the 107th Annual Meeting, Michigan State Medical Society, Mackinac Island, June 16-19, 1927

HOUSE OF DELEGATES

THURSDAY MORNING SESSION

June 16, 1927

The first session of the House of Delegates of the One Hundred and Seventh Annual Meeting of the Michigan State Medical Society, held in the theater of the Grand Hotel, Mackinac Island, Michigan, convened at ten-thirty o'clock, the Speaker, Dr. W. K. West, presiding.

Speaker West: The House of Delegates will come to order please.

We will have the report of the Committee on Credentials by Dr. A. P. Biddle.

Dr. A. P. Biddle: Your committee would like to have judgment passed on two matters. One is the substitution of Dr. W. J. DuBois for Dr. J. D. Brook. I wonder if the House will accept that.

Then I have one more and if the Secretary will kindly read this, we can have judgment passed on it.

Secretary Warnshuis: This communication is from the Secretary of the Grand Traverse-Leelanau County Medical Society.

... Secretary Warnshuis read the communication...

Dr. Biddle: I move that be accepted, Mr. Chairman.

... The motion was supported by Dr. Wenger of Kent...

Speaker West: It is moved and supported that Dr. George F. Inch of Grand Traverse be substituted for Dr. Kyselka as delegate.

... The question was put to a vote and carried...

Secretary Warnshuis: Here is the statement of Dr. W. J. DuBois. Dr. J. D. Brook is the accredited delegate and his credentials have been transferred to W. J. DuBois.

Dr. Biddle: I move the substitute be accepted.

... The motion was supported by Dr. Wenger of Kent and carried...

... Dr. Henry R. Carstens, Vice-Speaker, took the Chair...

Chairman Carstens: The next order of business will be the annual address of the Speaker, Dr. W. K. West. (Applause). (Will be published in August Journal.)

Chairman Carstens: The address of the

Speaker of the House will be referred to the Business Committee.

I will now turn over the chairmanship again to Dr. West for the regular order of business.

... Speaker West resumed the Chair...

Speaker West: The next item on our program is an address by our President, Dr. J. B. Jackson of Kalamazoo.

President Jackson: Mr. Chairman and Gentlemen of the House of Delegates: I want to congratulate the House of Delegates on the very excellent address that you have just had from your Speaker. I believe that the emphasis is placed in the right place. I am sure that the chief function of organized medicine is the improvement of the standards of medical practice.

I have not prepared any formal address to make this morning but there are a few things that I should like to talk over with you.

I intend to make the matter of the consideration of our present medical practice act the theme of my presidential address tomorrow night, but inasmuch as the business of the State Society is done on this first day, I should like to present in brief some of the ideas which I intend to develop further tomorrow evening.

Most of you know that the State Medical Society has taken an active part in the matter of legislation during the past session of the Legislature. You know that there were two bills which especially commanded our attention, the one from the osteopaths and the other from the chiropractors. That isn't anything particularly new because every two years we have the same proposition, the attempt at legislation of short-cut practitioners of the healing art. At the last session of the Legislature there was presented by the osteopaths a bill which provided that they were to be recognized as practitioners, not of osteopathy but practitioners of medicine, giving them the right to practice medicine and surgery, calling attention to the fact that in our present medical act there are four recognized schools of medicine—the regular, the homeopaths, the eclectic and the physiomedic. This bill provided that a

fifth school of medicine should be established, the school of osteopathy. No mention was made of sublaxations of the spine but they spoke of the structural integrity of the body mechanism.

This bill was sponsored by the younger graduates in osteopathy who have had four years of training. The osteopathic bill failed of passage by the Legislature because the osteopaths did not agree among themselves. The younger graduates of osteopathy wanted the right to practice medicine; the older graduates are still satisfied to practice manipulation of the spine; and I think largely because they did not agree among themselves, this bill failed of passage by the Legislature. Members of our Society were present at the hearing of this bill and while what we said may have had some influence, I think the fact that the osteopaths did not present a united front had more to do with the defeat of their bill than the representations that we made.

Then there was also presented the biennial attempt of the chiropractors to be allowed the privilege of a separate licensing board. This bill passed the House by a very large majority. It went over to the Senate and was finally defeated in the Senate. You will find a discussion of that in the next issue of the Journal showing the fight that took place in the Senate and the men who really won the fight for us on the chiropractic bill.

I refer to these things to indicate to you that the State Medical Society has interested itself in legislative problems and to point out the fact that every two years we have this same proposition. We have to go down to the Legislature and ask them please not to do this, and every year we win out by a somewhat smaller margin.

Now it has occurred to me that this would be a good time for the Michigan State Medical Society to try to adopt a constructive policy in regard to our medical practice act. In the first place, the recognition in our medical practice act of four schools of medicine is an anachronism. There are no longer four schools of medicine. That belongs to the past generation. In the second place, there is going to be at every session of the Legislature every two years this attempt of the short-cut practitioners to be legalized. In the third place, there is no provision in our present medical act for adequate enforcement of the law. You all know that there are a great many men practicing the cults who are outside of the law and yet they

are not made to comply with the law. We make isolated attempts here and there to put an end to it but we do not succeed. The present method of enforcement of the law is a failure.

Many states have undertaken to adopt a constructive plan in regard to these things. I will refer to that more fully tomorrow night, but New York, Indiana, Connecticut, Wisconsin, Nebraska, Minnesota and many of these states have attempted to do something constructive rather than to go down every two years and try to defeat the proposed legislation. Wisconsin has adopted a basic science law providing that every man who wishes to practice the healing art, whether he be a practitioner of medicine or osteopathy or a chiropractic practitioner or whatnot must take an examination in the basic science. This basic science board is made up of non-practitioners of medicine, with leading men in the various sciences represented, and every man has to take an examination before he can practice the healing art.

Dr. Woodward of the American Medical Association has prepared a very excellent model basic science law which many of you, I am sure, have read.

Now it seems to me that the fact that the osteopaths have come up at the past session of the Legislature and asked to be recognized as a school of medicine brings this thing to a very critical point, and I believe that the Michigan State Medical Society ought to make a serious study of this matter and try to formulate a policy and a program for the future instead of going down every two years to the Legislature, to try to present to the Legislature and the people of the State of Michigan a definite program, and the Council and I as the President would like to recommend to the House of Delegates that a commission be appointed by authority of this House of Delegates—a legislative commission to be appointed by the incoming President—who shall make a special study of the medical practice act and try to formulate a program, whether it be a basic science law or a law like the New York law, who shall make a study of what has been done in these various other states and try to do something constructive in the State of Michigan.

That is my recommendation to you as a House of Delegates. This will mean a great deal of work and a great deal of that work, of course, will be carried out through our official secretary's office. I would like to call your attention to the fact that as a

State Society our work has been expanding very much in the last few years. Every year we take on new activities; we try to broaden the scope of our work; and that means a great deal of routine, of detail, in the office of our Secretary. I think that many of us as members of the Society do not appreciate the enormous burden of work that falls upon our Secretary. I should like also, judging from my own experience as a member of the Executive Committee, to call your attention to the fact that a great deal of routine work is done by the Council and by the Executive Committee of the Council.

I have no further recommendations to make to you. I should like to urge you to give very serious attention to the report which is to be made to you today by Dr. Smith as Chairman of the Special Committee which was appointed by authority of the House of Delegates at the last session to make a study of the condition so far as charity work in hospitals of the state is concerned. This is a big problem and requires your new serious consideration. I hope the members of the House of Delegates will not let the golf links interfere with the serious consideration of this problem.

Thank you! (Applause).

Speaker West: The President's address will be referred to the Business Committee.

The next thing on the program is the report of the Council, Dr. R. C. Stone, Chairman.

ANNUAL REPORT OF THE COUNCIL

To the House of Delegates:

During the year the Council has imparted to our members, through The Journal, reports of its activities. In the March Journal, by direction of the Council, the Secretary prepared and published in extended detail an article on the Scope and Policies of our State Society. The Minutes of the Council and of the Executive Committee have also been published. The House of Delegates and our membership therefor are possessed of the information that records the work that has been accomplished by your Council during the past year. It is deemed expedient, however, to place emphasis upon certain features of our activities. This report, therefor, will be so limited.

LEGISLATION

The state legislature of this year witnessed the introduction of an unusually

large number of bills pertaining to health and medical practice. There were many attempts to trespass upon the rights and practices of physicians. Your Council through its Chairman, Secretary, President Jackson and the Executive Committee, aided most helpfully by Senator Green, Dr. Guy L. Keifer, Dr. E. R. Vander Slice and Representative UpJohn remained in constant contact with Committees of the Legislature and members of the Legislature. A number of hearings were attended and personal interviews obtained. As a result, we report that no bills were passed giving recognition to the various cults.

For several years past, President Jackson and the Council have given the Legislative problems and the Medical Practice Acts very deep consideration. This past year, President Jackson has made a very thorough investigation of the whole problem and this morning has made a recommendation in his address to the House of Delegates. In view of past experiences and by reason of sentiment encountered your Council now declares that the time has come when definite plans and policies must be determined upon for the purpose of conducting an educational campaign for the enlightenment of the public and the profession. That following such a campaign a bill be introduced in the next legislature that will create a revision of the laws, the establishment of a Board that shall govern all who hold forth as being capable to treating the sick and to provide enforcement procedures. Such a campaign is imperative. To that end does the Council recommend that you authorize appointment by the President, confirmed by the Council, of a Special Legislative Commission, of five members, directed by the Secretary and advised by the Executive Committee of the Council. That this Legislative Commission be charged to conduct such an educational campaign, and prepare a suitable bill for introduction in the Legislature and that the Council be authorized to appropriate the requisite funds.

OSTEOPATHS AND MORPHINE

At the request of the State Board of Registration in Medicine the Attorney General made a ruling that Osteopaths were without authority to prescribe opium or its derivatives. On receipt of this ruling, the Executive Committee, authorized the Secretary to enter into correspondence with officials of the U. S. Revenue Department of the Treasury. As a result of that correspondence the Secretary is in receipt

of a ruling which instructs revenue collectors to refuse to issue licenses to Osteopaths to dispense opium, etc. under the Harrison Act.

POST-GRADUATE EDUCATION

The Council through the Secretary's office, has continued providing District Post-Graduate Conferences. These have also been extended to County Societies. A three-day conference was also arranged at the University Hospital. The value of these conferences have been definitely established and it is purposed to continue them.

The Council has sensed from the membership that still further and broader opportunity is desired by our members to pursue post-graduate study. To this end the Council has had several conferences with the University representatives seeking to cause the establishment of further Post-Graduate appointments. Progress is reported and favorable consideration is being accorded. The Council hopes that ere fall more detailed announcement can be made.

MEMBERSHIP AND FINANCES

On June 1st our membership was 2,872.

Our financial report was published in the March Journal and our auditors certified audit is available for the Reference Committee. Our net worth on January 1, 1927 was \$14,754.34.

GENERALIZED ACTIVITY

The following enumeration records the general activities of the Society which have been directed from the Secretary's office under the Councils Supervision:

1. Joint Committee on Public Health Education.
2. Legislative Bureau.
3. Endowment Foundation.
4. Minimum Programs for County Societies.
5. Council Conferences.
6. High School Lectures.
7. Periodic Physical Examination.
8. County Secretaries Conference.
9. Medico-Legal Defence.
10. Publication of the Journal.
11. Investigation of Law Infractions.
12. Survey of Doctors of the State.
13. Laboratory Technicians Course at the State College.
14. Women's Auxiliary Organization.
15. Survey of Hospital Charities.
16. State Mortality Records.
17. Council Executive Committee.

These reflect only the major activities and impart none of the details or the host of essentials that are entailed in the routine administration of business and editorial details. They are sufficient however, to convey to our members that their State Society is a going, aggressive, achieving organization.

LAW INFRACTION INVESTIGATIONS

As announced the Council has to a limited measure undertaken through various avenues the investigation of illegal practitioners. By reason of the scope and nature of this work no detailed report can be recorded. Approximately 35 cases were disposed of. Consistant progress is being made. It is purposed to pursue these investigations. It must not be expected that any wide or extensive campaign can be instituted for reason that must be self evident.

ADMINISTRATIVE EFFORTS

The Council is profoundly conscious of the fact that our Society has made excellent progress and that this progress has broadened our scope and sphere of contact and labors. Attendant upon this enlarged field of work are many and varied details that demand personal supervision and direction for they are not self regulated. In common with other states the Council recognizes that our impigning and varied contacts with the public call for the assuming of definite responsibilities. These problems call forth anew the need of a full time executive officer. The council believes consideration should be given toward the securance of such an executive.

HONORARY MEMBERSHIP

The Council recommends for Honorary Membership the following:

- Dr. V. C. Vaughn, Washington, D. C.
- Dr. W. T. Dodge, Big Rapids, Mich.,
- Dr. A. T. McLaren, Port Huron, Mich.
- Dr. A. H. Rockwell, Kalamazoo, Mich.

CONCLUSION

The Council records with extreme pleasure the splendid spirit that prevails throughout the state and commends most heartily the loyal support that has been subscribed by our County Societies.

Speaker West: The report of the Council presented by Chairman Stone is referred to the Business Committee.

I wish now to name the members of the Reference Committee: Dr. Carl F. Moll of Genesee, Chairman; Dr. Walter J. Wil-

son of Wayne; Dr. Philip Bourland of Houghton; Dr. G. H. Southwick of Kent; Dr. James D. Bruce of Washtenaw.

The next item on the program is the election of the Nominating Committee of five. You will note that no two members are to be from the same Councilor District.

Dr. Biddle: I wish to nominate Dr. Dibble of Wayne.

Dr. Moll (Genesee): I wish to nominate W. J. Kay of Lapeer County.

Dr. Garber: I wish to nominate Dr. George F. Inch.

Member: I wish to nominate Smith of Cadillac.

Member: I wish to nominate James D. Bruce of Ann Arbor.

Member: I wish to nominate McIntyre of Lansing.

Member: I wish to nominate Dr. C. M. Williams of Alpena.

Member: I wish to nominate Dr. T. S. Evans.

Dr. G. H. Southwick (Kent): I wish to nominate Dr. W. J. DuBois.

Dr. Moll (Genesee): I move that the nominations be closed.

... The motion was supported by Dr. Randall of Genesee and carried...

Secretary Warnshuis: There have been placed in nomination: Dibble of Wayne; Kay of Lapeer; Inch of Grand Traverse; Smith of Tri-County; Bruce of Washtenaw; McIntyre of Ingham; Williams of Alpena; Evans of Ontonagon, and DuBois of Kent. There are nine nominations, of which five are to be elected.

Speaker West: I will appoint the following tellers: Dr. DuBois of Alma, Dr. Randall of Flint and Dr. Wendt of Wayne County.

Dr. A. P. Biddle (Wayne): I move you, Mr. Speaker, that W. J. Kay be seated as a delegate.

... The motion was supported and carried...

Secretary Warnshuis: While the delegates are cogitating over their election, I want to read the following communication.

... Secretary Warnshuis read the letter from Dr. Baird.

Bay City, Mich., June 7, 1927.

Dr. F. C. Warnshuis,
Grand Rapids, Mich.,

Dear Doctor Warnshuis:

Please convey the following to the President and Council:

I herewith resign as Councillor of the 10th District, Michigan State Medical Society to take effect at the Annual meeting at Mackinac Island.

I am engaged in so many extra professional work, committees, etc., that I find it increasingly difficult to give my best services to the Society and feel that their best interests will be served by appointing or electing a man who can give more time to the work.

Inasmuch as this will be an unexpired term, I am not sure whether an election is necessary or

whether my successor will be appointed by the President. I have talked the matter over at some length with the members in this district and also with the Delegates. They all seem to feel that Dr. J. William Gustin of this city is the logical man for the office.

With kindest personal regards,

Very truly yours,

FRED S. BAIRD.

Secretary Warnshuis: It will be necessary, Mr. Speaker, for the House to accept this resignation and then the Nominating Committee will make a nomination and report tonight.

Dr. Wilson (Wayne): I move that the resignation of Dr. Baird of Bay City be accepted.

... The motion was supported and carried...

Secretary Warnshuis: I will also make the announcement, Mr. Speaker, that under the provisions of the Constitution and By-Laws, Councilors whose terms of office expire, are nominated by the delegates of the County Societies constituting their respective districts. It is provided in the Constitution and By-Laws that the State Secretary shall call these delegates in district caucuses, at which time they can make these nominations which will be submitted to the House. The Secretary will call these caucuses at a later time this afternoon. The delegates of Districts 7, 8, 9 and 10 will meet in caucus to nominate their Councilors for the terms expired.

To expedite matters, while the ballots are being counted, we have next on the program the reports of committees. All of these have been published, however, with the exception of the one on Hospital Survey and Delegates to the A. M. A. What is your wish in regard to the other reports?

Dr. A. P. Biddle: I move that they be accepted as printed.

Secretary Warnshuis: May I suggest that it has been the custom of the House to refer these automatically to the business committee, which goes over the reports and brings in recommendations as to action to be taken.

Dr. Biddle: I accept that, sir.

... The motion was supported and carried...

Speaker West: It is so referred.

Are the delegates of the American Medical Association ready to report? If so, we will hear them now.

Dr. L. J. Hirschman (Wayne): Mr. Speaker, I take great pleasure in presenting the senior member of the delegation, Dr. Moll of Flint, who will give the report.

Dr. C. F. Moll: Mr. Speaker and Members of the House of Delegates: This is the second time within the past sixty days that Dr. Hirschman has passed the buck to me. I think he is the champion

buck passer that we have in the Michigan State Medical Society, and if there is ever an office of buck passer, I will nominate him for that position.

The House of Delegates met in Washington and you gentlemen have all read the report as published in the Journal of the A. M. A., which is far better and far more intelligently presented than I can present it to you.

I didn't know that I was expected to make any report or that any of us were to make a report. We had the honor of having our Secretary, Dr. Warnshuis, re-elected Speaker of the House. Michigan is very proud of him and he has done very splendid work as Speaker.

There were a number of very important questions which came up. Some of them were settled satisfactorily and some possibly not as satisfactorily. One of the very important committees was one that Dr. Hirschman happened to be a member of and I think the work of that committee will be of more interest to you than any other committee and I will call upon him to tell you about it. (Laughter).

Dr. L. J. Hirschman: Mr. Chairman, I appreciate the innate modesty of all of the members of the Michigan Medical Society. I am very modest myself and I don't want to say very much about that committee except that the committee was a special committee, and I think it is one of the few times in the history of the House of Delegates that our present efficient Speaker found it necessary, in order to preserve harmony, to appoint a special committee to keep two other committees in harmony. This special committee was on the relation of the medical profession to the nursing situation. A commission has been appointed to which the A. M. A. was invited to send a delegate, and the A. M. A. was so represented, to study the nursing situation in the relation of the number of nurses to the patients who need nurses and the present living cost and whether the nurse is being properly remunerated and a great many other things. It was such an important matter that representatives of the American Nurses Association, The American Hospital Association, the American Medical Association and eight or ten large national associations joined hands to study the problems. This report as made recommended that the American Medical Association not only be represented but that \$5,000 be appropriated annually for five years to help defray expenses of studying this problem. This was the smallest appropriation made. Many other associations and wealthy individuals made appropriations.

The money has apparently been very well spent and I think the reports which will come forth from the studies already made will give us a much clearer conception of the present study regarding private and public duty nurses and institutional nurses and all nursing service.

The committee had some problems which were passed on from the Speaker of the House and we tried to meet them and I think the recommendations we did make were carried.

Another recommendation which will be of some interest in Michigan was the situation in regard to the care of obstetrical cases in sparsely settled districts. There was a particular communication which came to us from Kentucky. It seems that in Kentucky there are many, many square miles of territory without a doctor where, for many years, children have been born with the mother's receiving no attendance whatsoever, and when she did get attention it was from the crudest type of midwife. The Nursing Association in Kentucky and in other states like that have been trying to

give nurses a superficial training in midwifery to temporarily relieve the situation as they could not get doctors.

This was a very dangerous subject for us because it rather encroaches on the practice of medicine and I think we recommend the spirit of the communication and recommended further study.

I want to say, for the benefit of my modest friend Dr. Moll, that thanks to his eloquence, although I don't think any eloquence was needed to further embellish the fine opinion which everybody already has for our fellow citizen Fred Warnshuis, he was unanimously elected Speaker of the House for the ensuing year. In fact, one of the southerners at the meeting became so enthusiastic that he recommended that the Secretary of the American Medical Association publicly kiss Fred Warnshuis on both cheeks. (Laughter and applause).

Speaker West: The reports delivered to us by the delegates of the American Medical Association will be submitted to the Business Committee.

If the Tellers are ready with their report, we will hear it.

... The report of the Tellers was not completed...

Speaker West: We will then hear the report of the Committee on the Hospital Survey, Dr. Richard R. Smith of Grand Rapids. (Applause).

... Dr. Smith presented the prepared report of the Committee on Hospital Survey...

(See supplement of this issue.)

Speaker West: What is the wish of the delegates in regard to the very valuable report submitted by Dr. Smith?

Dr. DuBois (Kent): Do I understand that this report is to be published in the Journal?

Secretary Warnshuis: It will all depend on the action taken here.

Dr. BuBois: I move you that this very excellent report, which embodies a very enormous amount of work on the part of the Chairman and the Committee, be published in its entirety in our Journal, and also that this Committee be continued.

... The motion was supported by Dr. Biddle of Wayne...

Speaker West: Is there any discussion?

Dr. McClintic (Wayne): I would like to ask if this committee is going to the charity hospital of Wayne County? For example, they are not only maintaining a poorhouse at Eloise and a psychiatric department, but they also have a hospital up there, and in the last three months probably 30,000 patients have been taken care of in the out patient department. The expense of this is largely gratis as far as the profession is concerned yet it is part of the charity work of the state and county. The state pays some of the expenses of the psychiatric department.

Speaker West: Is there any further discussion?

Dr. H. J. Pyle: Dr. Smith in reading his report hoped that any recommendations which might

come from the House of Delegates should be very carefully made. How can the House of Delegates today, for instance, pass on this intelligently? Does this mean that this will be published and recommendations made next year?

Speaker West: That is what I understood to be the case.

Dr. Smith: Yes, that is correct.

...The question was called for...

...The question was put to a vote and carried...

Dr. Bruce (Ann Arbor): I think we should be clear on one question that was asked here as to whether or not the conclusions or recommendations are to be based alone on the material at hand or whether or not further investigations would be made and the conclusions based upon them in their entirety. My understanding is that the latter obtains.

Speaker West: Dr. Smith has declared that this is only a preliminary report and would have to be investigated further. Does that answer your question?

Dr. Bruce: That answers the question that was asked prior to my remarks.

Secretary Warnshuis: Your Tellers report as follows: Dibble, 45; Bruce, 40; McIntyre, 31; Inch, 27; Kay, 26; DuBois, 22; Evans, 23; Smith, 13; Williams, 16.

The five receiving the highest number of votes are: Doble, Bruce, McIntyre, Inch and Kay.

Speaker West: The names submitted by the Secretary constitute the Nominating Committee.

Secretary Warnshuis: There is no unfinished business upon the desk. We come to the next order of business which is new business and resolutions, which is a matter for the pleasure of the House. Of course, the House can set its own time for sessions. The sessions you find in the program are only tentative sessions. Whether the Business Committee can make a report before the House at one o'clock or two o'clock or four o'clock, or whether you want any sessions this afternoon or prefer to do the rest of your business tonight, is a matter for the House to decide.

Dr. McClintic (Wayne): Several of the members came to this convention to attend the business sessions, and business requires that we return this evening. For that reason and as we came especially to transact the business of this House, we would like to do that instead of playing golf. That can be done on Friday and Saturday and I hope that we will attend to business today. I prefer that we reconvene at two o'clock this afternoon.

Secretary Warnshuis: It is now twenty-five minutes after twelve.

Dr. McClintic: It is the pleasure of quite a number here that we meet at one-thirty as scheduled. That is certainly agreeable to me.

Speaker West: If there is no objection, the House will stand in recess until one-thirty this afternoon.

...The meeting recessed at twelve-thirty o'clock...

THURSDAY AFTERNOON SESSION

June 16, 1927

The second session of the House of Delegates was called to order in the theater of the Grand Hotel, Mackinac Island, Mich., at two o'clock by Speaker West.

Speaker West: The House will please come to order.

We will take up where we left off this morning with new business and resolutions, No. 10 of the morning meeting.

Dr. McClintic (Wayne): I would like to bring up for the consideration of the House of Delegates that the House of Delegates of the American Medical Association a year ago requested that the Council at that time define the term "contract practice" and report back to the House of Delegates of the American Medical Association this year, and they reported the definition as follows:

"By the term contract practice applied to medicine is meant the carrying out of an agreement between a physician or group of physicians as principals or agents and a corporation, organization or individual to furnish partial or full medical service to a group, or class of individuals for a definite sum or for a fixed rate per capita."

I would like to move that this definition as formulated by the House of Delegates of the American Medical Association be made applicable to members of the Michigan State Medical Society and that it be incorporated as one of our principles of medical ethics of the State of Michigan.

...The motion was supported by Dr. Wendt of Wayne and carried...

Speaker West: Is there any other business to come up? Are there any resolutions?

Dr. McClintic: I would like to ask, if it be proper at this time, to move that we consider the matter of legislation as presented by our President this morning.

Secretary Warnshuis: That will come in under the Reference Committee's report.

Speaker West: Is the Reference Committee ready to make its report?

Dr. Wilson: We are not ready to make a complete report at this time.

Secretary Warnshuis: Report what is done.

Dr. Wilson: The instructions of the Chairman were that we do not do that. I have acted as Secretary and we thought it wise to present the report as a whole but not in part.

Secretary Warnshuis: If the Reference Committee is not ready to report and the members have no new business to introduce, there is nothing for the House to do.

Dr. Biddle: I move that we adjourn till tonight at seven-thirty.

Dr. McClintic: I would like to have the matter of legislation brought up because I am particularly interested in that and I think several others are, and as I said this morning, we will have to leave this evening and will not be here for the seven-thirty meeting, and the proposition I have to present can be taken care of without the report.

Speaker West: Are there any objections? If not, go ahead.

Dr. McClintic: For several years I have been interested in this question of medical legislation, and I think the question of the quack is as old as illness itself. I think a quack probably treated the first man who was sick and nobody doubts that there will be quacks treating the sick when all of us are dead.

A few years ago—I don't say it was a pleasure or an honor either—I happened to be a member of the West Virginia Legislature. Of course, you think of West Virginia merely as a land of hills and coal but in that session I was placed on the Committee on Sanitation and Hygiene which also handled medical legislation. At that time we had a law very much like the law of other states which permitted practically anybody to come into the state and get a license to practice medicine. Our State Medical Board, the Board of Examiners, called the Public Health Council there, told me time and again that no man got a license to practice medicine in that state unless he was a graduate of a Class A medical school.

That summer after I was nominated for office, I took the West Virginia State Medical Board examination, and with me there were seventeen negroes from the Mahara Medical College, and at that time Mahara Medical College was a Class C school. With me also (I come from the University of Cincinnati) there were eight men from the Eclectic Medical College of Cincinnati, which at that time was a Class B school, and they took the State Board examination. In other words, it was left to the discretion of the State Medical Board of Examiners as to whom they should admit and they maintained to the profession of the state that only graduates of Class A medical schools were admitted.

That opened my eyes and so the next spring when I went to the Legislature one of the first things I endeavored to attack and correct was that condition and we merely went at it this way, and I think it is the only solution of the problem—to attack it from an entirely different angle and it is simply this: We took the State Medical Practice Act of West Virginia and defined it as it is defined in practically all the courts and codes of the country as the practice of medicine consisting of the practice of the art and science of treating disease. That included every one. Then we laid down this principle: That no person should be admitted to an examination in the State of West Virginia unless that person had first completed four years in a high school and two years of premedical education in a school with standards equivalent to the standards had at the University of West Virginia; in other words, we took the State of West Virginia as the standard.

With those requirements we said nothing about the rest of it, and the following year not an eclectic—and I hurt someone's feeling by saying no homeopaths, no osteopaths and no chiropractors were able to get a license to practice medicine.

I think the solution of it is this: Just as soon

as you require a man to go through high school and take two years in a recognized college with standards equivalent to the University of Michigan, when a man has gone that far he has spent so much time and so much money and he has learned so much that he would never be willing to go ahead and make a quack of himself. When a man gets that far, then he wants to be a doctor. It is because of the lack of this that he thinks the other things are all right. But as soon as we put down these medical requirements we are going to find it is going to solve the whole problem.

The question of basic sciences, I think, might be added, but, on the other hand, the question again comes up as to the examination of these people and you would continuously have trouble trying to exact certain requirements of the basic sciences. I think until we attack on that basis, we can get nowhere. The advantage of that is that then the chiropractor can't say, "You are trying to put me out of business," because you are exacting for yourself and for your own profession the same thing that you are exacting for the chiropractor and the osteopath and the Christian Scientist and others. The thing you are always confronted with is that you are jealous, you have a corporation and it is a closed corporation and that you want to put the other fellow out of business because he is hurting your business. But just as soon as we make the same requirements asking all to meet the same fundamental requirements, then no one can say we are impartial and that we are wanting to put somebody else out of business. In other words, it is fairness.

There is another angle to this and I think it is this: Anyone who has been in the legislature knows that there never was one legislature in which log rolling didn't exist. When I went in to get my bill through—I happen to be a Democrat and there were eighteen Democrats in the legislature and eighty-five Republicans. What chance had a poor Democrat with that many Republicans? But I found that on this committee the Chairman was a dentist. I was the only Democrat on the Committee; all the rest were Republicans. What this dentist, who was the Chairman, wanted was to create or permit the licensing of dental nurses in the state of West Virginia—he called them technicians. He wanted dental technicians licensed in West Virginia. In order to get my support for the dental technicians, which I didn't think would hurt me or anybody else, he was perfectly willing to help me get my bill through. In other words, the point is this: Another thing we should do is to have men in the legislature from our profession who understand the problem we are working on. It is the hardest thing in the world to educate or get a layman to understand our problems and difficulties.

For example, I had this experience when we went before the Committee of the Senate. One of the Senators was a graduate of the Eclectic Medical College of Cincinnati, which was a Class B school. I explained to them very frankly that this law would put out of existence all Class B schools as far as West Virginia was concerned but this fellow didn't know the difference between a Class B and a Class A school and he said, "I am for the bill; that won't affect my school at all." So that fellow took the bill and got it through the Senate and put the graduates of his own school out of business because he wasn't familiar enough with the requirements and classifications of medical colleges to know the difference.

I think we should try to get reputable physicians in the legislature and get men on the committees who are familiar with medical education and who know what they are doing. I think as soon as we attack the problem from that angle we are going to get somewhere.

The other point is this: After having established this as a principle and having gotten it passed once, you are going to find that you have to go back to each legislature and see that that law is not repealed, because just two years later in West Virginia another bunch got in—there were no physicians in the House and only one or two in the Senate who didn't know any more about it than the man to whom I referred—and repealed the law. And today the condition is as bad as it was before. For two years there was not a soul who took the examination in the state of West Virginia who had not taken two years in a university and received a degree from a Class A medical school.

That would be my recommendation with reference to our policy to be pursued in the legislative program of this Society. I would like to offer that for the consideration of the House of Delegates at this time as a policy to be adopted by our legislative committee. (Applause).

Speaker West: Is there any further discussion?

Dr. Hirschman: I move that the stenographic report of what Dr. McClintic has just told us be referred to the Reference Committee for consideration on this subject.

... The motion was supported by Dr. Randall of Flint...

Dr. Wilson (Wayne): If we adopt the suggestion of the President that a committee be appointed to study this matter, that would be the proper place to refer that to, rather than to the Reference Committee. That is, of course, presupposing that some action will be taken along that line.

Speaker West: Dr. Hirschman, do you favor that?

Dr. Hirschman: Yes.

... The question was put to a vote and carried...

Speaker West: Are there any other matters to come up?

Secretary Warnshuis: What time do you want to adjourn to?

Dr. Biddle: I make a motion that we adjourn to meet at eight o'clock this evening.

... The motion was supported and carried and the meeting adjourned at two-fifteen o'clock...

THURSDAY EVENING SESSION

June 16, 1927

The third session of the House of Delegates was called to order in the theater of the Grand Hotel, Mackinac Island, Michigan, at eight twenty-five o'clock by Speaker West.

Speaker West: The House will be in order.

We will have the roll call.

Secretary Warnshuis: I hold in my

hand the signed registration to roll call of fifty-two of the accredited delegates, and I move you, sir, that these constitute the roll of the House for this session this evening.

... The motion was supported and carried...

Speaker West: We will now have the report of the Reference Committee.

... The prepared report of the Reference Committee was presented. It accompanies this report and is marked.

REPORT OF THE BUSINESS COMMITTEE OF THE HOUSE OF DELEGATES OF THE MICHIGAN STATE MEDICAL SOCIETY

Mackinac Island, June 16, 1927.

The splendid address of the Speaker of the House, Dr. W. K. West of Painesdale, is most praiseworthy and his recommendations to the younger generation of physicians are to be commended.

The work of the Legislative Committee in the last session of the Legislature is worthy of the highest praise.

Michigan has always been in the forefront in elevating standards of medical practice and should continue with New York, Minnesota, Wisconsin and other states in the passages of a more adequate medical act.

The suggestion that a commission of five to present a properly worked out plan for this purpose is approved.

In the formulation of new legislation regulating the practice of medicine, it should be kept in mind that one of the weaknesses of the present act was in its failure to provide adequate means for compelling the fulfillment of the law.

The continuance of our most successful plan of operating post graduate clinics is recommended. Recognizing the feeling of the profession at large and the great desire for such service, your Committee looks forward with great anticipation to the further development of post graduate work at the State University.

The healthy state of our society in the matter of membership and finance is noteworthy.

The Committee is in agreement with the Council as to the desirability of having a full time Executive Secretary.

We recommend the election to honorary membership of Doctors Victor C. Vaughan of Washington, D. C., W. T. Dodge, Big Rapids, A. H. Rockwell, Kalamazoo, and A. T. McLaren of Port Huron.

The report of the Public Health Committee in its various recommendations is approved.

The Committee on Medical Education reports much progress in the development of post-graduate medical education and we recommend hearty assistance to this program.

The conclusions of the Committee on Nursing Education are endorsed.

Attention of the House of Delegates is called to certain requests as stated in the report of the Committee on Medical History. Any assistance in this regard will be of great help to the Chairman, Dr. C. B. Burr, whose intense interest in this phase of medicine has led him to give unstintedly of his time to this work. For the present certain articles of general interest should be from time to time published in the State Medical Journal and when sufficient material has been gathered it may be published in book form. The favorable consideration of the Council is suggested in response to the request for the appropriation of sufficient funds to carry on this work.

No report has been received from the Committee on Civic and Industrial Relations. As this Committee covers a most important field, we suggest it be requested to forward its report at the earliest possible date.

Respectfully submitted,

Carl F. Moll, Chairman.
Walle T. Wilson, Sec'y.
G. H. Southwick.
J. D. Bruce.
B. Bourland.

Speaker West: What is your wish with regard to this report?

Dr. DuBois (Kent): I move the acceptance of the report.

... The motion was supported by Dr. Garber of Wayne and carried. . . .

Secretary Warnshuis: It will then be necessary for somebody to move that Doctors Victor C. Vaughan of Washington, D. C., W. T. Dodge of Big Rapids, A. H. Rockwell of Kalamazoo and A. T. McLaren of Port Huron be elected to honorary membership.

Dr. Biddle (Wayne): I move that they be elected.

... The motion was supported and carried. . . .

Speaker West: These men are elected as honorary members.

The next item of business is the report of the Nominating Committee, Dr. Dibble, Chairman.

Dr. Dibble: Mr. Speaker and House of Dele-

gates: Your Nominating Committee respectfully submit the following report:

First Vice President, C. D. Munroe, Jackson.

Second Vice President, C. F. DuBois, Alma.

Third Vice President, D. A. Cameron, Alpena.

Fourth Vice President, A. V. Van Horne, Otsego.

Delegate to the American Medical Association, Dr. C. F. Moll; Alternate, Dr. A. P. Biddle.

Speaker West: What will you do with these nominations?

Dr. Hirschman (Wayne): I move that the Secretary be instructed to cast the unanimous ballot of the House for the gentlemen whose names have been mentioned for First, Second, Third and Fourth Vice Presidents, and for Delegate and Alternate to the American Medical Association.

... The motion was supported and carried. . . .

Secretary Warnshuis: Your Secretary does so cast.

Speaker West: The election of these men is declared as announced by the Secretary.

Secretary Warnshuis: The delegates from the Seventh Councillor District have nominated Dr. Heavenrich of Port Huron as Councillor of that District to succeed Dr. MacKenzie.

Dr. Wilson (Wayne): I move that Dr. Heavenrich be elected and the Secretary be instructed to cast a ballot for this office.

... The motion was supported by Dr. Moll of Genesee and carried. . . .

Secretary Warnshuis: Your Secretary does so cast.

Speaker West: He is declared elected.

Secretary Warnshuis: The delegates from the Eighth Councillor District nominate Dr. Julius Powers to succeed himself as Councillor of that District.

Dr. DuBois: I move that the Secretary be instructed to cast the ballot of the Society for Dr. Powers for Councillor of the Eighth Councillor District to succeed himself.

... The motion was supported and carried. . . .

Secretary Warnshuis: Your Secretary does so cast.

Speaker West: He is declared elected.

Secretary Warnshuis: The delegates of the Ninth Councillor District submit the name of O. L. Ricker of Cadillac to succeed himself as Councillor for that District.

Dr. C. M. Williams (Alpena): I move that the Secretary be instructed to cast the ballot of the delegates for Dr. Ricker as Councillor for the Ninth District to succeed himself.

... The motion was supported by Dr. Brooks of Wayne and carried. . . .

Secretary Warnshuis: Mr. Speaker, Secretary does so cast.

Speaker West: Dr. Ricker is declared elected.

Secretary Warnshuis: I have not been able to get the delegates of the Tenth District to fill the office of Dr. Baird, who has resigned, and I have no nominations for that District.

Dr. V. H. Dumond (Bay County): I wish to place in nomination the name of Dr. Paul R. Urmston to fill the unexpired term of Dr. Baird.

... The nomination was supported...

Speaker West: It has been moved and supported that Dr. Paul Urmston of Bay City be nominated for Councillor of the Tenth District. All those in favor will signify by saying, "Aye;" opposed, "No." It is carried.

He is so declared elected.

Secretary Warnshuis: Mr. Speaker, the nominations for Speaker and Vice Speaker of this House are made by nominations of delegates direct from the floor of the House

Dr. Dibble (Wayne): I wish to nominate Dr. Carstens for Speaker.

... The nomination was supported by Dr. Biddle of Wayne...

Speaker West: Are there any other nominations?

Dr. DuBois: I move you that the nominations be closed and that the Secretary be instructed to cast the ballot of the Delegates for Dr. Carstens for Speaker.

... The motion was supported by Dr. Moll and carried...

Secretary Warnshuis: Your Secretary does so cast.

Speaker West: Dr. Carstens is declared elected.

Now we will have nominations for the Vice Speaker.

Dr. McIntyre (Ingham): I wish to place in nomination the name of Dr. Henry J. Pyle of Kent County.

... The nomination was supported by Dr. Moll...

Members: I move that the nominations be closed.

... The motion was supported and carried...

Secretary Warnshuis: Your Secretary does so cast.

Speaker West: Dr. Pyle is declared elected.

Is there any unfinished business?

Dr. DuBois (Kent): An unfortunate precedent is being established in this House and it happens

that there is nothing in the Constitution to prevent it. It happened today and I believe it happened at one time a year ago. Under the old Constitution and By-Laws members of the Michigan State Society were not eligible to membership in this House if they held an office or were a member of the Council. It is very unfortunate that we happen to have one of our honored members as a member of the Council, a member of this House of Delegates and a member of the two most important committees of this House of Delegates. In other words, he is representing to us what we should do in legislation, and at the same time he votes for that legislation and then, as a member of the executive group, he carries it out. It happens that this man is all right. The matter has gone through well, but it is a bad precedent to establish.

I move you, although this must lay over until next year, an amendment to our By-Laws that the members of the Council, the President, the First Vice President, the Treasurer and the Secretary of this Society are not eligible to membership in the House of Delegates.

Speaker West: This will have to lay over on the table until next year under the rules of the House.

Dr. Hirschman (Wayne): I would like to ask the unanimous consent of the House to listen to a report from a man who does not have the privilege of the floor but he has something of extreme interest to the profession to give at this time. If there is no objection, I would like to have the Speaker extend the privilege of the floor to the State Health Commissioner, Dr. Guy L. Keifer. (Applause).

COMMISSIONER OF HEALTH'S STATEMENT

Dr. G. L. Kiefer: I desire to make a short announcement. I want to make an announcement on behalf of the Department of Health of Michigan and on behalf of the Advisory Council of that Board and I want to state to you delegates to the State Medical Society the policy of the Michigan Department of Health.

We propose to push the progress of our public health measures as far as possible, but to stay within the realm of public health and not trespass in the realm of state medicine. We have very definite ideas about just where that line should be drawn and if we conduct work which may seem to some members as being in the field of state medicine, it is for the purpose of demonstration only and it is to be discontinued as quickly as such work can be turned over to the profession.

In considering this sort of policy we have to take into consideration not only clinical medicine, but laboratory medicine. The State Department of Health Laboratories do a great deal of work for the profession. We believe that much of that is necessary and in line with the direct prevention of communicable diseases, but the Department has gone, we believe, beyond

that field at least for the present, and one of the things that has been conducted is the work of blood chemistry, of which only about 200 of the 7,000 physicians in the state have taken advantage. We have believed and do believe that that is beyond our field at present and have discontinued it for the reason that we believe that should be done by private laboratories or, as the Speaker said in his address today, by the men themselves. We can see no reason for continuing this any more than we should go on in our laboratory work with X-ray laboratories, for example, and do all of that work.

We want it understood that our policy is to take into our confidence the organized profession, to have them work with us as much as they will, and I am very glad to say that if at any time any of these things we are pursuing, the policies we have adopted, do not meet with your approval, we will be very glad to have your suggestions at any time. (Applause).

Speaker West: Is there any other unfinished business? If not, a motion to adjourn is in order.

... It was moved by several that the House adjourn sine die, and the meeting adjourned at 8:45 o'clock...

DELEGATES AT ANNUAL MEETING

Alpena County—	
C. M. Williams.	
Berrien County—	
W. C. Ellet.	
Calhoun County—	
W. L. Godfrey.	Harry B. Knapp.
Clinton County—	
R. D. Boss.	
Delta County—	
J. W. Towey.	
Eaton County—	
Stanley Stealy.	
Genesee County—	
H. E. Randall.	C. F. Moll.
Gratiot-Isabella-Clare County—	
C. F. Du Bois.	
Grand Traverse-Leelanau County—	
George F. Inch.	
Hillsdale County—	
W. H. Sawyer.	
Ingham County—	
Milton Shaw.	J. Earl McIntyre.
Jackson County—	
Harold L. Hurley.	
Kalamazoo County—	
W. E. Shackleton.	
Kent County—	
A. V. Wenger.	G. H. Southwick.
Henry J. Pyle.	W. J. Du Bois.
Lapeer County—	
W. J. Kay.	C. D. Chapin.
Luce County—	
R. E. L. Gibson.	

Marquette-Alger County—	
H. H. Loveland.	
Mecosta County—	
Donald MacIntyre.	
Menominee County—	
Edward Sawbridge.	
Oakland County—	
R. H. Baker.	
Ontonagon County—	
E. J. Evans.	
Saginaw County—	
A. R. McKinney.	
Schoolcraft County—	
A. R. Tucker.	
St. Clair County—	
D. W. Patterson.	
Tri County—	
W. Joe Smith.	
Tuscola County—	
John G. Maurer.	
Washtenaw County—	
James D. Bruce.	John Wessinger.
Wayne County—	
C. D. Brooks.	Geo. J. Baker.
Andrew P. Biddle.	Geo. Van Amber Brown.
A. E. Catherwood.	John L. Chester.
H. F. Dibble.	H. B. Garner.
L. T. Henderson.	L. J. Hirschman.
Chas. S. Kennedy.	J. C. Kenning.
W. W. MacGregor.	Geo. E. McKean.
C. F. McClintic.	F. M. Meader.
A. E. Naylor.	E. B. Richey.
S. E. Sanderson.	Claire L. Strath.
R. V. Walker.	L. F. C. Wendt.
Walter J. Wilson.	

MEMBERS AT ANNUAL MEETING

Alpena County

O'Donnell, Francis J., Alpena.
Williams, C. M., Alpena.

Bay-Arenac-Iosco Counties

Abbott, F. E., Sterling.
Dumond, V. H., Bay City.
Fisher, R. L., Handish.
Foster, L. Fernald, Bay City.
Jones, J. M., Bay City.
Kessler, Mana, Bay City.
Smith, David T., Omer City.
Urmston, Paul R., Bay City.

Berrien County

Ellet, W. C., Benton Harbor.
McDermott, John J., St. Joseph.

Calhoun County

Colver, Benton N., Battle Creek.
Godfrey, W. L., Battle Creek.
Haughey, W. H., Battle Creek.
Knapp, Harry B., Battle Creek.
Russell, Edwin P., Battle Creek.
Serio, Philip P., Albion.
Stone, R. C., Battle Creek.
VanCamp, E., Battle Creek.
Walters, F. R., Battle Creek.

Cass County

Green, George W., Dowagiac.
McCutcheon, W. C., Cassopolis.

Cheboygan County

Chapman, Willis Earle, Cheboygan.
Mayne, Frederick C., Cheboygan.
McKillop, G. L., Wolverine.
McKillop, A. J., Wolverine.

Chippewa County

Bandy, F. C., Sault Ste Marie.
Ennis, C. J., Sault Ste Marie.
Moloney, F. J., Sault Ste Marie.
Mooney, John A., Mackinac Island.
Whitmarsh, T. R., Sault Ste Marie.

Clinton County

Boss, R. D., Wacousto.
Hart, Arthur O., St. Johns.

Delta County

Bartley, G. C., Escanaba.
Boyce, W. B., Escanaba.
Defnet, Harry J., Escanaba.
Kitchen, A. S., Escanaba.
Moll, G. W., Escanaba.
Towey, U. W., Powers.
Walch, John J., Escanaba.

Eaton County

Bradley, J. B., Eaton Rapids.
Hargrave, D. V., Eaton Rapids.
Prall, Harry Jay., Eaton Rapids.
Stealy, Stanley A., Charlotte.
Stimson, Charles A., Eaton Rapids.

Dickinson County

Alexander, W. H., Iron Mountain.

Antrim-Charlevoix-Emmet Counties

Duffie, Don H., Central Lake.
Grittet, F. F., Alanson.
Van Leuven, B. H., Petoskey.

Genesee County

Chambers, M. S., Flint.
Cook, Henry, Flint.
Covert, F. L., Gaines.
Blakely, A. C., Flint.
Brasie, D. R., Flint.
Burr, C. B., Flint.
Malfroid, B. W., Flint.
Manwaring, J. G. R., Flint.
Moll, Carl F., Flint.
O'Neil, C. H., Flint.
Orr, J. W., Flint.
Parker, James W., Grand Blanc.
Randall, H. E., Flint.
Reid, Wells C., Goodrich.
Rowley, James A., Flint.
Scott, Robert D., Flint.

Gratiot-Isabella-Clare Counties

DuBois, Charles F., Alma.
Hall, B. C., Pompeii.
Kilborn, H. F., Ithaca.

Grand Traverse-Leelanau Counties

Inch, George F., Traverse City.
Minor, Ernest B., Traverse City.
Swartz, Fred G., Traverse City.

Hillsdale County

Green, Burt F., Hillsdale.
Sawyer, Walter H., Hillsdale.

Houghton County

Bourland, Philip D., Calumet.
Martin, Nilsson, Houghton.
West, W. K., Painesdale.

Huron County

Monroe, D. J., Elkton.

Ingham County

Carr, Earl I., Lansing.
DeVries, C. F., Lansing.
Huddleson, I. Forest, East Lansing.
McIntyre, J. Earl, Lansing.
Milton Shaw, Lansing.
Strauss, P. C., Lansing.
Toan, J. W., Portland.

Jackson County

Hurley, Harold, Jackson.
Leahy, E. O., Jackson.
Robinson, D. E., Jackson.

Kalamazoo County

Barrett, F. Elizabeth, Kalamazoo.
Boys, C. E., Kalamazoo.
Caldwell, Geo. H., Kalamazoo.
Jackson, J. B., Kalamazoo.
Shackleton, W. E., Kalamazoo.

Kent County

Bettison, William L., Grand Rapids.
Brook, J. D., Grandville.
Brotherhood, James S., Grand Rapids.

Clay, H. T., Grand Rapids.
Corbus, Burton R., Grand Rapids.
Davidson, Sidney G., Grand Rapids.
Dodge, W. T., Grand Rapids.
DuBois, W. J., Grand Rapids.
Foshee, John C., Grand Rapids.
Grant, P. T., Grand Rapids.
Hagerman, D. B., Grand Rapids.
Hutchinson, R. J., Grand Rapids.
Lanting, D. B., Byron Center.
Moll, Arthur M., Grand Rapids.
Moore, Vernor M., Grand Rapids.
Morrill, Donald M., Grand Rapids.
Pyle, Henry J., Grand Rapids.
Smith, R. Earle, Grand Rapids.
Smith, Richard R., Grand Rapids.
Snapp, Carl F., Grand Rapids.
Southwick, H. G., Grand Rapids.
Vis, Wm. R., Grand Rapids.
Wells, Merrill, Grand Rapids.
Wenger, A. V., Grand Rapids.
Warnshuis, F. C., Grand Rapids.

Lapeer County

Chapin, C. D., Columbiaville.
Kay, W. J., Lapeer.

Lenawee County

Marsh, R. G. B., Tecumseh.

Luce County

Campbell, E. H., Newberry.
Gibson, R. E. L., Newberry.
Perry, Henry E., Newberry.
Redwine, J. T., Newberry.

Macomb County

Curlett, J. E., Roseville.

Marquette-Alger County

Burke, Richard A., Palmer.
Corcoran, William A., Ishpeming.
Loveland, H. H., Republic.

Mecosta County

Campbell, James B., Big Rapids.
MacIntyre, Donald, Big Rapids.

Menominee County

Landsborough, David R., Daggett.
Parish, J. K., Hermansville.
Sawbridge, Edward, Stephenson.

Monroe County

Rubley, Samuel J., Monroe.

Muskegon County

Laurin, V. S., Muskegon.
LeFevre, George L., Muskegon.
Norford, F. N., Muskegon.

Oakland County

Baker, Robert H., Pontiac.
Farnham, L. A., Pontiac.
Mooney, C. A., Ferndale.
Reid, Fred F., Clawson.
Scott, F. A., Rochester.
Stewart, Peter, Royal Oak.
Sutherland, Clark J., Clarkston.
Wiers, W. W., Royal Oak.

Oceana County

Griffin, W. L., Shelby.

Ontonagon County

Evans, E. J., Ontonagon.

Presque Isle County

Carpenter, Clarence A., Onaway.

Saginaw County

Cady, F. J., Saginaw.
Ernst, A. R., Saginaw.
Keller, S. S., Saginaw.
Kempton, Rockwell M., Saginaw.
Longstreet, Martha, Saginaw.
McKinney, Alexander R., Saginaw.
O'Reilly, W. J., Saginaw.
Powers, Julius H., Saginaw.
Sample, C. H., Saginaw.
Sample, John T., Saginaw.
Watson, R. S., Saginaw.

Sanilac County

Mitchell, M., Deckerville.
Tweedie, Martha, Sandusky.

Schoolcraft County

Tucker, A. R., Manistique.

Shiawassee County

Haviland, James J., Owosso.
Hume, Arthur M., Owosso.
McCormick, C., Owosso.

St. Clair County

McCue, Christopher, Goodells.
Patterson, D. W., Port Huron.

Tri County

Miller, G. D., Cadillac.
Smith, W. Joe, Cadillac.
Ricker, Otto L., Cadillac.

Tuscola County

Maurer, J. G., Reese.

Washtenaw County

Alexander, John, Ann Arbor.
Badgley, Carl E., Ann Arbor.
Bruce, James D., Ann Arbor.
Cummings, H. H., Ann Arbor.
Coller, Frederick A., Ann Arbor.
Huston, John, Ann Arbor.
McCaffrey, Lawrence E., Ann Arbor.
Myers, Dean W., Ann Arbor.
Pohle, Ernst A., Ann Arbor.
Wessinger, John, Ann Arbor.
Youmans, John B., Ann Arbor.

Wayne County

Baker, George J., Detroit.
Butler, Volney N., Detroit.
Bauer, Ernest W., Detroit.
Baumgarten, E. C., Detroit.
Biddle, Andrew Porter, Detroit.
Brooks, Clark D., Detroit.
Brown, G. Van Amber, Detroit.
Buesser, Frederick G., Detroit.
Campbell, Duncan A., Detroit.
Carstens, Henry R., Detroit.
Catherwood, A. E., Detroit.
Charters, J. H., Detroit.
Chester, John L., Detroit.
Cole, Fred H., Detroit.
Crawford, Albert S., Detroit.
Darling, Milton A., Detroit.
Davis, C. R., Detroit.
Dempster, James H., Detroit.
Dibble, Harry F., Detroit.
Dodds, John C., Detroit.
Douglas, Bruce H., Northville.
Downer, Ira, Detroit.
Flehme, E. F., Detroit.
Fowler, Wm., Detroit.
Friedlaender, Bernhard, Detroit.
Garner, H. B., Detroit.
Gordon, J. E., Detroit.
Hackett, Wm. A., Detroit.
Hasley, Clyde K., Detroit.
Hayes, J. D., Detroit.
Heath, Parker, Detroit.
Henderson, Leslie T., Detroit.
Hirschman, Louis J., Detroit.
Honhart, Fred N., Detroit.
Hughes, R., Detroit.
Jennings, Alpheus F., Detroit.
Joinville, Euclid Victor, Detroit.
Karr, Herbert S., Detroit.
Kennedy, Charles S., Detroit.
Kennedy, Robert B., Detroit.
Kenning, J. C., Detroit.
Kiefer, Guy L., Detroit.
King, Walter E., Detroit.
LaFerte, A. D., Detroit.
LaMarche, Norman, Detroit.
Levy, David J., Detroit.
Lemmon, Charles E., Detroit.
Lynch, Russell E., Centerville.
McClintic, C. F., Detroit.
McClure, Roy D., Detroit.
McDonald, Allan, Detroit.
McKean, Geo. E., Detroit.
MacGregor, W. W., Detroit.
Marinus, Carleton J., Detroit.
Martin, E. G., Detroit.
Meador, Fred M., Detroit.
Menagh, Frank R., Detroit.
Moehlig, Robert C., Detroit.

Naylor, Arch E., Detroit.
Peirce, Howard W., Detroit.
Penberthy, Grover C., Detroit.
Rexford, Walton K., Detroit.
Richey, E. B., Detroit.
Roehm, H. R., Detroit.
Rupp, Jacob Roth, Detroit.
Sanderson, S. E., Detroit.
Straith, C., Detroit.
Vardon, Colin C., Detroit.
Walker, Roher V., Detroit.
Wendt, Leonard F. C., Detroit.
Whitney, Elmer L., Detroit.
Wilson, Walter J., Detroit.
Wood, G. H., Detroit.
Total—256.

GUESTS

Dean Lewis, Baltimore, Md.,
Wm. Braun, Chicago, Ill.
Morris Fishbein, Chicago, Ill.
Ralph Pemberton, Philadelphia.
E. D. Plass, Iowa City, Iowa.
Fred J. Pratt, Minneapolis, Minn.
Total—6.

LADIES ATTENDING THE ANNUAL MEETING

Alexander, Mrs. Wm. H., Iron Mountain.
Baker, Mrs. Stella M., Detroit.
Bandy, Mrs. Helen L., Sault Ste Marie.
Cady, Mrs. May S., Saginaw.
Caldwell, Mrs. George H., Kalamazoo.
Cook, Mrs. Henry, Flint.
Corbus, Mrs. Burton R., Grand Rapids.
Crane, Mrs. Caroline Bartlett, Kalamazoo.
Curllett, Mrs. J. E., Roseville.
Davidson, Mrs. Sidney G., Grand Rapids.
Dempster, Mrs. J. H., Detroit.
Dodge, Mrs. W. T., Grand Rapids.
Dumond, Mrs. J. H., Bay City.
Ellett, Mrs. W., Benton Harbor.
Fisher, Mrs. R. L., Standish.
Foshee, Mrs. J. C., Grand Rapids.
Foster, Mrs. L. F., Bay City.
Foux, Mrs. Kessler, Bay City.
Fowler, Mrs. Evelyn B., Detroit.
Fowler, Miss Dorothy Jean, Detroit.
Grant, Mrs. P. T., Grand Rapids.
Green, Mrs. B. F., Hillsdale.
Green, Mrs. Geo. W., Dowagiac.
Hackett, Mrs. W. A., Detroit.
Hart, Mrs. Arthur O., St. Johns.
Harvey, Mrs. Edward H., Paw Paw.
Heiden, Miss Lucille, Detroit.
Herdman, Mrs. F. A., Ithaca.
Honhart, Mrs. F. L., Detroit.
Hughes, Mrs. R. W., Detroit.
Hurley, Mrs. H. L., Jackson.
Inch, Florence E., Traverse City.
Joinville, Mrs. Evelyn, Detroit.
Keller, Mrs. Blanche, Saginaw.
Kilborn, Mrs. H. F., Ithaca.
Knapp, Mrs. Nettie Evans, Battle Creek.
Lanting, Mrs. Celia, Byron Center.
Laurin, Mrs. V. S., Muskegon.
Leighton, Mrs. Florence, Sault Ste Marie.
Malfroid, Mrs. B. W., Flint.
Manwaring, Mrs. J. G. R., Flint.
Marinus, Mrs. Mable C., Detroit.
McDermott, Mrs. J. J., St. Joseph.
McDonald, Mrs. Allan, Detroit.
McKinney, Mrs. A. R., Saginaw.
Morford, Mrs. F. N., Muskegon.
Myers, Mrs. Dean, Ann Arbor.
O'Donnell, Mrs. F. J., Alpena.
O'Neil, Mrs. C. H., Flint.
O'Reilly, Mrs. W. J., Saginaw.
Orr, Mrs. J. W., Flint.
Ricker, Mrs. Otto L., Cadillac.
Rupp, Mrs. J. R., Detroit.
Rowley, Mrs. James A., Flint.
Scott, Mrs. R. D., Flint.
Serio, Mrs. Philip P., Albion.
Smith, Mrs. D. T., Omer.
Smith, Mrs. R. Earle, Grand Rapids.
Stewart, Mrs. Peter, Royal Oak.
Tweedie, Mrs. Martin, Sandusky.
Urmston, Mrs. Paul R., Bay City.
Van Camp, Mrs. E., Battle Creek.
Vis, Mrs. Wm. R., Grand Rapids.
Watson, Mrs. R. S., Saginaw.
Wendt, Mrs. L. F. C., Detroit.
Whitney, Mrs. E. L., Detroit.
Wiers, Mrs. W. W., Royal Oak.
Wood, Mrs. Lilla B., Detroit.
Shanley, Mrs. Frank, South Bend, Ind.

Total—69.

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

PRESIDENT HERBERT ELMER RANDALL

Herbert Elmer Randall, M. D., of Flint, was elected unanimously, and without opposition, to the office of President of our State Society.

The past month has been characterized by the conferring of honorary degrees by our educational institutions and medals of honor, valor and distinguished service by our government. The recipients are all cited in a formal manner. We emulate that custom and cite President Randall in the following manner:

For service to his community, County Society and State Society that has ever been subscribed with full loyalty and an ever evidenced desire to enhance the best interests of all. For the unselfish contribu-

tion of time and personal resources in order that the honor of the profession might be maintained and enhanced. For service to the nation in time of war. For ever assuming the attitude of fairness and justice, in order that the individual rights of all might be preserved. For exemplifying the true man among men, the friend of all and inspiring the ideals of unselfish service. For reflecting in his labors and professional work the noble characteristics of all those who have honored the profession of medicine.

We feel that the statements in this inadequate citation reflect the reason why we have honored Dr. Randall and also honored ourselves. We assure him of loyal support during his tenure of office and are certain that the year confronting us will record commendable achievements for our Society. As a matter of record we append a brief biography of Dr. Randall, as imparted by himself:

Born at Birmingham the same year (1876) as Irving S. Cobb, but not so funny. Lived for first seven months on milk and water, and caught every kid disease that came along. Attended public school at Birmingham and Detroit. The High school in Detroit was the old Capitol building that burned and then attended High school in old Biddle house on Jefferson avenue.

Worked, while Dr. Hutchinson clerked in Hunt and Eatons, the old Methodist Book concern. Randall packed what Hutchinson sold. Entered Detroit College of Medicine in fall of 1894. During college days was assistant in office of Doctors H. O. and Frank Walker on Adams avenue, just back of Central Methodist church.

Dr. Randall was house surgeon of St. Mary's Hospital, after graduation, in 1897 and 1898, and commenced practice at Dryden, Michigan, a town of 300 people. He was examined and appointed contract surgeon in Spanish American War, but appointment was not accepted, when he moved to Lapeer. A partnership at Lapeer with Dr. Wm. J. Kay lasted eight years, when he moved to Flint to limit his work entirely to surgery.



HERBERT ELMER RANDALL

President—1927-1928.

Was Major of Medical Corp in Detroit College of Medicine Hospital Unit (Base Hospital No. 36) at Vittel, France, during World War in charge of Hospital A, known as the Knight Templar Hospital, where 5,000 soldiers passed through, a few passed out, a mortality of less than one-third of 1 per cent. Served in charge of Operating Team No. 26, which saw service at Lunville after gas attack St. Michiel Salient and again during Meuse-Argonne.

Organized the Lapeer County Medical Society and was Secretary for eight years; President of Genesee County Medical Society; State Delegate to American Medical Association, and Councillor Michigan State Medical Society for ten years. Has served as Chairman, Hurley Hospital Staff, and has been surgeon to Michigan Home at Lapeer over twenty-five years.

Married Louise S. Jourdain of Stillwater, Minnesota, in 1898, and have one daughter, Margaret. Member of Elks, Masons, Bay City Consistory, Shrine, Rotary Club and Detroit Athletic Club.

OUR NEW OFFICERS

The following officers were elected at the Annual Meeting of the Michigan State Medical Society:

First Vice-President—C. D. Munro, Jackson.

Second Vice-President—C. F. DuBois, Alma.

Third Vice-President—D. A. Cameron, Alpena.

Fourth Vice-President—A. L. Van Horn, Otsego.

Delegate to American Medical Association—C. F. Moll, Flint.

Alternate Delegate to American Medical Association—A. P. Biddle, Detroit.

Councillor of the Seventh District—T. F. Heavrich, Port Huron.

Councillor of the Eighth District—Julius Powers, Saginaw.

Councillor of the Ninth District—O. L. Ricker, Cadillac.

Councillor of the Tenth District—Paul R. Urmston, Bay City.

Speaker of the House of Delegates—Henry R. Carstens, Detroit.

Vice-Speaker of the House of Delegates—H. J. Pyle, Grand Rapids.

Detroit was selected as the place for the next Annual Meeting.

OUR ANNUAL MEETING

Our Mackinac Island meeting has now become a matter of record and an incident of happy reminiscences for those in attendance. Mackinac Island, with its beautiful surroundings, the Grand Hotel providing every comfort and with a management ever solicitous and attentive to our every want, ideal weather almost of mid-August temperature, splendid ad-

resses and papers, afternoons for golf and pleasure and an evidenced comradery among our members, record the outstanding features. The only regret is that so many of our members forfeited joining those in attendance and can never realize what they missed. Why they did not attend, we do not know—we are of the opinion that they lose sight of the personal benefits that accrue from our meetings and view the absence from business as a great financial loss. We regret also the small attendance from the Upper Peninsula, for whom the location was of easy access. We append some of the comments that were heard:

Biddle, Detroit:

The arrangements for the comfort and entertainment of the guests and the weather were ideal. The constructive suggestions embodied in the address of the President and the Report on Hospitals of Dr. Richard R. Smith are of far-reaching importance to the laity as well as the profession. The historical address of Dr. B. R. Corbus at the rededication of the Beaumont Monument was inspiring and fascinating; the addresses of our invited guests and their lessons to us were deeply appreciated.

But in spite of the excellent character of the papers, the attendance upon the Section Meetings, owing, I believe, to too much time being given over to recreation between the meetings, was at times so small as to discourage the efforts of the officers of the sections. In my opinion the work of the Scientific Sessions should be grouped more closely, given in a shorter time without such attractive intermissions.

Paul R. Urmston, Bay City:

The fact that all the doctors were all grouped together in one hotel and could not get away was a very good feature, and the social end at these meetings is what counts. I think it was a great success. I am not a piano player after midnight.

C. M. Williams, Alpena:

This meeting and the place just suits me, the pleasure, the rest and recreation. The crowd is not here, that is evident, but they are the losers. The thing that appealed to me mostly was the niceness with which the Secretary ran the show.

W. T. Dodge, Big Rapids:

It has been a very good meeting and the arrangements were such that all could get to the meetings if they wanted to and not leave the hotel.

J. Hamilton Charters, Detroit:

Exceptionally good meeting. I think their all being under one roof a very good thing, and then the resort features were another recommendation. The Gynecology section was the best this year we ever had—extraordinarily fine. Dr. Pemberton's talk was fine; Dr. Corbus' paper a wonder; Dr. Jackson had a wonderful paper, and the outstanding feature was Dr. Richard R. Smith's report.

One thing always noticeable about the meetings

is that the fellows are so anxious to get up to a place, then get here and want to get back home the next minute. Regret that meeting had to be changed from Saturday night to Saturday afternoon. They should have stayed over Sunday.

B. F. Green, Hillsdale:

All right for an outing. Have always thought the place to have a real medical meeting was a big town.

Wm. K. West, Painesdale:

A wonderful place for a meeting, the weather was fine and all arrangements O. K. The attendance not as large as it should have been, but this undoubtedly due to the time of the year and the doctors not realizing the advantages of a resort for a meeting.

E. A. Pohle, Ann Arbor:

Would much rather have a meeting at a place like Mackinac Island than a city—combines the pleasures, attractions and scenic beauties of a resort with the meetings of the different Scientific sections. Why go to a city when you can have that every day?

W. J. O'Reilly, Saginaw:

A fine meeting.

Julius Powers, Saginaw:

A wonderful meeting, fine golf, excellent dance music, but I do object to the Secretary stealing dances from my wife.

W. H. Sawyer, Hillsdale:

I enjoyed every minute and found pleasure in visiting with my friends.

Richard R. Smith, Grand Rapids:

One of the finest state meetings I have been to. I have never had such an opportunity to visit and talk with the different members as I have often wanted to as I did at this meeting. I enjoyed the meeting most thoroughly.

J. D. Bruce, Ann Arbor:

Permit me to congratulate you once more upon the manner in which the program at Mackinac was carried through. The location was ideal and, while it probably somewhat reduced the attendance, there was an air of fellowship and good feeling that was very encouraging. I am sorry to have missed the scientific program, but matters over which I did not seem to have control decreed otherwise.

J. C. Kenning, Detroit:

A fine meeting—excellent speakers and a golf course that can be expensive.

La Ferte, Detroit:

A profitable meeting scientifically and in golf. I am highly delighted.

G. Van Amber Brown, Detroit:

Wayne County members will never know what they missed. One of the best meetings we ever had.

The minutes and official reports are partly incorporated in this issue and will be concluded in the August number.

STATE SURVEY OF HOSPITAL CHARITY

As a supplement to the July Journal there will be found the preliminary report of our Society's Special Committee on Hospital Charity. It is a most interest arresting report and furnishes much for thought and study. It was impossible for the committee to complete its labor and in consequence no fixed conclusions or recommendations are tendered at this time.

The report sets forth quite clearly and accurately the findings that were collected from twenty-three representative hospitals and part two of the report deals with the University Hospital. There is imparted a thorough formulation of a broad foundation upon which it is hoped to eventually erect a principle as well as a policy that will dominate the charity work and charity policies of our Michigan hospitals.

The committee has been continued and will proceed with its studies and formulate a further report at our next annual meeting.

We refrain from further comment or analysis at this time. We do congratulate and thank the committee for this most excellent piece of work; they merit every praise. We urge that the hospitals of the state and members of the profession willingly lend their fullest assistance to the committee when its requests for information and statistics are sent out. We are quite sure that the committee will unhesitatingly supply its findings to those hospitals that are seeking to solve their charity problems. We shall refer with pride to this piece of most constructive investigation and commend similar studies in other states.

MEETING OF EXECUTIVE COMMITTEE OF THE COUNCIL

The Executive Committee of the Council met in Grand Rapids on the evening of June 1st at 6 p. m. Present: R. C. Stone, J. D. Bruce, B. R. Corbus, Geo. L. Fe Fevre, J. B. Jackson, R. R. Smith, W. H. Marshall, and F. C. Warnshuis.

1. The Secretary reported on the arrangements that were perfected for the Annual Meeting, which received the approval of the Committee.

2. The Secretary read letters received from Doctors Guy L. Kiefer and Senator Greene. On motion of J. D. Bruce, supported by B. R. Corbus, the Secretary was instructed to convey the thanks of the Society to Doctors Greene and Kiefer, Sena-

tor Engel and Senator Gansser for the services they rendered during the last session of the legislature.

3. The Secretary was authorized to give a nominal honorarium to members on the program of the Upper Peninsula Post Graduate Conference.

4. Doctors Richard R. Smith and W. H. Marshall of the Committee on Survey of Charity Service in Michigan Hospitals presented a voluminous report which was discussed at length by the members of the Executive Committee and details arranged for its presentation at the meeting of the House of Delegates.

The meeting adjourned at 11:30 p. m.

WHY?—A GREEN COVER

The following letter under date of June 6th from our good friend, Dr. W. J. O'Reilly of Saginaw, calls up anew this question of green without reference to the Irish—being Dutch, we favor the orange in color and food—

Dear Doctor Warnshuis:

The Journal is all right from both literary and artistic standpoints, but why did you not adopt the green cover while Dr. Clancy was president?

Is there any valid reason why green was chosen as the Society color during the regime of Dr. Jackson?

Yours,
W. J. O'Reilly.

THE ANSWER

The following is from an English manufacturer of gowns, subsequently confirmed by an American manufacturer.

DEPARTMENTAL COLORS

Arts and Letters.....	White
Theology and Divinity.....	Scarlet
Laws	Purple
Philosophy	Blue
Science	Golden Yellow
Medicine	Green
Pharmacy	Olive
Dentistry	Lilac
Veterinary Science.....	Gray
Fine Arts	Brown
Music	Pink
Library Science.....	Lemon
Pedagogy	Light Blue
Forestry	Russett
Commerce and Accountancy.....	Drab
Engineering	Orange
Physical Education	Sage Green
Humanics	Crimson
Oratory	Silver Gray
Public Health.....	Salmon Pink
Agriculture	Maize
Economics	Copper

These colors please the eye and delight the beholder. They add immensely to the beauty and impressiveness of the ceremonial processions. The arrangements of the colorings excite the interest of the spectators who try to figure out the full

significance of the symbolic display and to determine by colors the colleges participating.

The colors selected for the different degrees are are historic, appropriate and easily remembered. The white for arts and letters comes from white fur of the Oxford and Cambridge B. A. hoods; while the red for divinity follows the traditional color of the church as signifying burning love and zeal for the faith as used by Cardinals for centuries. The purple for laws comes from the royal purple of the king's court; the blue of philosophy is the heavenly color that betokens truth and wisdom. The green of medicine comes from the green stripe of the army surgeon's uniform—originally, perhaps, the color of medical herbs, allied to which is the olive of pharmacy. The golden yellow of science speaks of the wealth of scientific discovery and invention. The pink for music comes from the pink brocade of the Oxford doctor of music. Verbam sat Sapienti.

Now we feel our selection is justified and founded on proper precedent.

Course, we might continue and muse as to the "Lilac of Dentistry" and the "Lemon of Library Science", inserting a "wise crack" on all these varied lines. We leave that to our good friend, with Dooley training of Detroit. For the present we are sticking to green. Now, come on with your comments.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1926

With comments that have appeared in The Journal. Cloth. Price, \$1.00. Seventy-three pages. American Medical Association, Chicago, 1927.

Those who are interested in the work of the Council on Pharmacy and Chemistry, and this includes all who have to do with the therapeutic use of drugs, look forward each year to the volume which gives the reasons for the Council's rejection of the preparations found unacceptable for inclusion in New and Nonofficial Remedies. These reasons are given in the Annual Reprint of the Reports of Council on Pharmacy and Chemistry; in addition the book gives the reasons for the omission of certain preparations from New and Nonofficial Remedies during the year, and contains several special reports of a general nature authorized by the Council for publication.

Reports are given on the following articles found not acceptable for New and Nonofficial Remedies: Allonal, Animasa, three benzyl benzoate preparations, Ceanothyn, Cresog, Firma Chloro, Idozan, Malt

Nutrine, Murasenide, Naftalan, Neo-Reargon, Montox, Numoquin, Olesolution, "Pabst Extract—The 'Best' Tonic," Pheno-septine Cones and Pheno-septine Powder, Pollen Antigen Spring Type-Lederle, Rad-X-Solution A and Rad-X-Solution B, Robes' Anti-rheumatic Injection, Sodium Methylarsenate (De Marsico), Ster-Alco, Sulcitacium, Tetradol, Thymo-Borine, Toxivi, Toxok, and Triophos. Besides these there are reports on a number of articles that have been omitted from New and Non-official Remedies.

The volume also contains the following special reports of current interest to physicians: a report on the status of bacillus and bacillus bulgaricus therapy, on the basis of which the N. N. R. article on Lactic Acid-Producing Organisms has been revised and rewritten; a report dealing with the esteem in which antistreptococcus serum is now held by leading surgeons, gynecologists and obstetricians, prepared by Dr. Emil Novak on the basis of the answers to a questionnaire sent to representative members of these groups; and a preliminary report on the status of the new drug, Ephedrine.

DIRECTORY OF THE A. M. A.

The new edition of the American Medical Association Medical Directory is off the press and being distributed. This directory is the most comprehensive and complete compilation ever accomplished in the line of medical census. It lists every known doctor alphabetically and by location. It lists national, state and local hospitals, schools, registration boards, societies, officers, medical practice laws, health authorities—well, if you look you will find pretty near everything along these lines. It is of value to every medical man for it is inclusive of all that belongs in a directory. We appended an explanatory letter from Dr. Olin West:

June 6, 1927.

Dr. F. C. Warnshuis,
Grand Rapids, Michigan.

Dear Doctor Warnshuis:

I am very glad indeed to have your letter of June 3, concerning the apparent discrepancy between the American Medical Directory and the records of the Michigan State Medical Society.

Of course, you must understand that it takes practically two years to compile the American Medical Directory and that the forms of the Directory must be closed from two to three months before the Directory finally comes from the press. This explains the discrepancy between the figures with respect to membership in Michigan as given in the Directory and as shown by your records. Had it been possible for us to get the Directory

figures immediately before it came from the press, the number of members would have been shown in almost exact correspondence with your records.

The Directory is intended to convey information concerning the addresses of physicians at the time the publication is issued. It is our purpose to include in the Directory all graduate physicians whether they have begun actual practice or whether they are in hospital service or engaged in some other line of work. That is why all of those physicians in Michigan taking graduate work or serving in hospitals appear as being located in Michigan, even though within a year they will be located somewhere else.

There is no possible way in which these discrepancies can be avoided if the Directory is to serve its purpose as a volume of information concerning the present locations of physicians. The same situation exists with respect to practically every other state.

The number of physicians in Michigan, as stated in the Directory, is arrived at after the most careful check. It seems to me that there is no ground for complaint on the part of anybody who understands the demands of the situation and the methods that are necessary to follow in connection with the publication of the Directory. If we carried out your suggestion to leave out all who are not eligible for membership in every state, we would not have a directory of the physicians of the United States but would have simply a directory of the members of the state medical societies and this is not what the Directory is intended to be. It is just as important for us to have information concerning those men who are not members and who are not even eligible for membership as it is for us to have the other information. The fact that the Directory carries this information constitutes one of the greatest safeguards that we have against the affiliation of undesirable men.

I have just received the June number of the Journal of the Michigan State Medical Society. A casual examination indicates that it is a very interesting number and I expect to have much pleasure in looking through it very carefully.

Very sincerely yours,

Olin West.

ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION

At the annual session of the American Medical Association in Washington, May 16 to 20, there was a registered attendance of 6,273, meaning at least 10,000 visitors to the convention city.

OUTSTANDING FEATURES

Among the outstanding features was an address by the President of the United States, Calvin Coolidge, who conferred high praise on the medical profession for its contribution to the social organization. The President and Mrs. Coolidge also held a special reception for physicians, on the White House lawn.

The departments of the national government, including the Army and Navy medical departments, the United States Public

Health Service and many medical bureaus, especially those of the Department of the Interior, assembled exhibitions for the visiting guests.

The publicity relative to the session in the newspapers of the country was the greatest ever given to an annual meeting of the Association. This is presumably a reflection both of the increasing interest of the public in the progress of medicine and of the co-operation between the American Medical Association and the American press. Practically all of the great press services and newspapers have special representatives in Washington. Arrangements had been made by the headquarters of the American Medical Association for aiding the dissemination of publicity through these channels, both previous to and during the session.

HOUSE OF DELEGATES

The following statement concerning the proceedings of the House of Delegates is not in any sense complete. A fuller outline has already appeared in *The Journal*, and the complete record will be printed in the official "Proceedings."

At the first meeting of the House of Delegates, May 16, the Speaker, Dr. F. C. Warnshuis, urged continued attention to the problems of nursing education and nursing service in the United States. He suggested an attempt to solve the question of the requirements, qualifications and standards for a capable, competent surgeon and a means to aid the public in making such an identification. He also urged state licensure and special hospital legislation as a means for protecting the public against poor and incompetent institutions.

The President of the Association, Dr. Wendell C. Phillips, urged continuous attention to the education of the public in matters of health. He suggested a proper system of censorship to safeguard medical publicity. He again recommended consideration of the restrictions placed on physicians in the prescribing of alcoholic liquors.

The president-elect, Dr. Jabez N. Jackson, urged new attention to the problems of medical ethics, and the preparation of a manual which would make clear both to the profession and to the public the intent of the "Principles of Medical Ethics."

The President of the Association appointed a committee, consisting of Doctors Ray Lyman Wilbur, Rock Sleyster, G. E. Follansbee, Harlow Brooks and William Allen Pusey to act on public responsibility,

having to do with the relationship of the medical profession to the public.

On recommendation of the Judicial Council, the opinion was adopted that all articles of an educational nature on medical or health subjects intended for the lay press or lay audiences should give expression to the consensus of opinion of the medical profession rather than to personal views, and that such articles should appear preferably under the auspices of the American Medical Association or of one of its component county societies or constituent state associations.

REPORT ON MEDICAL EDUCATION

In considering the report of the Council on Medical Education and Hospitals, the House of Delegates adopted the report of its reference committee. This committee considered as over-optimistic the views of the Council that the present medical schools are adequate to supply places for those wishing to enter a medical school. The reference committee believed that the Council on Medical Education might devote more attention to the problems of the supply of physicians and the question of medical care in rural districts, to the preparation of a statement on the defects in the present situation and to similar subjects.

The reference committee considered it necessary that the present curriculum be reduced materially and that any consideration of a new curriculum should give special attention to the training of general practitioners, with brief courses in the more important specialties. The recent decision of the Council to recognize as suitable for internship only hospitals in which there is a minimum percentage of necropsies was approved and recommended.

INVESTIGATION OF HEROIN

The reference committee on legislation and public relation requested the Board of Trustees of the American Medical Association to have another investigation of the use of heroin made by the Council on Pharmacy and Chemistry in conjunction with some of the scientific sections.

EVALUATION OF REMEDIES

It was recommended that the Association condemn as unwise and futile any attempt to evaluate a therapeutic agent by legislative fiat, referendum, popular vote or any similar method. The conclusion was adopted that such evaluation can be made only by the investigation and decision of experts.

DISASTER RELIEF

A consideration of the report of the committee on disaster relief resulted in the adoption of a recommendation that the American Medical Association urge constituent associations and component societies that have not already established disaster relief committees to do so as soon as possible.

MORTALITY STATISTICS

It was urged by the adoption of a report of the reference committee on hygiene and public health that the attention of the United States Census Bureau be called to the impossibility of comparison of statements on maternal mortality of the various nations and that the bureau be urged to secure a strictly uniform definition of maternal mortality by the bureaus of vital statistics of various nations.

COSMETICS

A resolution urging Congress to enact a law to control the manufacture, distribution, sale and commercial use of toilet preparations for preserving and enhancing personal beauty was referred to the Board of Trustees for action.

EDUCATION OF SURGEONS

The reference committee on the speaker's address commended the section having to do with the duty of the American Medical Association to standardize and elevate the practice of medicine and surgery within and without hospitals through its own organization, but not through legislative or other agencies.

APPOINTMENT OF DELEGATES

The reference committee urged that societies appoint delegates in time to permit the speaker of the House of Delegates to announce the reference committees thirty days in advance of the session, so that these committees might give adequate attention to the various reports of officers and councils before the time of the session.

HEALTH CONFERENCES

The importance of health conferences was recognized and attempts to reduce the duplication of efforts in various fields were encouraged.

CONTRACT PRACTICE

The report of the Judicial Council of the American Medical Association to the effect that there were both ethical and unethical contracts possible, and that each

contract must be judged on its own merits was approved by the committee and adopted by the House of Delegates.

CHARGES FOR SERVICES TO INSURANCE AND

INDEMNITY COMPANIES

A resolution to the effect that physicians were not under any obligation to provide information to insurance or indemnity companies unless paid the usual fees charged for similar services to private patients was approved and adopted by the House of Delegates.

PLACE OF NEXT ANNUAL MEETING

The Board of Trustees was asked to investigate places for holding the next annual session and to present its approval of two or more cities which, on investigation, have been found to possess ample facilities. The Board of Trustees has authority to change the place of holding the session if for any reason it is deemed advisable.

INCOME TAX DEDUCTIONS

A resolution requesting the promotion of an amendment to the revenue bill relating to income tax, which gives the individual a right to deduct from his income tax the expenses of medical treatment for himself and family was referred to the Board of Trustees, with the suggestion that they in turn transmit it to constituent state societies for action.

NURSING EDUCATION

Reports of the various committees on nursing education were received by the House of Delegates, and it was recommended that the American Medical Association give support in the work of the committee on grading of nursing schools and share in its financial program. The Board of Trustees appropriated the sum of \$5,000 for one year toward this end.

THE PHYSICIANS' HOME

A special committee reported on the need of a physicians' home. The committee recommended that the Secretary of the Association be requested to secure full information in regard to what is now being done by the profession for aged and incapacitated physicians, in various states and cities, so that other states or component societies may take measures to afford relief for dependent, worthy physicians, their widows and their orphans who may be in need. It was recommended that the secretary make a report on this matter at the next annual meeting. The committee was

convinced that the need for a national home is not sufficient to warrant the American Medical Association in establishing, managing and sustaining a home.

COLLABORATION WITH HEALTH OFFICERS

Collaboration between physicians and health officers was urged as the only method of meeting the public health situation for the good of the profession and the public.

TRACHOMA AMONG INDIANS

The American Medical Association was urged to continue its affiliations with all the activities of the United States government of the work being done by the national committee for the prevention of blindness for the elimination of trachoma among Indians.

LEGISLATION FOR CO-ORDINATING GOVERNMENT HEALTH ACTIVITIES

The House of Delegates reaffirmed its approval in principle of the Parker bill, co-ordinating the health activities of the federal government under the direction of the United States Public Health Service. It also adopted the report of the reference committee recommending approval of the Ransdall bill, appropriating \$10,000,000 to establish a national institute of health under the control of the Surgeon-General of the United States Public Health Service.

DISABLED EMERGENCY MEDICAL OFFICERS

The House of Delegates reaffirmed its favorable action of 1922, requesting the passage of the Bursum bill, which relates to the retirement of disabled emergency army medical officers on a parity with all other classes of disabled officers of the World War now on the retired list.

MEDICINAL LIQUOR

The report of the reference committee of the House of Delegates to the effect that hereafter the House of Delegates shall not pass any resolution pertaining to the therapeutic value of anything and that no committee report empowering any such resolution shall hereafter be presented until it has been considered by the Council on Scientific Assembly and the Council on Pharmacy and Chemistry was adopted. Recommendation was made that the special committee on alcoholic liquors be continued and be directed to co-operate in preparing a bill to be presented to Congress correcting the unfortunate provision of the Volstead Act limiting the amount of alco-

hol used, and providing such regulations as will permit doctors to prescribe whatever amounts of alcoholic liquors may be needed for their patients, and subject to such reasonable restriction as may be thought wise and best after a conference with the head of the Prohibition Department.

It was also urged that the American Medical Association declare its adherence to the principle that legislative bodies composed of laymen should not enact restrictive laws regulating the administration of any therapeutic agent by physicians legally qualified to practice medicine.

A supplementary report of the Judicial Council recommended that "Every resolution presented relating to the alcohol question shall be referred to the Board of Trustees for investigation." The recommendation was adopted by the House of Delegates.

CAUSTIC POISONS

The House of Delegates approved the resolution extending to members of Congress the thanks of the American Medical Association for passing the Caustic Poison Act in 1927.

FORM LETTERS ON PERIODICAL PHYSICAL EXAMINATION

A resolution asking the Board of Trustees to prepare approved forms of letters or literature which may be sent out by county medical societies to the public to promote the value of periodic health examinations and information that the examination can be made and records kept by qualified physicians who are members of the American Medical Association, in this manner helping to circumvent the harmful advertising activities of commercial agencies dealing with periodic health examinations, was endorsed by the reference committee and adopted by the House of Delegates.

CONTRACEPTION

A resolution recommending the alteration of existing laws, wherever necessary, so that physicians may legally give contraceptive information to their patients in the regular course of practice was referred to the Board of Trustees of the Association.

HEALTH HAZARDS IN INDUSTRY

The resolution petitioning Congress to make possible an increase in the personnel and resources of the United States Public Health Service in order that the service

may extend its activities in the field of industrial hygiene was referred to the Board of Trustees.

AMENDMENTS TO THE BY-LAWS

Notices of proposed amendments to the By-Laws: (1) defining the powers of the Judicial Council; (2) defining the legislative powers of the Association and the right of the House of Delegates to expel members or Fellows on recommendation of the Judicial Council; (3) a resolution changing the members of the Council on Medical Education and Hospitals was presented and must lie over to 1928 for action.

WOMAN'S AUXILIARY

A motion that the House of Delegates request the Board of Trustees to appoint a liaison committee between the American Medical Association and the Woman's Auxiliary was adopted.

ELECTION OF OFFICERS

In the election of officers, Dr. William S. Thayer of Baltimore was elected president of the Association; Dr. Charles A. Elliott of Chicago, vice-president; Doctors Olin West, secretary, and Austin A. Hayden, treasurer, were re-elected, as were also the speaker, Dr. Frederick C. Warnshuis of Grand Rapids, Mich., and Vice-Speaker, Dr. Allen H. Bunce of Atlanta, and the trustees, Doctors Edward B. Heckel of Pittsburgh and Rock Sleyster of Wauwatosa, Wis.

The president, Dr. Jabez N. Jackson, made the following nominations to appointments on the various councils: For the Judicial Council, Dr. Donald McCrae, Jr., Council Bluffs, Iowa, and Dr. Frank Cregor of Indianapolis, to succeed Dr. Thayer; for the Council on Medical Education and Hospitals, Dr. Emmett P. North, St. Louis; for the Council on Scientific Assembly, Dr. Frank H. Lahey of Boston. These nominations were confirmed.

THE SCIENTIFIC SECTIONS

More than three hundred manuscripts were read in the sixteen scientific sections of the Association, covering many medical subjects. A complete list of the papers read with the names of the persons discussing them appears in The Journal of the American Medical Association for June 11, 1927, beginning on page 1896.

MEDICAL BOOKS ACATALOGUE DESCRIBING 250

The new Illustrated Catalogue, just issued by W. B. Saunders Company, medical publishers of Philadelphia and London, describes and illustrates more than 250 titles. Of these, 42 are new books and new editions not described in the former issue of their catalogue.

A serviceable feature of Saunders Catalogue is the giving of the month and year of publication of each book listed. This, together with the description and in many cases the table of contents, author, his teaching connection and price, make the Saunders Catalogue one of unusual value from which the doctor may select and order his medical books.

There are a number of new books in the catalogue which deserve the particular attention of progressive physicians and surgeons. For instance, there are "Cecil's New Text-Book of Medicine," "Stokes' Clinical Syphilology," "Kolmer's Chemotherapy," "Morse's Pediatrics," "Ford's Bacteriology," "Young's Urology," "Reh-fuss' Diseases of the Stomach," "Wechsler's Clinical Neurology," "Palfrey's Specialties in General Medicine," etc., etc. Anyone desiring a copy of this 80-page Catalogue need but indicate his wish to Saunders Company and one will be sent him immediately. It is worth having in the library as an index to current medical literature.

THE JOURNAL

IS

YOUR FORUM—

WE INVITE YOU

TO UTILIZE

IT FOR THE

EXPRESSION OF

YOUR VIEWS

ON

MEDICAL SUBJECTS

MONTHLY COMMENTS

Medical—Economic—Social

The minutes, committee appointments and other information pertaining to our annual meeting will be concluded in the August issue. It was impossible to edit all the copy for incorporation in this issue.

Particular attention is likewise directed to the Annual Report of the Council and the reports of Standing Committees. They all impart abundant evidence that your state society is a live, achieving organization.

We have repeatedly drawn attention to the fact that any doctor who fills out blanks for an insurance company without obtaining a fee therefor is a sucker. Insurance companies simply graft off the profession when they seek to obtain evidence and expert opinion without fee. Again do we recommend that every doctor refrain from filling these blanks and supplying such information until a fee is tendered. Of course if you want to be the easy mark that's your privilege.

The report of our Special Committee on Hospital Charity is transmitted to our members in the form of a supplement to this issue. We urge every member to read, study and preserve this report. We feel certain that the committee will welcome your suggestions and The Journal will be pleased to receive your comments. Additional copies of the report may be obtained at 50 cents each by applying to the Journal's editor.

Vacation time—golf, fishing, cottages and the woods. Are you taking one? If not, why not? Of course our members in the resort regions are on the job for this is their busy season—they enjoy their vacations in the late fall and winter. But you who have stood the grind—you who are in the harness 11 months in the year—you are the ones who need 30 days next to nature and we urge that you so plan—that is if you wish to reach the three score and ten mark.

If you want to know why the green cover, read the editorial. If you have any suggestions, write them, for we are open to advice. We positively decline to accept any suggestions as to pink or heliothrope. They are taboo. Cerise might receive passing consideration. Gray and blue are to reminiscent of the morning after and red is far too bolshevistic. Purple is reserved for law and brown is to senile. Black costs too much for white ink. White is too common and would put us under false colors. And so you can go through all the shades and conclude as we did that green about fills the bill. But come on with your comments—there must be some brilliant ideas and suggestions existant.

Dr. Tibbals recently reported the collection of a 25-year-old account. The following establishes a better record:

In a recent issue of the Port Huron Times-Herald a communication appeared relating the payment of a debt due Dr. G. S. Tweedie of Sandusky which was 35 years old.

Dr. Geo. W. Jones of Imlay City has Dr. Tweedie outclassed by 10 years, as the following letter will explain. Such acts of honesty and appreciation of services are worthy of all praise. The doctor says if others would follow the example of this former Imlay City boy, he would be \$20,000 richer than he is today.

The letter follows:

Dr. Geo. W. Jones,
Imlay City, Michigan.

My Dear Doctor Jones:

I enclose herewith my check for \$10. I deeply regret that this charge for your professional services has remained unpaid for so many years; but I am very thankful that I recently learned of it and that I am able to make payment. On the 15th day of this month (June) it will have been 45 years since you brought me into the world and aside from the fact that I regret my father's failure to take care of a just and honest debt for one reason or another. It is a pleasure for me to make payment for your services in attending upon the occasion of my birth.

Yours sincerely,

New and Nonofficial Remedies, 1927, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1st, 1927. Cloth. Price, postpaid, \$1.50. Pp. 473 XLVII. Chicago. American Medical Association

The appearance of the annual edition of New and Nonofficial Remedies is looked upon as an event among all those interested in drugs and their therapeutic use. The text is so carefully scrutinized and revised each year by the various members of the Council on Pharmacy and Chemistry that each issue is essentially a new book, a safe guide to the frontier that lies between the official drugs and the latest preparations launched by the pharmaceutical manufacturers.

The mechanism of the book is excellent; each preparation is classified, and each classification is preceded by a general and critical discussion of the group by one who is an authority on the subject; there is an exhaustive index not only to the contents of the book, but also separately, to the legislature concerning the host of preparations that the Council has found unacceptable for inclusion. A glance at the book shows that the most important single revision this year is that of the general article on Lactic Acid-Producing Organisms, which has been radically revised and rewritten to show the present status of therapy in this field. Further perusal shows that many preparations have been omitted. The preface explains that many of these have been omitted because the manufacturers or distributors have not presented evidence to demonstrate their contented eligibility. Some have been omitted because they have become official articles by inclusion in the tenth edition of the U. S. Pharmacopeia; such articles, when marketed under the pharmacopeial name or synonym, and without special claims, do

not require description in New and Nonofficial Remedies.

Among the preparations newly admitted to the book are: Isacen, a product related to phenolphthalein; Ipral, a barbitol hypnotic; a cod liver oil concentrate having a definite vitamin A and

vitamin B potency; and three erysipelas streptococcus antitoxin preparations.

New and Nonofficial Remedies is indispensable to any physician who prescribes drugs. It contains information about medical products which cannot be found in any other publication.

O U R O P E N F O R U M

Affording Opportunity for Personal Expression

Editor of The Journal:

It is with profound sorrow we hear of the death of our esteemed classmate and friend Dr. Frank B. Walker.

Be it therefore resolved, that we—members of the class of 1892 of the Detroit College of Medicine in reunion assembled, do hereby express our sincere regrets at the loss of our highly esteemed friend and classmate.

Be it further resolved that a copy of these resolutions be forwarded to the bereaved family, also to the bulletins of the college and Wayne County Medical Society for publication therein.

(Signed) JOHN N. BELL,
Secretary.

For the Class.

Editor of The Journal:

Progress in the Medical History has, I think been sufficient to justify presentation of the enclosed bill of expenses, and if warranted to do so you may send me a check for which I shall be duly grateful.

I found quite a lively interest in this history on the part of the members of the Association at the Mackinac meeting and several outside of the committee, Doctors Smith, West, Biddle and others have promised co-operation and contribution.

Dr. Dempster is taking on Medical Education and Sawyer will write on the subject of Medical Journalism. I thought it would be desirable in view of the sentiment of the Upper Peninsula men to turn over the Upper Peninsula Medical Society to West and Felch. Dr. Brook will take Medical Organization of Lower Michigan, Biddle Army Service.

The Mackinac meeting, from many points of view, was, I thought, highly successful. I was particularly pleased with the opportunity for personal contacts. Randall brought me home. We arrived last night having remained the night before in Traverse City.

I had a nice visit with your son Saturday afternoon.

With kind regards, I am,

Yours truly,
C. B. BURR.

Editor of The Journal.

I read your Speakers address yesterday and wish to congratulate you on your fine effort. It is a credit to us all to have so fine a representative of the State in the Speaker's Chair of the House of Delegates governing and the greatest Medical Society in the world.

I trust I may meet you at Mackinac although I have to make such frequent visits to Southern

Michigan on account of my mother's illness that it may not be possible for me to make it.

Fraternally yours,
C. R. Elwood.

Editor of The Journal:

Whether or not the state profession has accepted and put in practice the suggestions of Dr. Minot in pernicious anemia treatment, I do not know. In any event, we at present have a dearth of material for research purposes. We are particularly anxious to get in a considerable number of cases to try out some new liver extracts, which as yet are not available for general use.

I am wondering if you could, and thought it wise to insert a paragraph into The Journal, reminding the profession that this problem is now under way and that we can take care of a limited number of patients.

Cordially yours,
James D. Bruce.

Editor of The Journal:

Sorry not to be present at the Annual Meeting. Am leaving for Europe on the 11th. With kindest wishes to you and hoping the meeting will be the best ever, I am

Fraternally yours,
William J. Stapleton, Jr.

Editor of The Journal:

Many thanks for your letter of May 24th. It has been a pleasure for me to help safeguard the interests of the medical profession in the legislature during the last two sessions.

Two years ago it was little trouble to hold the cult legislation in check by controlling the committee on Public Health. This year for some reason not accounted for, everything of that nature was referred to committee on State Affairs.

The Chiropractor bill passed the House by a large majority, no one appearing in opposition. Coming to the Senate it was wrongly referred as I have mentioned. I went before the committee and succeeded in having it laid on the table. A few days before the end of the session a part of the committee favorable to the bill was hastily called by the chairman and reported the bill out favorably.

On General Orders we had a hot contest for an hour or more. The medical profession received more abuse from two Wayne County members than I have heard in a long time. Before the third reading vote came I had pledged enough votes in opposition, so Mr. Woodruff, from Wyandotte, the sponsor, asked to have it

laid on the table and there it remained till adjournment.

The rush on this matter came so suddenly that I had no time to get any assistance from the outside. I was delighted to defend the profession on the floor of the Senate and thrash them thoroughly.

Senator Gansser assisted in a very able talk and enough others stood loyally by the medical profession to suppress this invasion.

Very truly,
C. E. Greene.

Editor of The Journal:

I have your letter of May 24 asking for an account of the finals in the fight on the Chiropractor bill in the Senate.

After it was decided on May 12 that the bill would be reported out of committee, I had a talk with Senator Green and he said that he would make a determined effort to have the bill referred to his committee, that is, the Committee on Public Health in the Senate. This attempt was made but failed by a very meagre majority and then the bill was brought on the floor of the Senate for discussion.

Senator Green and Senator Engel of Lake City led the fight against the bill and Senators Woodruff and Wood of Wayne were the leaders in favor of the bill. After considerable heated discussion, Senator Engel said he wanted to ask Senator Woodruff just one question and he wanted a yes or no answer. The question was, "Are you a believer in the germ theory?" and the answer was, "No". Thereupon, Senator Engel made the argument that it was no wonder that a man who did not believe in the germ theory would just as soon manipulate the back of a child who had diphtheria and let the child die instead of applying well-known remedies to bring it back to health. He said, "This has actually happened in my community."

This argument had the effect of turning the whole assembly, many of the supporters of the bill deserted it and it was defeated by a large majority.

I want to say to you that, besides Senator Green who fought for the rights of the doctors all through this session, we should not forget that Senator Engel came to the front when his help was very much needed and was a decided aid in helping to defeat this piece of legislation.

Very sincerely yours,
Guy L. Kiefer, M. D.
Commissioner.

Editor of The Journal:

I am just in receipt of your letter of June 7 conveying to me the compliments of the State Medical Society and their appreciation for such services as I rendered during the recent meeting of the legislature.

I desire to thank you and the Council for your nice letter, but to say that I considered it my duty, not only as a citizen, but more particularly as a member of the State Medical Society and as your Health Commissioner, to do what I could to prevent the passage of legislation which would be a menace to the health of the commonwealth.

I hope to see you at the state meeting at Mackinac Island next week.

Guy L. Kiefer, M. D.,
Commissioner.

Editor of The Journal:

I have read with interest the correspondence on page 395 of The Journal of the Michigan State Medical Society, relative to the rate of payment fixed by the Federal Government for medical services rendered federal prisoners confined in county jails in Michigan. Will you not let me know the outcome of the investigation now under way to determine by whom the rates stated were fixed? If they were fixed by central authority in Washington, possibly equally preposterous rates have been fixed for the treatment of federal prisoners in other parts of the United States. If so, it would seem to be a matter worthy of the attention of this bureau.

Wm. C. Woodward, Executive Secretary,
Bureau of Legal Medicine
and Legislation.

Editor of The Journal:

Your letter of June 8th regarding certain Legislative matters which come up at the last session received.

I wish to express my personal appreciation for the sentiments expressed in your letter. With kindest personal regards, I remain,

Yours truly,
Albert J. Engel.

DEATHS

Dr. Burton C. Bradshaw died at his residence at Royal Oak on December 22nd, 1926, at the age of 62. He was a graduate of the University of Michigan in the class of 1891. He located at Mayville, Michigan, and remained there until October, 1912, when he came to Royal Oak and was in active practice there at the time of his death. He was a classmate of Dr. Sutherland of Clarkstown and Dr. Stewart of Royal Oak. He was an active member of the Oakland County Society and also a member of the Michigan State Medical Association.

Dr. Bradshaw was a fine type of physician as well as a man, and one whom you could be proud to claim as a friend. He was young in looks and spirit for a man of his age; always aggressive and almost a martyr to his profession. He believed in the Code of Ethics and practiced accordingly. He leaves a wife and three children: Esther, a teacher in Royal Oak Schools, Parke, a medical student at the University of Michigan, and Miriam, a student in high school.

The following resolutions were adopted by the Society:

Whereas, in the course of Divine Providence, Dr. Burton C. Bradshaw was taken from our midst by death on December 22nd, 1926,

Be It Resolved, That we, as members of the Oakland County Society, go on record as mourning the loss of a member who was a true physician and friend, and that our heartfelt sympathy be extended to the bereaved family.

A copy of these resolutions to be placed on the Society's records and to be sent to the family.

J. S. Morrison, Secretary.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

MONROE COUNTY

Monroe County had a very interesting meeting May 19. Dinner was served at the Park Hotel. After it, Dr. Russell W. Bunting, of the Department of Dentistry, Ann Arbor, spoke on "Nutrition as Related to the Teeth." The local dentists were in attendance at the meeting.

Yours very truly,

Florence Ames, M. D., Secretary.

HOUGHTON COUNTY

Report the regular monthly meeting of the Houghton County Medical Society at the Scott Hotel in Calumet, May 3, 1927. Seven members were present. Dr. John Norup of Ameek was elected a member of the Society. Dr. M. D. Roberts gave a well prepared paper on "Examination and Care of Aviation Pilots."

Alex B. MacNab, Secretary.

EATON COUNTY

The regular monthly meeting of the Eaton County Medical Society was held at the Harriet Chapman Hospital at Eaton Rapids, May 26, 1927.

A splendid chicken dinner was prepared and served by the nurses of the hospital after which Dr. C. C. Young of the State Laboratory addressed us on "Modern Laboratory Methods" and demonstrated the cutaneous tests for asthma, scarlet fever and diphtheria.

Dr. Youngs' talk was very interesting and instructive and very helpful to all who heard it.

After a short discussion the meeting was adjourned.

Very truly yours,

H. J. Prall, Secretary.

GOGEBIC CO.

Two papers of unusual interest were presented in the June meeting of the Gogebic County Medical Society. Dr. A. J. O'Brien, who several months ago returned from Vienna, where he made a special study of endocrinology, gave the Society the results of these studies in a most valuable paper. Dr. Oscar Harmos, director of the Gogebic County public health laboratory connected with Grand View Hospital, presented a very instructive paper on "The Preparation of Specimens for Laboratory Examination."

The initial step was taken by the Society, in conjunction with the Ironwood Health Department, to establish keep-well clinics for babies in Ironwood. A communication from the Ironwood Health Officer on this subject was read and referred to the Board of Directors with power to act. The arrangement of a picnic for Sunday, July 11, was referred to the committee on social affairs, of which Dr. C. E. Stevens is the chairman.

Louis Dorpat, Secretary.

IONIA-MONTCALM CO.

For the June meeting the members of the Ionia-Montcalm County Society were royally entertained at the Ionia State Hospital on Thursday evening, June 9th.

The music, which was furnished by a band composed of patients of the hospital, was very much appreciated.

The following very interesting and instructive program was furnished entirely by the medical staff of the Ionia State Hospital.

Dr. Perry C. Robertson, superintendent of the hospital gave a preliminary report on "Malaria Treatment of Syphilis of the Central Nervous System." He quoted statistic showing that paresis until recently has been a hopeless condition and usually with a fatal termination in a comparatively short time but some patients are still alive and enjoying good health for as long as ten years after receiving this treatment.

Dr. L. Duval, assistant physician, gave the bibliography, symptoms, prognosis, and especially the treatment of paresis. His discussion of treatment included both the specific which is non-satisfactory and the non-specific which is more satisfactory.

The theory is that a high temperature is fatal to the spirochete and as the pyrexia which is induced by injecting the malaria infection can readily be controlled by giving quinine, this method of treatment has proven the most satisfactory of any tried so far.

Figures from different writers indicate from 33 to 50 per cent of successes with the malaria treatment.

Dr. H. L. Imus, assistant physician, gave several case reports showing the deplorable mental and physical condition of some cases of paresis before treatment was instituted. He then described the technic of treatment, symptoms following treatment, and can require after the treatment is given. Then several clinical cases were shown whom had received the treatment and in whom a wonderful improvement was shown.

While this treatment is not without some danger to the patient and should not be attempted by the general practitioner still it is encouraging to know that by referring these doomed cases to the proper places for treatment much may now be done for them.

The members of this society are justly proud of the fact that we have as our own members a team qualified to present such a "top notch" scientific program.

The members present were unanimous in declaring this as one of the best meetings in the history of the society.

H. M. MAYNARD,

Secretary.

BERRIEN COUNTY

The May meeting of the Berrien County Society was held in Niles at the Four Flags Hotel. The meeting was well attended by both physi-

cians and wives. The women adjourned after dinner to the lobby, where they organized a Woman's Auxiliary and elected officers.

Mrs. H. G. Bartlett of St. Joseph was chosen as President and Mrs. W. C. Ellet of Benton Harbor as Secretary.

The Women's Auxiliary was extended a permanent invitation to attend the monthly dinners of the Berrien County Society.

The Medical Society was given two excellent papers by men from the Battle Creek Sanitarium Staff. Dr. Edwin Russell gave an interesting paper on "Aenemia in Infants," with a discussion of the etiology and feeding of such cases.

Dr. L. E. Verity gave a fine paper on "Nephritis" in which, for such a broad topic, he summarized and covered the field so thoroughly that all who heard the paper felt it extremely worth while.

At the Business meeting a resolution was passed commending Senator George Barnard of this district for his work in defeating the vicious cult legislation attempted in the last legislature.

The picnic meeting of the Society was set for Buchanon in July, the Buchanon members inviting the Society to the County Club.

W. C. Ellet, Secretary.

WHEREAS, Measures were introduced in our State Legislature at its last session to license Osteopaths and Chiropractors to prescribe and dispense medicines and,

WHEREAS, The requirements for medical practice have been made more exacting and extensive in recent years so that it now requires from eight to ten years to get a degree in medicine and,

WHEREAS, Letting down the bars to Chiropractors and Osteopaths, known as drugless healers, with no knowledge of drugs and their actions, would seriously degrade the practice of medicine, and be a serious menace to public health, therefore be it hereby

RESOLVED, That we heartily commend and appreciate in the interest of the Public, the stand taken by our Senator, Hon. Geo. Barnard in defeating the proposed vicious legislation. To his courage, and influence largely was the bill defeated. Be it further

RESOLVED, that a copy of this resolution be sent to our esteemed Senator, Hon. Geo. Barnard and to the Secretary of the State Medical Society.

Berrien County Medical Society,

R. B. Howard, President.

W. C. Ellet, Secretary.

KALAMAZOO CO.

A regular meeting was held in the rooms of the Academy, May 16, 1927; a well attended dinner preceded the meeting. The minutes of the previous meeting were adopted as printed in the Bulletin.

Dr. J. A. Boersig of the firm of Parke, Davis & Co., Detroit, exhibited some very interesting moving pictures illustrating the manufacture of antitoxins and vaccines at their plant in Detroit and at their biological farm at Parkdale. Diphtheria antitoxin and typhoid vaccine were used to illustrate the method in each case. Dr. Boersig's pictures were quite self explanatory, but a discussion took place following the pictures wherein many practical questions were answered.

Dr. Hugh H. Beebe of Ann Arbor, who was to talk on "Some Difficult Phases in the Management of Goitre," was unable to appear because of the death of his brother. Word of Dr. Beebe's grief came so late that a substitute was not able to be obtained.

Dr. Crum read a draft of the new fee bill that the committee just drew up; action on it was deferred until the next meeting.

Dr. Jackson reported a disappointing action on the part of the Lieutenant Governor in allowing both the Osteopathic and Chiropractic bills to be introduced to the legislature through the committee on public affairs, instead of through the committee on public health as was promised and should have been done.

A letter was read by the Secretary that had been received from the Calhoun County Medical Society in regard to their invitation and challenge to a golf match and scientific meeting. Dr. Bennett moved, Dr. Adams seconded that the invitation and challenge be accepted. Motion carried. Dr. Balch was appointed chairman of the golf committee.

Dr. McNair introduced his amendment to the by-laws to change the name of the Illegal Practice Committee to the Medico-Legal Committee. The duties of the committee as outlined in two sections has been taken almost literally from the wording of that found in the by-laws of the State, and Kent County Medical Societies.

Sec. 1. The Medico-Legal Committee shall receive all calls for help in suits brought against members of the Academy; shall investigate the circumstances and shall forward a report to the Medico-Legal Committee of the State Society. The Committee shall also defend and help members in every possible way if suit is brought against them.

Sec. 2. The Medico-Legal Committee shall act in liaison with any similar body of the Kalamazoo County Bar to promote the mutual welfare of the Kalamazoo County Bar and the Kalamazoo Academy of Medicine.

The report of the amendment was laid on the table.

Dr. Crum reported a meeting well attended by the laity in the Academy rooms in conjunction with cancer prevention work. Doctors Jackson, Shackleton, Morter, Stuart and Mr. Glasgow presented short talks and pathological specimens.

Dr. B. E. Walker read two letters addressed to himself from Bronson hospital informing him that he would be unable to perform any surgery in that hospital henceforth. He then asked that the Academy investigate this action as it had not been satisfactorily explained to him. Dr. McNair moved, Dr. Beebe seconded that a committee of five be appointed from the Academy to investigate this matter. Twenty-six voted in favor of the motion and none opposed.

Adjournment.

R. J. Hubbell, Sec'y. Pro Tem.

The committee appointed by the President was: Dr. Frederick Shillito, Chairman; Dr. R. U. Adams, Dr. L. J. Crum, Dr. Rush McNair, Dr. B. A. Shepard.

KALAMAZOO ACADEMY GUESTS AT BATTLE CREEK

Tuesday, June 7, all honest-to-goodness, fair, and would-be golfers of the Kalamazoo Academy of Medicine motored to Battle Creek under the

guardianship of Dr. Balch, as guests of the Calhoun County Medical Society for a challenged golf match. Handicaps were previously reported with as much honesty as could be mustered and the pairings made with these in mind. Needless to say, the afternoon was greatly enjoyed on the links of the Battle Creek Country Club and the spirit of the men was high in spite of "the worst golf they ever played."

A delightful chicken dinner was served in the club house, the one occasion where the Kalamazoo men "did themselves proud." The awarding of prizes was then ably handled by Dr. Knapp; and let it be known that the Kalamazoo men deeply appreciate the fact that Dr. Knapp did not insist on reading the scores of each match. Dr. Balch was given one dozen Kro Flite balls for lowest net score, whereupon he rose and declined them with his usual modesty, stating that he did not have the lowest net score. Dr. Knapp begged to state that the recipient certainly had the lowest score among the Kalamazoo golfers, which statement elicited no contradictory remarks and the balls found their way back to Dr. Balch. A second prize of six balls was awarded to a Battle Creek member.

The scientific program was furnished by Kalamazoo men as follows:

Dr. Ward Collins—General Management in Diseases of Children.

Dr. David Squires—Chest Examination of Children.

Dr. Rollin D. Thompson—Recent Phases in Treatment of Tuberculosis of Children.

The papers were well discussed and a general atmosphere of good fellowship prevailed. The consensus of opinion was that the compliment should be returned at an early date.

ATTENTION—FORMER ILLINOIS DOCTORS

Doctors who lived formerly in Illinois, or who are descendants of pioneer physicians of the "Illinois country" will hear with interest that Volume One of the "History of Medical Practice in the State of Illinois" is ready for delivery.

The history has been written under the supervision of a committee appointed by the Illinois State Medical Society as a commemoration of its seventy-fifth anniversary but more especially to make a living tribute to those valiant men of the medical profession who played so able a part in the exploration, settlement and development of the Illinois country.

In this first volume of the History are set down events from the earliest available knowledge of conditions in the Illinois country, along through the days of the aborigines, and commencing with the actual records when, in 1673 Father Marquette had medical attention in Chicago, up until the year 1850.

In the second volume (now in preparation), narration continues up until the present time. Future years will bring other volumes so that this history will be an ever virile monument to the men and incidents whom it would honor.

Research of years resulted in an opulent supply of material from which to compile this history and has evidenced to an almost unbelievable degree the vital part played by physicians in every angle of the exploration, settlement and development of a country that is one of the richest and most influential sections of the richest country in the world.

It must be remembered that originally the Illinois country encompassed a territory far greater than the area now known as the state of Illinois, Wisconsin, Indiana, Missouri, Kentucky and Iowa, as well as what is now Illinois, and even some section of Ohio fell into that primitive epitome of the Illinois country. In the southern part of the state it was well into the nineteenth century before Missouri and Illinois ever acknowledged the natural divorce of interests made by the Mississippi river. Because of this, naturally enough, close interest in this history extends to physicians or to their descendants in practically every state in the Mississippi Valley or contiguous thereto.

Rare maps, unusual personal memorabilia and rare discretion in compilation, make this history of unique interest to doctors everywhere and to many laymen.

This history of medical practice in the state of Illinois embodies in the course of its narration, an interesting and illustrated digest of the early efforts of white settlers in Illinois, with specific allusion to the share in these tasks, performed by medical men. Included are portraits of rare interest, reproductions of historic documents, excerpts from diaries, personal letters, human reminiscences of days fraught with peril, filled with hope, and not devoid of humor, through a period of about 250 years. From the days of the "Chirurgeon" who attended Pere Marquette, through the massacres at Fort Dearborn, the years of Indian raids, down with the circuit-riding "saddle-bag" doctors, to these days of radium and radio, this history marches. Attics, family albums, safe deposit vaults, and state records have been ransacked to produce the material needed for this chronicle. Illinois holds today the honor of being the world's medical center. Progressive steps of this achievement, and its contributive factors such as hospitals, asylums, sanitariums and allied institutions and medical colleges are set forth in detail, both pictorial, documentary and narrative. In brief, this account epitomizes the almost unequalled growth of a community whose economic wealth is paralleled by its public health. Personal data of the men, of the organizations,—including pioneer army and navy physicians and surgeons and local, county and district societies, schools and hospitals as well as of the Illinois State Medical Society itself; various internationally famous medical discoveries made by Illinois men; the state's contribution to the world of research; medical libraries and periodicals existent in Illinois; campaigns for medical protection against enemies of public health; details of the various Medical Practice Acts; state sanitation from the notable drainage canal and the supervision of food supplies, vital statistics; meetings, officers, policies and finances of the State Society;—all this and more in accurate transcription make this history a miniature encyclopedia of scientific advance and desirable, and hitherto unavailable, information.

The edition is limited. It will not be reprinted. A place in every physician's library is merited by this volume, both as a tribute to the men who blazed the trail for modern scientific medicine and as an ever-present reminder and authority as to what is happening to medicine right in this state every day, so far as finance, discovery, legislation and public relations are concerned, and the men who are responsible for the heritage of trust for over two centuries and a half. Volume

One is now ready. Volume Two will follow soon. Orders may be sent to Committee on Medical History, Illinois State Medical Society,—Medical and Dental Arts Building, 185 North Wabash Avenue, Chicago, Illinois. Charles J. Whalen, M. D., Chairman.

POLLINOSIS—"HAY FEVER"

Pollen-free air to breathe is one solution of the problem of pollinosis, but a costly one. Most hay-fever sufferers can't afford it. For them it is a case of the mountain not coming to Mahomet, and Mahomet not going to the mountain. The *status quo* prevails.

Fortunately these unfortunates have a remedy in specific immunization; the only question is, when shall it be done? And, incidentally, what pollen extract shall be used in the immunizing process?

It is none too early right now to start the immunizing treatment, which requires about six weeks for completion—fifteen injections at intervals of three or four days.

As to choice of pollen extracts: Since these extracts keep better in concentrated form, they are offered in this form by some manufacturers, notably by Parke, Davis & Co., who advertise their product elsewhere in this issue.

With the concentrated extract three vials (closed with thin rubber caps) of diluent are supplied, and in diluting the extract the physician has only to withdraw it in his syringe from the original package and place it in the first of the three vials of diluent, then take up $\frac{1}{2}$ c.c. of this dilution and place it in vial No. 2, and then $\frac{1}{2}$ c.c. of this dilution for vial No. 3. It can be done almost as quickly as it can be described. The physician then has three dilutions for the graded doses, all protected from the air; and a table of doses is supplied with the material.

Parke, Davis & Co., offer an illustrated book on hay fever. Physicians are invited to write for it.

PREVENTION OF CONTRACTURES FOLLOWING INFECTIONS OF HAND

Sumner L. Koch, Chicago (Journal A. M. A., April 16, 1927), asserts that contractures following hand infections may be reduced to a minimum if (1) drainage incisions are made with due regard for important anatomic structures; (2) secondary infection is not added to the primary infection; (3) hot dressings are dispensed with early in the course of treatment and replaced by the intermittent use of the sterile arm bath and dry heat; (4) movements of the fingers and hand are initiated as soon as the acute symptoms of infections have subsided, and (5) during periods of rest the hand is immobilized in the position of function.

DIET IN TREATMENT OF CARDIAC FAILURE

Clinical and experimental observations seem to indicate that milk and carbohydrates, particularly those forms of the latter which are easily assimilated, should constitute the major portion of the diet in cardiac failure. A diet has been used by Fred M. Smith, R. B. Gibson and Nelda G. Ross,

Iowa City (Journal A. M. A., June 18, 1927), which has an energy value of 2,100 calories and consists of 44 Gm. of protein, 110 Gm. of fat and 222 Gm. of carbohydrate. It is served in the form of milk, cream, butter, eggs, vegetable purees, cooked cereals and fruit juices. The carbohydrate is further increased by the addition of sugars, as dextrin-maltose, dextrose and lactose. Small and frequent feedings are given to avoid gastric retention and fermentation. When edema is present, the liquid intake is limited to 1,500 cc., and the salt is reduced to a minimum. Usually on the third or fourth day other foods, as jelly, crackers (salt free), toast and stick candy, are added. Later, about the eighth day, depending on the condition of the patient, pureed fruits and additional pureed vegetables are incorporated in the diet. Gradually, the consistency of the food is changed from that of the soft to the light diet. In some instances, following the elimination of the excess fluids, particularly in those patients who are greatly undernourished, the energy value of the diet is increased to approximate 3,000 calories. However, when the patient is obese, the diet is sufficiently reduced to permit a gradual loss in weight. All patients with cardiac failure, with individual exceptions, were treated in the same way. They were put to bed at absolute rest. When necessary, codeine or morphine was administered hypodermically at bed-time to promote sleep. Cascara or other mild laxatives were employed when needed to produce a daily bowel movement. From 15 to 20 minims (0.9 to 1.25 cc.) of tincture of digitalis was prescribed three or four times daily, depending on whether or not the patient had previously taken the drug. The routine hospital soft diet was served. The liquid intake was limited to 1,500 cc., and the urinary output was recorded. The patient was weighed daily when the condition permitted. If after a period of from five to seven days there was no demonstrable change in the general condition and the weight remained stationary, the cardiac diet was prescribed. The favorable influence of the diet is illustrated by five cases reported. The results emphasize the importance of diet in the treatment of cardiac failure. They demonstrate that a change in this feature of the treatment alone may be sufficient to promote the elimination of the excess fluid after the usual remedies have failed. The effectiveness of the diet is believed to be due to the energy value and the form in which the food is given. It is felt that patients with cardiac failure, especially those in whom the condition has existed for some time, should have at least a diet that will maintain a normal metabolism.

OCCURRENCE OF STAPHYLOCOCCUS AUREUS INFECTION WITH SCARLATINIFORM RASH

Franklin A. Stevens, New York (Journal A. M. A., June 18, 1927), has observed a number of exanthems in which there was considerable doubt as to the diagnosis. A great majority were proved to be scarlatina. Instances occurred in which the rash did not blanch or the scarlatinal streptococcus was not recovered. In rare cases neither the culture nor the skin test gave evidence of scarlatinal infection. In three such cases *Staphylococcus aureus* has been isolated. In these instances the bacteriologic and immunologic data show that the entire picture was the result of infection with staphylococcus.

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ORIGINAL ARTICLES

SOCIALIZATION AND PATERNALISM IN MEDICAL PRACTICE*

MORRIS FISHBEIN, M. D.

(Editor Journal American Medical Association)

CHICAGO, ILL.

THE BEGINNINGS OF MEDICINE

Among savages, and among peoples of the past, sickness was not believed to be due to natural causes. Always the disease had been sent by some evil spirit! And when the mind itself became affected and the patient began to conjure up the chimeras that torture the fever-wracked brain, the unlearned ones were convinced that the person afflicted had become possessed. Then the tribe assembled to drive the evil spirit from the body. All the magic of the priests or medicine men was used in the process. The healing of these mystic rites is faith-healing, the power of suggestion, the method used by cultists of all varieties today. When the suggestion is the preponderating factor in controlling the mind, the mob or community mind is more powerful as an influence than that of the individual healer.

THE MIDDLE AGES AND SUPERNATURALISM

In the middle ages when the Black Death stalked over Europe, community effort was invoked. The first public health council known to history was assembled to draw up measures for averting the plague. The mob, never listening to the voice of reason, sought to placate the spirits of evil by offering human sacrifice. The priests carried icons and relics in vast parades among the people, thus aiding to disseminate the very disease they sought to over-

come. The mob is urged not infrequently to its destruction. Contrast this ignorance with the actual knowledge of scientific medicine that we now possess.

THE VIS MEDICATRIX NATURAE

When the Greeks began to develop a science of medicine, when it became possible to distinguish one disease from another, and to treat diseases according to objective observations as to their causes and the effects of the treatment used, the practice of medicine became more definitely a relationship between one individual and another, or at most, between several individuals and the person afflicted. Specialists in medical science know that two minds are better than one, and that sometimes one mind is much better than another. The most ancient of physicians recognized the fact that some persons could inspire the patient with a desire to recover and could aid the peculiar power lying within the body known as the *vis medicatrix naturae*, the power within the living tissue that urges it toward repair and recovery.

PREVENTIVE MEDICINE AND LOWERED DEATH RATES

The modern science of medicine, particularly of preventive medicine, began with the discovery of the bacteria by Pasteur, about fifty years ago. Since that time life expectancy has increased so that the death rate has been lowered from 31

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per thousand in 1824 to 12 per thousand in 1925, and so that the average life has increased from 36 years in 1880 to 53 years in 1920. This increase in life expectancy has meant more for humanity than all of the battles ever waged and for which monuments were erected to the conquerors. It has meant more for human happiness than has any other contribution of civilized man; it has freed man from the fear of disease.

COMMUNITY HYGIENE AND SANITATION

The great success of preventive medicine has involved the application on a community scale of the knowledge of disease developed by individuals. Typhoid fever has been practically eliminated from every community. If the case rate for typhoid fever that prevailed in Chicago in 1880 existed today, there would have been 60,000 cases of typhoid fever in Chicago last year instead of the 164 that actually occurred. In the old days many a physician sent his sons through college on his income from typhoid fever. Smallpox has been virtually eliminated by the use of vaccination, isolation and quarantine. The death rate for tuberculosis has been cut more than one-half by the knowledge of preventive medicine applied to that disease. The infant mortality rate, representing the pitiful deaths of babies within the first year of life, has been lowered to less than one-half of what it previously was, by the application of knowledge regarding infant feeding, and by the control of infections concerned in infant mortality. Here is knowledge, applied on a community scale by public health officials, with the co-operation of the public and of the medical practitioners necessary for the administration of preventive methods applied to the individual. Such co-operation can virtually abolish most of the severe infections and contagious disease from any community. *But bear in mind that the giving of serums and vaccines and anti-toxins and skin tests and all of the other methods in the increased armamentarium of preventive medicine represent procedures applied to one individual by another.* These are not the same type of procedures that are necessary for the provision of a sanitary supply of water, for the disposal of sewage, for the control of milk and food, for the elimination of contacts with those infected in places of public assembly. Nevertheless, it has been the plea of some of those who would be forward looking in matters of public health, that

the methods of the public health official, having been successful in sanitation, will be equally successful in the prevention of all disease in the individual and even in the treatment of disease.

DEGENERATIVE DISEASES

Investigations have shown that further increase in life expectancy depends largely on the control of such conditions as heart disease, high blood pressure, Bright's disease and other diseases of the kidney, brain hemorrhage, and cancer, conditions which have not been shown to be infectious, and which are grouped as degenerative diseases. They represent the type of disorder that results largely from the wearing out of the human tissues, and that occurs chiefly beyond middle age, at the time when the individual cells no longer have the power of repair. The hope of preventing death from these diseases rests in their early detection and in the application of sound personal hygiene. Methods of living must be established that will put on the defective organs only such burdens as they are capable of bearing. Since early detection is important, physicians have suggested that everyone, and particularly those beyond middle age, arrange to have an examination made at least once each year. This process is known as *periodic physical examination*, and is already being applied on a large scale in various ways in many communities. The attempts to introduce this method for the benefit of man have brought into the practice of medicine more intensely than ever before questions of commercialization of medical practice, of socialization and of paternalism. They have made a vital issue of what was formerly to a large extent a dream in the minds of socialists and of sociologists, of welfare workers and of idealists.

MEDICAL TREATMENT OF VARIOUS SOCIAL CLASSES

When a *rich man* becomes ill, he calls for a physician. Usually the physician goes to him, thereby using a considerable amount of time in traveling that might have been used in a hospital or in the physician's office for seeing a number of patients. When the physician sees the possessor of wealth, he does everything possible to find out the cause of the disease. If this cause is easily apparent, the physician is likely to prescribe medical or surgical methods immediately for the control of the condition. If the cause is not apparent, he may ask for additional advice, and specialists are brought to the

bedside. But he is more likely, in these modern times, to suggest that the patient be taken to a hospital of which the physician is a member of the staff, and in that hospital the patient is likely to have the competent attention of laboratory investigators, of roentgenologists, of specialists in diseases of the various organs concerned and indeed, if necessary, of several men of the type of practice in which the attending physician himself indulges. For every man concerned there will be a fee collected by each of them individually. The fee is usually equivalent to the type of service rendered; and because the person concerned is a man of importance, anything the physician does for him assumes proportionate importance.

A person of the *middle class* similarly afflicted and able to perambulate on his own power is likely to go to the office of his family physician. The physician, if he is a good one, will make a complete physical examination and will record the history of the patient; he will make such laboratory tests at once as seem to be necessary; if X-ray pictures are required, he may have them made at an X-ray laboratory in the same or a nearby building. As a result of the evidence secured, he will make a diagnosis—if not a certain diagnosis, at least a tentative one. If the advice of a specialist is required, he may recommend to the patient that he go directly to the specialist, and he is likely to explain to the patient the additional cost involved. In most instances this diagnosis and the treatment given will be successful. In many instances it may be necessary to send the patient to a hospital, in which case most of the procedures that have been mentioned for the wealthy patient will be called into effect. If the physician is wise, only such procedures will be used as seem to be of immediate importance in the condition concerned, and the extraordinary efforts usually applied to those with extra wealth are not likely to be employed.

The application of medical practice has been changed greatly by the development of the hospitals. The advantages lie in the ability of one especially competent physician to see many more patients in a single place where all the armamentarium of medical technique is assembled. But the disadvantages lie in a still greater depersonalization of the patient as he was seen at home. And hospitalization, too, continues to be a more and more mostly process. The rich can afford it. Some of the poor are provided with it through the increas-

ing burden of state aid and the accumulation of vast philanthropies. The middle class, existing in the kitchenette, must perforce have the hospital when it falls ill, for even the obscurity of nocturnal employment of the quarters devoted primarily to eating, bridge and listening to the radio, cannot tolerate pneumonia, ozena, or rheumatism. To the hospital then the middle class must go in increasing numbers; and it pays, as it always has and always will pay, for being the middle class. It has been habituated to having a middle class service from middle class physicians and there will be provided more middle class hospitals. But everyone knows that there will never be provided for the middle class the medical service that is given to a Rockefeller and for which a Rockefeller pays.

The middle class of late is always oversold on the luxuries of life purchased on the instalment system, and therefore has no money for medical expenses. A janitor whose wages had been garnisheed for non-payment on a grand piano, purchased a second hand automobile on the instalment plan two days later. When his wife fell ill he sought free service in a combined private and charity hospital. As she lay sick, friends and relatives called and brought with them some \$50 to \$100 worth of flowers in gaudy baskets, which were carried away from the hospital in the second-hand automobile and deposited on the grand piano, while the hospital bill and that of the physician remained unpaid.

If the person concerned be poverty stricken or a person of less than average income, he goes, perhaps, to an institution supported by public funds, in which he becomes the charge of physicians engaged in teaching medicine and thus under constant trial by their peers. Under such circumstances naturally he loses his privacy. In the institution all of the methods available to the modern practice of medicine may be had without cost to the indigent patient.

The person of any class, if he consults his family physician, is likely to have more than an even chance for good medical care without exploitation. The poor man, or the person of low middle class is unfortunately the one most frequently exploited by all of those on the borderland of medical science. He it is who usually provides the primary source of revenue for chiropractors, osteopaths, electric therapists or naturopaths; he it is who is likely to attempt to save the cost of a visit to a physician by purchasing a patent medicine widely advertised in the press, or by ask-

ing his corner druggist for a prescription; he it is who is likely to belong to a fraternal order which maintains a lodge doctor. He is one who may be working in some large industrial plant or factory where a certain sum is taken from his wages each week to pay for the treatment in the factory hospital or for a visit from the factory doctor when he becomes sick. He is a man usually poorly educated regarding his own body. He falls victim easily to all of these medical wiles before he is turned by his indigence into community care, and he gives most concern to the workers of welfare.

One of the most Utopian of all writers on the relationships of medicine to the social scheme recently said:

"The principle that all who can should pay their own doctor and nurse is sound enough until some better plan is devised, but the principle that all who need professional attention should have it, and should have it promptly and that it should be as good as the existing state of the science of medicine permits, regardless of the patient's financial circumstances, is making its way to general acceptance. Whether this will lead to a general system of state medicine, comparable with the public school system of education, or to a system of health insurance, which deals with the financial aspects of sickness, or to some entirely different plan is still uncertain; but that there is to be a radical change which will emancipate health in some way from the fetters of the existing acquisitive economic system, as we have already emancipated elementary and secondary education, seems reasonably certain. In any socialized system of public hygiene, there will be provision for free periodic examination, regardless of known ailments, and there will be some financial provision for the families of those who like the tuberculous may need long continued sanatorium care or a complete change of residence or of occupation."

Perhaps one of the most remarkable of the statements that have appeared on this subject is that of the president of the American Public Health Association, in his address before that body in October, 1926. Professor C. E. A. Winslow pointed out what he considers an inadequacy of medical care in this country, emphasized the schemes for periodic physical examination, group medicine, industrial medicine and national health insurance that have been adopted in various places and considered the health center movement as it has developed in the United States.

"The purely individualistic practice of medicine as it has existed in the past," he said, "must be increasingly supplemented by form or forms of organized medicine which will offer to the individual modern scientific medical care including laboratory and specialized consultation service on an economic basis, which will facilitate its application to the prevention of incipient disease—probably on some basis which involves payment of

the physician through a common fund for the supervision of the health of an individual rather than for the treatment of a specific ailment."

He qualifies the health officer as the official responsible to the community for the promotion of health. He urges co-operation with the medical profession, but he concludes with a challenge:

"It will be the duty of the health officer of the future to see that the people under his charge, in city or county, in palace or tenement, have the opportunity of receiving the best medical service on terms which make it economically and psychologically easy of attainment; and, himself, to furnish such service if and when, it cannot be provided in other ways."

Winslow recognizes, since he has for many years followed the trend of public health and medical practice in this country, the definite attitude that the medical profession of the United States, as well as that of most other countries, has taken against all systems that can be included under the heading "state medicine." While Winslow will admit that some things are better done by the individual and some by the state, he is inclined to urge that public and private health are functions of the state. He pleads that an organized medical service will be financially favorable to the medical profession, although he recognizes that in the past many such systems have led to commercialism, that industrial medicine may become a mere instrument for fighting compensation claims and that the sale of salaried medical service to the public by non-medical profit-making organizations is unsound.

"The administration of insurance plans and of health centers," he says, "must be safeguarded with meticulous care if we are to avoid inadequate compensation for physicians, lowered standards of service, loss of independent initiative and the deadly blight of institutionalism. It will take the maximum of broadminded statesmanship on the part of both health officials and the medical profession, if the good results of organized medicine are to be obtained without their possible attendant evils."

Apparently Professor Winslow is one of those optimistic men, who, like William Jennings Bryan, believes that when there is a demand for leaders, God will provide them; that when a trained soldier is needed he will spring as the legions of mythology sprang from dragons' teeth sowed in the soil. Neither American nor any other civilization has yet revealed a statesmanship of such magnificent mentality as to be entrusted safely with the administration of a state system of medicine.

HEALTH INSURANCE IN GERMANY

It is interesting, if not amusing, to gaze upon the analyses of medicine as practiced

by national health services in England, Germany and other foreign countries, and to find how suavely the promulgators interpret what they see. If one is to believe Mr. Michael M. Davis, the German system of medical care by the sick benefit or insurance societies is a glorious accomplishment for the common people of that state. He obtained his views, however, largely from Dr. Walter Pryll, the organizer and medical supervisor of the federation of these societies. Davis asserts that the members and their families are having better treatment than they ever had before, that the physicians are supplied with equipment and assistance and laboratory facilities, that they are granted adequate salaries with old age retirement and pensions for widows, that they develop clinics for prevention as well as for cure.

Since the establishment of the health insurance system in Germany, more than 40 years ago, there have been continual battles between the physicians and the insurance societies as to the institution of medical service. In 1923, the physicians under the leadership of the national association went on strike, absolutely refusing to provide medical service for the hundreds of thousands of insured members and their families. Dr. Pryll recounts with pride to Mr. Davis how the sickness societies were able to beat the medical profession by the establishment of clinics, although it was necessary to make concessions to some doctors of a little private practice so that the physicians might not wipe themselves out entirely from medical society.

In contrast to the scene as viewed through the roseate spectacles of Dr. Pryll and Mr. Davis, one may look at the record as told by Dr. Erwin Liek in his recently published book on "The Physician and the Future." Dr. Liek sees a medical profession degraded beyond measure. He sees physicians attempting to serve 90 or 100 patients a day, at the same time completing a vast amount of paper work, recording cases for the insurance organization that needs the paper work more than it needs the medical attention. He sees physicians with little hope for the future, working only to complete the day's stint of patients, knowing that tomorrow is merely another day. That type of physician has little or no interest in medical research. He has no more pride of occupation than the man who spends each day turning the same bolt on the same axle in the assembling of a cheap motor car. *He is no*

longer the practitioner of a profession; he is essentially the salesman of a small stock of medical goods. The dreamer and idealist may say that this system is attempting to realize better medical service for less money. It may be realizing less money, but no one knows so well as the physician who practices that type of medical practice that it is not realizing better medical service.

HEALTH INSURANCE IN GREAT BRITAIN

In Great Britain the medical profession bitterly fought the health insurance scheme, but was forced by demagogues into present conditions. When the health insurance scheme was finally adopted physicians made as good a compromise as seemed possible. The secretary of the British Medical Association, commenting on the situation for *The Journal of the American Medical Association*, pointed out that the scheme now in effect brings about a vast amount of increased clerical work and throws upon many physicians a demand which they cannot possibly fulfil satisfactorily. He warns American physicians that if such schemes are proposed in this country, they should insist on being consulted before the scheme gets to the state of crystallization in legislation. "Unless they are watched and resisted," he says, "administrators tend to multiply laws and red tape." Knowing the attitude of the average man when questions of finance are concerned, Mr. Cox cautions sagaciously that it will be best not to say too much about money. The average man is little concerned with the income of the other fellow.

The most recent pronouncement from Great Britain is a call to resist still further encroachment on the practice of medicine. The *British Medical Journal* of February 19, 1927, calls attention to two declarations of policy made in an address by the parliamentary secretary to the Minister of Health. In that address the secretary said with regard to hospitals that "the government stood firmly by the voluntary organizations and hospitals." He declared that "the government's policy was wholly opposed to the creation of state medical service. It would not be in anybody's interest," said Sir Kingsly Wood, "to take the work now being done by the medical practitioners of the country and put it in the hands of whole-time public servants." The *British Medical Journal* confidently assures its readers that the defenses against any frontal assault on ex-

isting methods are secure. *But it warns them also that the question of increased communal provision for the giving of medical advice and treatment to certain sections of the population, whether mothers and babies, school children, or dependents of insured persons and others in like economic position, the decision as to whether this shall be effected by municipal clinics and treatment centers which are or have a tendency to be, staffed by whole-time medical officers or shall be brought about by an insurance or other system in which the best features of purely private practice, including an effective freedom of choice of doctor, can without difficulty be incorporated, is the most vital of questions to be determined by the profession, the social reformer and the politician.* The one method leads insidiously but scarcely less certainly to a whole-time state clinical service; the other can be used effectively to maintain all that the medical profession holds most essential and all that the public has learned most to appreciate in its relations with members of the profession.

Much has been written relative to the Sheppard Towner legislation conferred on a willing populace by a sentimentally minded congress, and placed in purgatory by the last congress through the enactment of an extension for two years, with the agreement that no further attempts would be made for such legislation at the end of that period. This legislation was the outgrowth of promises made in the platforms of both major political parties in a presidential election, held just after the right of ballot had been conferred upon the feminine portion of our population. It was supported by the women's clubs and women's periodicals of the country. The legislation could not fail. Now the sisters of the woman's press are endeavoring to force congress into a re-enactment of this legislation at the end of the present two year period. Sheppard-Townerism is inevitably an inroad of the state into medical practice. The legislation is economically unsound; it did not accomplish what its proponents claimed for it.

There is yet to be found a nation in which a system of state medicine, so far as already established, has met with the full approval of a large majority of either the public or of the medical profession. True, the salaried officers charged in each instance with the administration of these activities are likely to speak of them with glowing enthusiasm and to urge them still further on the public. The socialistic re-

former and the idealist are likely to insist that these schemes must work satisfactorily because in Thomas Moore's "Utopia" and in Samuel Butler's "Erewhon," and in every other dream the wishes, as Professor Freud himself insists, always come true! But in the practical affairs of everyday life the wish is only too often lost to realization. The difficulties inherent in any scheme of socialized medical practice employing full-time salaried physicians for the prevention and cure of disease are inherent in all of them. Socialization makes the best men seek other fields because individual thinkers will not be bound by routine schemes. Under socialization the seeker for pecuniary returns multiplies his visits to the sick in order that he may add to his fees, while the sick multiply their visits to the physician in order that they may take more time from work and get back more money from the insurance organizations. In this country today there are already a half-dozen schemes of medicine practiced on a social, a commercial, or a group basis, the type of medical practice that will lead, unless controlled, to state medicine or community practice.

The Committee on Public Policy of the Ohio State Medical Association has listed most of these tendencies in the following paragraph of its most recent report:

"In considering problems in policy," said the committee, "we have been confronted with many factors tending to socialize medical practice; including the rapid extension of free clinics; growth of health insurance ideas in groups and classes; wide varieties of surveys and demonstrations; widespread propaganda for nationalization of property and socialization of personal service; increase in 'health charity' to those able to pay; 'state medicine' personal health service in educational institutions; wide variety of organizations exploiting some 'public health' ideas; and the tendency of governmental agencies and departments, through bureaus, inspectors and investigators to interfere in the relationship between patients and their individual physicians.

"We believe both from the standpoint of the public and the private practitioners of medicine that there should be no further evidence of governmental control and supervision in the field of health and medicine until after very careful thought and study."

Contrast with this point of view that of the director of one of the largest of the so-called welfare funds, as voiced in the foreword to a recent report:

"Government is society's most effective means for requiring universal participation in effort at self-help to a higher status. By making a given social improvement a function of government itself, and by providing, through taxation, machinery for its development, the means of self-help to the desired end theoretically are firmly established. Much laudable social work, therefore,

the value of which has long since been demonstrated to the satisfaction of experts, must be initiated and fostered through its introductory stages by voluntary groups of individuals, sufficiently informed of its needs and of its value to sympathetically associate themselves in it. When a large number of government's constituency sufficiently recognize the importance of the new work to support its incorporation into the government program of activities, success is promised."

In the report of another such welfare group, its director said:

"The exact part which the practicing physician is to play in the local public health program is a most important subject and perhaps the most hopeful things has been the recent shift in emphasis from the debate as to the rights of the physician and the possible interference with these by the public health worker to the more constructive consideration of the opportunity which is open to the average citizen for greater service from the physician in keeping well, and the opportunity of the physician for developing preventive practice, which may give him an even more commanding position in the public health program."

It was an ancient aphorism that said, "Beware the Greeks bearing gifts."

DEMONSTRATIONS

Demonstrations made by many of the great welfare organizations for child care, for the control of tuberculosis, for general relief from all disease, are of value in showing what can be accomplished under ideal conditions in a community. What is to be said, however, of a child welfare demonstration put on at a cost of approximately \$3.00 and some change per capita for the persons in the community, which then departs leaving the community to work out its welfare as best it may on a per capita of under ten cents per person in the community? Yet such instances are not rare among demonstrations. A person or a community gets exactly the kind of medical care that it is willing or able to pay for.

THE CURSE OF PHILANTHROPY

Not only physicians, but also sociologists, psychologists and economists have on frequent occasions in recent years devoted pages of anathema to the curse of philanthropy. Ever since it was realized that pauperization resulted from much of the practice of free medical clinics, committees of physicians and investigators have issued pronouncements against uncontrolled application of charitable funds to medical care. The great problem of the past quarter of a century has been to use for the public good the benefits to be derived from medical science. The possibili-

ties for good logically have made medical research and medical education the beneficiaries of more philanthropy than has been accorded to art institutes, sculpture and general cultural and municipal improvements. They have also given rise to the new professions of social worker, public welfare counselor and the executive secretary, whose sinecure recently attracted the vitriol of Mr. Mencken's pen.

Prof. Hans Zinsser of the department of bacteriology in the Harvard Medical School, under the attractive title "The Perils of Magnanimity" cleverly tosses a series of shafted and veiled barbs into the control of medical education exerted by the General Education Board and similar endowments. Dr. Zinsser's note of warning against standardization of medical education, through the economic pressure exerted by philanthropy, is timely. The medical professions in various communities have already protested against attempts by health demonstrations and similar movements to destroy initiative and individual relationships in medical practice.

PERIODIC EXAMINATION AND CORPORATION PRACTICE

Insurance companies have endeavored to supply periodic physical examinations through their own examiners, through the use of an intermediary corporation known as "The Life Extension Institute," and more recently by recommending to their policy holders that the latter go directly to their family physicians. In addition to these plans, many industries have provided examinations on entrance into employment for all workers with a view to protecting industry against persons likely to suffer unduly with illness; some have provided for repeated examinations by full-time salaried industrial physicians. Several corporations have been formed to sell the services of salaried physicians to the public. In a recent survey of the health of department store workers, the authors recommended that all department stores establish full-time health service with periodic physical examination free for all employes. If the department store workers, the telephone workers, the laundry workers, the steel workers, the motor car workers and all others employed in gainful occupations in the United States are to be given free periodic physical examinations by the industry in which they may insure themselves, it is obviously ridiculous for the general practitioner to attempt to give such service as a part of his regular occupation. Nevertheless, it has been argued

by every practitioner with a knowledge of the questions involved in the practice of medicine, that the only person who can properly make and repeat the periodic physical examination is the family physician. He alone is or should be familiar with the family and all of its branches; he alone is concerned first with the interest of the patient and not with the interest of the industry. Above all, he alone is interested in providing service to the patient who is his employer under the circumstances, and not to some other employer, either the industry or the government.

CHICAGO BAR ASSOCIATION PROTEST

Medicine is not the only profession that is beginning to feel the inroads of commercial or corporation practice. The Chicago Bar Association recently sent a circular to all lawyers advising them that corporations, including banks, trust companies, real estate and brokerage houses are engaging in the practice of law. Banks and trust companies are drawing wills, associations advertise that they can secure reductions in special assessments, real estate firms probate estates, attorney's fees are charged in foreclosing and making loans, and banks charge attorney's fees for drawing up papers on loans where printed forms are used, and only a clerk needed to see that the signatures are on the proper dotted lines.

VENEREAL DISEASES AND THE CORPORATION

The sociologists urge that venereal diseases are to be controlled only by education regarding the method of contracting the disease and the treatment of all persons afflicted. Some earnest but misguided philanthropists in Chicago established an institute with a group of salaried physicians to treat all who might apply at fixed fees, lower than those charged by the majority of physicians in the community. The salaried physician is a routine, commercialized physician. The organization concerned has yet to make available a scientific report of the effects of its method of treatment. It has introduced methods of competition, including full-page advertisements in the press, in which a self-respecting physician could not possibly engage. It has taken away from the physicians who have prostituted their knowledge by employment with the concern every element of self-respect, every hope for the future.

GROUP PRACTICE

Group practice, either that provided by salaried physicians employed by corpora-

tions of business men, or by stock companies or partnerships of physicians who are good business men, has usually failed in the past and will continue, no doubt, to fail in many instances in the future. Business is business, and medicine is medicine, and never the twain shall meet. Doctors continue to urge and demand a study of business methods under the name of "medical economics," but a sincere application of what are known as true business methods is not compatible with the ideals of medicine and means certain medical failure.

CONTRACT PRACTICE

Among the most pitiful of all of the methods of practice of medicine by salaried physicians paid by corporations are some of the schemes included in what is vaguely called "contract practice." The Judicial Council of the American Medical Association has given special attention to this problem. In its excellent report at the 1927 convention of the Association, it makes clear the point of view that organized medicine must take in relationship to this subject. The term "contract practice" as applied to medicine means the carrying out of an agreement between a physician or a group of physicians and a corporation, organization or individual to furnish partial or full-time medical services to a group or class of individuals for a definite sum or for a fixed rate per capita. The Judicial Council found that there are many conditions under which contract practice is not only legitimate and ethical, but in fact the only way in which competent medical service can be provided. It mentions, for instance, cases in which a large number of workmen are employed remote from urban centers, as in mining or logging camps. It mentions certain industrial situations wherein large employees of labor are compelled by law to provide certain medical service to employees and it recognizes that there are communities too small to offer sufficient inducement to a competent physician to locate there for practice. It formulates, however, definite conditions which absolutely establish a contract as being unfair or unethical. Certainly when the compensation received is inadequate as based on the usual fees paid for the same kind of service by the same class of people in the community, when the compensation is so low as to make it impossible to render competent service, when there is underbidding by physicians in order to secure the contract, and when a reasonable degree of free choice of

physician is denied those cared for, contract practice is unfair, unscientific, and harmful both to the public and to the medical profession.

One need only listen to the stories told by physicians living in communities where contract practice is the rule on a large scale to realize the difficulties involved. Reports are made of physicians making fifty calls after dinner in the evening on patients who are on the contract list. Obviously, under such circumstances it is impossible for the physician to make even a perfunctory examination. Certainly when he is compelled in addition to fill out blank forms, to write prescriptions and to do all of the other things that are necessary in such practice, he cannot render competent medical service. He becomes the slave of a routine which makes him satisfied to do the least possible instead of the best. And if he looks back at the wasted career, he will say, as I have heard every physician who has followed such practice say, that never under any circumstances would he permit his sons to engage in medicine as a profession.

THE PHYSICIAN OF THE FUTURE

What position will physicians eventually occupy in the cosmic scheme? There should be no serious disturbance of the mutually beneficial relationship that exists between the adequately educated intelligent physician and his intelligent client who chooses his health adviser and co-operates with him in promoting personal and family health. Probably such effective and mutually helpful service will be in great demand so long as personal liberty lasts. Ever tightening laws, rules and regulations may still further embarrass both the personal health physician and his patient. State medicine—government medicine, socialized medicine—may continue to expand until many physicians and many people will become elements in some vast government machine. But private arrangements for personal and family health service are likely to continue indefinitely to demand skilful physicians to care for the most intelligent people.

CRITICISM OF THE INDIVIDUAL

Practicing physicians are not infrequently criticized by public health officers, welfare workers, publicists and others because of their alleged neglect of anti-smallpox vaccination, anti-typhoid vaccination, anti-diphtheria inoculation, and other practices calculated to prevent dis-

ease. The accusation is a challenge to the medical profession. The value of the measures has been established beyond any doubt. The physician must do his duty to his public in caring for their needs or the public will get them cared for in some other manner. However, the general practitioner should not accept the full responsibility for all these sins of omission. Many of those who now criticize have for some years been "educating" the public to the belief that the public health clinics, health centers, voluntary health bodies and what-not were anxious to render these services "free" to rich and poor alike and that "free" meant both the cost of materials and medical service. Is it not logical to charge part of the disturbing conditions to the error in "education" of the public; to the inadequacy of the free service and materials; to indifference?

The physician must pay license fees, federal, state, county, municipal and other taxes, must spend thousands for essential equipment and transportation facilities, must serve free the poor among his clients, and must live as other citizens. How can he be expected to compete with "free" service?

Formerly, protective inoculations and similar forms of medical practice were a responsibility of physician to his patients, with government and other charity-serving organizations looking after the poor. Although most of the controllable infections were among the poor, organizations, government and otherwise, decided to extend their charity to all alike. Some now criticize physicians because many of them discontinued the practice of preventive medicine in the face of such competition. The intrusions and interferences not of physicians' choosing but are being forced increasingly on the public and physicians by the unwarranted attempts at expansion of government into phases of personal health.

The practice of medicine has changed with the increase of knowledge that has come in the past twenty-five years. The young man entering medicine today represents an investment of six to eight years of time during which he not only sacrifices the money he spends in securing an education, but the money he might have earned and the income from both of these sums, an amount calculated to be from \$12,000 to \$15,000. In return for this, he has been enabled to look forward to a leading position in the social scheme, with the possibility that after several additional years

of toiling and striving he may be able to make a fair living. What if he is to look forward to a salaried position yielding from \$250 to \$400 per month in a large organization in which he automatically follows a narrow routine? He is no longer a physician; he is no longer treating human beings for the relief of their ailments. He has become a tonsil mechanic, an adjustor of adenoids, or an inspector of gonorrhoea. The prospect is not likely to appeal to the type of man who now becomes a physician; it would not attract even a chiropractor or a Christian science healer. What then of state medicine! State medicine might indeed provide a standardized diagnosis and treatment for a standardized citizen. If medicine were chiropractic, state medicine would be quite compatible with its practice, but state medicine is the death of initiative, of humanity, of science. Until we become a nation of Robots with interlocking, replaceable and standardized parts, there will be little chance of such completely standardized doctors.

BEAUMONT: MICHIGAN'S PIONEER PHYSIOLOGIST

BURTON R. CORBUS, M. D.
GRAND RAPIDS, MICH.

Vaughan, Osler and Meyer have so competently and so splendidly extolled the life and work of this man whose memory we are honoring today that the obligation to attempt a further appreciation of his life is one that I approach with a considerable degree of temerity. Yet it is an obligation that carries with it an honor that I would be loath to forego.

On a June day in 1812, a young man presented himself to the Medical Examining Board at Burlington, Vermont. His examination being satisfactory, he was recommended "to the world," so the license reads, "as a judicious and safe practitioner in the different avocations of the medical profession." So is introduced Dr. William S. Beaumont.

He had had a common school education, had taught for a year or so, and then had, with rare judgment, apprenticed himself to a physician of unusual ability, Dr. Benjamin Chandler, of St. Albans, Vermont. With him he studied for two years. This was his entire preparation for the practice of

medicine and for the research work in which later he was to show such unusual ability.

Although such preparation was apparently most inadequate, it must not be overmuch depreciated. There are many today who feel that the return in part to the preceptor system would be a distinct gain for our present medical education. The contact with a capable practitioner, the early opportunities for contact with the patient, the chance for a practical application of the preceptor's instruction,—all of these are of inestimable value.

Beaumont was taught the value of close observation of the patient, of the need of careful history taking, of logical thought, and more than these, Dr. Chandler furnished the young student with inspiration and incentive. Since a boy he had had an unusual urge to put things down on paper. This was perhaps, to some extent, influenced by the fact that he was quite deaf. He kept a diary in which he put down the details of his life, his speculations on philosophy, on life, on religion, the impression left upon him by his reading of the classics, and frequently whole paragraphs from these same classics, more particularly relating to conduct.

He was already a good observer. His case histories of the patients whom he saw during his apprenticeship, are most voluminous in their detail, and his picking out of the salient points and his conclusions, even admitting the help that he must have received from his preceptor, were of such a character that it seems almost impossible that one with so little training could be so accurate. They are today worthy of the study and the emulation of the graduating doctor and the intern in our hospitals. This ability to observe, this willingness to study, this urge to put down on paper his observations and his conclusions, made an excellent ground work for his later studies.

A dozen years later he was to be made an honorary member of the Medical Society of the Territory of Michigan in appreciation of the work which he had done on the physiology of digestion, a work just beginning, but which was destined to make him one of the pioneer American physiologists and the foremost in the study of gastric digestion.

Almost immediately after receiving his license, he entered the army. The war of 1812 was on and his service was very active. As always, he took full advantage of his opportunities, and his worn buckskin pocket notebook is filled to overflowing

* Address delivered at 107th Annual Meeting of the Michigan State Medical Society, Mackinac Island, June 16-19, 1927, on the occasion of the unveiling of a new tablet placed on the Beaumont Monument.

with detailed descriptions of his cases. Here, too, fate offered a further opportunity of far-reaching consequence. One of his associates was Dr. Joseph Lovell, with whom he formed a friendship destined to be lifelong, and which proved to be of incalculable value to him in the prosecution of his life work.

With the end of the war, Beaumont resigned to enter practice in Plattsburg, New York. However, with the advent of Dr. Lovell to the surgeon-generalship of the United States Army, and the offer of the surgeon-general of a responsible position in his office at Washington, the thoughts of Beaumont turned again to the army. Although refusing the desk appointment, he shortly afterward applied for a commission. His first assignment was to the Fort on this island, Fort Mackinac on the Island of Michilimackinac.

It was a long trip from Plattsburg to this island in the wilderness, but the island was perhaps better known in the east than it is today. A favorite camping spot for the Indians, the scene of many a bloody battle, a settlement from the days of the early explorers, a familiar stopping place for La Salle and Tonti, and Father Marquette, furnishing a company of Indians and French in the Revolutionary War, taken by the British in the war of 1812, (now again under the U. S. flag), one of the most important posts in America of the American Fur Company,—it is likely that Beaumont was familiar with the story of the island.

He landed in June. June seems to have been a most eventful month in his life. I find this entry in his diary written 107 years ago this day, June 18, 1820,—

“Assumed the charge of the hospital and commenced duty in the U. S. service.”

He found on the island about 500 people, mostly French Canadians and Indians in the village on the beach below the fort. For his associates he had the officers of the fort and the officers of the American Fur Company. It was noted that the total number of white women on the island was twelve. One can imagine that life during the winter was quite uneventful and rather dreary, but once a year Michilimackinac became a very lively place. To the island came from all the north and the northwest, the Indians, the voyageurs, the traders of the American Fur Company bringing their loads of pelts, the result of their winter's work. They came in such numbers that the usual population of the island increased more than ten fold. It

was made a gala occasion, and the business was not to be hurriedly disposed of. It was a time for celebration.

On such a day as this, in still another June in 1822, the usual jollification was on. In the basement of the American Fur company's store a jostling crowd was bartering and gossiping, when suddenly a shot gun was accidentally discharged into the breast of Alexis St. Martin, a young French Canadian who stood about three feet distant. Surgeon Beaumont of the Fort arrived some fifteen minutes later. The stage is set and the curtain is raised on the play which will last for many years and will lead to the most important discoveries in the physiology of digestion, greater than the sum total of knowledge up to this time and greater than the discoveries of any one man since this time.

The story is well known, how in the healing of the wound a fistula was formed which permitted the outpouring of the gastric juices and made possible a certain degree of visualization of the interior of the stomach. The man and the opportunity had met, although Beaumont was not to immediately recognize the opportunity.

A year later the patient was still far from well. Without means he had long before this become dependent upon the charity of the village, and it was proposed to return him as a pauper to Montreal. The two thousand mile journey in an open boat, as planned by the village authorities, was quite likely to prove disastrous.

At this juncture Beaumont, out of the kindness of his heart, not willing to see his patient suffer from the arduous trip, took St. Martin into his home, a not inconsiderable obligation to a man whose salary was only \$40.00 a month and who had but recently been married.

Alexis had been in his home some time before he saw the possibilities. He says himself,—

“A mere tyro in science, with a mind free from every bias, I commenced them, (the experiments) as it were, by accident.”

But then, to use Osler's words, “he recognized, grasped and improved the opportunity which fell in his path with a zeal and unselfishness not excelled in the annals of medical science.”

His studies on Alexis St. Martin practically ended with the publication of his book,—“Experiments and Observations on the Gastric Juice and the Physiology of Digestion” in 1833. Interruptions had been many. St. Martin was difficult to handle. On at least one occasion he took French

leave of his benefactor in the midst of his experiments, and once away from Beaumont it was always difficult to get him to return. Permitted to go home for what was expected to be a short visit in April, 1833, Beaumont was never able to get him to return for further experimentation. He never gave up the effort, however, and up to the time of his death he continued to make advances and ever hoped he might continue the work.

There is no evidence that Beaumont at any time received any financial assistance in the prosecution of his experiments. The only exception to this is that at one period the Surgeon-General arranged for St. Martin to enlist as a private in the United States Army, and assigned him to Beaumont.

Repeatedly it was found necessary to send emissaries to Canada to plead with St. Martin to return. When successful, Beaumont not only paid him rather well, but usually supported his wife and his rapidly increasing family. One marvels that an assistant surgeon's salary could encompass so much, and knows that it could only be done by extreme sacrifice.

His friend, Dr. Lovell, the surgeon-general, gave him most valuable assistance,—made it possible for him to study in Washington for a period of time, and made it possible for him to be stationed at Plattsburg while he was publishing his book, but the exigencies of the service were often such as to prevent progress. In spite of his discouragements he continued with his work,—carefully investigating, laboriously studying the literature, not hesitating to go for help to the leaders in physiological research, getting from Prof. Dunlinson of the University of Virginia, the leading American physiologist, and Prof. Silliman of Yale, the leading American chemist, valuable advice, suggestions and confirmation of his findings, and always truthfully reporting.

As a part of the preface of his book he says,—

"I submit a body of facts which cannot be invalidated. My opinions may be doubted, denied or approved, according as they conflict or agree with the opinions of each individual who may read them, but their worth may be best determined by the foundation on which they rest, the incontrovertible facts."

And again later in his work,—

"Truth like beauty is when 'unadorned, adorned the most' and in prosecuting these experiments and inquiries I believe that I have been guided by its light."

With such ideals it is not strange that

for the most part his contemporaries were impressed with the accuracy and truthfulness of his observations. Combe, the leading English physiologist of the day, says,—

"It would be difficult to point out any observer who excels him in devotion to truth and freedom from the trammels of theory or prejudice."

Although Beaumont's fame rests on his research work, it is well that I point out that measured by the accomplishments of a lifetime, this work was only an important incident in an otherwise well filled life. He was an excellent army surgeon who was frequently called upon for specialized duty.

Retiring from the army in 1840, he began practice in St. Louis where his special abilities brought him immediate success. He was offered, and accepted, the chair of surgery in the Medical Department of the St. Louis University, then in its inception, and took a prominent and active part in the professional and social life of the community until his death in 1853, at the age of 66.

DEDICATION OF BRONZE TABLET

"Near this spot Dr. William Beaumont, United States Army, made those experiments upon Alexis St. Martin which brought fame to himself and honor to American medicine."

So reads the inscription on the monument erected jointly by the Upper Peninsula and the Michigan State Medical Societies, and dedicated June 10th, 1900. In unveiling this new tablet and re-dedicating this monument to this pioneer American physiologist and a fellow member, the Michigan State Medical Society is moved by a desire not only to honor the man and his work, but by its desire to emphasize to the medical youth of today the value of close observation, of logical thought, of analytical deduction, and last but not least, the virtue of truthful reporting.

With such an armamentarium and the desire to seek new truths, opportunities will be found to add "a mite to the promotion of medical science."* Much still remains to be done to make this world a healthier, a better and a happier world to live in. Discoveries in medicine, accomplishments in research, are products not limited to university and subsidized research laboratories. Harveys, Jenners, Beaumonts, Kochs, Longs and Bantings, country doctors all of them, will continue to appear and will not be submerged by the lack of apparent opportunity.

* The introduction to Beaumont's report to the Surgeon-general commenced,—

"With an honest desire to contribute, if I may, a mite to the promotion of Medical Science."

May the accomplishments of Beaumont, attained through sacrifice and disappointment, handicapped by a lack of facilities for the prosecution of his experiments, and by a lack of scientific training, carried on with great industry, because he held an overwhelming urge to DO, continue to serve as an incentive and an inspiration.

SPEAKER'S ADDRESS IN THE HOUSE
OF DELEGATES, MICHIGAN STATE
MEDICAL SOCIETY, JUNE 16, 1927

WILLIAM K. WEST, M. D.
PAINESDALE, MICH.

I wish to thank the delegates who were in session last year and elected me Speaker. I fully appreciate the difficulties of the office and hope I may have your patience in the performance of its duties.

Medical organization is essential for the advancement of medical science, as all work is better done by the group than by the individual; and so the physician is benefited when he meets with his fellows at stated intervals; the more often the better for him, whether there be a few at the county meeting, a few hundred at the state meetings, or thousands at our national meetings. At the larger meetings, with a broader program, the doctor can select some subject that he is particularly interested in, glean new facts and apply them on his return. The public might well watch the interest shown by their physician in attendance at medical meetings or larger clinics.

The social side of any meeting is pleasant and important. Here the doctor learns to know his fellow practitioner as a human being, and many prejudices existing between them, due to petty jealousies or resulting from the wagging tongues of over enthusiastic friends and patients, can be removed.

Then the questions of public policy and relations of doctors to themselves and to the public, which are handled by the House of Delegates, are very important functions of a society. These different subjects are embraced in the work of the different committees, which report at the meetings, and the greatest feature of this work is that the benefits accruing from their efforts are for the benefit of the public, through the safeguarding of their health and the prevention of disease. This Society is only interested in such laws, passed by the legislatures as relate to safeguarding public

health rather than helping the individual physician.

In spite of this beneficent work of organized medical men of the highest intelligence, it is remarkable how little of it is understood and appreciated by presumably intelligent people. However, an advance is being made, and the need of the best education for medical students, and the great value to every community, as well as the city, of properly conducted hospitals, are now recognized as they never have been before. Michigan can be proud of the advanced position it now occupies in these matters. The County and the State Medical Societies foster the great work of advanced medical thought. The Journal published by this Society we have reason to be proud of, and every intelligent doctor in the state receives great benefit from it. Group clinics going to every part of the state, promulgated by this Society, are of immense value to the local doctors, especially those who may not be able to get to the state meeting. Then the State Department of Health—for years ahead of those of most states, and we feel assured, will be kept at that high level—is of great value; more than can be estimated, both by the assistance it gives the profession and the safeguarding of public health. There is much for the benefit of the public and physician that must be handled by the House of Delegates, and it is important that each delegate realize the importance of his work. Each component County Society should be careful in the selection of their delegates and send to the State Society only such men, of known character and medical training, that the work done here will reflect the highest ideals of present medical thought.

Commercialism—the bane of medical practice—should have no consideration here, any more than it has in the scientific papers presented in the different sections. If those ideals prevail at these sessions today, as well as in the section meetings to follow, each physician attending will leave benefitted, and his absence from home will be something more than an outing.

Cushing, in his great work on the life of Osler, states that Dr. Osler practiced what he preached and regarded the attendance at medical meetings as one of his professional obligations—an obligation moreover which he made a pleasure. Not only did he attend many each year, both local and national, but he was frequently on the program. Osler himself wrote in the Canada

Medical and Surgical Journal in 1881, "that the majority of the members of the medical profession in Canada take no interest other than pecuniary in their calling, would appear evident from the half-hearted way in which societies and associations are kept up."

It is fitting that we again meet at this historic spot, made memorable in medical history by the scientific work of Dr. Wm. Beaumont; the results of which he finally gave to the medical world in 1833 in a paper entitled "Experiments and Observations on the Gastric Juice and the Physiology of Digestion." As you are probably all aware, the opportunity for this great work resulted from the shooting of Alexis St. Martin in the stomach. A fistula into the stomach followed the healing of the wound, and through this fistulous opening Beaumont was able to make his observations. Dr. Beaumont became a member of the Michigan State Medical Society in 1825, and at the following meeting, one year over a century ago, gave a preliminary report of this work in a paper he read before the Society. Only seven years before, in 1819, was the Michigan State Medical Society originally organized, and we can be proud that in its early years, with a small membership, such great work was done by one of its members; as, previous to this time, little was known of the gastric juice and the processes of digestion.

It is this work of Beaumont and the fact that he so ably utilized his opportunity for advancing the science of medicine that has given me my theme for a short address to you today.

This paper might be entitled "A Plea for a Higher Grade of Practice of Medicine," and the ideas suggested are more for the doctors in general practice, particularly the younger men going out of our hospitals after an internship of one year or longer. It has been my privilege to have had for over thirty years a very extensive experience with the younger men in the profession; that is, for one not connected with any large or teaching hospital. These young men have been of two classes, those who came from Ann Arbor after graduation for their internship, both at the Calumet & Hecla Hospital and later at the Copper Range Hospital, which I have charge of. Many of them were the most brilliant men in their classes. Their coming to us was through the courtesy in the first years of Doctors Vaughan and Dock and later Doctors Reuben, Peterson and Cabot. The others had finished their in-

ternships at larger hospitals and sought positions with us as assistants, some of them remaining several years. From the type of service they gave us and from watching their later careers, I have been able to learn their different ideas and ideals regarding the practice of medicine and note the results. It is unfortunate that so many younger men look upon the commercial side of medicine and the income they are to receive as the most important; even turning down positions in which the opportunity for experience and the associations would be of the greatest value, to take a position not nearly so good but offering a larger salary. Some of these men with ability and by hard work have later made good. But the average man has almost invariably lost by it, with the eventual incomes much smaller than those of the others, who have been more interested in the study of medicine and the opportunities for experience. I am not arguing for one moment that the doctor should lose sight of the business side of medicine. As a class many of them are underpaid, but for the first several years at least, a broad foundation of the science of medicine should be built. I heard the dean of one of our leading medical colleges make the statement, in an address a few years ago, that only 10 per cent of medical graduates made a success in medicine. No one probably is better informed than he as to the facts, and it is a strong arraignment. During the past few years medical progress has been so fast that it has become increasingly difficult for any one mind to grasp it at all, and medicine has been taken from an empirical basis and placed on a scientific one.

The practice of medicine is a profession, not a trade; and the responsibilities it entails and the ideals aimed at are higher than those of any other vocation. You cannot measure the success achieved in it on a pecuniary basis, as the saving of human life cannot be figured in dollars and cents. Yet the physician appreciating the humanitarian side of his great work and with a scientific training and interest very often has a large income. The graduate in medicine today has this training, far greater than they had a quarter of a century ago.

At no time has the practice of medicine and its specialties been on such a rationally scientific basis as at present; and work of this type is not limited to our large city hospitals, but is practiced in the smaller towns and villages, and the country doctor, with his long rides made easy by the

automobile, is found with his microscope and blood pipette. Operations which only a few years ago were supposed to be attempted by a few of the most expert surgeons are now frequently done skillfully in the small hospitals of towns of a few thousand.

The medical profession has reason to be proud of these accomplishments of its members—yet with all this great work going on, there are many physicians not doing as good work as they can and should, and probably the majority of this type can be included in the general practice class. For years our colleges have trained medical students in bacteriology, urinalysis, stomach analysis and the examination of the blood, so that when they began the practice of medicine they could do routine laboratory work accurately. When the medical service of the Copper Range Mines was organized I considered well equipped laboratories as essential for our hospital and dispensaries, and a large amount of work has been done as a routine. Some of the doctors have done much more than others on their own initiative, and others because it was insisted on. This was more necessary formerly, as the state laboratory at Lansing was too far away to get prompt reports. However, in recent years, with a state laboratory in Houghton doing most efficient work, I have urged that as far as possible this work be done by the doctors themselves, availing themselves of the Houghton Laboratory for certain particular cases. I have always believed that the younger men in the profession neglect their best interests when they do not do their own laboratory work, and I believe every doctor should for the first several years of his practice. When the time comes that his time will not permit he will have a good income and can easily afford a nurse, trained in this work, to do it for him, which will make it possible for him to have it as a part of his examination of every case. Years after we had been doing our own laboratory work I found the following printed on a card and tacked on our laboratory wall: "The grand old man of medicine, Abraham Jacobi, said: 'No physician should send at present a specimen of urine or sputum or even blood to a laboratory for examination. He must know it all himself and if a physician cannot make these tests, then his patients should apply to some other physician.'" This is strong language and may not be so necessary now with efficient laboratories, but if the physician is not in the same town with a labor-

atory he will have to wait for a report he can know at once. I believe that the young doctor who does this work on all cases, even on some when he thinks it not indicated, will do better work and get into a scientific groove in which he will work all his life. It should be a part of a thorough examination of every patient when first examined. It does not mean neglecting other diagnostic measures, but it is a decided addition to a thorough study of the case. Dr. George Dock said some years ago that we should expect to find pathological urine in only one examination out of every fifteen made. And yet I have had doctors tell me they had not examined the urine because there were no indications of kidney trouble. The examination of the blood, particularly the white and red count and haemoglobin estimation and often a differential, will often be the only means of making a correct diagnosis. I have seen advanced cases of pernicious anaemia attended by men of experience in which no diagnosis had been made.

In all of these cases were the attending physicians competent to make a thorough examination of the patient, including the study of the blood, but no attempt at this was made. Such medical work is inexcusable and negligent.

Another case is interesting because it is rare in this part of the state and because it emphasises the great importance of a complete examination. A miner had been under the care of a conscientious young doctor for several weeks and unable to work all this time because he felt weak and easily tired. There were no other definite symptoms and no diagnosis had been made. My only connection with the case was to suggest to the doctor a complete examination; which he did most carefully, and found a hook worm. The course of the case after was very much different. It is the only case we have had, but correspondence with a physician in a mining town in England from which he had recently come stated there had been a number of cases there.

I do not wish to convey the idea that the recent graduate or the older practitioner with years of experience should be expected to invariably make a correct diagnosis or exercise the best judgment. That man is not yet born; only the older men as a rule are more conscious of their mistakes. But I insist, and every busy consultant and specialist knows that he sees many cases each year in which a more correct and complete knowledge of the con-

dition of the patient could have been had by the attending physician had he availed himself of the training that he has. I cannot in a brief paper go into this subject thoroughly, and the few cases I have referred to only illustrate my point. It may be the use of the different laboratory aids; an autopsy at every opportunity; a complete examination of all cases; the habit of history taking records; all are essential. Neglect of these measures may result in delayed recoveries or death of the patient with loss of prestige and practice for the physician.

Our medical colleges teach these scientific methods and our large hospitals give their interns the opportunity to apply this knowledge, but I believe more emphasis should be laid on a scientific spirit. In my own acquaintance I know of no instance in which the young doctor doing this thoroughly, scientific work has not later passed the others on the road to success and become a leader in the community in which he practiced with a wide reputation. The patient wants help and recognizes and appreciates a thorough examination. As to the commercial side of the practice of medicine, and every doctor is entitled to a good income if he rightly earns it, I know of no legitimate measure that will so enhance his standing, both with his colleagues and the people also, as the constant daily application of the scientific knowledge in which he is trained. It may mean hard work and a grind for years—ten years or longer after he graduates—but if he does this and has character and any kind of a favorable personality, he cannot help but succeed. After all there is something grander in the practice of medicine than making a living; it is a high standing in the profession, the love of the masses, and the consciousness of having done your best.

THE CORRECTION OF SOME FACIAL DISFIGUREMENTS*

CLAIRE LEROY STRAITH, M. D., F. A. C. S.

DETROIT, MICH.

Plastic Surgery of the face is not a new field of surgical endeavor. Galen and Hippocrates, writing in about the first century explain efforts to correct deformities such as hare lips, ectropion, etc., and we can thank the ancient Hindoos for the "Indian

method" of total nose reconstruction, which is still found to be the most valuable of all principles so far devised for the restoration of a nose.

There have, however, been great advances made in the last decade so that the correction of conspicuous deformities can now be attempted with much more certainty of success, due to the fact that many false principles have been discarded and new and tried ones have taken their place.

Patients who are afflicted with comparatively trivial deformities are often so conscious of their disfigurement that they become depressed and develop an inferiority complex which may hinder them throughout life. These people often could be relieved by a comparatively simple operation but are discouraged by friends or unsympathetic family doctor, and so in many cases pass into the hands of some "quack" and are induced to have a paraffin injection or some other harmful treatment.

It is surprising how children of three or four years of age will feel the sense of embarrassment when they have some deformity. I recall a three year old child in the clinic of Dr. Brophy, who would cover its little face when anyone entered the room, so that its cleft lip could not be seen. Such impressions are not easily erased from a child's memory and therefore such children should always be operated in early infancy.

In considering any plastic procedure, there are a few general principles which should be applied to any wound to promote rapid healing and leave as little scar as possible. The margins should be clean cut. The edges should be handled very carefully; it is therefore always preferable to hook the tissue from beneath, rather than to employ a tissue forcep. There should be an exact approximation of the skin surfaces by delicate sutures tied not too tightly. If possible, all tension should be removed from the sutures by some external appliance or buried tension sutures.

LIP PLASTICS

Probably the most common congenital deformity of the face is the cleft lip. There are many varieties, but of all, the median cleft is the most unusual (Fig. 1). There have been, up until the present time, 26 such cases reported in literature. The patient shown was obviously a Mongolian idiot, so no operation was done. After its death the writer obtained permission from the parents to present the body to the

* Paper read before the Southwestern Michigan Triological Association, Jackson, Michigan, May 26, 1927.

Pathological Department of the University of Michigan, where it is now preserved.

istered, and sleep more profoundly afterward. The tissues heal more rapidly and in the first week when the breast milk is beginning to flow copiously, the breasts can be pumped and the child fed by medicine dropper with a greater possibility of continued breast feeding after operation, than if the child were taken from the breast for two weeks at two or three months of age. Another reason for the



Figure 1 (Case 1)
Median cleft lip. Very rare deformity.



Figure 3 (Case 2)
Simple cleft lip before operation.

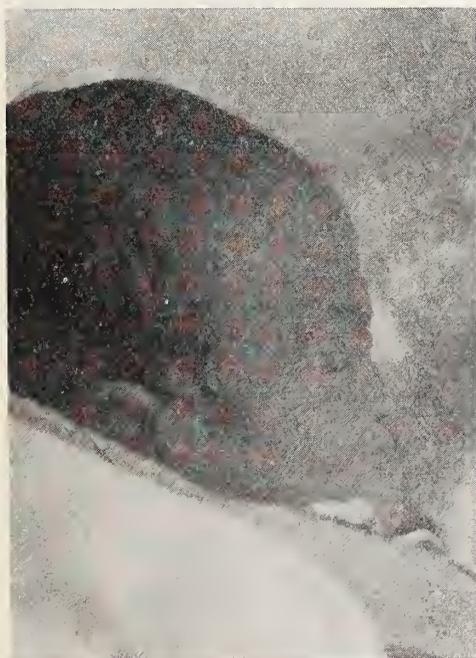


Figure 2 (Case 1)
Side view same patient. Note lack of development of premaxilla and nasal supports.



Figure 4 (Case 2)
Photo of same child taken at two years of age, when closure of palate was accomplished.

Most authorities agree that cleft lips should be operated upon in early infancy. I, personally prefer to operate upon a simple cleft lip (Fig. 3) about the third or fourth day of life, for several reasons:—very young babies take an ether anesthesia beautifully when properly admin-

early operation is that the mother finds great relief in knowing that when she leaves the hospital she can take home with

facial bones become calcified and difficult to mould into shape. In such an operation care should be used to place such wires well above the tooth buds, and to employ only enough pressure to hold the alveolar edges together at the site of the cleft.

In such a complete case the lip plastic is done three to six weeks after the bone wiring operation and the closure of the palate always delayed until the child is about two years of age (Fig. 6). Needless to say such patients should never be al-



Figure 5 (Case 3)

Complete single cleft palate and cleft lip with wide separation of alveolous. The bone wired at 8 days; lip plastic at six weeks.



Figure 7 (Case 4)

Man 26 years of age with unoperated simple cleft lip.



Figure 6 (Case 3)

Photo of patient at two years of age when palate was closed by operation.

her a fairly normal appearing, nursing child.

When the deformed lip is associated with an extensive cleft palate (Fig. 5) some form of bone wiring operation should be done within the first few weeks, to bring the nose into the mid line and secure a union of the alveolar ridge, before the



Figure 8 (Case 4)

Photograph sent by patient two weeks after leaving the hospital.

lowed to go to adult life with such a deformity (Fig. 7).

In the treatment of double cleft lip (Fig. 9) and cleft palate the same principles ap-

and the lip plastic done three to six weeks afterward (Fig. 10).

CLEFT PALATE

As before stated, closure of the cleft palate should be done at about two years of age, but older children, or adults, can be operated on at almost any age with excellent results. They must, of course, have speech instruction afterward and many patients, by persistent effort, are able to eliminate practically all defective tones from the voice.

FACIAL CLEFTS

Very rarely we see other facial clefts (Fig. 11) in which there is a failure of



Figure 9 (Case 5)

Complete double cleft palate and cleft lip before operation.

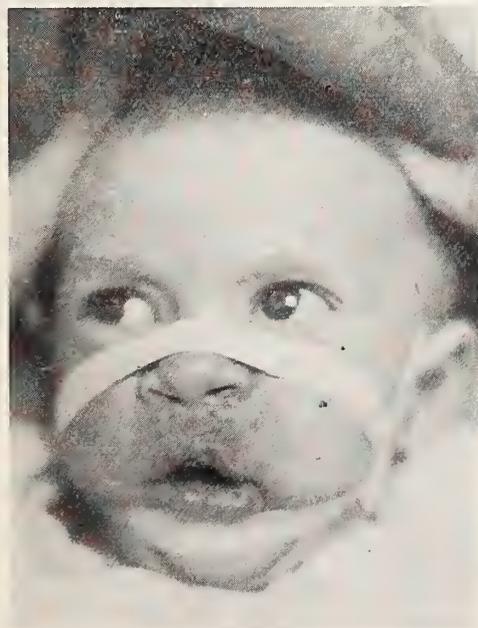


Figure 10 (Case 5)

Photo of same patient the day after stiches were removed, showing adhesive straps adjusted to face to relieve tention. Straps left on for two weeks to prevent scar stretching.



Figure 11.

Bi-lateral facial cleft extending almost to tuberosities of upper jaw.

union at each corner of the mouth and a cleft extending back almost to the tuberosity of the jaw on each side. This mouth had two accordion-like folds in each corner which allowed it to open to the immense size shown in Figure 11. The clefts were closed at each corner and the mouth



Figure 12

ply regarding the time of operation. One should never remove the premaxilla in such a case, for this treatment leaves an irreparable deformity. The premaxilla should be reduced and held in its proper position—a little advanced, if anything—

made to assume a more normal size and shape (Figs. 12, 13, 14).

only part of lip involved, as occasionally results from lip biting, has given some patients great mental relief.



Figure 13



Figure 14

Figures 12, 13, 14

After operation. Mouth reduced to normal size.

DOUBLE LIP

One of the most common minor oral deformities is the so-called "double lip" (Macrochaelia) which often gives the patient considerable annoyance due to the fact that the folds of mucous membrane hang down over the teeth when smiling. This condition can be corrected by excising an ellipse of tissue from behind the lip in a horizontal direction, dissecting out the hypertrophied mucous glands and suturing in proper position (Figs. 15, 16, 17). Remedying such a condition when there is



Figure 16



Figure 17

Figures 15, 16, 17

"Double lips" before and after operation.

FACIAL MOLES

The removal of small moles from the face, which are often quite conspicuous and annoying to the patient, can be accomplished by the electric needle, but this



Figure 15



Figure 18

Black, hairy mole, involving right half of the forehead, right temple and majority of right upper lid.

method usually results in a small white mark the size of the original lesion. I prefer to excise the lesion and after careful suturing there will scarcely be a visible



Figure 19

After first operation. Forehead and temple region removed and Wolfe grafter.

scar. Larger moles, however, may be excised and if necessary Wolfe grafted to cover the defect. The case presented (Fig. 18) was operated in two stages; the forehead and temple region was excised and Wolfe grafted and subsequently the eyebrow and right upper lid was excised and Wolfe grafted—pressure on this graft being maintained at 30 mm. by the "Smith Method;" that is applying a rubber balloon over the graft beneath the bandage and testing pressure frequently (Fig. 20). The present condition of the child requires the opening of the eyebrow region, at a later date, and the introduction of a hair-bearing Wolfe graft to replace the eyebrow (Figs. 21, 22).



Figure 20

Showing balloon and bandage dressing with apparatus in place for testing pressure over graft so that same can be maintained at 30 mm. (Smith).



Figure 21



Figure 22

Figure 21, 22

Present condition of patient. Eye brow to be grafted later.

FACIAL SCARS

Facial scars which have been a considerable source of embarrassment to the patient for some time, can often be excised and resutured very carefully, leaving scarcely any visible scar. For this purpose a double subcuticular stitch is excellent. A deep silk worm gut for relief of tension and a very superficial stitch of fine dermal or horsehair for surface approximation.

EAR DEFORMITIES

Ear deformities are sometimes congenital, due to adhesion of the pinna, etc., but they often occur as the result of motor accidents or gun shot wounds. If the loss is not too large it is usually best to repair by bringing adjacent parts together and reducing the size of the affected ear to



Figure 23
Old gunshot wound of cheek with loss of center section of ear.



Figure 24
After operation—illustrating mattress tension sutures on buttons to reduce scar.



Figure 25
Final result.

some degree. This however, is usually not conspicuous, for one seldom sees both ears at the same time. If desirable the other ear can be made smaller to compare with the former (Figs. 23, 24, 25).

NOSE DEFORMITIES

Nose deformities are very frequent and varied. The more common ones are twisted noses, either whole nose (Fig. 26) or car-



Figure 26
Twisted whole nose, before and after correction.



Figure 27
Twisted lower cartilage, before and after correction.

tilage (Fig. 27), hump nose (Fig. 28) and saddle nose (Fig. 29). Most all of these nasal deformities can be corrected through a mid-columella incision; the hump chiseled and rasped down; the twisted nose re-fractured and straightened; and the saddle nose corrected by the introduction of a support. There are many supports suggested, ivory, celluloid, bone, etc., but cartilage seems to give the best results.

This can sometimes be secured from the other nasal cartilage, but if a larger piece

is needed it is best to put in a hinged rib cartilage transplant by the "Gillies method," (Figs. 32, 33).

Due to the number of motor accidents at present the nose is often severely injured and occasionally severed entirely. Figures 30 and 31 show cuts which went through the septum and the entire nose. In the course of healing an almost total atresia of both nasal passages developed in the case shown in figure 31. This was

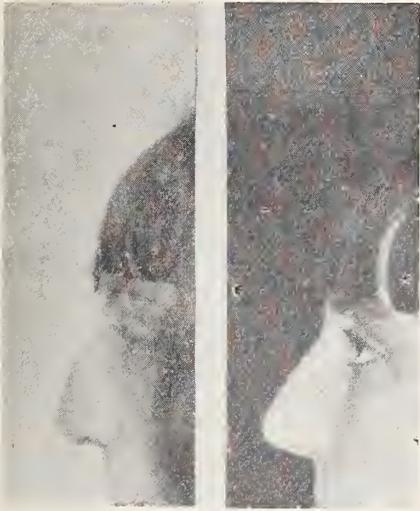


Figure 28

Hump nose (a rather common deformity after old cleft lip operations) before and after correction.



Figure 31

Windshield cut through nose which resulted in almost complete atresia of the nasal passages. Relieved by skin grafting.



Figure 29

Saddle of entire bridge, from crushing injury, before and after correction.

relieved by cutting through the adhesion and inserting a modeling compound mould covered with Tiersch graft which was held in place for two weeks. The skin graft "took" and no further adhesions have developed.



Figure 30

Windshield cut through nose.



Figure 32

Notched saddle nose with prominent bridge.



Figure 33

After removing bony prominence and inserting hinged rib cartilage transplant for support.

FACIAL BURNS

Facial burns which result in ectropion of lids or other conspicuous scars can often be remedied by applying one of the several methods of skin grafting. Figure 34 shows



Figure 34

Facial burn showing ectropion of lower lip where pressure Tiersch graft is applicable.

an ectropion of the lower lip following a severe burn in which the "pressure Tiersch graft" was used to allow the mucous membrane to return to normal position. The same method can be used in lid ectropion but a Wolfe graft from an upper lid, if available, is sometimes preferable. To relieve adhesions shown in figure 35, a Wolfe graft could be applied over the clavicular

region after tissues were opened and chin carried up to the proper position. The "Gillies tube pedicle method" of obtaining skin from distant parts to cover large defects, is often very useful (Fig. 36),



Figure 35

To relieve adhesions such as shown, a Wolfe graft can be used over clavicular region after incision and upward release of neck tissues.



Figure 36

Illustrating Gillies Tubed pedicle graft.

EYE PLASTICS

As an illustration of the application to eye surgery, of Esser's principle of pressure Tiersch grafting, I wish to cite the following case.

CASE HISTORY

While Mr. M., a man, age 30, was engaged in his occupation as a moulder, a piece of molten brass splashed into his left eye. The eye was badly burned and was removed by Dr. Ralph Pino, of Detroit, and, due to the fact that the conjunctiva had been completely destroyed, a subsequent adhesion of the lids to the base of the orbit took place. On examination, July 23, 1926, I found that there was no normal lid margin; the eye lashes were gone; the tarsal plates destroyed and the culdesac obliterated. (Fig. 37).

At this time an external canthotomy was made and the lids dissected free as far as the supra- and intra-orbital ridges. An impression of this cavity was taken with modeling compound, covered with Tiersch graft from the right biceps region, and inserted beneath the lids. This was kept in place for eight days and then removed, at which time the graft was found to have "taken" quite completely. To prevent contraction of the new formed eye socket a smaller model was then inserted and kept in place for about four weeks, with occasional removal for cleansing purposes.

At subsequent times during the next two months the canthotomy wound was closed and

minor plastics were done on the lid edges to straighten the margins. A special artificial eye was constructed and his appearance was quite markedly improved.

The patient, however, felt embarrassed without eye lashes. On November 26, 1926, under Novocain anesthesia the edges of the lids were opened. A strip of hair-bearing skin from the middle of each eye brow 3 mm. wide and of sufficient length, was inserted in the lid edge and sutured in place with horsehair. The graft from the left eye brow was inserted in the upper lid and that from the right eye brow reversed and sutured in the lower lid so that the hair on both lids would be directed toward the external canthus.

The lids were anointed with vasaline and cov-

ered with rubber tissue and a firm bandage applied. After six days the dressing was removed; the grafts were found to have "taken" and a light dressing was applied. The stitches were removed on the eighth day.

RESULTS

The postoperative pictures (Figs. 38, 39) were taken three months after the op-



Figure 39
Close-up of eye in present condition.

erative procedures were completed. For a time there was a slight desquamation from the graft lining the socket but this has ceased. The transplanted eye lashes were of course lost but new ones took their places so that now the patient is quite presentable.

CONCLUSIONS

In conclusion I would like to emphasize that plastic operations cannot be done in a hurry; great patience is required; the tissues must be handled with extreme care; the edges exactly approximated and properly sutured if good results are to be obtained.

THE TRAINING OF A SURGEON*

G. HOWARD SOUTHWICK, M. D.
GRAND RAPIDS, MICH.

The subject I wish to address you on this morning is "The Qualifications of the Modern Surgeon." Although the subject has been opened at many meetings during the past ten or fifteen years and various statements made as to what should be the standard of the man recognized as a surgeon, no official action has been taken by the governing body of the medical men, i. e., the American Medical Association, until the Speaker of the House of Delegates at a recent meeting in Washington suggested the appointment of a committee to report on ways and means of establishing a standard, and readily identifying for the public, a capable, qualified surgeon. The history of surgery in relation to even some of our best surgeons today discloses the fact that they started in general prac-

* Chairman's Address: Surgical Section, M. S. M. S., 107th Annual Meeting, Mackinac Island, June, 1927.

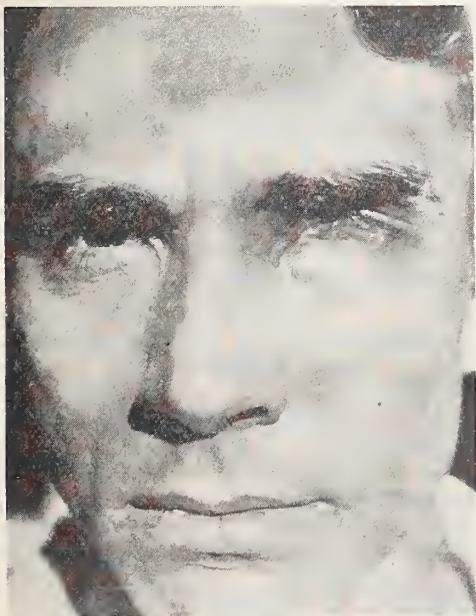


Figure 37

Loss of left eye and lid margins. Obliteration of eye socket.

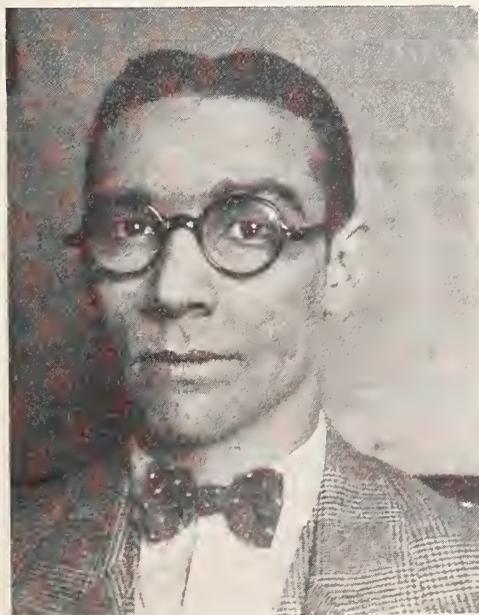


Figure 38

Result after restoration of eye socket by pressure Tiersch graft, transplantation of eye lashes, etc.

tice, and as their business increased their surgical work became paramount. They gradually passed through a process of evolution from a general practitioner into a general surgeon—some even advancing to the point of specialized surgery either by intensive study or if financially able, or ambitious enough, by taking courses with some of the recognized surgeons in that department either in this country or abroad.

If you have recently examined your original diploma you can recall that it gave you the degree of Doctor of Medicine and Surgery. How many in this audience this morning feel that the Surgical Degree in relation to surgery of today was more than an empty title? How, then, are we going to change the status of the graduate? Should the medical degree be awarded when he has completed his course and the recognized internship and a separate surgical degree later by his same Alma Mater; or should there be a National Controlling Board either under Federal Government control, American Medical Association, or American College of Surgeons to award Surgical degrees at a later date? Also, should the degree be awarded after a certain space of time and examination, or be awarded only following a practical and written examination? I believe we are all willing to give great credit to the American College of Surgeons for the improvement it has made in surgery in general in the past 16 years, but do you think that it has gone far enough, or can go far enough unless given authority to designate who shall and who shall not do operative work in Class A hospitals or other well controlled institutions?

Just what should constitute the fundamentals of surgical training is a very difficult matter to lay down in specific rules. Whether the graduate today should be allowed to do part of his surgery under reasonable supervision as he goes along in general practice and then gradually pass through the process of evolution, or whether, after taking a reasonable amount of time, say three to five years in general practice, and acquiring the knowledge and perspective of different pathological conditions, he be given the privilege of returning either to his Alma Mater or to some post-graduate school and acquiring a definite surgical degree. I believe the American College of Surgeons covers the field very well when it restricts the conferring of its degree only to those who have been in practice eight years or more. I believe it

will be freely admitted, even by my professional colleagues in the larger cities, that there is a tremendous volume of surgery and some of it fairly good surgery performed by the general practitioners who operates in the small towns and large villages throughout the country. It may be designated by them only that class of surgery which constitutes emergency surgery, yet it is very essential from the humanitarian viewpoint. It cannot be denied that the man who decides the minute he finishes his internship that he is going to be a surgeon in a specific class and is fortunate enough to attach himself to a surgeon of high caliber with whom he remains anywhere from five to ten or fifteen years, has acquired a knowledge of surgical judgment and technical training that no post-graduate course could possibly give him.

There are three criteria for the performance of any operation: First, a knowledge of the anatomy of the part to be operated on; second, a knowledge of the pathology of the condition for which you operate, and third, a training in the technic for a surgically clean operation. I believe you will all admit the requirements of a surgical judgment is just as essential as mechanical technic to the welfare of the patient. This can only be obtained by actual practice and is the one thing which brings the thought of the Old Preceptor back into the field of surgery.

The foregoing undoubtedly gives the best surgical attainment from the surgeon's point of view, but does it give him that view-point of the doctor who has been in general practice and who refuses to operate every case which might possibly be relieved by surgical means? Does it give him a thorough understanding of the honest, conscientious viewpoint of this country doctor, or even city doctor, who does not operate and does not recommend every possible surgical case to the surgeon. This part of the surgical judgment, I believe, can only be acquired through a reasonable number of years of general practice by the individual himself. I sometimes wonder if the strictly surgically trained man would ask himself the question, "If that was any of my family would I want to have the operation recommended as frequently as the man who has specialized after a few years of general practice?"

I do not believe there should be any change in the present teaching of surgery in our college course in acquiring the M. D. degree. I cannot agree with the English

surgeon, Dr. Rutherford Morrison, who said a few years ago that the teaching of most students who are to become practitioners should be different in character and more limited in aim than that intended for developing surgeons. I believe it is just as essential that the man who would do strictly medical work in future years should have a knowledge of surgery as it is that the surgeon should have a knowledge of medicine, and a few years of general practice for the sake of unity in diagnosis and the welfare of the patient. The teachings in medical schools today drift more and more into the hands of highly trained specialists. Each tends to do the same in his teachings as is so common in practice visibly to magnify his particular department to the extent of ignoring the unity of the patient.

If medicine is to preserve the well balanced proportion with due regards to the oneness of the patient—the teaching must either be in the hands of specialists who do not forget the unity of the patient or it must drift back into the hands of the well-trained general practitioner. This latter is not desirable.

The present academic course with its requirement of one year in this state in an approved hospital is good as it now stands. If a man finishes comparatively early in life, 22 to 24 years of age, then is the time for him to spend two or three years in general practice before deciding on what branch of surgery he wishes to continue further in. It is from this point on that there seems to be some difference of opinion as to what should constitute the surgical training. The ideal course from here on would be one of three years similar to that offered by the University of Minnesota at the Mayo Foundation. Unfortunately this is limited in number and the scholarships are mostly secured by younger men who have recently finished their required internship. Unable to secure one of these, should the young man attach himself to some well recognized surgeon with good surgical judgment or should he take up another college course which would confer a degree of surgery; or should he acquire a position as resident surgeon in some well organized Class A hospital and spend from two to three years in this institution? This cannot be done by the average physician unless the institution can see their way clear to pay a reasonable salary to a man of this caliber. For his services are worth at least that in the assistance he gives in training the

junior internes. When a man has completed his training and gets out in practice to do surgery, where is he going to work? Many cities have closed hospitals. Is there any opportunity for a young surgeon to prove that he can make good? Surely the closed hospital custom is too conservative. There is in that policy very little that offers an open door to the hard-working, well-trained young surgeon. In the western part of this country and Canada, I am told that the open door policy is maintained whereby any man can operate on a private patient when he can find one. This policy gives opportunity to the young surgeon. It is at the same time open to grave abuse. The open door must be carefully guarded by a Board of Management guided by a medical superintendent with a conscience, so that surgeons, but none other, are allowed to operate.

In conclusion, therefore, it is respectfully suggested that the surgical part of the present diploma be eliminated at the time of graduation. That a new degree be established with a degree of C. M. to be based largely on actual work done and be granted by a National Board of Control, as suggested earlier in our remark. Third, that all hospitals to which any public money is contributed for its construction or maintenance should open the private wards to any man holding the new above mentioned degree and who is known to the Board of Management to be a man of unquestionable reliability.

Before closing I wish to add a few words on Conservation. Not on conservation of natural resources but on conservation of valuable economic asset to our country today. You are all well aware of the program of the American Medical Association in regard to periodical health examinations. How many men present this morning have had a complete physical examination the past year? How many of the surgeons present realize their economic worth as it would be expounded to them by a modern life insurance agent? He should conserve therefore his own personal physique by taking at least a certain amount of time, say one month, in complete relaxation each year—one month for the advancement of his own professional knowledge by attendance at Clinics or some post-graduate course so that when his period of active service has run, as a consulting surgeon, he will be of inestimable value to his fellow practitioners and to the public. The race is hard and allows only the survival of the fittest. He would therefore be the first to

show to the public that he is conserving his vital economic value not from financial, personal or mercenary point of view, but for his fellow men.

ACUTE APPENDICITIS WITH THE APPENDIX LOCATED IN THE PELVIS*

RICHARD R. SMITH, M. D., F. A. C. S.

GRAND RAPIDS, MICH.

When the appendix is located at or below the brim of the pelvis and is the seat of an acute inflammation, the problem that we face often offers certain peculiar features that make it worthy of some special consideration and study. The onset is apt to be more or less hazy and obscure, and in my experience, these patients usually come later to operation than the majority of patients with acute appendicitis. The location of the pain at the beginning of a large percentage of cases of the disease is in the epigastrium. With this group the pain is apt to be located across the lower abdomen and does not ordinarily localize sharply in the right lower quadrant. The tenderness is apt to be indefinitely located over the whole lower abdomen. These facts in themselves make uncertainties in diagnosis. Again the rigidity upon which we depend so much for diagnosis is usually milder, especially in older patients, or it may not be present at all for this symptom, other things being equal, is more pronounced when the inflammatory process approaches the anterior abdominal wall. The appendix being here deeply buried, it is not so liable to be in evidence. The abdominal cutaneous reflexes are also less apt to be affected. The pulse, temperature and leucocyte count are naturally about the same. The usual symptoms being less clear, operation is, as stated above, more apt to be deferred and in some of the milder cases that subside rapidly, the diagnosis is not made with certainty or it is entirely overlooked.

The most significant symptom that we have is obtained by an examination of the pelvis through the rectum. In the very beginning we are apt to find merely a tenderness high up posteriorly in the pelvis in the median line or to the right of it. A little later as an exudate forms, we may make out an indefinite tender mass there. One should be careful not to mistake the natural tenderness of the cul-de-sac for an inflamed appendix, but with the latter it is

usually more sharply localized. If the case is allowed to progress and abscess results, it tends to gradually gravitate or progress toward the bottom of the cul-de-sac and in time bulges the anterior wall of the rectum and the vaginal vault. Even before this time it is, of course, easily detected. Should the abscess acquire a considerable size and fill the pelvis a peculiar phenomena is apt to appear—namely, a very noticeable relaxation of the sphincter ani, and this I have found on so many occasions that I believe it has a distinct diagnostic value. I have never seen this symptom mentioned in any description of acute appendicitis. In the female we must naturally differentiate between such a case of appendicitis and an inflammation arising, say, from the tubes. Strange to say, difficulty is seldom encountered from this source. The history and symptoms usually point rather definitely one way or the other.

The early cases are best operated in the ordinary way with the incision perhaps a little lower than usual. If drainage is necessary the soft cigaret tubing had best be placed close to the wall since it is in intimate contact with the lower end of the ileum and otherwise may cause obstruction. I prefer a gridiron incision, but if the process is an extensive one a lower right rectus or median incision is sometimes simpler and insures more direct drainage. Should the pelvis be filled and the cul-de-sac be bulging well downward, a condition that we formerly met with much more frequently than now, an incision through the upper vault of the vagina is, I believe, best. I have never opened one of these abscesses through the rectum, although I have seen a number spontaneously evacuated through that route. In the male I believe it best to approach the abscess, whatever its size, from above. Cul-de-sac drainage through the vagina offers immediate relief from the symptoms with practically no danger to the patient, but it should never be attempted unless the abscess is distinctly filling the pelvis and bulging the cul-de-sac forward where it can be reached without difficulty. When mere evacuation is made, the patient may have another attack of appendicitis, but it is, of course, rather infrequent. When a woman has an extensive appendicitis with the appendix in this locality, she is very apt to become sterile from closure of the tubes. This, however, does not always occur and I recently operated upon a woman in whom we evacuated a pelvic appendiceal abscess through the

*Read at 107th Annual Meeting, M. S. M. S., Mackinac Island, June, 1927.

cul-de-sac fifteen years ago. She became pregnant, had another attack of acute appendicitis during pregnancy, and the usual abdominal incision was made with recovery.

If we group together all these cases of acute appendicitis with the appendix located in the pelvis, we will see that it forms a fairly distinct group. It occurs often enough to be of importance, but infrequently enough to puzzle one at times even though he be well experienced in dealing with this common disease. It occurred to me, therefore, that a brief paper on the subject might be of some value.

CONSERVATIVE PELVIC SURGERY*

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The fact that the pelvic peritoneum will withstand much trauma and infection, has led to many radical surgical procedures. This same resistance to infection, allows Nature and conservative measures a place in the treatment of pelvic inflammation.

The purpose of this paper is to briefly review some of the more useful conservative treatments and to recall the indications for their application.

Pelvic inflammatory disease is a term used frequently to designate a gonorrheal infection of the female, internal, generative organs. Correctly used, it includes all infections of the female pelvic structures. In order of their frequency, the organisms causing pelvic infections are; the gonococcus, streptococcus, staphylococcus, colon bacillus, and tubercle bacillus.

Most gynecologists are now agreed that the onset of an acute pelvic infection does not call for immediate surgical interference. The mucosa of the cervix, uterus, and tubes, is continuous from the vagina to the peritoneum. Early interference, tends to spread the infection before Nature can wall it off, or even seal the tubes. Cases opened early often show pus oozing from the fimbriated extremity of the tube.

During the acute stage of pelvic inflammatory disease, the patient should be confined to bed, resting in the Fowler position. Sedatives should be given to relieve the pain and to lessen peristalsis. Ice caps over the lower abdomen for the first few days will give relief; later heat is more beneficial. Saline solution or tap water may be given by rectum if the stomach is

irritable. No cathartics should be used, but the rectum emptied by enemata. Long continued hot douches should be given three times daily, in the hope that the inflammation may subside and the exudate be absorbed.

If, within a reasonable time under expectant treatment, the pain does not subside, the temperature fall, and the pelvic exudate decrease, two courses may be followed. First, the subcutaneous injection of 5 c.c. of sterile milk, repeated at an interval of three or four days, often gives marked improvement. Second, drainage of the pelvic abscess through the posterior cu-de-sac. This approach of the infected field is usually simple and fairly safe. After a posterior colpotomy, the convalescence is usually rapid and in many cases no further operative work is required. These patients are advised to return in from three to six months when further operative work is deemed necessary.

When the patient is self-supporting and must be rehabilitated quickly, operative eradication of the diseased organs may be done sooner than three to six months. If the patient has been afebrile for two weeks and a pelvic examination produces no increase in temperature, abdominal approach of the pelvic structures may be made with a fair degree of safety. Operations upon the female generative organs during the subacute or early chronic stages of pelvic infection, are usually more radical than those performed later. Time has not been allowed for healing and most of the structures seem hopelessly involved. Later one is better able to judge as to the advisability of leaving certain structures.

Chronic pelvic inflammatory disease gives no characteristic symptoms. Fatigue, nervousness, muscular weakness, gastrointestinal derangement, and excessive loss of blood at the menses are perhaps the most common symptoms. Locally, pain in the tubal region, either unilateral or bilateral, is complained of. This pain is increased by exercise and becomes more troublesome in the pre-menstrual period. Leucorrhoea is a constant finding.

In deciding upon a surgical operation for chronic pelvic inflammatory disease, several things must be considered; age, social status, physical condition, nervous stability, economic factors, and the desire of the patient.

The age of the patient plays an important part in deciding a pelvic operative procedure. Women under thirty-five years of age form a class where retention of

* Read at 107th Annual Meeting, M. S. M. S., Mackinac Island, June, 1927.

menstruation and normal function of the ovaries and tubes is desirable. Menstruation can often be preserved, but normal function of the tubes and ovaries rarely is possible.

The social status of the patient is likewise important in determining our surgery. Married women with children may allow more radical operations, than those married and desiring children. The unmarried, self supporting young woman cannot afford a long, disabling illness, thus demanding more radical and earlier surgery. The young woman who frequently exposes herself to reinfections is not often helped by conservative pelvic surgery.

After pelvic infections, especially those produced by the streptococcus, many women are poor surgical risks due to the long, toxic stage and the resulting damage. These women are in poor condition to withstand the shock of a pelvic operation.

The nervously unstable woman, when deprived of the menstrual function and her internal generative organs, often becomes a mental case. The selection of our patients in this group calls for our best judgment.

Economic factors play an important part in the handling of pelvic inflammatory cases. The acute stage can be cut short by rest and proper treatment. Milk injections will markedly lessen the period of convalescence and often allow the patient to return to work within six to nine weeks. By this same treatment and after posterior colpotomy, further operative work is sometimes made unnecessary.

The wishes of the patient, as far as good surgical judgment will allow, should always be considered in forming our surgical opinion. Sterile women, desiring children, should be given even the remote possibility for child bearing.

The following case report, briefly stated, illustrates this point:

Mrs. R. J. S. of Stockbridge, Michigan. This patient was twenty-nine years of age. She had been married five years and had never been pregnant. Her chief complaint was pain, located in the left lower quadrant of the abdomen; the discomfort was present at times but was increased at the menstrual periods. Her past history was unimportant except for typhoid fever when nine years of age; an appendectomy at the age of nineteen and a suspicious history of inflammatory disease at twenty years. An examination revealed a small uterus fixed laterally by enlarged, adherent appendages. The left tube and ovary were very sensitive. On August 25th, 1924, a laparotomy was performed. The omentum was found densely adherent over the right side of the pelvis and the site of the appendectomy wound. There were adhesions between the sigmoid and

the bladder. After freeing these structures an old tubo-ovarian abscess was removed from the left side of the pelvis. The right appendages were adherent but separated easily and with little damage. The right tube had been infected, it was thickened and nodular, but the fimbriae was not sealed down. Because both the husband and the patient requested that we try to conserve both menstrual and reproductive functions, the right appendages were left in, after suspending the ovary. The patient made an uneventful recovery. The patient and her husband were informed that menstruation would occur but no hope of child bearing was held out. Great was our surprise, when two years later, the referring physician wrote to inform us that he had delivered this patient of an eight pound boy.

Inasmuch as the Fallopian tubes usually bear the brunt of pelvic infections, especially those of gonorrhoeal origin, operations upon these structures are most common. Emphasis should be placed on some of the common errors of tubal surgery. In freeing the adherent tubes the best approach is from the posterior wall of the uterus, in the midline. Starting at this point, a line of cleavage is found, making it possible to free the entire tube from the posterior layer of the broad ligament and the peritoneum of the cul-de-sac. Ligation of the blood supply should always be as close to the tube as possible, so as to preserve the ovarian vessels. Failure of excision of the intra-mural portion of the tube often leads to repeated infections. The use of the round ligament to cover the amputation site give good peritonization.

Conservative operations on the tube have, on the whole, been somewhat disappointing. Still, even a few successes stimulate hope, and many women demand even this remote possibility of success. Establishing a new ostium may be accomplished by circular amputation of the bulbous distal end of the tube and suturing the cut edges; or by folding and suturing the split end of the tube. Whether this new opening will remain patent is questionable, but a few successes have followed these methods. Excision of the intra-mural portion of the tube and implanting a more distal portion of the tube, has given some favorable results, but like other means, it is uncertain.

The close relation of the ovary to the tube make surgery of the ovary necessary many times when the tube is diseased. Tubo-ovarian abscesses and dense adhesions between the two organs make it necessary to remove both, when in freeing adhesion, the ovarian blood supply is impaired.

Conservation of one or both ovaries is always desirable in young adults. Small

follicular cysts are not an indication for oophorectomy; but a markedly impaired blood supply does give a distinct indication for removal of the ovary. It is surprising how long a small part of an ovary will function. Resection of the macroscopically diseased portion of the ovary and careful suturing of the cut edges, will often give a satisfactory functioning organ. Suspension of the remaining portion of the ovary is important in maintaining its blood supply. Ovarian grafts and transplants are far less effective in maintaining menstruation.

As an illustration of the value of ovarian conservation, the following rather remarkable case is given:

On April 6th, 1927, Mrs. T. W., age 37, was referred because of pain in the abdomen and back, and bleeding from the uterus at short, frequent intervals. When twenty-two years old, a dermoid cyst of the right ovary had been removed; in 1918 when twenty-eight years of age most of the left ovary had been excised because of a large simple cyst extended up to the umbilicus. At this time a myomectomy was also done. Because of the very small amount of ovarian tissue at the second operation, the patient was informed that the possibility of bearing children was very remote. However, between 1918 and 1926 she has borne three healthy children. Her present trouble began in January, 1927, when her menses ceased and pain in the left side was complained of. About one month ago she began flowing frequently, and had severe headache. An examination showed a cystic mass about the size of an orange in the left broad ligament. The cervix was softened and pull up in the pelvis; the uterus was enlarged, softened and occupied the right side of the pelvis.

On April 7th, 1927, the abdomen was opened through a median, supra-pubic incision. An intraligamentous cyst was removed from the left broad ligament. It was of fetal origin. The small remnant of the left ovary was found attached near the left horn of the uterus. A pregnancy of four months was found and left undisturbed. The patient was given small doses of morphine during the first four days of her convalescence, and her recovery was uneventful. She is now about six months pregnant and has had no more pain nor flowing.

Where the tube on one side, and the opposite ovary are the only appendages that can be saved, it is well to suture the tube lightly across the posterior surface of the uterus; bringing the fimbriated end in nearer position to the ovary. This, however, is not necessary. I have had three women become pregnant and bear children where the lone ovary occupied one side of the pelvis and a tube the opposite side.

The question of conservation of the uterus is a much debated one. When the patient is near, or has passed the menopause, hysterectomy and bilateral, salpingo-oophorectomy gives the best results.

It has been proven that the endometrium rids itself of infection readily. In chronic pelvic inflammatory disease only the intramural portion of the tubes and the wall of the fundus contain residual infection. This metritis often leads to menorrhagia and metrorrhagia. In cases of this kind, when it becomes necessary to sacrifice both tubes, but one or both ovaries can be saved, fundal amputation of the uterus and bilateral salpingectomy is a very useful operation. The Bell-Buettner procedure is as follows: The tubes are freed, their blood supply ligated and the tubes detached up to the uterus. The fundal branches of the uterine arteries are caught laterally and tied. The round ligaments are tied and detached. This leaves the fundus free and it is amputated by transverse incisions made anteriorly and posteriorly and leading down obliquely toward the cavity of the uterus. This removes from one-third to one-half of the body of the uterus, but conserves nearly all of the endometrium. The uterine wound is now closed by two layers of sutures. The round ligaments are overlapped and sutured to the opposite angle of the uterine wound. This completely covers the line of suture and holds the uterus forward in a good position. The broad ligaments anteriorly are united mesially, thus peritonizing the fundus and round ligament stumps. By this operation, menstruation is retained and cystic degeneration of the ovaries is less likely to occur.

Conservative as well as radical operations have a place in gynecology. Careful study and selection of our cases will enable us to save our patients many needless operations. Castration can often be avoided and the menstrual function retained. Sterility can be overcome in a few cases, and many young women can be returned to fairly normal health.

MEMORIES OF INCIDENTS AND SOME
OF THE ACCIDENTS IN THE PRACTICE
OF MEDICINE IN MICHIGAN
NEARLY FIFTY
YEARS AGO

VICTOR F. HUNTLEY, M. D.
LANSING, MICH.

In looking over my desk a short time since, I ran across an old book that had been in there for many years; so long, in fact, that its existence had been forgotten. On the margin of the cover was written the single word—Memories—and the date

of 1882. In looking into and perusing some of the reading matter, I was reminded that it was an old record of some of my early experiences, set down somewhat in the form of a diary, yet not exactly that, as many of the incidents were months, if not years apart. I did, however, relate events that at the moment of their occurrence seemed vital to me no doubt—at least, had made such a vivid impression on my mind that they had been recorded—some of which occurred more than forty years ago. I spent some time in reading the book, recalling that when the events were experienced I had much more time to do that sort of thing than we have today. I wondered if it would be worth while to re-write the matter and give it to you, not as something of any great value either, but I thought perhaps it would give you another view of the experiences of the older men in the profession and that you might get an idea from these experiences of the hardships and trials encountered in those early days.

In the year 1871, the G. R. & I. Ry., now a subsidiary of the Penn system, was completed from Richmond, Indiana, on the south, to Mackinaw on the north, making Grand Rapids a divisional terminal. Cadillac, ninety miles north of Grand Rapids, then known as Clam Lake by reason of being built on the shore of a beautiful body of water resembling a great clam shell, was the terminus of the first division north of the Rapids and was well in the center of a vast wilderness of virgin pine forests extending from near Big Rapids on the south to Petoskey at the north, and was brought into the market by the advent of this railway. It was of the finest quality of white pine in the world, the manufacturing of which made more millionaires in Michigan than any other one industry, with the possible exception of the iron and copper mines of the upper peninsula. With the completion of this railway small towns sprang up like mushrooms the whole length of the line, especially in the pine belt, and before you were aware of it, there was a city, fully officered with mayor, common council and everything. In those pioneer days in the majority of the places the best corners were occupied by a saloon, rather than an oil station as is the custom today. Forty-five years ago Clam Lake was the center of this great lumbering industry. Saw mills and camps were spread out, not unlike the fingers of the hand, on the switches and short branches built in every direction,

until by the fall of 1882 the whole country around the lake was gridironed with side-tracks and switches from the main line of the railroad, with a small town and a mill or two at the end of each line.

Forty-five years ago I was a young man, very much alone in that wilderness, with very little acquaintance with the vagaries of that class of people, no tact, no knowledge in fact, of how to approach the people, and very little experience at that time in my profession. I will say that fifty years ago it was the policy of the medical schools to advise their students to locate in the smaller towns and communities, enabling them by this method to get in touch with their people sooner, perhaps, as well as giving them some needed experience quickly. This was undoubtedly one of the reasons and possibly the first, but the second and fully as important as the first, was to enlighten us on the financial side of the profession, by showing us how easy it was to get out of money, and how difficult it was to get, even after you had it earned and on the book, and after about forty-five years of experience in the service I do not see so very much difference in the second reason today. With this foreword, I will try to relate some of the more important events as I find them in my diary, making an effort to connect them as well as I may.

It was during the holiday season of the winter of 1882-3, we were spending the winter around Reed City with the idea of locating some place in the spring, perhaps farther north. We had friends that had gone north the year before and were much impressed with the prospects of a small town called Jennings, about ten miles from Clam Lake. So we decided to go and look it over. It took us all of the afternoon to get to Clam Lake on account of the very deep snow, and it was afternoon the following day before we were able to get a livery to even talk about the trip to Jennings. However, with a traveling salesman going in with us we did get started about 2 o'clock. It was 10 p. m. before we arrived at our destination, nearly frozen, as we were not clothed for any such trip. After waiting a few days for them to dig out the railroad we returned, deciding to locate there in the spring, as this seemed to be a stirring little town of about a thousand people. There were two sawmills and a large planing mill which employed perhaps five hundred men. This number, with the men employed in the camps getting out the logs was easily doubled. The following spring, having secured an Indian pony

and road cart, we loaded the family, consisting of myself, wife and son, then about three years of age, and made the trek to Clam Lake and Jennings in one day—where we remained for more than three years. Never saw green grass. Nothing but lumber, logs, sawdust, sand, and hundreds of happy, rollicking lumber jacks as they were called, who, while on duty worked like galley slaves, and at play were just as devoted to drinking, gambling or any other method that could be devised to spend their money. As I have already stated, we were located ten miles from Clam Lake, about five miles from Lake City, our county seat, and two smaller mill towns within five miles on the branch toward Clam Lake, beside lumber camps in every direction, giving us during the winter season, more than 5,000, mostly men, to care for. Thus you may readily understand that at times we were some busy. The profession at Clam Lake were very cordial to me, and gave frequent assistance in my difficult cases, for you must remember there were no nearby hospitals. Big Rapids being the nearest, our emergency work we were obliged to do in the home, and unless they were able to stand the long trip overland, we did all emergency work at home.

In looking over my memoranda, I am reminded of my first "O. B. case" which was one of the great tragedies of my professional experience. They were young people, living in the same apartment building and had become very intimate in our relations, and thought a great deal of them. She was a beautiful young woman of about 30 years, and had married the man of her choice against the wishes of her people, he being of the north, her people southerners, and living in Kentucky. Her father could not forgive her and she had eloped with her lover, was married and had come north to make their fortune together. Realizing that we might have some serious complications on account of her age, counsel was called early in the labor, but alas! she gave her life for her child, living only about one week after it was born. The death of the mother was not in vain, however, for the parents forgave him, and he and the child were taken into their hearts and home. The shock of her death nearly got me, however, and I passed many wakeful nights before I finally decided to carry on. On the next page of the diary, though some time later, was related an experience with a different ending. I was called down the street a block or two to attend a stout

Swede woman in confinement. She nearly frightened me to death by her groanings and lamentations, which began with every pain, and lasted until its expiration. In this case I saw for the first time in use the swinging trapeze arrangement, hung over the bed within easy reach of the patient. This, the midwife placed in her hands at the beginning of every pain, and pulling on this and bellowing at the top of her voice was her business until the child was born. I never learned what they did with the trapeze between babies, but judging by the stepladder arrangement of those present, presume in this particular family at least they just hooked it up on the ceiling temporarily, the ceiling being of rough boards only. When the child finally came I noticed the midwife getting the dishpan to wash it in, after which ceremony, I gave my valuable assistance by furnishing the cord dressings and all was well. My notes read that I always stood in well with this midwife, because I never interfered or made a suggestion if she was doing all right, and it further states that I was always sure of a call to any case she might be attending. Reading on, my notes say, in regard to this particular case, that I went over the next day to see the patient as was my custom then and is now, and I found the same dishpan filled with bread sponge before the fire. I never ate a meal with that family, though I did officiate several times later at the birth of children.

The next winter the cook's wife at one of the nearby camps was confined. They had sent for her mother, but the train was snowed in and she did not arrive until a week after the birth of her child. When I arrived the child was born, and the woman was on all fours on the bed trying to get her husband to cut the cord with the butcherknife, but he was unable to make it, as she was so nervous that she was unable to keep still long enough for him to take a chance. I was able to quiet the lady and finish up the job in good order and drove home with a very comfortable fee in my pocket.

One more incident and I am finished with this type of case. At one of the nearby mill towns was a very large shingle mill. The owner's wife was spending the summer with him. She was supposedly pregnant, but so far had resisted all his pleadings to return home for her confinement. On the contrary she had determined to give birth to her child in the wilderness of the north, among the whispering pines, as it were. Having several false alarms to

which I had been called, and at which times I had used every means at my command to determine the position, probable time of confinement, and in fact, all the needful data, to which she seemed to be unable to give me any great amount of information. So when she finally did call I asked for counsel, which was granted readily enough, and a physician from Clam Lake was soon with me. We sat there all afternoon. She would have pains for an hour, as regular as the clock, but no progress was demonstrable, and as it was glowing late and we were each away from home, decided to give her a hypo of mophia and await developments. It was a month or more before I heard from them, when the man came in to pay his bill and said he had been able to get her home to her mother, who had put her in a hospital for observation, and finally they had decided that she was not pregnant; never had been. Phantom pregnancy they called it, all in her head, if you know what I mean. I decided that it was a complex that I was not up to and was more than glad to hear that she had gone elsewhere.

If you are not wearied with this old material, I will relate a few of the unusual incidents of that early day that I find in my diary. They are not of any great professional value, but taken as a whole made up the everyday work in the early days of the north. I distinctly recall this incident that gave me cold chills, and I wondered what I could do with an accident such as they said had happened to a man in the camp. I was just preparing to go fishing through the ice, a great game in those days, when the messenger came in on the logging engine, with the story that a great rollway of logs had broken away, and passed over one of the loaders. They rushed me out on the dummy engine that the messenger had driven in, and as the distance was about five miles, of course, presumed that there would not be very much for me to do; rather, that they should have taken out an undertaker. Let me describe to you the rollway as it was constructed in this case. It was on the side of the hill. Well down to the bottom was the roadway where the logs were loaded. Built up from the road was a cobhouse device of logs about as high as the sleighs, including the bunks or frame upon which the logs were rolled. On the pier was placed a long log or skid, it was called, the bark being removed, and extending up the hill as far as seemed feasible for logs to be placed. A notch was cut into the lower end

next to the roadway for the key log to rest. The logs are cut and hauled and placed on these skids ready for loading, the side hill making the part of loading almost entirely by gravity. When loading, two expert men at that job are chosen to loosen up the logs and superintend their loading on the sleighs, great care being taken not to disturb the key log. What happened in this case, the key log was misplaced in some unaccountable manner, and the whole rollway came tumbling down, and before the man could jump for his life, one log, longer than its fellows, caught him back of the knees and threw him into the snow, the whole skidway passing over him. It had taken some time to get him out and into the shanty, everybody thinking him dead, of course, and he was unconscious when I arrived. They had him in the bunkhouse, and laid on the table near the fire. After removing the clothing and making a careful examination, everything was found perfectly normal—heart, chest and abdomen, as far as it was possible to demonstrate; not a mark on him other than a bruise under the knees where the log had caught him coming down. Looking over the ground we discovered that he had been thrown into the deep snow just beyond a little knoll and evidently the key log and every other one, had hit this knoll and bounded clear of him, and the only damage we could find was the scattering of the logs.

Another time I was called to attend a man that had been hit on the head by a falling limb. The men in this camp were all Poles except the teamsters and the foreman, and they were very superstitious. They had him out in the blacksmith shop covered with a light blanket, thinking, of course, that he was dead. After examination, I told the foreman that he was alive, and would freeze in the shop. So they brought him into the office where he lay for three days before regaining consciousness. It was two or three weeks later, and after they thought he was well, he began to act queerly, and I was called again. After counsel had looked him over, we decided to trephine, and found a small clot which was removed, but as the hemorrhage persisted and being unable to reach the vessel, we packed the cavity with iodoform gauze, a narrow ribbon of it, and removed an inch or two every day. This man recovered, and as far as I am aware, is alive today and apparently as intelligent as he ever was. Remember this was over forty years ago. This sort of experience

was not uncommon at that time and in the final analysis was of great value to us young fellows of that day. Primarily on our initiative, we met with conditions in which we were forced to act. Emergencies often that meant life or death to our patients, and in summarizing the benefits of such practice I would place that thought first, as it gave you a feeling of strength, increasing your confidence in your own ability. You must bear in mind that we had no nearby hospitals, fifty or seventy-five miles being the nearest, and we were simply forced by necessity to improvise, and by cleaning up a room in a private residence, making it as nearly aseptic as possible, many a major operation was done without much injury to our percentage of recoveries. I think now as I look back over this diary that our medical cases suffered most, and they usually from lack of proper nursing. An experienced nurse at that time was an unheard of thing in that country, and we today with our hospitals and array of nurses on instant call, cannot appreciate what we were, in this handicap, able to do for the cases in hand. We suffered, as nearly all new lumber towns did, with an epidemic of typhoid fever and diphtheria, scarlet fever and other infectious diseases following. These were brought on, no doubt, by the unsanitary conditions prevailing, and the great difficulty of maintaining a proper quarantine.

In the spring of 1887, one of the great mills finished their cut of pine and the owners decided that they would move their plant and some of the best men to West Virginia, where they owned another tract of timber. This procedure took a good many of my best families, and as it had been rumored frequently of late that the other mill would be finished with their pine in about three years, I began to look around for a more permanent location. A doctor friend of ours was making plans to move from a small town about ten miles from where we were, and arrangements were easily made to make the change and by May twelfth, 1887, we were moved and located in a pleasant little town on the main line of the railroad, and for the ensuing thirty years we were a part of this little town. Here the timber was all hard wood and the soil was good agricultural land. Soon many of the early settlers were clearing up lands for farms and many of that early day are today wealthy farmers, if there are any such people. In looking over my memorandum of that period I saw that my first year's earnings there was

\$2,500 with cash collections just a little more than \$500. Reading on I find that ten years later my earnings had only increased to a little more than \$3,000, but the cash was \$2,100. In those days away from the lumbering interests money was not plenty nor easy to get even after it had been earned. This paper would not be complete if it did not say something about the benefits accruing to the young physician locating in the smaller communities today. To be sure, the rural field is not as attractive as it was forty years ago. Neither are the opportunities for performing emergency work as frequent as formerly. Good roads, automobiles, telephones and specialists all tend to narrow the field. Yet after all there is some real pleasure and great satisfaction in going back to the old town where you knew everybody, taking them by the hand and calling them by their first name, kissing their babies, eating their chicken dinners, sympathizing with them in their sorrows, and rejoicing with them in their successes. Aside from all that, the doctor in a small community is a much respected man, and I know, personally, that he is always invited to take part in all the uplift endeavors, such as building churches, paying the preacher, and many other devious and sinister ways that separates him from his money. Of course, you must own the best horse or auto, as the case may be; your better half must needs attend all the social functions, and next to the banker you are "It." The only difference that I am able to recall at this time is, that the banker loans them the money, but the doctor gives it without hope of reward.

Nearly fifty years have passed since much of the material given here was written. Fifty years ago the most of northern Michigan was a vast solitary forest, and the moaning of the wind through the tops of the great pines was endless. Soon the handiwork of man began. The timber was fallen and manufactured into lumber and shipped to the far corners of the world. Today all is changed, the miracle has happened, the timber is gone and in its place are cities and villages dotting the whole state over; great trunk lines of highway traverse in every direction, where but a short time since it seems to me it was difficult getting along with a horse and cart. It seems but yesterday that I entered this wilderness, wild and unconquerable as it seemed at that time; today it is but a memory. Should you drive north on your vacation this summer, stop your car at

the top of the east hill overlooking the valley of the Cedar river, if you wish to view a peaceful and marvelously beautiful rural panorama. Looking way to the south and west may be seen the shining tracks of the railroad, winding its sinuous course down the hill which encloses this valley almost entirely, not unlike two ribbons of silver, reflecting the rays of the afternoon sun. Close beside it here is the great state highway M-13. The sun shimmering and glinting through the cloud of dust that hangs over the roadway day and night and may be seen for miles. On, on down the hill they glide to the lowermost part of the valley where lies the little hamlet beside the river nearly hidden in the dense foliage that borders the stream, and that has been placed for shade by the people. Here the train makes a short stop to discharge passengers and mail, soon creeping and crawling to the north slowly as it emerges from the valley. The highway makes a direct westerly turn here in the main street of the village, and turns north again about one-half mile west of the main corners. Away to the north and west that glimmer of water you see is the mill pond, and you may just discern the roof of the old mill through the dense foliage. The white line along the west side of the pond is M-13 where it follows along the banks before starting on the long trek to the north. Beyond and below the mill is the wild water from the millrace. There lurk the trout, fairly hidden in the shadow of the shrubs that border the stream; you can see the glimmer of the water as the afternoon sun meets its surface with a kiss. Farther to the west are the fertile farm fields. Back in the village looking south from the highway we are standing on, may be seen the high school building, with a church near by, and through the dense foliage that nearly obscures the village proper may be counted three other church spires. In the forefront and about half way down the hill, still looking south of the highway, is the campground of the Free Methodists. About a mile south of the village the river crosses beneath the tracks of the railway, passing under the bridge with a song. It circles to the east and north through the campground, gurgling its happy way onward. Flashing and glowing in the afternoon sun, it sweeps beneath the railway to the north of the village and ripples merrily on to the west, until finally it hesitates and comes to a stop at the great dam placed across its course, thus forming the mill pond, and

in this way performing its share of the labor toward maintaining the well-being of the community, as it furnishes power for the grist mill and the electric light plant. Here in the midst of this beautiful picture created by nature with some small help of man, nearly thirty years of my life work has been cast, with its work and play, with its sorrows and its happiness, for it does give one great pleasure to feel that he has had some small part in the creation of such a picture. No doubt there are some that will be unable to see beauty in the scene, or what there is attractive in the life of the country doctor. Their attention may be drawn to the obvious narrowness and remoteness of the field, the separation from professional associates, the physical hardship and fatigue, the lack of recreation, the multiplicity of duties, and finally the poor financial returns. Certainly such a life is not for that one. Let no one think that there is no pleasure in this life of service. In addition to the comradeship gathered by years of acquaintance and meetings from day to day, as I have mentioned before, there is the pleasure of the strong man in combat, of overcoming seemingly insurmountable obstacles, of pushing and succeeding where others fail.

The doctors plowing through the snows of northern Michigan fifty years ago, experienced something of the thrill of a Peary or Amundsen struggling through the ice and snow toward the Pole. Life, to a man of adventurous and determined spirit, is full of thrills and rich in compensation. Only the weak and selfish, the nerveless and undecided, fail to find pleasure in this life of service.

TUBERCULOSIS AND GOITER

E. P. Sloan, Bloomington, Ill., (Journal, M. A., June 18, 1927), fears that the rather frequent coexistence of goitre and tuberculosis is not sufficiently appreciated. Diagnostic difficulties are great, owing to the similarity of the clinical picture in the two cases. The sequence of pathologic change in the thyroid explains the relative severity of the two diseases at different periods. Three Types of Diagnostic Problem in the Early Cases.—1. The incipient case of tuberculosis, without demonstrable lung lesion, resembling exophthalmic goitre. 2. The forme fruste type of exophthalmic goitre resembling early tuberculosis. 3. Coexistence of tuberculosis and goitre; coexistence of the two diseases, which is comparatively frequent, as shown by statistics. Three Types of Cases That Are Sometimes Surgical.—1. Chronic tuberculosis with toxic goitre. 2. Arrested tuberculosis with toxic goitre. 3. Acute cumulative toxemia resultant from coexisting pulmonary tuberculosis and toxic goitre. Treatment.—Early cases: medical; rest and hygiene as for tuberculosis. Late cases: surgical, when positive symptoms of thyrotoxicosis are unquestionably present.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

NEW HEALTH LEGISLATION

A number of laws of direct or indirect interest to physicians were passed by the 1927 Legislature. A brief resume of some of the more important of these will follow.

The "new tuberculosis commitment law," Act 314 of the Public Acts of 1927, recites in much more specific language many of the ideas embodied in previous scattered legislation on the subject of tuberculosis.

Restatement is made that tuberculosis is a "dangerous communicable disease," that physicians must report cases, that the Michigan Department of Health is to furnish report blanks, and that the State Commissioner of Health makes rules and regulations for the discovery and control of persons afflicted.

Section 3, however, very clearly states that whenever a local health officer shall know of a case of tuberculosis needing care, treatment, and hospitalization, this case shall be hospitalized immediately without any further action on the part of anyone. After the patient is hospitalized, the health officer shall make an investigation as to his ability to pay, and file this detailed report with the Board of Supervisors along with an itemized statement of the expense incurred.

This apparently gives the health officer peremptory power as to when and where hospitalization shall be carried out for cases of tuberculosis. As usual, however, the Board of Supervisors is required to pay only such bills as it deems reasonable, and if the whole of the health officer's action should be considered unreasonable by the Board, it could refuse to pay the whole bill. Consequently, the health officer will have to apply the law with care and good judgment.

COUNTY HEALTH DEPARTMENT LAW

The County Health Department Law, Act No. 306, has been discussed before, but its importance warrants repetition. The law provides that the Board of Supervisors may establish a county health department, plans to be approved by the State Commissioner of Health. Cities with full time health officers may or may not be

included in such a county department. The county health officer is to be selected by the Board of Supervisors, and he may be removed by the Board of Supervisors or by the State Commissioner of Health.

The county health department is to administer all health laws. Two or more counties may join to make a district health department. Expense is to be apportioned on the basis of the "tax valuation."

The full time county health department as a means of putting public health work on a sound basis is a well recognized mode of organization. It is so thoroughly established that the United States Public Health service and the International Health Division of the Rockefeller Foundation are willing to assist in the financing of such projects.

Michigan's present system of 1,700 health jurisdictions can be abolished under this law, and the functions concentrated in 85 to 100 full time county and city health departments. This is no experimental legislation. Such laws are based on twenty years of experience in the field of local health supervision, and there are now 337 counties in the United States operating in this way.

VENEREAL DISEASE LAW AMENDED

Two sections of the present disease control law are repealed by Act No. 180. One section provided for treatment of infected persons under supervision of the Michigan Department of Health, and for the employment of inspectors by the department to carry out the provisions of the law. The other section prohibited druggists from selling drugs for venereal disease except on prescription, and required that druggists report all such prescriptions each month to the Michigan Department of Health. Physicians were not to give drugs except as office treatment.

As the law now stands, the State Department of Health cannot provide treatment for any persons, or employ inspectors to aid in enforcing the law. Druggists may sell various patent medicines for venereal disease without reporting to the department.

REGISTRATION OF LABORATORIES LAW

Under the provisions of Act No. 308 all laboratories "shall be registered" with the Michigan Department of Health. Details of registration are left entirely in the hands of the department. All laboratories must make a record of all "live germs" given away, sold, or distributed.

This law will, in effect, improve the quality of work done in the various private laboratories of the state, because it will give the department authority to inquire as to methods and modes of procedure. The great advantage of having such a law is that it will help to standardize procedures, and will give the department a chance to become acquainted with those in responsible charge of private laboratories.

On July 15 the department sent a letter to laboratories in Michigan, explaining the plan of registration and the provisions of the law. Perhaps the simplest comment is to quote sections of the letter itself.

"The 1927 Legislature of Michigan passed the 'Engel Law' which provides for the registration and supervision of laboratories where live pathogenic germs are handled.

"Certain information is required before a registration number can be granted. A questionnaire is attached. It is to be filled out as directed and returned to Guy L. Kiefer, M. D., Commissioner of Health, for his approval. A registration number will be assigned to you.

"No cultures are to be shipped through the mails unless bearing a label giving the name, address, and registration number of the sender and a statement that the package contains pathogenic micro-organisms. No culture or subculture shall be sent to points inside of the State of Michigan unless the vendor has the registration number of the person receiving the culture. A list of the registrants will be kept in the Department of Health at Lansing.

"Kindly inform the other laboratories in your vicinity of this law in order that they may be registered. We do not have a list of the laboratories in Michigan and consequently feel that everyone should co-operate in the administration of the law, which goes into effect September 1, 1927.

"All communications regarding registration should be directed to Guy L. Kiefer, M. D., Commissioner of Health." The letter was signed by C. C. Young, Director of Laboratories, Michigan Department of Health.

AMENDMENT TO BIRTH AND DEATH REGISTRATION LAW

To make legal a procedure that the Michigan Department of Health has been trying to maintain without statutory regulations is the purpose of Act No. 125 which amends the Birth and Death Registration Law.

The act provides that where death occurs without medical attendance, the undertaker shall notify the coroner who shall investigate and shall then sign the death certificate. No provision has previously been made for a coroner to sign a death certificate.

BIOLOGICAL DISTRIBUTION LAW

It is made the duty of the State Health Commissioner to "manufacture and distribute antitoxin and other biological products for the use and control of communicable diseases" by Act No. 105. The local health officer may requisition these products as provided in the Rules and Regulations of the department.

This law makes legal the manufacture and distribution of biological products by the Michigan Department of Health.

TREATMENT OF INDIGENT CHILDREN

The scope of the law providing for the medical and surgical care of indigent children at the University Hospital is broadened by an amendment, Act. No. 317. The provisions of the law are extended to allow the commitment of indigent pregnant juveniles. This gives legal sanction to admitting young girls to the maternity hospital.

MICHIGAN STATE SANATORIUM

Act No. 190 appropriates \$600,000 for the Michigan State Sanatorium at Howell, and transfers to the Michigan State Sanatorium the \$500,000 appropriated in 1925 for the State Tuberculosis Sanatorium. With this amount of money, the institution at Howell can be practically rebuilt, and it has been given the name of the Michigan State Sanatorium to signify that practically a new institution is to be erected there.

THE KARCHER-DYKSTRA LAW

The Karcher-Dykstra Law, Act No. 320, is a long and involved law which has considerable bearing on the establishment of sewage disposal plants in the state. Under the present laws, cities are limited in the amount of municipal bonds that they can issue. The new law changes this principle.

When a city is bonded to its legal limit, no matter how urgent the building of a sewage disposal plant may be, it is forbidden by the constitution of the State of Michigan from issuing further bonds for any service whatsoever. Under these circumstances a private corporation can build a sewage disposal plant and issue bonds on the *plant itself* without reference to any other property.

This bill merely grants to the City Council the same powers as a private corporation would have in doing this same thing. Now, a City Council can build a sewage disposal plant and issue bonds on the *plant*, that are *not* a general liability of the city.

This is very helpful legislation, since it will allow certain cities with much bonded indebtedness to construct sewage disposal plants that are urgently needed and that could not be built otherwise.

THE DYKSTRA LAW

An amendment to present legislation that in some ways extends the provisions of the Karcher-Dykstra Law is known as the Dykstra Law, Act No. 156. This provides that water works, electric light and power systems and other public utilities may be bought and paid for by bonds issued *on the public utility itself* and not on the city property as a whole.

Cities can now tax to 2 per cent. They can borrow on the credit of the city, first, for buying water works systems not to exceed 8 per cent of the assessed value of all real and personal property in the city, second, for buying electric light and power systems not to exceed 3 per cent of the assessed value, and third, for buying such other public utilities as may be authorized by law.

These bonds are to be for not more than 6 per cent interest, not longer than 20 years duration, and for not more than 60 per cent of the cost of the public utility. This special type of mortgage bond shall not in any city be issued for more than "8 per cent of the assessed value of all real and personal property in the city."

This law offers to cities a new way to finance public utilities.

STAFF CHANGES

Dr. Dorothy L. Green, who has been carrying on the study of deaths in Michigan from puerperal causes, made at the request of the State Medical Society, is leaving the department to take up special work at Bellevue Hospital, New York City.

Later she will enter private practice in New York.

Dr. Green has been connected with the Bureau of Child Hygiene and Public Health Nursing since September, 1925, and has spent most of her time conducting infant and pre-school clinics throughout the state. Since April, 1927, she has worked on the maternal mortality study, investigating 113 deaths in 23 counties.

Dr. Florence H. Knowlton of Sparta, Wisconsin, will succeed Dr. Green. Dr. Knowlton is a graduate of Tufts College Medical School, and served as Assistant Physician at the Belmont Hospital, Worcester, Massachusetts, for three years. For the past three years she has been Resident Physician at the State Public School, Sparta, Wisconsin.

William C. Hirn, for a number of years First Assistant Engineer of the department, left for Detroit, June fifteenth, to take a position with a firm of consulting engineers. While with the department Mr. Hirn had supervision of water treatment plants.

John M. Hepler, a member of the staff of the Bureau of Engineering, will succeed Mr. Hirn.

Bertha Karkau, R. N., who has been carrying on a demonstration prenatal program in Osceola County under direction of the local physicians, resigned from the department staff July first. Miss Karkau will be married in August to Dr. I. W. Brown, a practicing physician of Marion, Michigan.

VISITS OF ENGINEERS DURING MONTH OF JUNE, 1927

Inspections of Railroad and Boat Water Supplies: 10 cities.

Bay City (2)	Mackinaw City (4)
Channing (2)	Mackinac Island (2)
Cheboygan	Manistique (3)
Detroit (3)	South Haven
Grand Ledge	Watersmeet (2)

Inspections and Conferences, Sewage and Sewage Disposal: 24 cities.

Bronson	New Baltimore
Coldwater	Northport
Eaton Rapids	Onaway (2)
Elk Rapids	Pine Lake
Flint	Pontiac
Greenville	Portland
Hart	Royal Oak
Howell	Saginaw
Ithaca	Sparta
Lansing	Sturgis
Lapeer	Walled Lake
Manistee	Wayne

Inspections and Conferences, Water Supplies: 11 cities.

Grand Rapids (3)	Rockford
Lakeview (2)	Saginaw
Lansing	Shepherd (3)
Mackinaw City (2)	South Haven
New Baltimore	Williamston
Oden	

Inspections and Conferences, Stream Pollution: 2 cities.

Filer City (2)	Kent City (2)
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Inspections and Conferences on Camps: Eight.

- Bloomington, Y. M. C. A. Camp, Sanitation.
- Brighton, Fresh Air Camp, Sewage Disposal (2).
- Charlevoix, Girls' Camp, Sewage Treatment.
- Clare, Lansing Y. M. C. A. Camp, Water and Sewage Disposal.
- Clyde, Detroit Y. M. C. A. Camp, Water and Sewage Disposal.
- Fremont, Evanston Y. M. C. A. Camp, Sanitation and Water Supply.
- Jackson, Girls' Camp, Water Supply.
- Saginaw, Boy Scout Camp, Sanitation (3).

Inspection of Swimming Pool:

Lansing Y. W. C. A. Pool.

Inspections, Miscellaneous: 5.

- Bravo, Resort Sanitation.
- Farmington, Nuisance and Drainage (2).
- Farmington, Sewage Treatment at Methodist Orphanage.
- South Haven, Cozy Resort, Sanitation.
- South Haven, Sunny Brook Farm, Sanitation.

Roadside Water Survey:

Trunk lines covered, 3,259 miles. (Collecting samples).

Samples collected, 743.

Trunk Lines covered, 614 miles (posting supplies).

Supplies posted:

- Municipal, 22.
- Public, 169.

Trunk Lines completely covered are U.S.-131, 31, 27, 127, 23, 25, 24, M-37, 36, 24, 53, 19, 51, 84, 81, 83, 29, 42, 55, 22 and 76. (Collecting samples).

Trunk Lines partially covered are U.S.-10 and 112 and M-15, 43, 50, 78, 64 and 46. (Collecting samples).

Samples from 90 school supplies were collected.
 Samples from 12 gas stations and garages were collected.

Samples from 33 Tourist Camps were collected.

PREVALENCE OF DISEASE

	June Report			Av. 5 Years
	Cases Reported			
	May 1927	June 1927	June 1926	
Pneumonia	526	364	302	397
Tuberculosis	506	532	454	492
Typhoid Fever	24	29	38	46
Diphtheria	381	338	433	392
Whooping Cough	751	586	566	665
Scarlet Fever	1,103	920	1,190	898
Measles	1,175	898	3,957	4,088
Smallpox	188	152	30	208
Meningitis	6	18	13	13
Poliomyelitis	0	3	3	3
Syphilis	1,325	1,378	1,282	1,096
Gonorrhoea	674	717	892	927
Chancroid	0	7	3	14

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

June, 1927

	+	-	+-	Total
Throat Swabs for Diphtheria				818
Diagnosis	35	302		
Release	60	123		
Carrier	1	289		
Virulence	5	3		
Throat Swabs for Hemolytic Streptococci				543
Diagnosis	58	195		
Carrier	25	265		
Throat Swabs for Vincent's	10	327		337
Syphilis				5808
Wassermann				
Kahn	1059	4708	41	
Darkfield				
Examination for Gonococci	148	1075		1223
B. Tuberculosis				439
Sputum	82	328		
Animal Inoculations	1	28		
Typhoid				114
Feces	2	35		
Blood Cultures	1	20		
Urine		8		
Widal	3	45		
Dysentery				26
Intestinal Parasites				11
Transudates and Exudates				152
Blood Examinations (not classified)				144
Urine Examinations (not classified)				346
Water and Sewage Examinations				1345
Milk Examinations				108
Toxicological Examinations				
Autogenous Vaccines				
Supplementary Examinations				108
Unclassified Examinations				539
Total for the month				12061
Cumulative Total (fiscal year)				155740
Decrease over this month last year				2457
Outfits Mailed Out				13251
Media Manufactured, c. c. (Special Media)				241825
Typhoid Vaccine Distributed, c. c.				3005
Toxin Antitoxin Distributed, c. c.				11840
Antitoxin Distributed, units				12950000
Silver Nitrate Ampules Distributed				5496
Examinations Made by the Houghton Branch Laboratory				1923
Examinations Made by the Grand Rapids Extension Laboratory				5516

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

MINUTES OF THE COUNCIL

The first session of the Council was called to order at the Grand Hotel, Mackinac Island, at 9 a. m., June 16, 1927, with Chairman Stone presiding and the following Councilors present:

R. C. Stone, Chairman; B. R. Corbus, B. F. Green, Geo. L. LeFevre, J. D. Bruce, B. H. VanLeuven, Julius Powers, O. L. Ricker, J. Hamilton Charters, C. E. Boys, Richard Burke, Henry Cook, and the Secretary-Editor, F. C. Warnshuis.

1. The Annual Report of the Council to the House of Delegates was discussed and approved as drafted and directed to be transmitted to the House of Delegates, on motion of Doctors Charters and VanLeuven. (See Minutes of the House of Delegates, July issue of *The Journal*).

2. On motion of Doctors Ricker and Boys—V. C. Vaughan, Sr., W. T. Dodge, A. D. MacLaren and A. H. Rockwell were nominated for Honorary Membership, upon recommendation of their respective Councilors. Approval of the nominations ordered transmitted to the House of Delegates for election.

There being no further business the meeting adjourned.

The second session of the Council was called to order in the Grand Hotel at 6 p. m. on June 17. Present:

R. C. Stone, Chairman; B. R. Corbus, B. F. Green, Geo. L. LeFevre, J. D. Bruce, B. H. VanLeuven, Julius Powers, O. L. Ricker, J. Hamilton Charters, C. E. Boys, Richard Burke, Henry Cook, and the Secretary-Editor, F. C. Warnshuis.

1. Dr. Richard R. Smith, Chairman of the Special Committee of the House of Delegates on the Survey of Hospital Charities, appeared before the Council and presented certain features relative to the continuance of the work of his committee. Dr. Smith was instructed to pursue committee activities as his judgment indicated and to confer from time to time with the Executive Committee of the Council relative to problems that might arise during the committee's activity.

2. On motion of Councilor Boys, sup-

ported by Charters, Detroit was selected as the next place for the holding of our Annual Session, the time to be designated at the January meeting of the Council.

3. On motion of Councilor Burke, supported by Cook, the minutes of the Executive Committee of the Council were approved and directed to be incorporated as part of the Minutes of the Council.

4. On motion of Councilor Bruce, supported by several Councilors, R. C. Stone was elected Chairman of the Council for the ensuing year.

5. On motion of Councilor Bruce, supported by Boys, B. R. Corbus was elected Vice-Chairman of the Council for the ensuing year.

6. Chairman Stone conferred the thanks of the Council to retiring President J. B. Jackson, for the services that he had rendered as Councilor and as President of the State Society during the past ten years.

There being no further business the Council adjourned to meet in January in Detroit at the call of the Chairman.

COUNCIL COMMITTEES 1927

Publication—

J. D. Bruce, Chairman
B. F. Green
B. H. Van Leuven

Finance—

Geo. L. LeFevre, Chairman
Julius Powers
J. H. Charters

County Societies—

B. R. Corbus, Chairman
C. E. Boys
O. L. Ricker.

YOU TELL ME

To the member sending in the best set of answers we will give a 1927 Edition of Aaron on Diseases of the Digestive Organs, price \$11.00. To the second best set of answers, one volume of Cecil's Text Book of Medicine, price \$9.00.

QUESTIONS

1. What is the latest treatment of pernicious anemia?
2. What steps are necessary to become a mem-

- ber* of the A. M. A.? (b) A *Fellow* of the A. M. A.?
3. What is the present day treatment of erysipelas?
 4. What is the purpose of *Hygeia*, published by the A. M. A.?
 5. Give five reasons why a person should submit to a periodic Physical Examination?
 6. Where do you find the column, Tonics and Sedatives? Who writes it?
 7. Who and where do they live:
 - President A. M. A.
 - President Michigan State Medical Society.
 - Secretary of the A. M. A.
 - Surgeon General of the Army.
 - Chairman of the Council.
 - State Commissioner of Health.
 - Secretary, Board of Registration.
 - President, Board of Registration.
 - Dean of Detroit College of Medicine and Surgery.
 - Dean of Medicine Department U. of M.
 8. How many members in your County Society? How many eligible non-members in your county?
 9. What is the differential diagnosis of extradural and subdural hemorrhage.
 10. State five facts revealed by our Special Committee on Hospital Charity in their report published in the July issue.

* * *

"Ask Me Another?" seems to be a fairly popular diversion. It's August and you have leisure—so we are asking you to take stock of your knowledge—a mental review is always timely. Come on with your answers. If this awakens interest we'll run another one in September.

JUST A DAY

We thought possibly some of our readers would like to glimpse "Just a Day" in ye Secretary-Editor's office and so we enumerate the following items:

1. Long distance call from a County Secretary for a speaker for County Meeting four days hence. Speaker secured and name and subject wired to county secretary.
2. One hundred pages of Journal copy read and 36 pages of advertising checked.
3. Six reprints of original articles checked for authors.
4. OK'd monthly bills for vouchers.
5. Correspondence:
 1. Answered inquiry from County Secretary as to what is meant by *Hygeia* Clip Sheet.
 2. Dictated statement to Secretary of American Association of Obstetricians and Gynecology as to Michigan activities in material welfare work.
 3. Answered 15 questions for National President of Woman's Auxiliary.
 4. Answered an inquiry from Johns Hopkins' pathologist.
 5. Advised Chairman of Kansas Society of Committee on Public Relations as to our work in Michigan.
 6. Advised President Randall of the committee appointments to be made by him.

7. Acknowledged letter from Chairman of the Committee on Medical History.
8. Answered inquiry from Secretary of Section on Pediatrics.
9. Answered an inquiry from one of our Councilors.
10. Advised four members of their election to honorary membership.
11. Wrote five members inviting them to join in a Post Graduate program.
12. Wrote County Secretary relative to remission of dues for half year period.
13. Apologized to member for misspelling his name on our membership certificate.
6. Wrote three editorials and couple of pages of comments.
7. "Jacked up" printer for delaying galley proof of original articles.
8. Opened about 50 pieces of circulars, magazines and other mailable material and filled a good sized waste basket.

And then we called it a day—typical of the 365 days in each year.

WOMAN'S AUXILIARY

The Woman's Auxiliary of our State Society was organized at the Mackinac meeting. The following officers were elected:

President, Mrs. Guy Lincoln Kiefer, Lansing.

Vice-President, Mrs. W. K. West, Painesdale.

Secretary, Mrs. Earl McIntyre, Lansing.

We have tendered to the Auxiliary, space in *The Journal* for their monthly reports and announcements. This has been accepted and in succeeding issues such a department will be conducted by the officers of the auxiliary. We know that this organization is confronted with numerous opportunities for educational instruction of the public and that it can go far in causing the people to obtain a clearer insight of the problems and principles of scientific medicine and community health and the profession's view. We confidentially anticipate that individual benefits will accrue to our membership. We urge County officers to extend every assistance to the organization of local auxiliaries and that a program of local activity be undertaken.

REPORT OF THE MICHIGAN HEALTH EDUCATION PROGRAM CONDUCTED UNDER THE DIRECTION OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION, 1925-27

The Michigan Health Education Service was organized in 1922 under the auspices of the Joint Committee on Public Health Education. This Health Education Program has grown steadily, both in scope

and effectiveness. As regards the number of assignments made and the attendance upon these lectures, the record for the past year has exceeded that of any preceding year.

Health lectures have been given throughout the state under the auspices of Parent-Teacher Associations, high school programs, church organizations, Women's Clubs, and other organizations interested in health education. The number of calls for lectures of this sort have exceeded the supply of speakers. Additions to our staff of speakers for next year are imperative if we are to meet the increasing demand for health education service.

One of the significant features of our Health Lecture Service for 1926-27 was the organization of a series of co-ordinated lectures for High School Assembly programs. This work was carried on in an experimental way in Detroit, Grand Rapids, and Flint during 1925-26. During the past year the program was very much perfected and extended. Health lectures in series were given in 89 high schools. It is worthy of note that every school where health lectures were given has asked for a continuation of the service next year. Health lecture reports were received by the University Extension Division covering practically every assignment. Almost without exception these reports were favorable.

In many of the high schools of the state students were required, as part of their exercises in English, to write out reports of health lectures given. Many of these reports have been submitted to the Extension Division. Most of them show understanding of the material presented and an appreciation of the service. As a sample of these high school exercises, the following is one of the reports written by the students of the Girls' Catholic High School of Grand Rapids upon the lecture delivered by Dr. C. H. Johnston of Grand Rapids on the subject, "Walter Reed":

"I thing the first thing which I enjoyed and appreciated in yesterday's lecture was the winning personality of the speaker, Dr. Johnston. His informality and pleasant, ordinary manner of speaking at once made the listener feel interested and at ease. Also, his manner of presenting his material was so clear and interesting that even younger people than high school students would have enjoyed the talk.

"The lecture, I am convinced, was an appropriate one for high school students, for while disease and the woe and fatalities that it brings in its wake are not exactly pleasant topics, they are, nevertheless, good topics, because they make us appreciate our own good health and place us on

our guard against contagious diseases. The remarkable work of Dr. Reed and his associates in caring for persons who had contracted yellow fever and in eliminating, as far as possible, the cause of the same for others, is a work which will not die out after a few centuries, but one which will live on and on as long as people inhabit this earth."

Dorothy Fritsch,
English III.

March 29, 1927.

The following is a list of the names of the doctors who gave health lectures throughout the state during the past year:

A. D. Allen, M. D.	C. F. Karshner, M. D.
R. W. Alles, M. D.	R. N. Kempton, M. D.
Florence Ames, M. D.	R. M. Kempton, M. D.
Percy Angove	George M. Kesi, M. D.
N. E. Aronstam, M. D.	H. F. Kilborn, M. D.
Chas. H. Baker, M. D.	Chas. F. Kuhn, M. D.
F. A. Baker, M. D.	Clair Langton, M. S.
R. H. Baker, M. D.	B. F. Larsson, M. D.
H. S. Bartholomew, M. D.	George LeFevre, M. D.
C. H. Benning, M. D.	R. W. McLain, M. D.
A. C. Blakeley, M. D.	J. G. R. Manwaring, M. D.
Alexander Borland, M. D.	W. H. Marshall, M. D.
C. E. Boys, M. D.	Willard Mayer, M. D.
A. L. Brannock, M. D.	F. M. Meader, M. D.
S. E. Braendle, D. D. S.	C. V. Merritt, M. D.
E. D. Brooks, M. D.	F. B. Miner, M. D.
J. S. Brotherhood, M. D.	J. J. Moffett, M. D.
James D. Bruce, M. D.	S. G. Mollica, M. D.
George M. Brown, M. D.	J. D. Monroe, M. D.
Carl E. Buell, M. D.	A. R. Moon, M. D.
G. R. Bullen, M. D.	G. W. Moore, M. D.
Hugh Cabot, M. D.	E. T. Morden, M. D.
A. L. Callery, M. D.	Elba L. Morse, R. N.
C. D. Camp, M. D.	R. A. Morter, M. D.
E. I. Carr, M. D.	C. A. Meafie, M. D.
M. S. Chambers, M. D.	E. N. Nesbitt, M. D.
A. W. Chase, M. D.	L. F. Newbern, M. D.
H. L. Clark, M. D.	Estella Norman, M. D.
L. F. Cobb, M. D.	R. L. Novy, M. D.
E. A. Cook, M. D.	W. J. O'Reilly, M. D.
Maria Coolidge, M. D.	R. C. Perkins, M. D.
T. H. Cooper, M. D.	E. B. Pierce, M. D.
E. E. Curtis, M. D.	F. A. Poole, M. D.
W. R. Davis, D. D. S.	W. E. Praeger, Ph. D.
W. J. V. Deacon, M. D.	Stuart Pritchard, M. D.
Marjorie Delavan, A. B.	Roy Pryor, M. D.
J. H. Dempster, M. D.	Waynard Pyle, M. D.
R. H. Denham, M. D.	H. E. Randall, M. D.
D. C. Denham, M. D.	Otto L. Ricker, M. D.
D. C. Denman, M. D.	Philip Riley, M. D.
C. F. DeVries, M. D.	S. J. Rubley, M. D.
Chester A. Doty, M. D.	S. E. Sanderson, M. D.
Chas. F. DuBois, M. D.	Susanne Sanderson, M. D.
W. J. DuBois, M. D.	W. H. Sawyer, M. D.
E. E. Dutchess, M. D.	D. J. Scholten, M. D.
C. L. Eggleston, M. D.	P. P. Serio, M. D.
C. T. Ekelund, M. D.	A. M. Shaeffer, M. D.
Wm. Donald, M. D.	Budona Sherman, M. D.
E. R. Elzinga, M. D.	M. E. Silver, M. D.
Karl Fahndrich, M. D.	N. Sinai, D. P. H.
W. L. Finton, M. D.	W. N. Shipton, M. D.
W. E. Forsythe, M. D.	R. R. Smith, M. D.
S. B. Frankhauser, M. D.	L. J. Stafford, M. D.
Nathaniel Gates, M. D.	F. W. Stewart, M. D.
Wm. M. German, M. D.	R. C. Stone, M. D.
C. J. Golinvaux, M. D.	R. S. Stone, M. D.
T. D. Gordon, M. D.	W. J. Stapleton, M. D.
W. H. Gordon, M. D.	E. R. Swift, M. D.
B. F. Green, M. D.	John Sundwall, M. D.
W. A. Griffith, M. D.	A. B. Thompson, M. D.
D. W. Gudakunst, M. D.	A. C. Thompson, D. D. S.
A. R. Hackett, M. D.	Floyd E. Town, M. D.
H. H. Hammel, M. D.	H. J. Vanden Berg, M. D.
E. E. Hancock, M. D.	E. R. Vanderslice, M. D.
Campbell Harvey, M. D.	Wm. R. Vis, M. D.
H. H. Heffron, M. D.	Paul F. Voelker, Ph. D.
W. D. Henderson, Ph. D.	R. L. Wade, M. D.
C. L. Hess, M. D.	F. C. Warnshuis, M. D.
M. L. Holm, M. D.	George Waters, M. D.
C. R. Hills, M. D.	Lynn Webber, M. D.
M. Hutzler, R. N.	Frank A. Weiser, M. D.
Melvin Isaminger, D. P. H.	L. F. C. Wendt, M. D.
C. P. R. James, M. D.	C. V. Weller, M. D.
D. S. Jickling, M. D.	T. J. Werle, M. D.
Frank D. Johnson, M. D.	C. H. Westgate, M. D.
C. H. Johnson, M. D.	T. M. Williamson, M. D.
R. L. Kahn, M. D.	Walter J. Wilson, M. D.
W. W. Kahn, M. D.	

Health lectures were given in the following centers :

Alma	Grand Rapids	Osseo
Ann Arbor	Grosse Pointe	Otisville
Bad Axe	Grant	Otter Lake
Battle Creek	Hillsdale	Pellston
Bay City	Horton	Petoskey
Belding	Hudson	Portage
Brooklyn	Ionia	Raisinville
Caro	Jackson	Redford
Central Lake	Kalamazoo	Richmond
Curran	Lakeview	Roseville
Deckerville	Lansing	St. Joseph
Detroit	Lapeer	Sand Lake
Dorr	Lincoln	Shepard
Elwell	Lowell	Twining
Fife Lake	Mancelona	Vernon
Flint	Milan	Washington
Glennie	Monroe	Wayne
Grand Haven	Muskegon	

Health lectures in groups of five illustrated lectures were given as a part of the regular Assembly programs in the high schools of the following cities :

Bay City	Sherwood	Reading
Detroit	Union City	Allen
Grand Rapids	Battle Creek	Clinton
Jackson	Marshall	Blissfield
Kalamazoo	Fenton	Morenci
Lansing	Gaines	Adrian
Port Huron	Goodrich	Deerfield
Saginaw	Flushing	Hudson
Quincy	Flint	Dundee
Coldwater	Litchfield	Petersburg
Bronson	Hillsdale	Monroe
Pontiac	South Lyon	Ida
Keego Harbor	Oxford	Holly
Royal Oak	Ortonville	Milford
	Jonesville	

SUMMARY

Total number of health lectures given	577
Number of places where health lectures were given (Not including high school series).....	53
Number of high schools where health lectures were given (Including 43 cities in 7 counties).....	89
Total attendance upon health lectures	137,000

SAFE VACATIONING

GUY L. KIEFER, M. D., D. P. H.,
Commissioner of Health.

With Michigan's resort fame so amazingly widespread and with vacations coming to be as much a matter of course as automobiles, it is high time that a little honest consideration be given to the question of what the resort owner really owes his public, and to the less discussed but equally pertinent question of what the public owes the resort owner.

Safe vacationing is, after all, not a one-sided problem. The contribution of the resort owner is a big item, but it is matched by the obligation of the vacationist himself. Blame for insanitary conditions when they exist, can usually be pretty evenly divided.

The resort business should be like any other business, you should get what you ask for and are willing to pay for. Supply follows the demand. The resort owner, like any other merchant, will keep in stock what the public wants. If they come, accept what is there, pay their bills without comment, and go, he quite logically decides that everything is satisfactory. If his guests are content with makeshift sewage disposal, questionable drinking water and unsupervised milk, why should he worry?

And in the past some of them have not worried, and typhoid has been the result. Not a good advertisement for the locality or the state, and no one knows it better than the resort owner himself. And no one is more anxious to guard against any possibility of an outbreak in his district.

But if the vacationist demands safety, it will be supplied. And he is growing more and more to demand it. "Sanitary," "safe," and "supervised" are good advertising words on resort letterhead. The interest of the more intelligent vacationist, at least, is shifting from the front porch view to the kitchen outlook. That the water sparkles is not enough, it must meet the same careful tests that are given to the water he drinks back home. Septic tanks have never had so much publicity and such social standing as now.

What the resort owner owes his public is pretty well agreed upon. He owes them drinking water that is safe, and not a typhoid menace. He owes them sewage disposal that actually disposes and does not endanger either the water supply, the milk supply, or the bathing beach. He owes them clean milk from tested cows, handled in an approved manner. He owes them foods that are protected from contamination, prepared and served by people who are proved by careful physical examination to be free from communicable disease.

But what does the vacationist owe the resort owner?

First, he owes him an intelligent demand. If he does not ask for health protection and is not willing to pay for it, then he has no reason for objecting when he does not get it.

And he owes him at least co-operation in the matter of disease prevention. Environment is important, but it is not all that is necessary. The burden of proof in the transmission of disease rests on the individual, and the same holds true about prevention. The person who starts on a

vacation trip without immunization against typhoid and vaccination against smallpox has himself to blame if he contracts either. The most carefully run resort has no guarantee against the guest who brings his typhoid germs with him or picks up smallpox on the way. When everyone has to present a vaccination certificate at the hotel door, only then can the resort owner be held solely responsible for any casualties.

Safe vacationing has become almost a slogan. We need a little more emphasis upon the dual responsibility in making it safe.

LICENSING OF PHYSICIANS

Our President at the recent meeting on Mackinac Island, reopened the question of a proper system of licensing physicians. He pointed out the defects in our present law and suggested that it was time to meet the issue squarely and do away, if possible, with the necessary fighting whenever the Legislature is in session to prevent additional obnoxious legislation.

This question has been studied a great deal and definite changes suggested to improve the situation but attempts to put them into action have usually failed until the recent adoption of a "Basic Science Law" by a number of other states. This of itself only partly solves the problem.

In 1917 I presented to a committee of our State Society a plan for remodeling our licensing law and it was received with cold horror. Shortly after the war I suggested it to Dr. B. D. Harrison and he was sure our present law could not be improved upon. Since then it has been discussed frequently and almost always such a scheme has been condemned.

It is very gratifying to find that now there is a general dissatisfaction with existing laws and a desire for a suitable modification.

Because of this new attitude a thorough presentation of any suggested plan should be given that its defects and merits may be sought out. A free discussion should precede any action and it should be conducted with fairness and frankness.

With this in mind the following plan is proposed as a basis upon which to draft what seems now to be a suitable law.

Originally our registration laws were passed for the purpose of protecting the sick from exploitation by the unscrupulous and from the hazard of the poorly prepared who treated them.

In these two subjects they have in part

failed for by the subterfuges of the cults they are still in large part treated by both the ignorant and the dishonest. This failure to accomplish the full intent of the law is obvious enough and the condition is growing worse instead of better.

The present registration act contains certain fundamental features as follows:

1. Treatment of the sick is ostensibly limited to those who are licensed.

2. The authority to grant these licenses is vested in a board of regularly trained physicians who are not connected with any medical school but in active practice.

3. The basis of qualifications for practice is an educational one requiring a knowledge of certain defined subjects.

4. The law states its intent to regulate the "Practice of Medicine" with a definition of the term.

The other features need not be discussed here but these will be taken up in order.

1. An attempt is made to limit treatment of the sick individual to those who are properly licensed. But in the name of supposed freedom of religious worship, in the name of supposed progress by promotion of new ideas, and, in the name of fair play the bars are let down to others.

2. The authority to grant licenses is given to a board of regularly trained physicians. Inasmuch as they do not recognize every fool proposal for treating those ill they are branded as narrow and exclusive ("medical trust") by advocates of these schemes.

This is played up with such a display of injured feelings and the exercise of such political acumen by these men with new notions that they are at times given other and more lenient boards of their own. *They thus at once shift the question from the one of merit to one of fair play.* This makes a powerful appeal to the public and its representatives. It is the basis upon which they are tolerated even if not licensed.

3. The required qualifications are educational in character. Applicants are examined in all those things to which the particular school subscribes. Those who seek a short cut announce a novel theory of disease of their own making and out of which they develop a system of diagnosis and treatment equally bizarre and then they fight, not to prove it true first and then get the privilege to practice it, but to get the privilege to practice it first and maybe prove it afterward by such use. This privilege is well-nigh irrevocable.

They demand it in the name of fair play and all they seem to ask is a fair chance to prove their contention, which soft

hearted people too readily grant. As a matter of fact what they covet and what they obtain is access to an attractive work with good financial returns. When this is obtained their good sense makes them seek more knowledge and they gradually abandon the limitations of their pet scheme for the surer foundations of science until they grow like unto regularly trained physicians, as witness the homeopaths who have arrived and the osteopaths who are on their way.

We should ourselves raise the question of fair play and utilize its great force. To be in a position to do this we must concede a point or two ourselves.

The first thing is to ask all those who would practice healing to have a *knowledge only of those subjects about which there is no dispute*. That means they should be examined in the fundamental sciences. In laying down the scope of the required subjects it might be well to omit them as 'ologies and define the scope of the work desired. In the exact sciences there is no general disagreement. There is only one chemistry, one physics, one mathematics, etc. There are no warring schools of the sciences.

The chiropractors have a long list of new 'ologies all their own which sound to the uninitiated very similar to the old ones with which we deal and for which no doubt they can give reasons for existence plausible enough to those who are not in a position to judge but who may be interested and influential in making our laws and enforcing them or securing fair play for those who say they are not getting it.

If we leave out of our requirements all technical titles and in plain English give the substance of the required knowledge it will look entirely different to others. If, instead of asking a prospective healer to know something of anatomy and histology which can easily arouse in the uninformed the customary distrust given all pedants, we just ask that he know something about the structure of the body, there can be no question of its need and everyone will grant it without the raising of questioning eyebrows.

So leaving aside premedical requirements which may well be as we have them at present, the general requirements could be as follows:

1. *The normal structure and development of the body*. Stated in this way no rational being would doubt its necessity though he might shy at anatomy, histol-

ogy, embryology, etc., which mean the same things.

2. *The normal functioning of the body and all its parts*. No one would question that and it includes physiology, physiological chemistry, psychology.

3. *The changes produced in the structure and functioning of the body when altered or interfered with by injury, disease, chemical or physical agents, and living organisms*. No one would question that this should be known. It would cover pathology both anatomic and physiologic, and diseases and injuries generally.

4. *The action of chemical, physical, and mechanical agents applied to the body in health and disease*. Surely the need for this would not be disputed. This would include all possible methods of treatment.

Stated in this manner, no sane person can argue that these subjects are not absolutely essential to understanding and caring for those who are ill, no matter how you propose to treat them. Befuddling legislators, courts and the public generally with obscure and fanciful theories dignified by imposing titles and presented as important sciences should become a lost art in this particular field.

The scope of these subjects covered should be left to the examining board provided we have a suitable board. There is nothing about diagnosis and treatment, nothing about the "Theory and Practice of Medicine" in defining the range of needed knowledge, but as a matter of fact these requirements when analyzed cover the whole curriculum as now given by anyone or any school if of value.

4. The title "Practice of Medicine" which we have cherished so long and stretched so widely should be dropped. Though we understand it, others do not and it gives an opening for disputes, funny court definitions, etc. The state could license with a non-committal title all of those who assume the primary responsibility for the care of those sick or injured with the usual exceptions for emergencies and home care.

Another great concession should be made. We can never convince others that it is fair to have only physicians on our board of licensure any more than we could convince the public that cabmen should have authority to license cabmen; milkmen, milkmen; plumbers, plumbers; etc. So long as we have a board composed of physicians we must expect other boards and there is no limit to the number we may have some day.

When a state delegates to any class of men, earning a competitive livelihood, the power of restricting in any way the numbers of its own members, at once inevitable economic pressure develops which tends to undue exercise of this restricting power.

A physician in practice views with a calm eye quack dentists, crooked real estate men, incompetent architects, half-baked plumbers, poorly trained teachers, shyster lawyers, etc., but let one of his patients leave him and employ another whom he knows to be incompetent or a fake and his serenity is mightily disturbed. *He at once wants the requirements raised so as to bar such individuals and he says the public should not be at the mercy of such men when after all he only feels that competition may be too keen and unfair.*

He wants such rivals barred not so much that they harm the public as that they harm him. *Were this not true he would work as hard against incompetents in other fields as against those in his own.*

This resentment in a cumulative way makes up the force with which we push our medical boards and it is at bottom an economic affair. The economic urge causes us collectively to boost for more limitations of the field of competitors. We may do this all unconscious of our basic motives and we do it in the guise of serving the public good. On the face of it, this it may well do, but our good intentions blind us to the harvest it will bring.

Inasmuch as other people are as bright as physicians, they all feel this whole thing and some see it. To them it looks like an organized effort to strangle competition and the public sympathy is given to those who circumvent this by new cults and short-cuts what is apparently an attractive livelihood.

All methods of licensing have as their object safeguarding the quality of services and they all have as a result the limitation of the number of those presenting such services.

It seems a dangerous principle to place this power in the control of the groups whose services are in question. They will always be considered as using the safeguarding process to cut down competition. No amount of denial on our part, however sincere our motives, alters this aspect of the case to others. It is a big invitation to the establishment of an elaborate and unending multicult board system. It should be obvious to us that doctors should not license doctors any more than that milkmen should license milkmen.

Each board in turn goes through the same process of growth, does a real good in raising standards, only to fall under the same suspicion and lend a powerful argument for another circumventing sectarian board.

If the proposed board does not have any practitioners of healing among its members who should compose it?

Inasmuch as the requirements are educational it is logical to have educators hold the responsibility of licensure. If we surrender this right, which physicians now hold, we must be absolutely positive it goes into safe hands. A board as ordinarily appointed would carry such a possibility for harm that it must not be so constituted.

Such a board as desired could be made up of men who become members by virtue of their official positions and the high standing this guarantees. Such a board could well be made up of the President of the University of Michigan, the Superintendent of Schools of Detroit, the President of the Michigan State College, the Superintendent of Public Instruction, and a teaching scientist appointed by the other four.

This is putting the responsibility up to a board whose integrity cannot be doubted, whose unbiased position opens them to any proven facts, and whose independence assures the public a consideration of its needs without suspicion of self-advancement or unfairness of any kind.

Such a board could organize its work so that only an insignificant portion of the time of its members would be needed from their regular duties. They only carry responsibility while the burden of work would be delegated to qualified subordinates.

These subordinate examiners might very well be teachers of the subjects presented. Why we bar a man trained in examining and teaching for a political appointee often trained in neither is difficult of understanding.

All who present themselves for such examinations should go through by number and be graded while unknown.

Inasmuch as this board has some latitude in the material of its examinations, if some proponent with a new slant on disease wants to have practitioners qualified in this new method all he has to do is to prove scientifically his claims to this board of men. When he seeks such recognition he no longer can shift the question from one of merit to one of fairness as is so easily and effectively done now.

Such a plan would incorporate the following radical changes:

1. Drop the title of "Practice of Medicine."
2. Examine only in those subjects about which there can be no important dispute, the "Basic Sciences."
3. Drop technical names in defining the

scope of the fields to be covered in examinations.

4. Lodge the power to license in a non-partisan, non-political board composed of educators who depend on other work for their standing and their livelihood.

—J. G. R. Manwaring.

M O N T H L Y C O M M E N T S

Medical—Economic—Social

That July Journal was a dandy, a blinger—that's what we thought. But Judas Priest, guess we were nigh all alone in that opinion for we haven't received letters telling us what our readers thought. We are not fishing for bouquets—we detest fishing—but we do like to receive your comments on what appeals to you for we believe your comments will be of interest to our members. We have a department—"Among Our Letters"—that's our open forum. We want your comments and criticisms for that department. Please come across.

We published two articles: "The Last Illness of George Washington" and "Letters Written by a Pontiac Doctor One Hundred Years Ago." Indirectly we learned that they were pleasing to our readers. We want more of such articles. Ye Old Timers, will you not write for us? Please search through your old records and see if you cannot dig up equally interesting material and articles.

County Officers' attention is called to the statement on the front cover page which emanates from the Committee on Civic and Public Relations of the New York State Medical Society. We heartily concur in that policy and recommend it to County Societies for their guidance.

Newspaper reports state that a certain farmer in Eaton County was the victim of two clever rascals who posed as eye specialists and succeeded in mulcting him of several thousand dollars. They obtained some \$3,500 for treatment directed toward cataracts. Guess Barnum's declaration still holds good, or else Eaton county farmers have an abundance of funds.

A certain lady is going about the state calling on doctors and Medical Society officers endeavoring to enlist their support in an attack on Christian Scientists. She also solicits subscriptions for an alleged magazine that she edits and which contains repeated attacks on scientists. Our advice is that no one has anything to do with her plans or publications. The medical profession is not concerned with leading any attacks. We are concerned simply with the education of the public with the truths of scientific medicine and how their application conserves health and relieves disability. As the people perceive these truths they will desert the proponents of cults and Christian Scientists. Vituperate attacks accomplish nothing.

Proof of all original articles are sent to authors before the article appears in The Journal. Accompanying each proof is an order blank for reprints that are furnished at actual cost. Some authors order reprints, others do not. The article then appears and many of them are abstracted in other Journals, the Index Medicus and the cumulative index. Then in 30 to 60 days the author receives requests for a reprint from various parts of the country and reference libraries. Having none, he writes in and wishes some reprints and there is where we run up against a snag. As soon as The Journal is off the press the type is destroyed—consequently to furnish reprints to those who failed to order when returning the proof necessitates re-setting of the type, which is expensive and quadruples the original price of reprints. Our recommendation is that every author order at least 100 reprints when returning proof. We make this statement because this past month we had four requests for reprints of articles published three months ago.



Above you perceive the triumvirate—from left to right—Ex-President Jackson, Dr. M. Fishbein, Editor of The Journal of the A. M. A., and President Randall. Photo came by mail from we do not know which one of the three, but we are hoping that publishing is gratifying to all three.

Our University and teaching hospitals have all increased the number of internes on their staffs. Being on the ground floor they naturally selected the number they wanted and filled their staff. The result being that other hospitals about the state, yes and country, are left with undermanned interne staff—some are wholly without a

single interne. This year the situation is very acute and presents a serious problem. Our larger hospitals have increased the number of their internes seemingly far beyond their actual needs and it is this that we object to. To meet the established standards of hospital administration a requisite number of internes are required and if the internes cannot be obtained those standards cannot be maintained. We believe that the situation is so serious that the Council on Education and Hospitals should survey each hospital, determine the minimum number of internes required and then exercise its influence in inducing these teaching hospitals to limit their interne staff. If some such plan is not evolved there will be a larger list next year of hospitals unable to obtain internes.

There are far too many national medical meetings in the middle west and eastern sections of our country. To our way of thinking national meetings should be limited to the recognized national organizations and the other meetings should be under auspices of State Societies. These special clinics and travel clinics are superfluous. These duo, tri and quarto state meetings are in the same class. Several of these minor and newer specialty clinics are barely worth while. In some of these clinics there is a good deal of grandstand. A long list of speakers is imparted, much literature is sent out and persistent effort made to induce doctors to attend at \$10.00 per registration. The programs appear good; maybe he who attends derives benefit, but he pays well for it in time and money. Because he attended he feels he need not attend his district or state meeting. Give us \$10.00 per registrant and we'll agree to put on a bigger, better and more profitable state meeting than any of these "Clinics" can ever hope to be. We will book national men as speakers, and at the same time advance the work of your own State Society that keeps busy twelve months in the year in conserving your interests. The clinics forget you during eleven and three-quarters months each year. So we taboo these varied "Clinics" because they detract from state work and do little or nothing for the doctor's home interests.

In spite of all the preaching, new crops of sinners spring up daily. Hence we borrow the slogan: "Everlastingly At It." Well, we will keep dinging and maybe convert a few now and then. The A. M. A., our State Society and the County Societies have been preaching thorough physical examinations. We have sent out manuals and we have demonstrated methods that assure thoroughness in our Post Graduate Conferences. Yet in one day we encounter two patients who allege they had had a physical examination within sixty days and were told by the examining doctor (?) that there was nothing wrong with them. Each admitted that when examined the clothing had not been removed. One patient revealed a well advanced cancer of the breast. The other one had a four-plus Wassermann and four-plus sugar in his urine. Neither condition could develop in sixty days. Either examine thoroughly or send them to someone who will. Failure to be thorough brings disrepute to yourself and reflects on your profession.

Vacation time—have you or are you taking one? A text on Pathology by Stengel and Fox, price \$7.50, will be sent to the member sending

in the most interesting description of his vacation days. Tell us all about the time, the place and the benefits you received. We must have your story by September 15th.

Our good friend Bulson of the Indiana State Journal cites two pet peeves: The young shiek who comes in to consult him with hair all plastered down with some oil, grease or vile smelling fat, who is some day going to be tossed out of the window, and the man who receives an urgent inquiry by wire and who eventually answers by mail a week later. If those are his only peeves, Bulson is lucky. We have the same ones and a few score additional. Our biggest one is the four-flushing, commercial tainted, blow-hard doctor, posing as a highbrow and an eminent authority and constantly blating about his operating.

The Wisconsin State Medical Society holds its 86th annual meeting at Eau Claire on September 21st, 22nd and 23rd. We are always interested in Wisconsin's meetings for they always reflect progressive steps in organizational activity and scientific instruction. But we bet that there are a lot of Wisconsin doctors who fail to appreciate their State Society and neglect to attend. Some day they will recognize what they owe to their State Society and if they are men at heart they will make amends—but why not awaken today? Why wait till many golden opportunities are past? The same applies to Michigan.

Yes, it's August, Dog Days, and hot, but you are just to start out on your vacation—that's fine. But before going, drop in on your neighbor, or at the hospital and have them give you your periodic physical examination. If everything is "O.K."—fine. Then you can go the limit on your trip. If some little thing is wrong—well the right care and precaution during your vacation may correct it. So don't neglect the examination and incidentally include the family. Likewise recommend it to your patients. It's the degenerative diseases that produce the high mortality rates and lowers life's expectancy. Many of them can be prevented by having a periodic physical examination.

We had occasion recently to examine several hundred employes of a corporation that was desirous of educating its workers in the matter of their physical well being. We were again impressed with the many individuals revealing teeth that were in very poor condition—cavities, roots, infected gums and accompanying unhygienic state. It reminded us of our experience during the draft examinations. We questioned a goodly number of these men as to why they did not visit the dentist and take care of their teeth. The reply was: "I can't afford to pay a dentist." Right there is a social problem for health authorities and social workers. It does cost money and dentist's fees are not small—a hundred dollars doesn't go very far. We raise the problem and await its solution—something must be done to provide dental care to the middle class.

Every hospital that is endeavoring to improve its administrative work and the type of professional services rendered to the patients admitted have standing committees charged with the duty of reviewing the work and records. These committees check end results, scrutinize all service activities, estop inefficient methods and formulate

standards and regulations. From time to time we have exchanged experiences with a number of these committee members. The one outstanding comment is that poor work, employment of obsolete methods, undependable judgment and unsatisfactory end results is always more evident in the work of men who fail to attend medical meetings, who are too busy, lazy or self sufficient to visit other clinics and hospitals. This observation should be a warning. They may have been good, capable men at the time of graduation or for five years subsequent, but they've failed to keep up because they neglected to attend medical meetings and clinics.

All too frequently do we note a man doing good work for five or ten years. He becomes shackled to his routine, he's too tired to read, too self sufficient to go to his county or state meeting, he's afraid he'll lose a few cases and dollars if he takes a week every couple of months visiting various clinics, he's quite cockey for awhile—but poor, benighted fool, he doesn't know he's slipping and slipping fast—trailing far to the rear. His operative results are not good; his patients do not do well; his therapeutics are open to criticism; his diagnoses are oft in error and his judgment is not dependable. He is frequently called before the staff executive committee to explain and his work is being limited in the hospital—all because he failed to keep up with modern progress. Surely a warning. If you do not wish to be classified as a "has-been" seize every opportunity to attend your medical meetings, allot definite periods every two months for visits to clinics, schools and laboratories and pursue a systematic course of reading. Today you have to be everlastingly at it if you desire to remain in the vanguard. Cast about and note the successful men—that's the way they attain success. Cast about and note the "slippers" and the "was'ers"—they stayed at home. It's yours to choose in which division you elect to be classified.

Poor Dr. Pepy—the following is his musings over his visit to our annual meeting:

DR. PEPY'S DIARY

June 17—This night journeying to Mackinac Island to attend ye meeting of ye Michigan colleagues, jerking about hither and thither on ye train and ye porter making up ye berths at all hours of ye night, so that in ye morning ye surgeon from Maryland hath asked whether ye iron-molders union was meeting in ye aisles, so have I said that it was instead ye annual carneval of ye hardware merchants and they have used nails for confetti. Coming at last to ye landing for ye boat all have debarked for breakfast and ye train promptly departeth. Then have all walked to ye dock in ye meantime ye train coming back bringing ye baggage, such a comedy of errors as never hath been witnessed before.

June 18—Arriving on ye island do find ye section on surgery hard at work carving out slices on ye golf links while ye section on medicine devoteth itself to diet in ye dining room. So playing at golf have lost heavily of shekels to ye Michiganders and ye same in ye game of bridge, and speaking at last to ye doctors have bewailed ye fact that ye income of ye profession falleth off steadily. At night again on ye boat and on ye train to Grand Rapids and thence home by motor bus, riding some nine hours for it seemeth ye law in ye state of Michigan, ye same being ye home of ye petrol vehicle not to run ye steam trains on Sunday. Ye motor bus hath this advantage, that

it permitteth not of reading, hence one resteth ye eyes, that it permitteth not of a normal functioning of ye physiology, hence cultivating endurance, that it shaketh all ye muscles hardening ye same although ye gluteus maximus becometh plenty sore, that it arriveth on time, but how long, oh, how long.

Ye editor still doth chuckle by reason of having added to ye coffers some eleven simoleans from ye funds ye Pepy hoards from ye scrivening. Ye Michigan hospitality is biblical—It giveth and taketh.

ANNUAL MEETING

GENERAL SESSION

FRIDAY EVENING SESSION

June 17, 1927

The first General Session of the Michigan State Medical Society met in the Theater of the Grand Hotel, Mackinac Island, Mich., at 8 p. m., the President, Dr. J. B. Jackson of Kalamazoo, presiding.

President Jackson: The meeting will please come to order.

This noon we had a dedication of the new tablet placed on the Beaumont Monument on the hill at Fort Mackinac. On account of the fact that the sections were late in starting this morning, we thought it best to have the address in connection with the dedication of the tablet given this evening. We had hoped to have Dr. Vaughan give this address. As you all know, Dr. Vaughan has interested himself for years in the study of the history of Beaumont and the experiments which he made upon St. Martin. Unfortunately Dr. Vaughan, on account of illness, is unable to be present here with us and give the address but we are very fortunate in having Dr. Corbus of Grand Rapids to take his place, and Dr. Corbus will now give the address on the dedication of the Beaumont tablet.

... Dr. Corbus presented his prepared address ...

(See Original Articles this issue).

NOMINATIONS FOR PRESIDENT

President Jackson: It is a rule of the Michigan State Medical Society that the officers of the Society, except that of President, are elected by the House of Delegates. It has always been our custom to elect the President by the vote of the members and at this first general session we are ready to receive nominations for President.

Dr. Cook (Flint): It has been my pleasure to know several of our ex-presidents intimately. These men have been elected upon some char-

acteristic or group of characteristics which they have possessed; they may have been outstanding professionally; they may have been popular; they may have served their County Society or their State Society well. Be that as it may, these men must have had sound judgment and have been safe men to handle the reins of the State Society.

At this time I wish to present to you the name of a man who has been for 30 years a member of this Society, a man who, immediately upon his graduation from the Detroit College of Medicine, affiliated himself in a county which had no county society. Immediately upon his entrance in this field of his endeavor, he assisted and had much to do in the organization of a county society. He served eight years as Secretary of this County Society. Eighteen years ago he left that field and went to Genesee County. Since that time he has been a member of our Society in Genesee County—has been its President.

It is with great pleasure and honor that I present the name of Dr. Herbert E. Randall, who will meet all of the requirements needed as the President of the State Society if you see fit to honor him. (Applause).

Dr. Hirschman: I listened to Dr. Cook's beautiful eulogy of our good friend Dr. Randall and while I always did admire Dr. Cook as an orator, I think he has fallen short of all the nice things he should have said. I am not going to add to that but it gives me great pleasure to second the nomination of Dr. Randall. (Applause).

President Jackson: Are there other nominations?

Dr. Charters (Wayne): I move that the Secretary be instructed to cast the unanimous vote of this Society for Dr. Randall.

...The motion was supported by several and carried unanimously...

Secretary Warnshuis: Mr. President, your Secretary does so cast.

President Jackson: I will declare Dr. Randall elected as the next President of the Society and I am sure we will all be very glad to hear from Dr. Randall at this time. (Applause).

President-elect Randall: I think the appropriate story at this time would be the story of the country boy out riding with his girl. After they had driven a good many miles, she said to him, "Will you marry me?"

He said, "Yes," and they drove on for miles and miles. Finally she said, "Why don't you say something?"

He said, "I think I have said too much already." (Applause and laughter).

President Jackson: I am sure the Society is to be congratulated on its new President.

ANNOUNCEMENTS

The Secretary has some announcements to make.

Secretary Warnshuis: Mr. President,

Distinguished Guests, Ladies and Gentlemen: The House of Delegates yesterday convened in regular annual session and held three meetings. The annual reports of our various standing committees were delivered and were referred to the Reference Committee and were acted upon and this action will be reported through the columns of the Journal in next month's issue. Two outstanding features predominated yesterday. One was an extended elaborate report made by Dr. Smith of the Special Committee on the Survey of the Hospital Services of the State. This is probably one of the most important surveys in the line of investigation work that we have conducted during the past year and I am quite sure that each member will be deeply concerned in reading the report of the investigations of that Committee that was so ably presented.

The other outstanding feature was that the House authorized the creation by the President of our Society and the Council of a Legislative Commission that is going to study, not only the legislative laws of this state but also of those other states of the Union that are concerning themselves with the betterment of the practice of medicine and safeguarding the people of this country by providing for them a board of basic science examiners who shall qualify all those who seek to care for the people who come to them for the treatment of their human ills. I am quite sure that during this next year and a half this Commission which has been especially created is going to present in Michigan a model legislative law that will solve our legislative and licensing problems.

The election that resulted from the ballots that were cast were as follows:

First Vice President, C. D. Munroe of Jackson.

Second Vice President, C. F. DuBois of Alma.

Third Vice President, D. A. Cameron of Alpena.

Fourth Vice President, A. V. Van Horne of Otsego.

Delegate to the American Medical Association, Dr. C. F. Moll of Genesee County.

Alternate, Dr. A. P. Biddle of Detroit.

Detroit was selected as the place for our next annual meeting.

The Councilors whose terms of office expired were filled with the following elections:

Dr. Heavenrich of Port Huron, 7th District.

Dr. Julius Powers to succeed himself in the 8th District.

Dr. O. L. Ricker to succeed himself in the 8th District.

Dr. Paul R. Urmston of Bay City to fill the unexpired term of Dr. Baird, whose resignation was accepted, for the 10th District.

The House elected as its Speaker Dr. H. R. Carstens of Detroit and as Vice Speaker Dr. H. J. Pyle of Kent County.

Secretary Warnshuis: Times have changed and we change with them. Things are requiring more detailed attention on the part of organized medicine in its relationship to the public. One of the outstanding movements that has come across the country within recent years has been the organization of a Woman's Auxiliary of the profession of medicine that they may carry to the public the truths of scientific medicine. Michigan has been very fortunate in having for its organizational Chairman, Dr. Caroline Bartlett Crane of Kalamazoo, who has been charged with the duty of organizing the Woman's Auxiliary. It is the personal request of Dr. Crane, who is with us today, that the ladies in attendance at this meeting will meet her tomorrow at 10 a. m. in order that they may perfect the state organization.

INTRODUCTION OF THE PRESIDENT

This is our One Hundred and Seventh Annual meeting. Through all those years we have had many outstanding men who have led us in the office of the presidency. You all more or less know who these men have been. From year to year we have passed on these leaders who have made Michigan what it is in organized medicine, an outstanding part of our great American Medical Association, and tonight we are passing on one more of those distinguished men—a man who has devoted his time, his personality, his judgment and his resources to the interests of the profession and the individual doctor, always forgetting himself.

It is my extreme pleasure and honor to present to you tonight your retiring President, Dr. J. B. Jackson of Kalamazoo, who will deliver his Presidential Address. (Applause). (See July Journal).

President Jackson: I feel that we are all very much indebted to Dr. Pemberton for this very fine address, and on behalf of the Michigan State Medical Association I wish to extend to you our thanks.

The Secretary has a further announcement to make.

Secretary Warnshuis: Mr. President and Friends: Your Executive Committee, in arranging for the program for this year's annual meeting, selected the latter part of the weekend thinking we could combine with the scientific meetings the relaxation, fellowship and pleasure of a weekend outing. The sectional meetings tomorrow morning will be conducted at the hour of nine o'clock as they were this morning. However, there seems to be some tendency on the part of some of the members who are here to want to go home. Your Committee has arranged for the appearance tomorrow evening of Dr. Dean Lewis, Professor of Surgery of Johns Hopkins, and also Dr. Morris Fishbein, the Editor of the Journal of the American Medical Association. Your Committee would feel very loath to have these men come, as they are coming, for this long journey for this meeting to meet only a handful.

If you men are anxious to go home tomorrow and not stay over until Sunday, your Executive Committee is asking for an expression of opinion as to whether you want to hold the sectional meetings tomorrow morning and then put on Dr. Lewis' and Dr. Fishbein's talks tomorrow afternoon at two o'clock, allowing those of you who wish to do so to return tomorrow night. There will be no train going to the west side of the state tomorrow night unless we put on a special train. If we run the special train tomorrow night, because we have to bring up the equipment from Richmond, Indiana, we cannot run a special train Sunday night and you men from the west side of the state can't go home till Sunday night. You men from Detroit can go on the Michigan Central, leaving at nine o'clock. That means you must leave here tomorrow night on the boat at seven o'clock.

The Executive Committee is anxious to know what you want to do about tomorrow.

Dr. Brook: I move that we advance the time of our meeting tomorrow night to two o'clock tomorrow afternoon and at that time hear Dr. Lewis and Dr. Fishbein.

... The motion was supported ...

Secretary Warnshuis: And then do those men on the west side of the state want the special train to leave tomorrow night at approximately ten o'clock, which will get you in Grand Rapids and connecting points between six and seven o'clock on Sunday morning?

Many Voices: Yes.

Secretary Warnshuis: Will you be here tomorrow afternoon and not play golf?

Many Voices: Yes.

...The question was put to a vote and the motion carried...

...The meeting adjourned at ten-fifteen o'clock...

SATURDAY AFTERNOON SESSION

July 18, 1927

The second general session convened at two o'clock, President Jackson presiding.

President Jackson: I have great pleasure in introducing to you a gentleman who needs no introduction to a Michigan audience—Dean Lewis of Baltimore, who will speak to us on "The History of Goitre Pathology."

...Dr. Lewis presented his prepared paper... (Applause).

President Jackson: I am sure we are all very much indebted to Dr. Lewis for this very interesting talk.

The next speaker is the Editor of our Journal of the A. M. A.:

We are very pleased to have with us Dr. Fishbein, who will talk to us on "Professional Vagaries." (Applause).

...Dr. Fishbein presented his prepared paper...(See this issue).

...The meeting adjourned at three-thirty o'clock...

NATIONAL MEDICAL BUREAU, INC.

Physicians are being circularized by a concern having the somewhat imposing name, National Medical Bureau, Inc. The letterhead of this concern carries with it the idea that it is a nationwide organization having offices in New York City, Chicago and Los Angeles, with a "Division Office" at South Bend, Indiana.

The circular letter which the National Medical Bureau, Inc., sends to a physician states that it is about to appoint a physician in his locality to care for its members. It explains that the appointee would receive "50 per cent of the monthly membership fees in payment for his services," and in addition, "all of the regular revenue he normally derives from his medicines, drugs, medical supplies, and surgical operations." As a further inducement to apply for the appointment, the physician is told that, if selected, he was "automatically made the family physician in more than 500 homes of the city," whereby he could quickly build a practice that normally would take from ten to twenty years. The circular letter stated, further, that the doctor's "monthly checks average \$250."

These statements, if they mean anything, mean that the physician who signs up with the National Medical Bureau practically agrees to take care of 500 families for \$250 a month, or at the rate of 50 cents a month (\$6 a year) per family. Doubtless the medical service that such families would get would be in keeping with the amount paid the physician.

In order to qualify for the post of treating families at 50 cents a month, the National Medical Bureau outlines the requirements for appointment. These include:

1. Regularly kept office hours.
2. Maintaining neat, easily accessible offices.
3. The necessary instruments and equipment for surgical work.
4. The assurance that the physician would not charge excessive fees for services not covered by the membership.

As a further inducement, the physician is told that the "formal" mention of his name by the National Medical Bureau is a method of "indirect advertising" that "has a tremendous value."

Because the medical profession has been circularized, a letter was written to the National Medical Bureau at its Chicago address, asking certain pertinent questions, answers to which would permit inquiries from the medical profession to be answered intelligently. Specifically it was asked: Who are the incorporators of the National Medical Bureau, Inc.? Who are the officers? What is the character of the service that the National Medical Bureau, Inc., has to sell?

The letter, while sent to the Chicago office, was answered from South Bend and signed "W. Donald Dunkle, Division Director." Mr. Dunkle stated that a Mr. A. M. Nadel, who was out of the city, handled all the correspondence and that on his return, Mr. Nadel would be glad to answer any and all questions. A week later, a letter came from South Bend, signed "A. M. Nadel, Division Director." Mr. Nadel, instead of answering "any and all questions," ignored the request for information regarding the incorporators and stated that the personnel of the board of directors had not been settled, all business being conducted by him.

Mr. Nadel was again written to and told that was of peculiar interest to the medical profession. His letter threw but little light on a subject that He was again requested to give the names of the incorporators, and attention was also called to the fact that, while the stationery of the National Medical Bureau gives the impression that the concern has offices in New York City, Chicago and Los Angeles, as well as South Bend, Indiana, all business seems to be done from South Bend. Mr. Nadel was asked for the names of the representatives in New York City, Chicago and Los Angeles, and also for the names of the individuals behind the National Medical Bureau.

After waiting another week, Mr. Nadel replied that the names of the incorporators were "of little or no importance" to the medical profession, and that the National Medical Bureau had not "seen fit to divulge" and of what he described as its "confidential information." He stated, further, that the personnel of the board of directors was still not settled, and that while they had New York City, Chicago and Los Angeles addresses, their entire activity was being conducted from South Bend, Indiana.

A letter was addressed to the Secretary of State of Indiana, stating that the National Medical Bureau, Inc., was doing business at South Bend and asking for the names of the incorporators. A reply was received from the Department of State declaring that the corporation division had no record of the National Medical Bureau, Inc., either as a domestic corporation which had filed articles of incorporation in Indiana, or as a corporation from some other state admitted to do business in Indiana. This may explain Mr. Nadel's airy dismissal of The Journal's request for information regarding the incorporators as a matter "of little or no importance."

O U R O P E N F O R U M

Affording Opportunity for Personal Expression

CIVIC AND INDUSTRIAL RELATIONS

Grand Rapids, Mich.

Editor of The Journal:

Thank you very kindly for the information that President Randall has appointed me to succeed myself on the Committee on Civic and Industrial Relations of the Michigan State Medical Society. It will be a pleasure to serve in such a capacity and I trust that I may be of more service during the coming term of office than I have been in the past.

Very sincerely,
Harrison S. Collisi.

COMMITTEE ON NURSING EDUCATION

Flint, Mich.

Dr. H. E. Randall,
302 F. P. Smith Bldg.,
Flint, Mich.

Dear Doctor:

I have received a notice from Dr. F. C. Warnshuis that I am a member of the Committee on Nursing Education, of which I am to be Chairman.

I must decline this honor because I see absolutely nothing that this committee can do for the next year. I think that the whole committee could just as well be dropped at this time, and then when the question of modifying the law regarding the registration of nurses come up, such a committee can be of some service.

The report for this year was as complete as could be given at this time and I am sure that there is not much of value that can be modified in it or added to it.

Sincerely,
J. G. R. Manwaring.

HOSPITAL CHARITY

Omaha, Neb.

Editor of The Journal:

I just received the July number of the Journal and the supplement containing the preliminary report on hospital charity. This is a very excellent number, and is of particular interest to me in association with my present work. Dr. J. Jay Keegan, Dean of the College of Medicine here, and Mr. R. B. Saxon, the Purchasing Agent, have been very much interested with me in the analysis of charity work, and I would appreciate very much your sending copies to Mr. Saxon and to Dr. J. Jay Keegan at this hospital. If there is any charge for these copies, kindly inform me and I shall remit in your favor.

I appreciate very much your courtesy to me last month and trust that I may be of service to you at some time.

Very sincerely yours,
Carleton B. Peirce, M. D.,
Ass't Prof. of Roentgenology.

HOSPITAL CHARITY

Chicago, Ill.

Editor of The Journal:

I am very greatly obliged to you for your kindness in sending me additional copies of the Supplement of The Journal of the Michigan State

Medical Society for July. I shall be very glad indeed to forward you a check to cover the cost of these extra copies, if you will accept it. I realize that the publication of the Supplement must have been a rather expensive proposition and, in view of that fact, I know of no reason why the American Medical Association should not pay for the number of copies which it wishes to use.

It is my purpose to send a copy of the Supplement to each member of the Board of Trustees and to each member of the recently appointed Committee on Public Responsibility. I will also put a copy in the hands of the Secretary of the Council on Medical Education and Hospitals.

I have not yet had time to read the Supplement carefully but will do so at my earliest convenience. In glancing over it, I have received the impression that the committee has done a good piece of work.

With my sincere good wishes, I am
Very truly yours,
Olin West, M. D.

HONORARY MEMBERSHIP

Grand Rapids, Mich.

Editor of The Journal:

Your favor of 21st received, notifying me of the recent action of the State Medical Society, in electing me to Honorary Membership. I have long regarded an election to Honorary Membership in this society as an honorable procedure, and I am pleased to be honored with this action, and I shall be very glad to signify my acceptance of it.

I remain,
Yours very truly,
W. T. Dodge, M. D.

VENEREAL PROPHYLAXIS

Detroit, Mich.

Editor of The Journal:

Thank you very much for your letter of July 1 in regard to the Committee on Venereal Prophylaxis. I shall be glad to serve in any capacity that Randall wishes me to.

With kindest personal regards, I am
Sincerely yours,
H. W. Plaggemeyer.

ARE WE SUCKERS?

Saginaw, Mich.

Editor of The Journal:

So you consider any doctor who fills out blanks for an insurance company without obtaining a fee therefor is a sucker. Do you think a doctor is justified in filling out blanks for an insurance company even for a fee? Should not all blanks be filled out for the patient? Is there not something in the law of the land that prohibits a doctor giving out to any one, even an insurance company, any knowledge in his examination of the patient. It has appeared to me that we have two classes of injured to deal with. First, injured employes who come under the terms of the State Compensation Act. It is my opinion that State Liability Board would require the injured employe to have the blanks, provided by the insurance company, filled out by the attending physi-

cian. If so this service should be paid for by the patient. Then we have the injured—not employes, such as accidents from railways, street cars, automobiles, etc. It is my belief that the attending physician in such cases has no legal right to give the corporation or individual liable for the accident any information bearing on the injury, or to the insurance company interests without the permission of the patient.

A few days ago I was called to care for a man—not an employe—injured by a corporation. A few days later an attorney representing the insurance company, called at my office and started a discussion of the case. Then he wrote up a digest of what he claimed I had said and asked me to sign it. I suggested that he call upon the attorney for the injured and get a statement from him. I knew he would be glad to give a statement without any charge. He seemed much surprised at my suggestion and said he invariably found physicians very willing to sign such prepared statements. Guess you are right—the doctors are suckers—but do they not also violate the law in filling out insurance company blanks or signing statements prepared by attorneys without the permission of the patient?

W. J. O'Reilly, M. D.

Comment: Our esteemed friend from Saginaw seemingly has forgotten our "Green Cover" and propounds an inquiry with several apparently conflicting subdivisions. He raises a legal point that attorneys will differ and argue over. We nevertheless re-affirm our previous statement. These insurance blanks are for the benefit of the company or corporation and why should a doctor supply information and opinions gratis. Come again, doctor, but please don't straddle.

—Editor.

ARCHERY

Editor of The Journal:

I promised you a little piece about archery at the State Meeting and I am sorry I have not sent it to you. I have been busy ever since leaving the Island and also since coming here to Boston.

After all, there is really very little to say about archery as it was at the State Meeting. It is apparent that physicians as a class are poor golfers or else they do not have time enough to play often to become proficient.

Dr. Rubley and myself have been at the archery game over three years and have specialized on the archery-golf game, until we are able to give good competition to the best golfers that come along.

We have every reason to have a deep respect for Mr. Phil Dufina, pro. of the Grand Hotel Golf course as well as his brother and uncle. Those boys can play golf as evidenced by the way in which they consistently laid their balls on the fifth green in one shot, a distance of 300 yards. Rubley and I each beat them, but by only two to four strokes.

If you wish, I will send you a brief summary of our games with scores for the August Journal as soon as I get home.

My wife and I are living in our tent here at the Boston Auto Camp while I am at the hospital trying to learn something. Th camp is on a high hill only a short distance from down-town and only two and one-half miles from the Women's Free Hospital where I am working. We have every convenience here and enjoy ourselves in every way. We have a shower bath house, and

all modern sanitary equipment, refrigerators in the community tent and just about everything you can expect for camping. Besides all this, Boston is a wonderful city.

I will write you again when I arrive home in August.

Sincerely,
R. G. B. Marsh, Secretary Lenawee.

DEATHS

DR. A. G. GRAYBIEL

Dr. Alexander Gordon Grabiell, a member of the Kent County Medical Society for the last twenty-four years, and practitioner of Caledonia, died June 29 in Butterworth Hospital, following a three weeks' illness. Dr. Graybiel suffered a cerebral hemorrhage on June 6. A terminal pneumonia was the immediate cause of death.

Dr. Graybiel has practiced medicine continuously in Caledonia for forty years, having located there in 1887, after his graduation from the Detroit College of Medicine. He was born in Waterloo County, Ontario, in 1857, going to Detroit to enter the medical school in the early eighties.

In addition to being a member of the Kent County Medical Society, he was also a member of the Michigan State Medical Society and the American Medical Association.

Surviving are his widow, Mrs. A. G. Grabiell, of Caledonia; two sons, Dr. George P. Graybiel, 55 Sheldon Avenue, Grand Rapids, and Hugh A. Graybiel, editor of the Border City Star of Windsor, Ont., and his mother, Mrs. Mary Graybiel, 93, of Fordwich, Ontario.

Funeral services were held at his home in Caledonia on July 2, and burial occurred at Caledonia.

Dr. Graybiel belonged to the fast-disappearing type, the family doctor. He endeared himself to a great host of patients in his community by his assiduous interest in their welfare, and his attention to details which are not ordinarily of sufficient concern to the city physician. Dr. Graybiel enjoyed visiting with his fellow-practitioners, and was a very frequent attendant at medical meetings. Not only will he be greatly missed by the community of Caledonia, but also by his fellow-practitioners of Kent County.

DR. C. F. KARSHNER

Whereas, in the passing of our colleague Dr. Clyde Fenworth Karshner, the Medical Section of the Michigan State Medical Society has suffered the loss of its chairman, and

Whereas, his passing is felt as a distinct loss not only to the medical fraternity of his city but of the whole state society, and

Whereas, this society realizes the high medical ideals which have characterized his medical efforts, and the distinct medical achievement which he has made despite constant physical infirmity,

Therefore be it resolved that the Medical Section of the State Medical Society pass these resolutions of respect and admiration of him as a man and physician, and that they be inscribed on the minutes of this Society, and a copy sent to the family of the deceased.

V. M. Moore,
Gordon H. Yeo,
John L. Chester.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EATON COUNTY

The monthly meeting of the Eaton County Medical Society was held at the State Laboratory, June 30. This meeting was made possible through the kind invitation of Dr. Kiefer and Dr. Young.

We spent about three hours in the laboratory having the various phases of the work explained and demonstrated to us. To fully appreciate the workings and value of this laboratory to the profession and to the people of the state every physician should visit and see this plant in operation.

The members of this society that did not take advantage of this opportunity missed a real treat.

Very truly yours,

H. J. Prall, M. D.

HILLSDALE COUNTY

The regular joint meeting of the Medical Societies of the Counties of St. Joseph, Branch and Hillsdale, was held at the Country Club, Hillsdale, on July 12th, 1927, at 6 p. m.

A good dinner was served, after which the President, Dr. H. C. Miller, introduced the speaker of the evening, Dr. Guy L. Kiefer, Commissioner of the State Department of Health of Michigan. Dr. Kiefer gave a very timely, friendly and instructive address on "Relationship Between the Medical Practitioner and the Department of Health."

Dr. Kiefer discussed the subject from the standpoint both of the Department and physician and illuminated it from both viewpoints. He brought out most clearly the aims of the Department and the importance of mutual help and co-operation between it and the individual practitioner.

Dr. Kiefer answered several questions from members which clearly proved their interest.

At the close, the President in behalf of the Societies, warmly thanked Dr. Kiefer for his fine address. There being no further business, the meeting adjourned. Twenty-four doctors present.

D. W. Fenton, Secretary.

BERRIEN COUNTY

The Berrien County Society held its June meeting at the Edgewater Beach Club on the shores of Lake Michigan on June 28th. The meeting was well attended and the members enjoyed the moving pictures and talk given by Dr. J. A. Boersig of the Parke Davis Company. Dr. Boersig has given this same display to nearly every Society in the state. It was well received by the Berrien County members even though this was one of the hottest days of the year. The discussion that followed dealt mostly with the new Imunegen preparations that are being put out by this company.

The report of the Society's Delegate to the State Meeting was read and the same ordered by motion to be filed in the transactions of the Society.

Preparations were completed for the picnic meeting to be held at the Orchard Hills Country Club at Buchanan, on July 20th, when the Society will be the guests of the Buchanan members.

Machinery was put in motion at this meeting to keep boosting for the 1929 State Meeting in Benton Harbor and St. Joseph. Those of you who read this report and are members of other County Societies, keep us in mind. We shall attempt to convince you from time to time in the coming year that this is the ideal place for a meeting. If you liked riding the ferry at Mackinac we will provide you with some real boat rides when you come here. If you like fruit, we will see that you are provided with the world's best at a September meeting. If you wish to know the secret of the Smith Brothers in growing whiskers, we will take you out to the House of David Colony, and if you want some real golf courses come here. Any members of the State Society who pass through the Twin Cities of Michigan are invited to look us up and if we can't convince you that this is Eutopia at least we will show you a good time.

W. C. Ellet, Secretary.

PASTEUR UP TO DATE

It was Pasteur, as every one knows, who first proved that the bite of a rabid dog was not necessarily fatal; more than that, that the development of hydrophobia in the case of a person so bitten could be prevented with almost absolute certainty. The protective agent was the attenuated virus of rabies, from the spinal cord of a rabid dog, and the doses differed from each other in the degree to which the virus had been attenuated—first a very weak dose, then a stronger, and so on, the object being, of course, to develop resistance in the patient before the end of the incubation period of the disease. The method itself was considered so dangerous by Pasteur himself that he hesitated to use it on a human being when the opportunity arose. But it has since that time saved unnumbered lives.

Pasteur was the pioneer. Since his time a method has been discovered for eliminating entirely the element of danger from the use of rabies vaccine, without the least sacrifice of protective effect, so that now there is no possibility of harm resulting from the proper use of the improved vaccine, and the record of successful inoculations is 100 per cent to the good.

The virus is not merely attenuated, but killed, in the Cumming Vaccine, marketed by Parke, Davis & Co., and all the doses are alike, thus rendering this product different not only from the original Pasteur product, but from bacterial vaccines. In the use of bacterial vaccines the doses are graded, but this is not the case with the Cumming vaccine. It is quite apparent from the results reported that immunity does not in this case depend upon graded doses, but only upon the use of an active vaccine administered daily for the required period—14 days or 21 days, according to the location and severity of the wound.

Parke, Davis & Co. offer a 24-page illustrated booklet on Rabies to medical inquirers.

BOOK REVIEWS AND MISCELLANNEY

Offering Suggestions and Recommendations

DISEASES OF THE DIGESTIVE ORGANS—With Special Reference to their Diagnosis and Treatment. Edited by Charles D. Aaron, Sc. D., M. D., F. A. C. P., Professor of Gastro-Enterology and Diets in the Detroit College of Medicine and Surgery; Professor of Gastro-Enterology in the Detroit Post-Graduate School of Medicine; Consulting Gastro-Enterologist to Harper Hospital. Lea & Febiger, Philadelphia.

Fourth Edition. This text has long held a splendid reputation and in this new edition that reputation is enhanced. One finds so much that is meriting special commendation that it is difficult to enumerate all of them in a short notice. Suffice it to say that as a teacher, diagnostician and assistant Aaron's text will be found dependable and extremely valuable.

DISEASES OF THE SKIN—A Practical Treatise on Diseases of the Skin, for the use of Students and Practitioners. Edited by Oliver S. Ormsby, M. D., Clinical Professor and Chairman of the Department of Dermatology, Rush Medical College of the University of Chicago; Dermatologist to the Presbyterian, Saint Anthony's and West Suburban Hospitals, and the Home for Destitute Crippled Children; Consulting Dermatologist to the Orphan Asylum of the City of Chicago; Member of the American Dermatological Association and of the Congress of American Physicians and Surgeons; Corresponding Member of the Section of Dermatology of the Royal Society of Medicine, London; Corresponding Member of the Societe Francaise De Dermatologie Et De Syphiligraphie, Paris; Corresponding Member of the Dansk Dermatologisk Selskab, Copenhagen. Lea & Febiger, Philadelphia.

New third edition that brings this standard text up to date.

MANAGEMENT OF THE SICK INFANT—Edited by Langley Porter, B. S., M. D., M. R. C. S. (Eng.), L. R. C. P. (Lond.), Professor of Clinical Pediatrics, University of California Medical School; Visiting Pediatrician, San Francisco Children's Hospital; Consulting Pediatrician Babies' Hospital, Oakland; Consulting Pediatrician, Mary's Help Hospital, San Francisco, and William E. Carter, M. D., Instructor in Pediatrics, University of California Medical School, San Francisco. The C. V. Mosby Co., St. Louis.

A fairly complete codification of all that has been written on the subject.

DENTAL MATERIA MEDICA AND THERAPEUTICS—With Special Reference to the Rational Application of Remedial Measures to Dental Diseases. A Textbook for Students and Practitioners. Edited by Hermann Prinz, A. M., D. D. S., M. D., Sc. D., Professor of Materia Medica and Therapeutics, The Thomas W. Evans Museum and Dental Institute School of Dentistry University of Pennsylvania. The C. V. Mosby Co., St. Louis.

Received.

PRACTICAL OTOTOLOGY—Edited by Morris Levine, M. D., Associate Professor of Otolaryngology, New York Post-Graduate Medical School and Hospital; Associate Attending Otolaryngologist, New York Post-Graduate Medical School and Hospital. Lea & Febiger, Philadelphia.

Imparting practical facts and principles.

THE SURGICAL CLINICS OF NORTH AMERICA—Issued serially, one number every other month. Volume 7, Number 2 (Cancer Number—April 1927.) 231 pages with 113 illustrations. Per clinic year (February 1927 to December 1927). Paper, \$12; Cloth, \$16 net. W. B. Saunders company, Philadelphia and London.

Received.

A TEXT-BOOK OF MEDICINE—By 130 American Authors. Edited by Russell L. Cecil, M. D., Assistant Professor of Clinical Medicine, Cornell University, Medical School, New

York. Octavo of 1,500 pages, illustrated. Cloth, \$9 net. W. B. Saunders company, Philadelphia and London.

A collaborated text by 130 authors. One finds each subject covered in a concise but thorough manner.

THE PRACTICAL MEDICINE SERIES—Comprising eight volumes on the year's progress in medicine and surgery. Edited by Everts A. Graham, A. B., M. D., Professor of Surgery, Washington University School of Medicine; Surgeon-in-chief of the Barnes Hospital and of the Children's Hospital, St. Louis. The Year Book Publishers, 304 S. Dearborn Street, Chicago.

Received.

HEALTH SUPERVISION AND MEDICAL INSPECTION OF SCHOOLS—Edited by Thomas D. Wood, A. M., M. D., College Physician, Adviser in Health Education, and Professor of Physical Education, Teachers College, Columbia University and Hugh Grant Rowell, A. B., M. D., Physician to the Horace Mann Schools. W. B. Saunders company, Philadelphia and London.

An excellent text for health and school officials.

THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY IN THE WORLD WAR—Volume XI Surgery, Part I. General Surgery, Orthopedic Surgery and Neurosurgery. Prepared under the direction of Maj. Gen. M. W. Ireland, the Surgeon General. Government Printing Office, Washington.

The department is doing an excellent piece of historical recording in this series. It is most interesting and exceedingly instructive.

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ORIGINAL ARTICLES

THE MANAGEMENT OF HEAD INJURIES*

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ETIOLOGY

In this paper we report a series of 441 cases of head injuries treated in our hospital, and by so doing will again bring to your attention this most important problem, especially emphasizing the need of prompt adequate attention and accurate diagnosis, in order that the proper need of treatment can be instituted.

We include in this series of "Head Injuries" only the cases where there has been definite injury to the skull or intracranial structures. We have omitted all cases with questionable cerebral concussion and simple lacerations of the scalp.

This era of great industrial development and marked increase in speed of travel has resulted in an increase of accidents in spite of the great progress in accident prevention. The U. S. Department of Labor, Bureau of Labor Statistics (I) reports from 43 states that in 1917 there were 1,374,468 accidents, of which 11,388 were fatal, and in 1925, 1,708,594 with 10,537 fatalities. These were mainly in the industries and railroads and have omitted the larger number not reported from traffic accidents and those in civil life. Vital statistics from other sources report a steadily rising rate of head injuries.

As to traumatic agents, in our series the

automobile was responsible for 54.2 per cent of the injuries affecting most during the first, third and fourth decades. Males to females in the first, 38 to 17, in the third, 29 to 25, and in the fourth, 28 to 10. Falls (20 per cent) and blows (18.4 per cent) show about the same age incidence. The sex distribution of the total series was males 75 per cent. The average age for the series was 30 years.

TRAUMATIC AGENTS

Auto		Fall		Blow		Other Causes		Totals	
M	F	M	F	M	F	M	F	M	F
151	88	78	10	78	3	24	9	331	110
239		88		81		33		441	
54.2%		20%		18.4%		7.4%		100%	

Average Age 30

Stewart in 1921, reported 6,135 head injuries with 617 fractured skulls in New York City with falls 33 per cent, auto 24 per cent and blows 22 per cent, as chief traumatic agents. His series showed 65 per cent males. The average age was 36. As to the injury to the skull, we classify the fractures as basal and vault, the latter subdivided as fissured (linear and stellate),

* Read before The Michigan State Medical Society, June 18, 1927.

comminuted, diastatic, depressed and perforated.

CLINICAL DIAGNOSIS

	Concussion	Contusion	Laceration	Laceration and Hemorrhage	Totals
Without Skull Fracture	257	7	5		269
With Skull Fracture	94	24	49	5	172
Totals	351	31	54	5	441

The location of injury in our series was vertex, in 85.7 per cent of cases, basal in 5.7 per cent and combined vertex and basal in 8.6 per cent. Stewart's series showed vertex 66 per cent and basal 34 per cent. Beasley in 1916 reported 1,000 cases with vault 33 per cent, basal 34 per cent, and combined 33 per cent. We stress that the important thing is the injury to the intracranial contents and use the classification of such injuries as concussion, contusion, laceration, and laceration and hemorrhage with or without skull fracture. The fracture of the skull is of secondary importance except where it is (1) depressed, (2) compound, (3) stellate with driving in of bone fragments and (4) where it tears across an important blood vessel or into an infected sinus.

DIAGNOSIS

The diagnosis is in most cases simple, but may be more or less difficult. In doing so, we use chiefly clinical signs and symptoms combined with X-ray and lumbar puncture.

1. Early signs and symptoms. The following have been valuable guides :

1. The degree and duration of the primary unconsciousness. This gives a fair index of the severity of the trauma and probable outcome except in cases of serious intracranial hemorrhage and infection which develop later.
2. Shock, vomiting, color and mental state are usually helpful guides but are more unreliable because they differ so in different individuals.
3. The percussion note of the skull will often reveal the side of fracture, but it can be misleading, and too much reliance must not be placed on this sign.
4. The site of external trauma usually indicates the most probable area of deep injury, if any, and can give us warning

whether to look out for middle meningeal hemorrhage, infection, etc. However, contra coup injuries are not infrequent and must always be borne in mind.

5. When blood is found coming from the cranial orifices (ears, nose and mouth) we must first rule out external injuries before diagnosing fracture. If bleeding persists or is accompanied by spinal fluid, we can be certain of basal fracture.
6. Eye findings—Ecchymosis of lids and subconjunctival hemorrhage, if of deep origin are more apt to come on a few hours later and persist longer than from external injury. The pupils are very important guides to the side and severity of lesion. They first contract, then gradually dilate and finally lose the reactions to light and accommodation if the injury is very severe.
7. Edema and ecchymosis of the scalp in certain locations such as the mastoid area (Battle's sign) can be relied upon to indicate fracture but otherwise may be unreliable. Hematomata have many times been wrongly diagnosed as depressed fractures.
8. The deep reflexes are invaluable guides, particularly if unequal and associated with changes in motor or sensory systems.
9. Motor and sensory changes and pathological toe signs (Babinski, Oppenheim, etc.) usually appear later, but if they occur early are of great importance in localizing the brain injury.

2. Later Neurological Signs :

1. Steadily deepening unconsciousness after a "lucid interval" usually means intracranial hemorrhage, although localized laceration with edema can closely simulate the picture at times. In the latter, however, the developments are not so rapid or extreme and subside more promptly.
2. Changes in the pupils are extremely significant and should be observed at frequent intervals in serious cases. In our series the pupil dilated on the side of lesion and all cases with fixed dilated pupils died. Nystagmus is an unfavorable sign. Choked disc usually comes later but engorged veins and a haziness of the margins often appear early as signs of increasing intracranial pressure.
3. Cranial nerve involvement comes on early or late and is permanent or temporary, depending upon whether the nerve is severed by the fracture or merely compressed by the accumulated fluids. The VIth nerve is reported as most frequently involved. In our series the VIIIth and VIIth were most frequent.
4. Progressive changes in the motor and sensory systems are of great importance and usually indicate partial pressure or complete severance of the pathways. There is usually first hypotonus then irritability, later spasticity, then gradual weakness and finally flaccid paralysis, if complete.
5. The deep reflexes usually change correspondingly and help in localizing and identifying the lesion. One must remember the possibility of associated lues or other lesions with pathological reflexes.
6. The vital signs (temperature, pulse and

respirations) and the blood pressure are indicators of the condition of the medulla and so help us only indirectly. Observations of the above signs should be made at frequent intervals until the danger of acute complications is past.

3. The X-ray gives us very definite information about the skull. It should be taken in all cases of head injury. It gives us a clue whether we are apt to have hemorrhage or infection. X-rays were taken in 80.3 per cent of our cases and were positive in 35.9 per cent.

X-RAY AND CLINICAL DIAGNOSIS

	X-ray Positive	X-ray Negative	Percent of Total
X-ray Done	127	227	80.3%
X-ray Not Done Not Reported	87		19.7%
Totals	441		100%
% of Total	35.9%	64.1%	100%

A negative X-ray may mean faulty technic. One picture may be sufficient. On the other hand, several angles may be necessary to reveal the fracture and give details. Clinical findings are of more importance than the X-ray.

4. Lumbar puncture is another accurate diagnostic means and usually indicates (1) intracranial pressure, (2) presence or absence of blood, (3) freedom of communication. It is as well a therapeutic agent in relief of pressure and drainage in infections. It may not be reliable, if there are basal injuries or if there is interference with free communication, with the lumbar subarachnoid spaces. Cushing, Sachs and others have pointed out the dangers of lumbar puncture and from our experience we advocate it only where there is a definite indication. More will be said of this under treatment.

TREATMENT

During the past decade there have appeared many valuable papers dealing with head injuries. All unite upon the conservative treatment for the uncomplicated and the moribund cases, but differ somewhat regarding the serious cases with cerebral compression. In the earlier years more radical treatment was generally practiced but lately we have all tended more and more to conservatism in this group, as we seem to have better results.

We shall consider briefly in a general way our management of head injury cases, and will touch only upon the most important points.

1. History of accident or injury. We stress the importance of obtaining and recording the data in detail from as reliable sources as possible. In this way we may find out at the outset whether we are likely to find a depressed, stellate or penetrating fracture. It is also necessary from the medico-legal aspect. We should know what treatment has been administered prior to admission to the hospital, and whether there has been a previous fracture or epilepsy, etc.

2. Immediate general survey of the case. This should be done by someone with sufficient experience to quickly and accurately size up the case, recognize the potentially serious cases and order the proper treatment. If the patient is in extreme shock, the examination should be brief and without undue exposure of the body. Detailed examinations can be done later. If there is bleeding from the ears or nose, speculum examinations should only be done under aseptic conditions. We do not irrigate the ears or nares, simply keep them clean and dry.

3. Immediate surgical treatment. This is usually only necessary for superficial hemorrhage or laceration of the scalp. When the patient is in shock, first control the bleeding temporarily by pressure and combat shock with heat and intravenous glucose before proceeding. The strictest asepsis should be maintained in all surgical procedures. All dirt and foreign material must be removed and probing for fractures done only with sterile instruments or gloves. The closure can usually be made without drainage unless very much contaminated. All further surgery can wait until recovery from shock when a more accurate diagnosis of the case can be made. Moribund patients are best left absolutely quiet, applying heat, using stimulants, etc.

4. Tetanus antitoxin should be given in all cases where deep wounds may be contaminated with dirt, 1500 units is the prophylactic dose. A small amount should be given first and wait five minutes for signs of anaphylaxis.

5. X-rays. If the patient's condition warrants, the next step is to take X-rays of the skull. The number of films necessary depends upon circumstances. Enough should be made to give us details of the nature and site of fracture. The films are

usually read at once. If the fracture crosses the meningeal vessels, we should be on the lookout for hemorrhage. If depressed or extending into an infected sinus, appropriate treatment should be instituted early.

6. Hospital care. Routine orders—All cases should be hospitalized for a varying length of time, depending upon the severity. Our routine orders are: (1)—If the patient is in shock the head is to be kept low, heat to the body, glucose 5 per cent by rectum (1000 c.c.) or intravenously (500 c.c.) if urgent. Caffeine may be used if necessary. Ice bags to the head. (2)—When the shock has cleared up, the head is raised slightly and after 12 hours kept partly up to prevent edema. (3)—The pulse, respirations and blood pressure in potentially serious cases are taken every 15 minutes for 4 hours, then every half hour for 4 hours, then every 1, 2 and 4 hours as the condition of the patient warrants. The nurses are instructed to take the blood pressures, checked at intervals by the internes. The temperature and determination of degree of consciousness, observation of pupils and tests of power and tonus of extremities are to be done every 4 hours during the first 8 to 12 hours to detect any signs of a progressive lesion. A steadily rising blood pressure and a pulse first slow and later rising, with increasing drowsiness warns of medullary compression. When the pulse pressure is as high as the pulse rate there is apt to be high intracranial pressure.

6. Neurological examination. This is done upon admission and checked at intervals because in cases of severe lacerations or hemorrhage the changes are rapid and progressive. The examinations note the color and condition of the skin, respirations and pulse, the degree of consciousness, size and reactions of the pupils, appearance of the optic discs, test the strength, tonus and sensations of the extremities, the deep reflexes and examine for pathological toe signs. The nurses in charge are instructed regarding the danger signals and should know the significance of the various changes that occur in the four stages of medullary compression from hemorrhage or lacerations. The pressure should be relieved in the first two stages or before there is medullary collapse. Unfavorable signs are dilating and later fixed pupils, diminishing and later absent deep reflexes, spasticity, clonus, high temperature and progressively deepening unconsciousness. For headache or restlessness

codeine, aspirin or moderate doses of luminal may be necessary, but one must be careful not to mask valuable signs. No morphine for sleep or mydriatics are used during the early uncertain period for the same reason.

7. Lumbar puncture. This procedure is one of our most reliable gauges of intracranial pressure and is done in cases, not in shock, where the diagnosis is uncertain, or where there is cerebral compression. It is extremely dangerous where there is hemorrhage at the base causing medullary compression or where there is a block at the base and high pressure above. In the latter condition ventricular puncture is safer. Lumbar puncture should be done slowly with someone constantly watching the pulse, respirations and blood pressure and stop upon the appearance of any unfavorable signs. The patient is always in the lateral prone position, and pressures read with a standard mercury manometer. The amount of fluid removed depends upon the conditions. Our rule is that with pressures above 16 mm. of Hg. enough is removed, slowly, to reduce the pressure to one-half or to normal. After the first diagnostic puncture, spinal punctures are repeated therapeutically as often as necessary. In our series there were 382 lumbar punctures done on 148 cases. The fluid was bloody in 39.9 per cent of the cases punctured. The highest mortality rate occurred in the cases where the fluid was bloody and spinal fluid pressure was over 20 mm. Hg.

8. Hypertonics. Another valuable means of non-surgical reduction of intracranial pressure is by the use of hypertonic solutions. Glucose solution in our hands has proved the most useful and has the advantage that it is not so apt to be injurious and its effect lasts longer, and in addition furnishes nourishment. We use it alone or combined with 15 per cent saline—intravenously 25 per cent (100 to 200 c.c.) or 50 per cent (50 to 100 c.c.) the latter given slowly. If less urgent, glucose or magnesium sulphate are given by rectum. Hypertonics do not have any appreciable beneficial effect upon hemorrhage or lacerations, but do seem to clear up edema temporarily. The treatment may have to be repeated every 6 to 8 hours. Care must be exercised that dehydration does not result from overdoing the procedure.

9. Craniotomy. Until the last few years this has been the generally accepted procedure for cerebral compression. Decompression, formerly done in from 25 per cent

to seventy per cent of the cases, is now practically limited to the cases of middle menigeal hemorrhage, and cerebral compression that do not respond to hypertonics and lumbar punctures. The technique needs no elaboration. Cushing's time-honored subtemporal approach with muscle splitting vertical incision is the best. The dura is opened only if there is bulging or excess of blood or fluid beneath. Exploration and drainage of a frontal sinus may be indicated if a gaping fracture with likely tearing of the dura extends into an infected sinus. The same thing applies if there is an aerocele following a fracture into paranasal air cells.

Cerebral operations are classified as (1) Immediate (2) Interval and (3) late. Under the first we would include elevation of depressed fractures, with cerebral compression, debridement of compound skull fractures, penetrating wounds or foreign bodies and decompression for removal of extra or sub-dural clots. Interval operations are done on depressed fractures without marked compression, drainage of brain abscesses and sometimes subtemporal decompressions for secondary hemorrhage or abnormal collections of fluid with compression. The late operation is usually an osteoplastic craniotomy for late sequellae such as epilepsy or drainage of a brain abscess.

cause we operated only upon very serious cases. Many cases, that others might have explored and given surgery the credit for curing, we cleared up with lumbar punctures and hypertonics. The mortality rate for the operative cases for the entire series was 3.2 per cent, and for the non-operative cases was 11.8 per cent, giving the total mortality rate for the series of 14.7 per cent.

10. After care. There can be no hard and fast rules because each case is a different problem. The important thing is absolute rest and quiet for a sufficient length of time and allowing the patient up very gradually. Our custom has been, in concussion cases, in bed 7 to 14 days, gradually up and around during the next 7 to 10 days, then in a week light work for two to three weeks, then regular work if no sequellae; with cerebral contusion cases, in bed two to three weeks, light work after three to four weeks more, and very gradually to regular work; with lacerations it is usually best to keep them in bed for from three to five weeks, no light work till eight to ten weeks after the injury, and regular work after about ten or twelve weeks. We have had less trouble when we keep our patients down a sufficient length of time. If headaches, or other unfavorable symptoms appear, the patient is put to bed for a week or so. If the headache persists, a spinal puncture and drainage is done, if the spinal pressure is high. Jackson and Krause advocate four weeks for the period of quiet with severe cases. Sharpe keeps his severe cases away from work for three months at least.

11. Complications. The complications in our series were chiefly paralysis, hemorrhage and infection, Cranial nerve palsies (VIIth and VIIIth predominating) cleared up in from a few days to five or six months. There was no special treatment—massage and electricity in the VIIth paralysis was used. There were 15 hemiplegias. Of these five died and nine cleared up before discharge, and one persisted on discharge, and was lost track of. The treatment was expectant with massage and Faradism. There was one brain abscess which was cured by operation and four meningitis cases all fatal. Of these one resulted from fracture into a frontal sinus, two basal fractures through the ears and one compound infected vault fracture. Many cases of meningitis were doubtless prevented by prophylactic means such as immediate drainage of frontal sinuses, early debride-

METHOD OF TREATMENT WITH RESULTS, ETC.

Operation			No Operation			
No. Operated	Survived	Died	Medical Treatment		No Treatment	
			Survived	Died	Survived	Died
22	8	14				
Operative Mortality 59.1%			363	29	5	23
Surgical Mortality Rate to Total Cases, 3.2%			Mortality Rate to Total, 6.6%		Mortality Rate To Total, 5.2%	

In our series craniotomy was performed in 22 cases or 4.3 per cent of the total series. Of those operated 14 died, giving an operative mortality rate of 59.1 per cent. Of the deaths one was due to a meningitis resulting from an accompanying basal fracture and five to such deep lesions as torn lateral sinus and deep lacerations accompanying middle meningeal. The other eight died of lacerations and hemorrhage accompanying depressed fractures. Our operative mortality rate seems somewhat high, but we feel it is be-

ment of compound fractures and aseptic treatment of ears and nose, etc. When there was a frank meningitis we treated by repeated spinal and cistern drainage and forced fluids. Immunizing sera were used. Operative drainage and subarachnoid or ventricular drainage should be tried in suitable cases. Hemorrhage, where accessible, such as middle meningeal, was treated with immediate operation. Where it was inaccessible, the pressure was combated with spinal punctures, hypertonics and decompressions in suitable cases. We have not included associated injuries and fractures elsewhere in the body.

RESULTS

Sixty-four and two-tenths per cent of our cases left the hospital apparently cured and did not return with unfavorable symptoms. Seventeen and seven-tenths per cent left with one or more unfavorable sequelae. Three and four-tenths per cent were either transferred to other hospitals or left for home against advice. There were 65 deaths, giving the mortality rate of the series of 14.7 per cent.

RESULTS

Cured	Recovered With Sequellae	Not Treated	Died
283	78	15	65
64.2%	17.7%	3.4%	14.7%

Of the deaths 81.5 per cent died within 48 hours after admission. Of the 17.7 per cent which left the hospital with one or several unpleasant sequelae, the commonest were headaches, fatigueability and general weakness. These figures probably do not fairly represent the number who actually suffered with headaches, vertigo, nervousness, etc., as these usually come after discharge and persist for weeks or several months. Psychoses (eight cases in our series) are sometimes very disturbing and may require hospitalization. Most all clear up ultimately, but a certain per cent retain permanent mental defects. When the compensation factor enters into the case, it becomes difficult to evaluate fairly the organic and functional elements. Sharpe found that 68 per cent of the 34 per cent of his total series that replied to a questionnaire, showed unfavorable sequelae. Hoag states that subjective symptoms are present in 80 per cent of head

injuries, eight per cent psychic. Stewart found 48 per cent in his series. Children seem to show far fewer sequelae and have a greater power of recovery from serious injuries, but are more apt to develop epilepsy, spastic paraplegias or other developmental failures.

PROGNOSIS

This must be guarded until six months to a year have passed, particularly in young people. This applies particularly in insurance and compensation cases.

SUMMARY

1. The problem of the proper management of head injuries is of increasing importance. Great progress has been made but our results can yet be improved upon.

2. It should be our aim to make even more accurate diagnoses of our cases and use the appropriate form of treatment for each different group. In this way we can save more lives and still further prevent unfavorable complications and sequelae.

3. In the management of head injuries we stress (1) the importance of accurate detailed history, (2) careful repeated examinations, (3) constant skillful nursing, (4) X-rays in all cases, (5) spinal punctures for diagnosis if there is any doubt, and therapeutically with hypertonics to reduce cerebral compression, (6) properly timed surgical intervention for accessible hemorrhage, compound fractures and depressed fractures with cerebral compression, and (7) insistence on keeping the patients quiet for a sufficient length of time to assure complete recovery before allowing to again resume the usual routine.

4. We have reported our series of 441 cases of craniocerebral injuries because we believe that the study of such groups of cases is of scientific value and should be on permanent record.

In conclusion we wish to express our appreciation for the privilege of appearing before you at this time and hope that it will bring forth discussion which will be of value to us all.

INFECTIONS OF THE HAND

J. G. R. MANWARING, M. D.

FLINT, MICHIGAN

The ultimate result in infections of the hand is so often dependent on *early and proper treatment* that every physician should be prepared to give such care. Unfortunately most physicians so seldom have occasion to handle such infections

that the rigid principles which should guide them are very hard to keep in mind and have on tap when needed. Because of this fact some years ago a chart was prepared which has always been kept at hand in the office desk and it has proven to be of great value for ready reference.

It is believed that many bad results in the treatment of these cases would be avoided if this or a similar chart was kept in every doctor's office and framed and hung in every physician's dressing room in our hospitals. To make this service available the chart we have used is submitted for publication in suitable form.

Every physician should have also Kanel's masterpiece on infections of the hand. Recently a similar book on the same subject by L. R. Fifield, an English surgeon, has been published which gives much the same material in compact form. It may be used. This chart will not do away with the advisability of a study of these books but can be a great help after the anatomical and clinical features are familiar.

1. Simple processes—Four types:

1. Felons—
Infection in connective tissue of terminal phalanx.
If neglected necrosis of diaphysis of end bone.
Treatment—Open early and always at side. Don't cut beyond crease under joint to avoid tendon sheath.
If bone dies, cut off at epiphysis, not at joint, and avoid tendon sheath.
2. Run around.
Infection of nail root.
Elevate layer of skin over nail to seat of infection.
Put in cotton and glycerine. Next day easy to inspect.
If needed then cut out nail root, usually all of it.
3. Carbuncle of finger.
Infection of dorsum of proximal phalanx. Looks like a boil.
Use stellate incision to slough and under cut edges.
4. Abscesses under calluses and in blisters.
Open, cut off upper cover and look for perforation to connective tissue spaces beneath. Frequent under calluses at distal palm into lumbricale spaces.

2. Severe infections—Three types:

1. Lymphatic.
2. Tendon sheath.
3. Connective tissue spaces.
 1. Lymphatic — edema — streaks up arm — general symptoms.
Ring and little finger goes to dorsum of hand, to epitroclear glands, then to axillary, then to general circulation.
Thumb and index finger to dorsum of hand to axillary glands, then to circulation—(chylous duct).
Middle finger over dorsum of hand to forearm and arm to neck to circulation direct.

Most dangerous. Usually streptococcic. Don't operate. Will cause cellulitis (Erysipelas). Use large wet dressing and rest. Large dressing so can't move fingers or hand and pump infections up lymphatics. If abscess forms later then open.

2. Tendon sheath infections. Remember anatomy of tendon sheaths.

Diagnosis—

- a. Finger is always swollen full and round.
- b. Painful when extended.
- c. Tender along course of tendon.

Operation—

- a. Open early and at side of finger always.
Ulnar side of index finger, radial side of little finger.
Open tendon sheath in each phalanx excepting distal. Do not cross joint.
- b. Open in palm at proximal end of sheath; if 2, 3, 4 digit, distal to transverse flexor crease, to avoid palmar space.
- c. If 1st or 5th digit, open to inner side of thenar or hypothenar eminence in course of sheath. In thumb not nearer than 1 inch to flexion crease of wrist to avoid nerves to thumb. Flexors of thumb run around thenar eminence on palm side. Little finger flexor around hypothenar.
- d. Open tendon sheath space above annular ligament also in 1st and 5th digit tendon sheath infections. This cavity lies under all of tendons and on pronator quadratus muscle. Cut $\frac{3}{4}$ in. above annular ligament upwards 3 inches along ant. curve of ulnar bone from the side. Cut skin, fat, fascia and then open on quadratus surface, push forceps across to other side and open there. If no pus no harm.
Dress all tendon sheath infections particularly, aseptically. Streptococcus infection may heal and do no damage, if staphylococcus get in destroys tendon. Use rubber tissue drain.

3. Connective tissue spaces.

1. Lumbricale, distal to transverse flexor crease of palm, infection shown by local tenderness and swelling. Open between fingers.
2. Middle palmar space, proximal to transverse crease. Infection shown by loss of concavity of palm, local tenderness, lack of symptoms. Incise palm between middle and ring fingers to lumbricale muscles. Then push a forceps along muscle into palmar space underneath the group of tendons.
3. Thenar space, swelling of thenar eminence with tenderness. Incise parallel to web between thumb and index finger on palmar side and open by blunt dissection with forceps pushed between ant. and post. muscles of thumb.

In all severe infections of hand put it up in position of function. This means thumb adducted and flexed, fingers all flexed, especially at proximal joints.

PHYSICIANS WITH THE EARLY EXPLORERS AND ADVENTURERS

Prepared for The Proposed Medical History of Michigan.

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The Indians in the vicinity of St. Joseph's River, Lake Michigan, were visited by Father Marquette in 1675. La Salle built a fort at the mouth of the river in 1679. (Fuller's Historic Michigan, Page 44).

I have seen somewhere in print that a surgeon accompanied Champlain on the westward wanderings, 1611-1618, and that Mackinac was visited. It is well known that he reached Georgian Bay and apropos the journeyings about a half-century later, of two Sulpitian priests, Dollier and Galinee, who coasted along the south shore of Lake Erie and "into the peaceful waters of the Detroit river," arrived at the site of the present city of Detroit, and discovering an Indian idol, paused long enough to smash it in pieces and throw the fragments in the river, Henry M. Utley writes¹, "so far as is known this is the first record of a visit to this locality. In all probability others had passed through the straits—the Recollet and Jesuit missionaries and possibly Champlain himself." Be this as it may, the name of the surgeon, if any, with Champlain is unascertained.

In passing, pious people will be glad to be assured that "God rewarded us immediately for this good action, for we killed a deer and a bear the same day²." Members of the medical profession will be perhaps equally gratified to learn that the missionaries traveled hitherward on their own, ministering to physical as well as spiritual needs, and that no physician could, consequently, have had any part in such a bit of vandalism.

Whether on LaSalle's first expedition in 1679, he was accompanied by a surgeon, history does not reveal, but it is possible that Liotot of sanguinary fame, journeyed with him on this occasion, returned with him to France, and remained in his company until the tragic Louisiana experience, of which more farther on.

In the "Jesuit Relations" of this and an earlier period, mention is made of surgery and surgeons, the latter occasionally by name, but none of these, apparently, accompanied Fathers Marquette, Joliet, Alouez, Jogues, Raymbault, or others, on their missionary enterprises to the Michigan localities.

I have the authority of Hon. Thos. A.

E. Weadock³, who has devoted much time to the study of the subject, that "Marquette was not accompanied by a physician at any time;" and he adds, "the Jesuits seem to have had some knowledge of medicine. You know they discovered cinchona which was called 'Jesuits bark' for many years."

It is altogether probable that one Jean Michel was of the pale-face race, the medical man having had the enviable opportunity to "see Michigan first." This was before the days of organized crime; transportation and, in tourist phraseology, "sojourning" were then relatively safe. There was nothing to fear but the Indians—mosquitoes and "varmints" excepted—and of these the few unfriendly Indians succumbed speedily to fire-water, fire-arms and other civilizing agencies. Indeed, the civilizing machine was so well oiled and operated so perfectly that the New York Commercial Advertiser⁴ was able to declare in December, 1822, that "Michigan is the worst governed state or territory in the Union if half is true that has been published in the last three or four years and never contradicted. (It is perhaps scarcely worth while to attempt contradiction at this late date, but it may be expedient to indicate whence much of the early population of Michigan was derived—the State of New York).

Michel accompanied the second LaSalle expedition in the Tonty (or Tonti) Section in 1681, but vanished speedily from sight. At all events, he was not, apparently, in the following year with LaSalle at Green Bay, otherwise it would scarcely have been necessary for "friendly" Wolf Indians to seek roots⁵ wherewith to dress the wounds of Sieur Barbier, unless mayhap Michel had run out of medical supplies and sought the co-operation of the Indians to replenish his stores. Such conjecture is by the way, not at all incredible, as the following narrative reveals:

"In 1535-36 the Iroquois around Quebec, as Jacques Cartier relates, treated scurvy in his crew very successfully with an infusion of the bark and leaves of the hemlock spruce; and the French at Onondaga in 1657 found the sassafras leaves, recommended by the same tribe 'marvelous' for closing wounds of all kinds⁶."

Parkman's account of the Cartier's crew incident is as follows: "A malignant scurvy broke out among them. Man after man went down before the hideous disease till twenty-five were dead and only three or four were left in health. The sound were

too few to attend the sick and the wretched sufferers lay in helpless despair, dreaming of the sun and the vines of France. The ground, hard as flint, defied their feeble efforts, and unable to bury their dead, they hid them in the snow drifts. Cartier appealed to the Saints, but they turned a deaf ear . . . The Holy Virgin deigned no other response.

"There was fear that the Indians, learning their misery, might finish the work that the scurvy had begun. None of them, therefore, were allowed to approach the Fort . . . Cartier forced his invalid garrison to beat with sticks and stones against the walls that their dangerous neighbors, deluded by the clatter, might think them engaged in hard labor. These objects of their fear, proved, however, the instruments of their salvation. Cartier, walking one day near the river, met an Indian who not long before had been prostrate like many of his fellows with the scurvy, but who was now to all appearance in high health and spirits. What agency had wrought this marvelous recovery? According to the Indian it was a certain evergreen called by him, ameda⁷, a decoction of the leaves of which was sovereign against the disease . . . The sick men drank . . . so copiously that in six days they drank a tree (sic) as large as a French oak. Thus vigorously assailed the distemper relaxed its hold and health and hope began to revisit the helpless company⁸."

Whatever motivated the Indians, they received the usual reward for their apparent beneficence. Cartier lured Donaconna and his chiefs into ambush where they were seized and hurried on board the ship. "Having accomplished this treachery, the voyagers proceeded to plant the emblem of Christianity⁹."

Surgeon Liotot, whether he did or did not accompany the earlier expeditions, figured tragically in that of 1687 in Louisiana and apropos pioneer experiences pertinent to this history, it may be said that he was as handy with an axe as any Michigan woodsman by whom the injunction "Spare that tree" has in diplomatic parlance been accepted "in principle" only. He also approved of the death penalty for misappropriation of provisions.

Joutel, "Commander" on the last expedition records that LaSalle had "on a former occasion hid some Indian wheat and beans two or three leagues from that place and our Provisions beginning to fall short it was thought fit to go to that place. Ac-

cordingly, he ordered the Sieurs Duhaut, Hiens, Liotot the surgeon, his own Indian and his footman whose name was Saget, who were followed by some natives, to go to the place described to them where they found all rotten and quite spoilt. The 16th (March, 1687) they met with two bullocks which Monsieur de la Sale's Indian killed, whereupon they sent back his Footman to give him notice of what they had kill'd that if he would have the Flesh dry'd he might send Horses for it. The 17th Monsieur de la Sale had the horses taken up and order'd the Sieurs Moranget (LaSalle's nephew) and de Male and his Footman to go for that Meat and send back a Horse Load immediately till the rest was dry'd.

"Monsieur Moranget when he came thither found that they had smoak'd both the Beeves tho' they were not dry enough and the said Sieurs Liotot, Hiens, Duhaut and the rest had laid aside the Marrow bones and others to roast them and eat the flesh that remained on them as was usual to do. The Sieur Moranget found fault with it, he in a passion seiz'd not only the Flesh, that was smoak'd and dry'd but also the Bones without giving them any Thing; but on the contrary threatening they should not eat so much of it as they had imagin'd and that he would manage that Flesh after another Manner.

"This passionate Behavior so much out of Season and contrary to Reason and Custom touched the Surgeon Liotot, Heins and Duhaut to the Quick they having other causes of complaint against Moranget. They withdrew and resolv'd together upon a bloody Revenge, they agreed upon the Manner of it and concluded they would murder the Sieur Moranget, Monsieur de la Sale's Footman and his Indian, because he was very faithful to him. They waited until Night when those Unfortunate creatures had supp'd and were asleep. Liotot, the Surgeon, was the inhuman executioner, he took an Axe began by the Sieur Moranget, giving him many Strokes on the Head; the same he did to the Footman, and the Indian, killing them on the spot whilst his Fellow Villains viz. Duhaut, Heins, Teissier and Larcheveque stood upon their Guard with their arms to fire upon such as should make any resistance."

LaSalle appearing on the scene Duhaut shot him through the head and the assassins "all repair'd to the Place where the wretched dead Corps lay which they barbarously strip'd to the Shirt and vented their Malice in vile and opprobrious language. The Surgeon Liotot said several

times in Scorn and Derision, "There thou liest Great Bassa there thou liest." "

To complete the story of seventeenth century surgery in the wilds;—on their wanderings two months later, owing to a dispute over certain property in their possession one Ruter "fired his piece upon Liotot the Surgeon and shot him through with three Balls. He lived some Hours after and had the good fortune to make his confession."

The foregoing quotations are from "A Journal of the Last Voyage Perform'd by Monsr. de la Sale to the Gulph of Mexico To find out the Mouth of the Mississippi River", By Monsieur Joutel A Commander of that Expedition¹⁰.

In his journal under date of January 16, 1675, Father Marquette records, "as soon as the two Frenchmen knew that my illness prevented my going to them, the Surgeon came here with an Indian to bring us some whortle berries and bread. They are only eighteen leagues from here in a beautiful hunting ground for buffalo and deer and turkeys which are excellent there. They had, too, laid up provisions while awaiting us and had given the Indians to understand that the cabin belonged to the blackgown. And I may say that they said and did all that could be expected of them. The Surgeon having stopped here to attend to his duties, I sent Jacques with him to tell the Illinois who were near there that my illness prevented my going to see them and that if it continued I should scarcely be able to go there in the spring¹¹."

M. M. Quaife, Ph. D., Secretary-Editor of the Burton Historical Collection, has supplied an interesting legend connected with the foregoing episode which he regards well authenticated; that at the time he was stricken with this illness, Father Marquette was in the present Chicago region and that in a distant neighborhood among the Indians of Illinois a medical man was living. He and a companion were engaged in illicit commerce in furs. The French Government in monopolistic spirit reserved to itself all rights in this enterprise and had the Doctor been apprehended he would have been subjected to severe punishment. Evidently he was a humane and worthy fur-bootlegger. He ministered faithfully to Father Marquette and repeated the visit.

It may possibly be that this, up to the present time nameless, adventurer was the original medical man in or near the Michigan locality. Whence he came or his route of travel to the western wilds no man yet

knows but coming as he probably did from the St. Lawrence region, he would necessarily have journeyed either across Northern Indiana or Southern Michigan territory, or by the Great Lakes.

Came Cadillac in the closing years of the seventeenth century to Michilmackinac as Commandant of the Post and bearing commission from Louis le Grand Monarque. Doubtless there was flourish and much pomp and circumstance, and in his train was probably Surgeon Belisle or Surgeon Forestier or both. Reasonably certain it is that the former at least accompanied him when he strode into Detroit in the first year of the sanguinary eighteenth century.

In Michilmackinac, possessed as he was to exploit the copper-colored native commercially, Cadillac fell afoul of the missionaries who were alive to the fact that unrestricted traffic in ardent spirits was subversive of ecclesiastical discipline and the perpetuation of outward and visible forms of piety. Cadillac was of opinion, inasmuch as "fish and smoked meats constitute the principal food of the inhabitants" that "a drink of brandy after the repast seems necessary to cook the bilious meats and the crudities which they leave in the stomach¹²." The missionaries were contrary-minded and De Carheil in true "Nation"al form "knocked in the heads of sundry barrels of brandy and spilled the precious fluid on the ground, which conduct resulted in a violent quarrel between him and Cadillac—an exceedingly irritating state of affairs¹³"

But this is afieid. When he made triumphal entry into Detroit in 1701, which proceeding the awed citizenry of Michigan were, thanks to Mr. Maybury and others, permitted to visualize in pageantry two hundred years later, Surgeon Belisle was with him, likewise in all probability Forestier, either of whom was competent to prescribe whatever was necessary to neutralize the effect of autotoxic "crudities" remaining in his silken safe-guarded stomach. As to doings of these notables, a part that history reveals is recorded in another chapter, "Eighteenth Century Physicians."

Names of medical men, other than those mentioned, have not been discovered as in the entourage of adventures and explorers Michigan way. One Jacques Franchere came to New France early in the eighteenth century as ship surgeon but he seems to have failed to find his way to the marvelous middle west.

This then must close the chapter on our remote medical forebears who like more than one of their successors in practice "missed an opening." Effort has been most persistently and conscientiously made to immortalize, by incorporating here, names of the deserving but not even the incomparable Clements Library so far as research reveals has records of others. Therefore *Si quaeris medicos antiquos alios aliubi prospice*. A larger contingent of adventurous spirits among professional brethren of long ago would have saved a situation somewhat unsatisfactory to an amateur in historical research.

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BIOPHYSICAL PRINCIPLES OF LIGHT THERAPY*

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When approaching the subject of physical therapy of which light therapy is a part, the practicing physician finds himself facing a rather complex situation. This new and rapidly developing branch of medicine was not taught during his medical course, and unfortunately the few reliable data available at present are scattered throughout the literature. On the other hand, doing physical therapy and selecting adequate apparatus of any kind requires a fair knowledge of its underlying biophysical principles. Therefore, I have accepted, with pleasure, the invitation of your Chairman, to give a brief essay on the present status of the biophysics of light therapy. It can by no means be complete but an attempt will be made to cover the essential points which everyone should be familiar with who is doing light therapy in daily practice.**

PHYSICS

Speaking from a physicist's standpoint, light waves are a form of electromagnetic

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** A rather complete bibliography of papers concerning the subject will be found in, Mayer, E.: "Clinical application of sunlight and artificial radiation." Baltimore, 1926.

waves traveling through space with a speed of 300,000 kilometers per second. They follow the laws of reflection, diffraction, and inverse square, the latter indicating that the intensity of a point source of light decreases with the square of the distance. In practice this means, for instance, that it takes four times as long to give the same dose at twenty inches as at ten inches distance. It is also important to remember that in case of parallel rays, their intensity varies as the cosine of the angle of incidence. The wave length of radiation is measured sometimes in micromicrons or one-millionth part of a millimeter; the scientist prefers the Angstrom unit which is equal to 10^{-8} cm. (1 micromicron = 10 Angstrom Units).

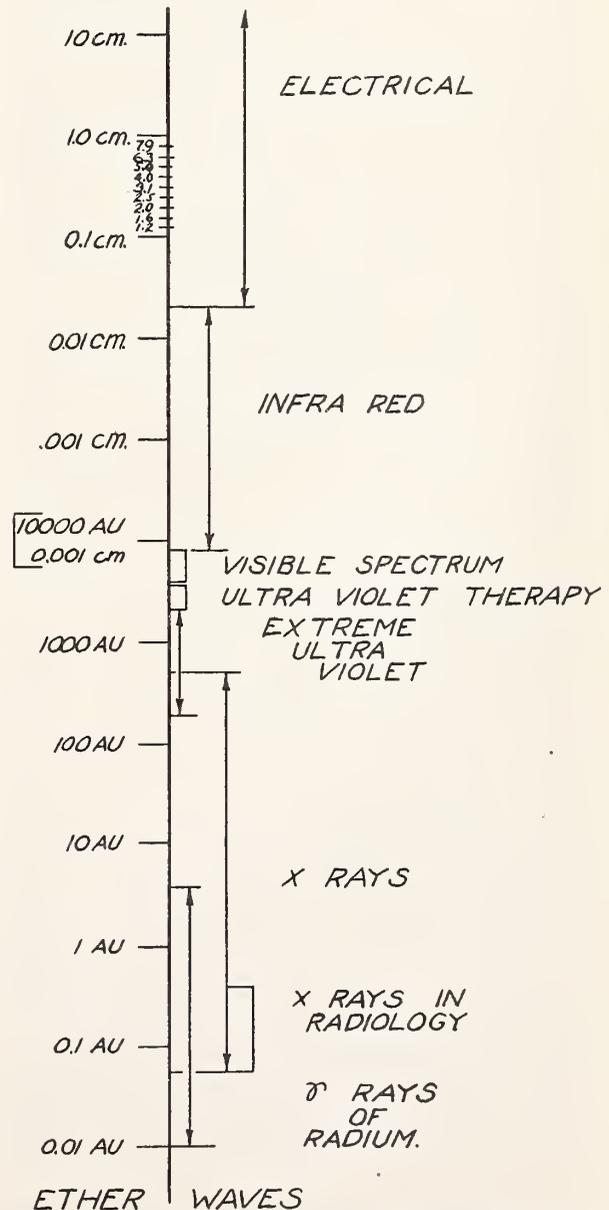


Figure 1—Graphical representation of complete range of wave lengths. (Taken from Robertson, p. 142).

If we look into the sunlight or some artificial light, our eyes record its color as white or yellow. The analyzing of such a beam of light with a prism demonstrates the fact that there are many visible components, the so called spectral colors (red, orange, yellow, green, blue, violet) ranging from 3700 to 7400 Angstroms. Beyond the visible red, we find the invisible infra red and on the opposite side, the invisible ultraviolet. The exact distribution of the various parts of the spectrum and their relation to the other magnetic waves is clearly illustrated in (Figure 1). These spectra can be photographed on a film. It appears then that there are continuous, line, band, or line and band spectra. Continuous spectra may be emitted by solids and liquids, line and band spectra by gases and vapors. Wien's law gives the relation between the temperature of radiant body and wave length; the product of the wave length which has the maximum energy and the absolute temperature of the emitting radiator is a constant. Closer examination of any spectrum reveals the fact that the energy distribution is not the same throughout the entire range of wave lengths; it is important, however, to know the energy distribution in its various parts. Table I gives an example showing the energy distribution of the sun, a mercury vapor lamp, and a carbon arc. Inasmuch as the biological effect of the various wave lengths is probably different, the physician should know the energy distribution in the spectrum emitted by his therapy lamp. This leads us to one of the most difficult problems in light therapy, the problem of dosage which correlates the result of the measurement of the output of a lamp with the desired or expected biological effect. Although the sun is the ideal source of radiation, we have, at least in this part of the country, to turn to artificial light: mercury vapor, carbon arc, and incandescent lamps are the principal types in use today. The mercury vapor lamp has a quartz burner in order to permit the short ultraviolet rays to pass through. Some of the carbon arc lamps are also enclosed in globes of different composition and transparency.* In light therapy, erythema and pigmentation or heat tolerance of an individual form the basis of judging the biological factor of a dose. In order to make any result reproducible, the emitted physical energy must

have been measured. A non selective device to measure the output of any light source is a thermopile connected to a sensitive galvanometer. (Figure 2.) A ther-

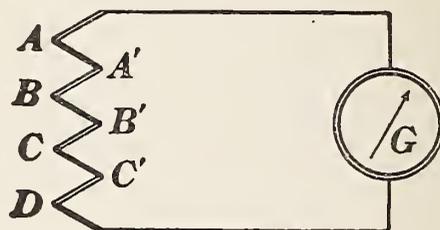


Figure 2—Thermopile with galvanometer in circuit.

mopile consists of a number of thin strips of two different metals which are soldered together. Their exposure to light induces an electro-motive force recording the total energy of the spectrum. Photo-electric cells (Figure 3) can also be used, but both

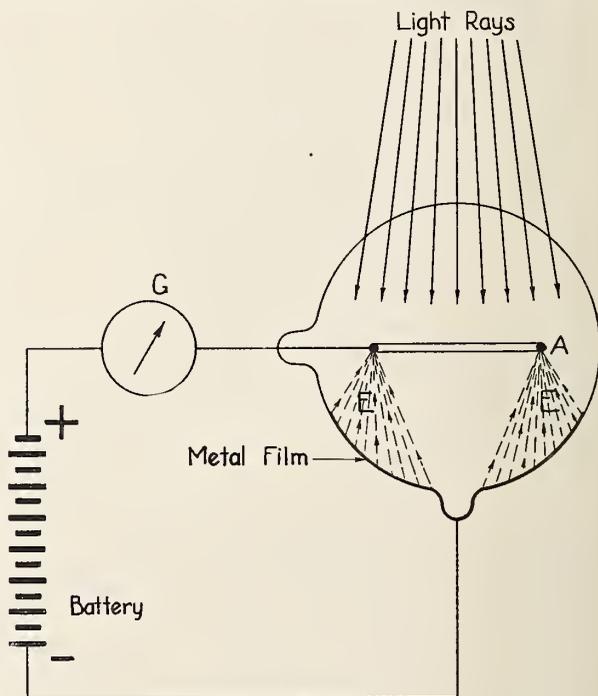


Photo-electric Cell.

Figure 3—Photoelectric Cell. The light waves striking the metal film (cathode) release electrons. The galvanometer indicates then the current flowing through the cell.

methods are rather complicated for the physician. A number of simple photochemical tests have been suggested to give an idea of the output of a mercury vapor lamp. The testing of such a lamp is essential because its output decreases in an unknown ratio with the age of the burner. All mercury vapor lamps must burn from ten to thirty minutes before they reach their equilibrium, i. e. the maximum constant output. Treatments should be given, therefore, only after the lamp has "burned

* Regarding the transmission of light through various materials see the last report of the Council on Physical Therapy, Journal of American Medical Association, 1927, Vol. 88, p. 1562.

in." Strong drafts, surrounding temperature, and power line fluctuation, also influence the radiant energy emitted by these lamps. The opening and closing of the hoods of such a unit causes, for instance, appreciable fluctuation in the burner circuit. We use, at University Hospital, a starch iodine test in its modification by Keller; it is very simple and sufficient for practical requirements.* For carbon arc lamps and infra red lamps, these photochemical tests cannot be employed. Any publication of cases should relate, therefore, at least the type of lamp, current, voltage, amperage, distance, time, candlepower in case of an incandescent lamp, and type of composition of carbon for carbon arc lamps. The emission of carbons of various composition has been studied recently by the Bureau of Standards, and the compilations of their results are very useful to the therapist.*

BIOLOGY

In discussing the biological action of light, it seems reasonable to assume that various wave lengths might have a different effect. There is little doubt that the action of a single wave length (monochromatic light) is not the same as when this wave length is mixed with other parts of the spectrum. We know, for instance, that ultraviolet light of short wave length causes an erythema of the skin in a very short time, followed by pigmentation in the majority of cases. The visible spectrum may induce a reddening of the skin, but if it does, it takes a very long time of exposure. On the other hand, radiation of long wave length does enhance the erythema produced by short ultraviolet light. The matter is absorbed in the very superficial layer of the skin while the longer waves penetrate deeper: to give an example, only 2 per cent of the energy of 2970 Angstrom Units pass through 0.1 millimeter of skin compared with 59 per cent of the energy of 5460 Angstroms, but almost none of the latter's energy reaches deeper than one millimeter. Through the investigations of Hausser and Vahle, we have learned that the wave length of 2970 Angstroms has a maximum erythema effect on the human skin. The relation between erythema and pigmentation and the importance of pigmentation in therapy is little understood. Studies of the exposed

skin with the skin microscope and histological examination of the erythema region suggest that the skin capillaries are the essential factor for the appearance of the erythema. It is possible that both reactions are desirable in patients treated over the entire body by ultraviolet light. Whether pigmentation is essential for the therapeutic effect remains still a debated question. People who do not respond to prolonged ultraviolet irradiation with pigmentation are probably those whose organism has lost its capability of reaction. If pigmentation is possible without a preceding erythema has not been established so far beyond doubt. One must also differentiate distinctly between true light erythema and a heat erythema which you can call "pseudo erythema." A true light erythema has always a considerable latent time, i. e., between exposure and appearance of the erythema, there is an interval of from one to several hours. Exposure of the human skin to red and infra red rays produces the sensation of heat. While red rays raise the temperature of the deeper layers of the skin, the infra red rays cause blisters of the epidermis in a relatively short time. The tolerance for invisible red, so called, dark heat rays is much lower than for visible red rays. It is possible, therefore, to raise the body temperature with the latter beyond the degree ever reached by the highest fever. Concentrated infra red radiation is injurious to the eyes; the eclipse blindness can be explained perhaps by the destructive effect of heat on the inner membranes of the organs of vision.

Regarding the effect of ultraviolet light on the eyes, we know that following exposure to the short rays a rather disagreeable conjunctivitis develops in the eyes. Consequently, our patients as well as the personnel must be protected by wearing amber glasses. Corning Noviweld, Shade 6, serves this purpose well. After a general body exposure, there is often a drop in the white blood count with relative lymphocytosis. That the number of red blood corpuscles can be increased in man does not seem to be certain. In animals which were made anemic, recovery took place more quickly under light exposure. The same holds true for hemoglobin. Prolonged exposure of blood in vitro leads to hemolysis, and following treatment in vivo, the red blood corpuscles show signs of injury. The effect is due, in all probability, to ultraviolet rays of less than 2700 Angstroms; they cause changes in the mem-

* Description of the test will be found in Amer. Jour. Roent., March, 1926, Vol. 15, No. 3, p. 193-201, and Jour. A. M. A., March 20, 1925, Vol. 86, pp. 818-820.

* Paper of Bureau of Standards, No. 539, Vol. 21, 1926.

branes of the erythrocytes. Recent experiments indicate that the number of platelets can be augmented by exposing the body to the radiation of a mercury vapor lamp. This opens therapeutic possibilities in cases of purpura. The bactericidal power of the blood has been raised in vitro and in rabbits by exposure to ultraviolet rays; that the same holds true in man is still doubtful. The blood pressure appears slightly lower in some cases after general body exposure; the drop, however, is very small. In this connection, it may be mentioned that the blood is said to absorb just the biologically active range in the spectrum. This brings up the question if the blood plays the role of carrier of the active agent, and if so, which part of the blood is the point of attack for ultraviolet rays.

The frequency of breathing may be influenced by light exposure but there is no rule governing this reaction. The metabolism can be stimulated; it is sure that the calcium content of the blood shows higher readings even weeks after the exposure. The therapeutic effect of ultraviolet rays in rickets can perhaps partly be explained by this observation. This rickets healing action of ultraviolet rays which seems to be due to wave length below 3100 Angstroms has been transferred to milk or cholesterol by exposing it for a certain length of time to a mercury vapor lamp. As to the nervous system, it has been stated that the tonus of the sympathetic nerves is decreased by light exposure. Cases of neurasthenia were successfully treated with ultraviolet rays; as explanation the theory was advanced that this disturbance may be due to light starvation. On the other hand, overdoses cause excitement, headache, and even nausea, in susceptible cases. Such observations have chiefly been reported by the English school.

Some of the general effects of ultraviolet rays, namely, the promotion of growth, the germicidal action which has its maximum at the wave length of 2900 to 3100 Angstroms, and the destructive action of large doses of ultraviolet rays on protoplasm, will be merely mentioned. We will also not discuss the various formulae which have been offered as a mathematical expression of the effect of light rays. Another interesting problem which might become of practical importance lies in the possibility of increasing the action of ultraviolet rays by sensitizing the organism. The observation of cases of hydroa drew the attention

to that question. These patients who are excreting haematoporphyrin showed an extreme sensitivity to light. Photodynamic substances, as for instance, eosin, have been used for artificial sensitization. This work, however, is still in the experimental stage.

Very recently, the question has been discussed whether the skin is the only organ which serves as receptor for radiation. The fact that short ultraviolet rays ionize the air makes it well possible that the inhaling of such air has some biological effect. A treatment chamber constructed for this purpose is illustrated in Figure 4. The results of experiments carried out

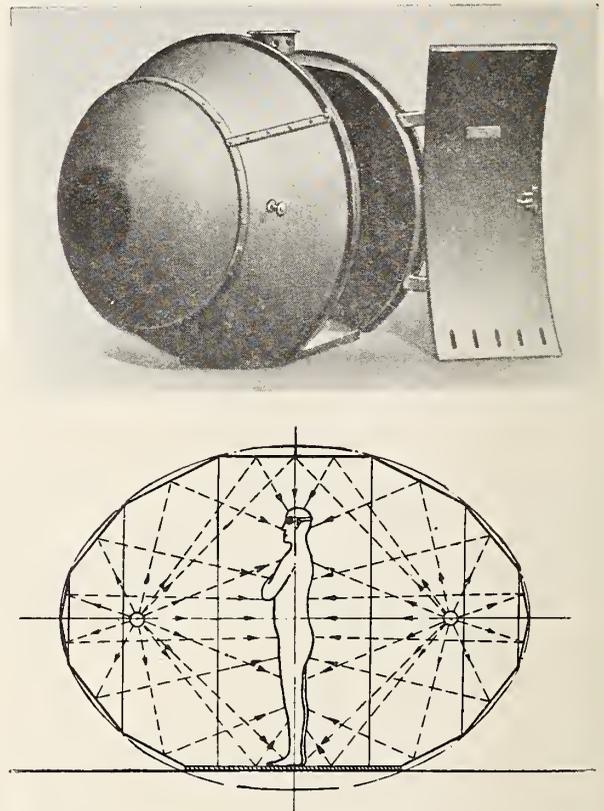


Figure 4—Treatment chamber. (Picard).

along these lines point to new ways of using ionization in therapy.

CONCLUSIONS

From this brief discussion, you see that the scientific fundament of light therapy is not a very broad one today. This imposes upon every physician the obligation of proceeding in that new field with caution. All cases must be carefully observed clinically and a most critical attitude is indicated not only in interpreting results but chiefly in their publication. Otherwise, we jeopardize the reputation and sound development of light therapy which

undoubtedly benefits a certain number of our patients.

TABLE I.

Ultraviolet component radiation in percent of the total radiation of all wave lengths of 14,000 Angstrom Units (A. U.) in the infrared.

Source	Ultraviolet Component 1700 to 2900 A. U.	Ultraviolet Component 2900 to 4360 A. U.	Total Ultraviolet Component 1700 to 4300 A. U.	Total 4360 to 14,000 A. U.
Sun: Sea level.....	0%	55%	55	45
Carbon arc:				
1. Pure carbon.....	4	40	44	55
2. Impregnated carbon.....	1	15	16	84
3. Impregnated "violet flame".....	..	58	..	42
Quartz mercury arc:				
Used 250 hours.....	17	45	62	38
New	66	34

HYPEREMESIS GRAVIDARUM

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DETROIT, MICHIGAN

The term hyperemesis gravidarum may be taken to include all those cases of vomiting occurring during pregnancy in which the vomiting is sufficiently severe and persistent to injure the patient's health. The frequency of the disease varies in different classes—among the neurotic women of the upper class in this country it occurs in every three or four hundred pregnancies. In European hospitals it occurs once in a thousand pregnancies and appears to be even less frequent in England and Germany.

The symptoms usually begin in the second month, more rarely in the fourth, but may appear in the sixth, though seldom after this. The nausea and vomiting gradually become worse until there is intolerance of the stomach for all liquids and foods. Nausea is caused by the mention, sight or smell of food. Constipation is the rule. Salivation usually accompanies the disease or there may be cotton spitting. Thirst is profound. The patient complains of pain in the epigastrium and soreness of the ribs and adjoining muscles. The disease may occur in two forms, either acute or chronic. In acute cases it pursues a rapid course. The patient after a few days of ordinary vomiting may begin to eject coffee-ground vomitus, soon passes into a somnolent or comatose condition and dies within a week or ten days without emaciation. In the chronic type, which is more common, the vomiting persists for weeks, the patient becoming markedly emaciated. The chronic type may be divided into three stages. The length of the three

stages varies very much. The first is long, the second shorter and the third usually short, the patient going into delirium or coma and death ensuing. Formerly it was taught that in the latter stages of the disease fever frequently occurred and was associated with a rapid and thready pulse and pronounced albuminuria. Williams states that fever was absent in all his fatal cases, that the behavior of the pulse was not constant, several of his patients recovering with a pulse well above 120, while in a fatal case it did not exceed 96. The blood pressure is low. The urine is scanty, highly colored, and may contain blood, bile, acetone, diacetic acid, leucin and tyrosin crystals.

The etiology of the disease is far from being settled. Williams believes since vomiting occurs in half of all pregnant women the cause must be due to some factor commonly present in normal pregnancy, that pernicious vomiting is due to an increase in the amount or in the potency of the same factor, or to a decreased resistance to its action on the part of the woman. Since 1916, G. C. Hirst has advocated the view that vomiting of pregnancy is dependent upon deficient corpus luteum secretion and bases his belief upon the fact that at autopsy the corpus luteum may be in a cystic condition. Harding and Watson attribute the cause to a lack of glycogen in the liver with subsequent fatty degeneration of the organ and for this reason recommend glucose intravenous as treatment.

According to the etiology, Williams divides these cases into two classes, neurotic and toxic. Until the last edition of his book, he included a third group, namely reflex. He now believes this group which was previously believed to be due to retroverted uteri or tumors of the genital organs can all be classed under the neurotic group. The cases in which Hirst gets results with his corpus luteum and Titus and Watson with their glucose intravenous should also be included under the neurotic group. DeLee according to etiology divides them into four groups—reflex, neurotic, toxic and those due to a disease of the stomach, and abdominal condition or abnormal condition of the blood. We have all seen cases stop vomiting when a retroverted uterus was replaced. I am inclined to believe this procedure is only psychic and these cases should come under the neurotic group. A neurotic type can be well demonstrated by a case I have under treatment at the present time.

Mrs. B., age 26, gave a history of being preg-

nant two years ago and having a therapeutic abortion for pernicious vomiting. Last menstruation was February 20, 1927. She came to me March 21, 1927. On examination, the uterus was forward, a little larger and softer than normal. I felt quite sure she was pregnant but I told her there was no sign of pregnancy and to come back in a month. In April she returned, the signs of pregnancy more marked. I still told her she was not pregnant and to come back in another month. I explained the condition to the husband but warned him not to tell her she was pregnant. May 16, 1927, she returned for a third examination. I explained that she was now (just) about three months and probably past the vomiting stage. But I was wrong. She went home and vomited all that night and for three weeks following. I became alarmed about her and on June 5th told her I would have to send her to the hospital and probably do a therapeutic abortion. The following day when I returned she had not vomited once and has gradually improved since. This I would class as purely of a neurotic nature.

We have all seen patients of the third group in which there is some abnormal pathology causing the vomiting. Removal of a chronic appendix will produce a cure. I recall one case—Mrs. H., primipara, age 31, was slightly jaundiced, emaciated, history of vomiting for five weeks. There was definite tenderness over gall bladder and the Roentgenologist thought he could demonstrate gall stones. The abdomen was opened, numerous gall stones were removed and a cholecystectomy was done. The patient made a normal recovery and the vomiting of pregnancy stopped.

The toxic group can be typified by the history of a case I had in Woman's Hospital, two years ago:

Mrs. D., age 27, married five years. First pregnancy. She had been vomiting only one week when I made my first visit. Her pulse was running between 90 and 100, her tongue was dry and coated and there was very slight jaundice of the sclera. Urine showed trace of albumin, diacetic acid and acetone. She was removed to the hospital and a duodenal tube passed. We were successful in getting the end of tube through the pylorus into the duodenum. Then with a thermos bottle with a murphy drip she was fed glucose and alkalis for five days. A murphy drip was kept up almost continuous and intravenous glucose was given on two occasions. In spite of this treatment she did not improve. Her pulse became more rapid, 120 to 130 and the morning of the fifth day I was told my patient was in coma and pulseless. With the aid of stimuli and intravenous saline, within two hours you could feel her pulse although the coma remained. We put her across the bed, inserted a curette through the cervix and stirred up the pregnancy. I did not try to remove it but wanted to stop it in a manner which took the least time. The patient gradually improved, was out of coma the next morning and went home in two weeks. If this patient had died, I would have blamed myself for not stopping the pregnancy sooner.

In fatal cases, characteristic lesions are usually present in the liver and kidneys.

In the liver the changes may be identical with those occurring in acute yellow troph. In such cases there is profound necrosis of the central portion of the lobule, while the periphery remains intact. In other cases, the necrosis is absent but the entire liver has undergone marked fatty degeneration. Thrombosis may occur in branches of the portal vein. Bile stasis is usually present. These liver changes are entirely different from those that occur in eclampsia in which the process begins in the periportal spaces and are due to portal thrombosis. The renal changes occur only in the terminal stages of the diseases and are purely degenerative in character. The glomeruli if at all are little affected, the pathology being limited to the convoluted tubules, whose epithelium is necrotic and the lumina filled with debris. The heart muscle may undergo fatty degeneration due to the circulating toxins. The liver destruction is the same as in chloroform, arsenic or phosphorus poisoning and for this reason Opie and others believe that the vomiting is due to a circulating toxin.

In considering the treatment, the mere enumeration of some of the many remedies recommended affords conclusive evidence that a specific cure has not yet been discovered. The most important point to determine in the treatment is whether or not the vomiting is toxemic. Some of the remedies may be mentioned and all have been used with success and failure. A gastric sedative such as serium oxlate with pepsin after meals may be given or corpus luteum in pill or ampule form may be used. Knee chest position for five minutes daily or twice daily allowing the air to enter the vagina. Keeping the husband away from the patient, his mere presence aggravating the condition. Carl Braun as a routine practised painting the cervix with 10 per cent Agnoz every other day. Others used Bier's suction apparatus on the cervix. A Norwegian advocated dilating the cervix. Mayer in 1911 advised adrenalin hydrochloride 1:1000 sol. gtt. XX t.i.d.p.c. Some years ago blood serum from the husband or from another healthy pregnant woman was injected intramuscularly with success. Pituitrin hypodermically has been used. Williams and Kaltenbach have used the stomach tube every time the patient vomits. Local anaesthetics in the stomach such as cocain, hypdrochloride, apothesein, etc., have been employed. Williams in his work on the urine, finding a high ammonia coefficient thought at first he could differentiate between a toxic and neurotic type.

The toxic would then be treated by emptying the uterus, the neurotic by suggestion. Later it was shown that the high ammonia coefficient was only a manifestation of an acidosis. The carbon dioxide combining power of the blood plasma was expected to be diminished in the presence of an acidosis and this used for an index of the degree of acidosis. This has proven not to be true and has no value in the treatment or prognosis of the case. In 1918, Duncan and Harding and in 1920 Titus and Givens published their articles on the treatment of hyperemesis gravidarum by the use of high carbohydrate diet. In the latter article they also mentioned that glucose could be used intravenous. Pleuger in 1917 demonstrated in animals, that starvation produced a hypoalbuminemia or what is commonly termed acidosis of the blood and the liver is depleted of its glycogen storage. It was on this theory that this work was undertaken. In 1922, Titus and Given published an article on the use of glucose intravenous in the treatment of hyperemesis. In the two papers, 114 cases had been treated with one death, two therapeutic abortions were done. They state eleven of these cases could be classed in the severe or pernicious class. In considering their reason for using such treatment one's attention is immediately directed toward the liver. It is the glycogen or sugar storing organ and is also a great detoxicating organ of the body.

Its function as a detoxicating organ is less powerful if depleted of its sugar. This is shown by the fact that starved animals are especially susceptible to liver injury from chloroform or other poisons. It has been demonstrated by Slemons by simultaneous analysis of material and fetal blood that the nutritive exchange of the placenta is almost entirely in the form of glycogen, that the fetal tissues are synthesized from glycogen. Therefore, the fetus suddenly begins to require of the mother enormous quantities of glycogen. The liver is thus depleted of its sugar and becomes less able to combat any toxins that happen to be in the body. Thus the toxemia is established, the vomiting prevents the absorption of carbohydrates and the condition grows continuously worse.

They also worked on a liver function test, by the estimation of blood sugar at stated intervals following the injection of a certain amount of glucose, usually 75 gms. Their results were variable and could not be relied upon. This had previously been shown by work of Wilder and

Sansum in 1917. They state that normal individuals vary greatly in sugar tolerance. Since the discovery of insulin many papers have been published advocating the use of insulin following the injection of glucose intravenous. In August, 1924, Wm. Thalheimer of Milwaukee reported eight cases and in 1926 two additional cases treated in this manner very satisfactorily. In 1923, Harding and Potter showed that in these patients treated by glucose intravenous it took about seven days to clear up the ketonuria and excessive urinary output of nitrogen. Thalheimer maintains with the addition of insulin this can be done in 18 to 24 hours. He believes this treatment should only be used in severe cases, those showing large amounts of acetone and diacetic acid in the urine and a decreased blood alkaline reserve of 40 to 45, the normal being 60. He gives as an individual dose, 100 gms. of glucose dissolved in as much water as is required by the dehydration of the patient, usually 1000 c.c. and takes 4-5 hours time in the administration. He gives one unit of insulin for every three gms. of glucose—20 units at the beginning and 10 units one or two hours later. This procedure may be repeated later in smaller doses if necessary.

Many authorities are opposed to the use of insulin, using the argument that insulin causes the glucose to be burnt up by the tissues, thus not allowing it to be deposited in the liver as glycogen. Kanavel, Paddock and Portis have recommended the use of the duodenal tube. The difficulty here is to get the tube to pass the pylorus, due to a pyloro-spasm. I observed one very severe case treated by Portis by this method with a very good result. He recommends using belladonna or atropine to relax the pylorus.

In summing up the treatment, how are we to treat a neurotic patient who is beginning the course of a secondary toxic vomiting? At her first visit to the office what would we do? First a thorough examination to rule out a reflex cause such as retroversion, or an outside cause such as appendix, gall bladder or sinus infection, etc. High carbohydrate diet be given, and some of the psychic remedies such as corpus luteum intravenous. I find using large doses intravenous 2-3 c.c. give better results. If she continues after continued treatment for several days we may put her to bed at home, no visitors, competent nurse, quiet atmosphere. At this stage, I believe two things are very important, i. e., keeping the bowels well open and giving

large doses of bromide per rectum; to keep the bowels moving is the most difficult. Some patients will chew fenamint gum, some will take effervescent drinks of phosphates. If these cannot be used, then you have to rely on an enema. The bromides can be used in doses of 120 grs. two daily of the sod. salt. A murphy drip may be used to supply fluids. It is difficult to do much more in the home and if the vomiting persists the patient should be removed to the hospital in a quiet, darkened, private room. Here more drastic treatment may be used, glucose intravenous, hypodermoclysis and if necessary a therapeutic abortion.

Now I wish to report 40 cases occurring in Harper Hospital in 1925 and 1926. These patients were treated by many different physicians and no routine treatment was followed. The most interesting points in their course and treatment are shown in the following tables:

Stay in hospital—longest 26 days, shortest 5 days, average 11½ days.

Duration of treatment in hospital before marked improvement—shortest 24 hours, longest 7 days, average 5½ days.

The removal to the hospital is often sufficient to bring about a cure. After a patient is in the hospital she should be given the benefit of 5-6 days treatment as is shown in the table that the average improvement began about the fifth day.

Type—primary toxic 1, secondary toxic 12, neurotic 26.

In the last few years the classifications have changed. I believe all cases can come under these three heads: The primary toxic, those that run a rapid course and are going to die if the pregnancy is not interrupted quickly; under neurotic would be included the reflex group, plus the true neurotic. When a neurotic patient continues to vomit she becomes toxic due to the dehydration and acidosis. These make up the secondary toxic group.

Para	Age of Patient
Para 1—16	15-20— 2
Para 2—11	21-25—20
Para 3— 8	26-30—10
Para 4— 3	31-35— 3
Para 5— 2	Over 35— 5

As would be expected the largest group is in the primipara and para 2, since the largest number of babies occur in young women; also as patients become older many lose their neurotic characteristics.

Blood sugar was estimated in 18 cases—lowest 0.076 per cent, highest 0.133 per cent.

Here it is noted that the blood sugar is practically within normal limits. This brings up the question of whether or not Titus treatment is rational, i. e., glucose intravenous; according to these findings the patient is not lacking in sugar. It could be argued that the beneficial results from his line of treatment could be explained on a psychic basis.

N. C. N. estimation was done in 21 cases:

Highest	40	mgms. per 100 c.c.
Lowest	20	mgms. per 100 c.c.
Average	29.5	mgms. per 100 c.c.

These are within normal limits—often times the N. C. N. is low. Blood chemistry is so complex and puzzling we may not be working along the right lines. There may be some toxic body present for which we have no test to demonstrate. Some day this should be cleared up.

Uric acid estimated in 8 cases:

1	10	mgms. per 100 c.c.
2	5.4	mgms. per 100 c.c.
3	10	mgms. per 100 c.c.
4	8.5	mgms. per 100 c.c.
5	3.6	mgms. per 100 c.c.
6	3	mgms. per 100 c.c.
7	3	mgms. per 100 c.c.
8	6	mgms. per 100 c.c.

Uric acid is high. The same thing is true in eclampsia. I went over the charts to determine how often therapeutic abortion was done with a high uric acid finding. I was very disappointed to find the uric acid had not been estimated in a single case where an abortion was done. What does this high uric acid finding mean? Is it an evidence of the degree of acidosis? We don't know. What it will lead to or whether it is important may be explained later.

Wassermann was taken in 25 cases—all negative, which shows syphilis is not a factor.

Duration of excessive vomiting before examination—shortest 3 days, longest 12 weeks, average 3½ weeks.

This shows that in nearly every case an attempt has been made to treat them in the home.

Murphy drip was used in all but two cases.

Chloral and bromide per rectum was used in all but three cases.

Hypodermoclysis without glucose intravenous was used in seven cases with five recoveries.

Glucose without hypodermoclysis used in ten cases with nine recoveries. Glucose plus hypodermoclysis used in twelve cases with two recoveries.

As stated above, seven patients were treated with hypodermoclysis and five recovered. In these two nonrecovery cases, it was given as a measure to make them better able to stand the operation of emptying the uterus. Therefore, in the five cases where it was used as treatment, the five recovered. Now we might ask whether the toxæmia is due to the dehydration or due to the using up of the glycogen or sugar in the body? It is surprising to find that not more were treated by this method. Many authorities believe this to be the most important procedure in the treatment. It lessens the dehydration and also has a psychic effect. The point I want to make here is—if a sufficient number of cases were treated by repeated hypodermoclysis would not the results be as good as those treated by glucose intravenous? Both are rational treatment and both have a certain psychic effect.

Glucose Intravenous	Hypodermoclysis	Result
5 times	2 times	Ther. abort
3 times	11 times	Ther. abort.
0 times	6 times	recovered
0 times	2 times	recovered
3 times	0 times	recovered
0 times	4 times	recovered
2 times	0 times	recovered
1 time	0 times	recovered
3 times	0 times	Ther. abort.
1 time	0 times	recovered
1 time	0 times	recovered
1 time	0 times	recovered
2 times	4 times	Ther. abort.
4 times	4 times	Ther. abort.
2 times	3 times	Ther. abort.
1 time	7 times	Ther. abort.
1 time	0 times	recovered
1 time	0 times	recovered
0 times	1 time	Ther. abort.

3 times	4 times	recovered
3 times	3 times	Ther. abort
4 times	3 times	Ther. abort.
0 times	2 times	Ther. abort.
0 times	7 times	recovered
1 time	0 times	recovered
3 times	7 times	recovered
1 time	1 time	abortion (ther.)
0 times	15 times	recovered
1 time	5 times	Ther. abort.

Pulse on admission—lowest 80, highest 150, average 105.

80- 90.....	5 cases
90-100.....	11 cases
100-110.....	5 cases
110-120.....	5 cases
120-130.....	6 cases
Over 130.....	8 cases

Here you will note in 24 cases, or the majority, the pulse was over a hundred, showing the patient was quite severely ill on entering the hospital. It was also noted the pulse would invariably go higher when hospital treatment was instituted, remain higher for one to four days and then begin coming down. On entering the hospital, acetone was present in 28 cases, absent in 12. On entering the hospital, albumin was present in 8 cases.

When acetone negative in urine with hospital treatment:

2 days— 2 cases	
3 days— 4 cases	
4 days—10 cases	
5 days— 9 cases	average five days
6 days— 2 cases	
7 days— 0 cases	
8 days— 1 case	

This is just more evidence of the severity of the disease. The majority were acetone free within five days, showing the improvement does not begin with hospital treatment for this length of time. Another reason why most cases should remain in hospital at least from 4 to 5 days before the uterus is emptied.

Treatment in hospital before therapeutic abortion was done:

Shortest time—24 hours	1 day —1 case
Longest time—14 days	2 days—3 cases
Average time— 6 days	3 days—1 case
	4 days—5 cases
	5-10 days—2 cases
	14 days—1 case

Therapeutic abortion was done in 13 cases—32.5 per cent. Spontaneous abortion occurred in 1 case. Death without abortion occurred in 1 case. Readmissions during the same pregnancy in 2 cases. Recurrence with previous therapeutic abortion 9 cases, one previous abortion 8, two previous abortions 1.

It will be noted that the majority of these abortions were done the first four days. The only reason I can offer for this is that these patients had been previously treated in the home too long and were brought to the hospital in some cases just for the operation. I believe this is a mistake to allow the patient to remain at home so long where inadequate treatment can be given. Get them to the hospital early and give them the benefit of a hospital stay of at least six days before emptying the uterus be considered.

What should we consider as indications for therapeutic abortion?

1. When in doubt wait.
 2. Pulse—must be continuously over 110.
 3. Temperature—If it occurs 100-101.
 4. Loss of weight—excessive except in the primary toxic type.
 5. Mental state—delirium or coma.
- Patients recover quickly and for this reason they may be allowed to go far.

CONCLUSIONS

1. Most cases of vomiting are not toxic and will get well regardless of the type of treatment.
2. In cases that appear toxic, progress is usually slow and abortion can safely be put off until there is no reasonable doubt as to its necessity; abortion only a last resort.
3. Hospitalization should be a part of the treatment before performing abortion, and not brought to the hospital for abortion.
4. Uric acid nitrogen is increased in most cases, but its significance is not positive.
5. Those cases having hypodermoclysis for some period in advance all recovered—five cases.
6. In ten cases with glucose intravenous, nine recovered.

THE NON-CONVULSIVE TOXEMIAS OF LATE PREGNANCY

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Although "The Non-Convulsive Toxemias of Late Pregnancy" is a rather non-descript title, it serves best as an inclusive term for those forms—until more is known of their etiology. The toxemias to which we have special reference are those classified by most authors as pre-eclamptic and nephritic. Acute yellow atrophy and presumable toxemias (including psychosis, neuritis and such like) might well be included save that they are rare and more varied in signs and symptoms; whereas this former group is marked by hypertension, albuminuria, edema, or retinal changes. An exhaustive study into the etiology, treatment and pathology will not be attempted here; but instead we have studied such cases which have appeared among the first 1,500 obstetrical patients at the Henry Ford Hospital with reference to recent work on these toxemias.

The classification of toxemias as nephritic and pre-eclamptic has always been difficult and no tests have proven satisfactory as criteria for the distinction—save in severe nephritis. Hence, clinical observation has been the deciding factor—based on the time of onset, and the rapidity and completeness with which the signs have disappeared after delivery. Thus if the hypertension and albuminuria disappeared within two or three weeks

post-partum, the diagnosis was pre-eclamptic—if not, nephritic. Because of this uncertainty many workers have been led to attempt classification on a more rational basis—tests for liver and kidney function. The most notable of the liver tests—the tetra-chlorophthalein—at first seemed to give definite evidence of liver damage, but with more extended trial, it has not proven reliable. Since the signs of these toxemias are those commonly associated with renal damage, it would be expected that renal tests would prove more valuable; but the results have not been entirely satisfactory. Thus the phenolsulphon-phthalein and urea concentration tests, the amount of urinary diastase, the ratio of urinary to blood urea, and the ratio of urinary albumin and globulin have not given evidence for undisputed diagnosis. Blood chemistry findings, also, offer very little help. However, as DeWesselow has pointed out, the duration of these toxemias is relatively short and it is conceivable that the toxemias may produce a temporary renal insufficiency while the tests now used are significant only when applied to the permanently damaged kidney.

That such temporary insufficiency may lead to permanent damage is emphasized by recent work on the aftermath of toxemias. It was formerly thought that eclamptic and pre-eclamptic toxemias conferred upon the patient a relative immunity, and that future pregnancies need not be feared. The first extended studies of this nature were published in 1924 by Harris who investigated the renal status of patients one year after their pregnancies complicated by the late toxemias. The group included 27 cases of eclampsia and 55 of pre-eclampsia. The first series bore out the contention of relative immunity as but 3 of the 27 showed signs of persistent renal damage. In a second series of 55 pre-eclamptics, 33, or 60 per cent showed renal impairment. A similar study but with particular reference to the relation of pregnancy toxemias to signs of chronic cardio-vascular disease appeared early this year; and Corwin and Herrick point out the frequency of these sequelae. Among the 165 cases studied, 122, or 74 per cent exhibited signs of cardiac hypertrophy, sclerosis of the brachial or radial arteries, vascular retinal changes or persistent hypertension from 6 months to 6 years post-partum.

Such a high percentage of recurrences makes still more desirable tests for differentiation between nephritic and preeclamp-

tic toxemias. A step in this direction has been taken by Stander and Peckham who reviewed a series of repeated toxemias of pregnancy in the Hopkins Clinic, and their findings have led them to add a new group to the accepted forms—the low reserve kidney. In this form, which recurs with subsequent pregnancies, the onset of symptoms is gradual; the blood pressure rarely goes above 160/100, and the albumin in the urine seldom above two or three grams per litre. In repeated pregnancies there is no tendency for the process to become more severe, and frequently the signs are less alarming. In short, the low reserve kidney is a sort of pregnancy nephritis in contrast to the accepted form of nephritis which becomes progressively more severe with repeated pregnancies. The diagnosis of pre-eclampsia is reserved for those toxemias in which the onset is sudden and acute and eclampsia seems imminent.

In the light of these reports it has been of interest to review such cases of toxemia cared for in the Obstetrical Department of the Henry Ford Hospital. It was thought that the incidence of toxemia here might be lower than in a more open hospital but the analysis shows 75 cases of non-convulsive toxemias in the first 1,500 deliveries—a percentage incidence of 5. If we exclude those cases not cared for in the prenatal clinic but referred because of the toxemia the incidence is 63 or 4.2 per cent. These figures check very closely with those of other hospitals and it appears that one out of twenty to twenty-four late pregnancies is complicated by non-convulsive toxemia. If we classify these as indicated above we find:

Pre-eclampsia 18		Low Reserve Kidney 37	
Primiparae 14	Multiparae 4	Primiparae 25	Multiparae 12
		Nephritis 20	
Primiparae 8			Multiparae 12

Such classification, however, is largely theoretical when only one pregnancy with toxemia is observed, but it bears more weight when applied to repeated pregnancies. Of these 75 patients—twelve have been followed through pregnancies subsequent to the one complicated by toxemia. Short summaries of their findings follow:

1. Pre-eclamptic Group:

1. C. G. C.—aged 24—first pregnancy in 1923, normal, up to term, but when admitted in labor—B. P. 180/115, albumin 2 gms., edema + +. Recovery was rapid—blood chemistry normal, phthalein normal. The second pregnancy in 1927—normal.

2. M. H.—aged 23—first pregnancy in 1923—normal up to the 36th week when B. P. suddenly rose to 180/110, with Alb. 3 gms. and edema. Labor induced by bougie at once—recovery rapid. The second pregnancy in 1924—normal.
3. M. L. D.—aged 25—first pregnancy in 1924—normal up to term, then B. P. 140/100 with edema and alb. 25 gms. Labor supervened four days after and recovery was rapid. The second pregnancy in 1927—was normal.
4. E. N.—aged 30—first pregnancy in 1923. B. P. 150/100 with edema but no albuminuria at 38 wks. No improvement with 4 days rest in bed—medicinal induction of labor—rapid recovery. The second pregnancy, now in its 37th week has been normal.
5. L. C.—aged 32—(History of two normal pregnancies). In this third pregnancy—1924, the B. P. rose to 160/100 with edema $\frac{+}{-}$ $\frac{+}{-}$, albumin 1 gm. at term—induction bougie—rapid recovery. The fourth pregnancy in 1926—was normal.

These five cases illustrate well how suddenly serious signs and symptoms may appear without any previous indication. As it happens, these five cases were approximately at term but in a larger series we should expect to find cases with acute signs developing even earlier. The important points in this group are the sudden onset, the severity, and the prompt termination of labor—so that the duration of the toxemia is relatively short. Such cases appear to do well in subsequent pregnancies.

2. Low Reserve Kidney:

1. M. B.—aged 30—1st pregnancy in 1925. Normal except for albuminuria from the 32nd week till term when it reached 6 gm. per litre. The second pregnancy in 1927 was marked by albuminuria from the 36th week to term. No edema or hypertension. Trace of albumin at 2 weeks post-partum.
2. E. L.—aged 30—second pregnancy 1922 (history of normal first pregnancy)—B. P. 130/90 at 24 weeks, 140/100 at term, no albumin. Third pregnancy in 1924—B. P. 135/90 at 32 weeks—150/100 in labor at term with a trace of albumin. Good recovery.
3. H. S.—aged 34 years—second pregnancy in 1924—(History of premature delivery in 1913—also nephrectomy after perirenal abscess in 1920). Slight albuminuria with B. P. 150/90 from 28th week to term—induction by bag—rapid recovery. Phthalein and urea concentration tests normal. Third pregnancy in 1925—showed B. P. 150/100 at term, with a trace of albumin.
4. V. M.—aged 31—first pregnancy 1926—B. P. 140/100 with edema and trace of albumin at the 38th week. Spontaneous labor at term, B. P. 135/105, premature separation of placenta. Phthalein and urea concentration tests at three months post-partum showed evidence of mild nephritis. The second pregnancy in 1927—normal.

Three cases of this group showed moderately severe signs of toxemia beginning from the 24th to the 32nd week; but in each case it was possible to tide the patient along to approximately term without aggravating the signs. In the next pregnancy we find that the signs are no more severe and the onset no earlier. In all there was recovery within two weeks post-partum. Case No. 4—V. M. is of exceptional interest in that at 3 months post-partum tests shows signs of a mild nephritis so that it might well be classed in the nephritic group. However, the findings seem more closely to correspond to the low reserve group.

3. Nephritic Toxemia:

1. M. P.—aged 29—first pregnancy in 1925—sudden gain in weight at the 32nd week, B. P. 185/110 at 34 weeks with albumin 7 gms. Hospital care for four weeks, little improvement, induction bougie—good recovery. Second pregnancy in 1927—B. P. 135/90 at 34th week—145/100 at 35th week with premature spontaneous labor and premature separation of the placenta—fair recovery.
2. V. L.—aged 31—first pregnancy normal—1922—second pregnancy in 1924—premature separation of placenta at 28 weeks. No other signs. Third pregnancy in 1925—B. P. 125/90 at 32 weeks—premature spontaneous labor at 34 weeks with blood pressure 200/120—albumin .5 gms.—B. P.—130/90 at six weeks post-partum.
3. R. M.—aged 29—first pregnancy in 1926—B. P. 140/100 at 30 weeks—160/110 with albumin $\frac{+}{-}$ $\frac{+}{-}$ and edema at 36 weeks. Albumin 2.5 gms. B. P. 180/125 at 38 weeks, induction of labor by bougie. Trace of albumin with casts two weeks post-partum. The second pregnancy in 1927—showed a B. P. of 130/95 at 30 weeks, 150/110 at term with a trace of albumin. Six weeks post-partum the B. P. was 140/95.

The cases of this group showed severe signs of toxemia with onset from the 28th to 32nd week. These signs gradually increased in severity as the pregnancy advanced, necessitating early induction of labor or resulting in an early spontaneous delivery. In the subsequent pregnancies the signs again appeared early and the recovery post-partum was slow so that at six weeks the B. P. was still above normal.

Thus in the twelve cases presented, six were free from signs and symptoms in subsequent pregnancies while six showed repeated toxemias. In passing, it is of interest to note the connection of premature separation of the placenta with these toxemias. Just how sharply the line may be drawn between the low reserve and nephritic groups is problematical for in both the signs appear early and the actual duration of the process is over a period of several weeks. Perhaps both represent a different grade of the same process—nephritis. One remains stationary—the other is progressive. As yet, we have no cases comparable to those reported by Stander and Peckham where two or more toxemic pregnancies have been followed by one entirely normal. However, the distinction between pre-eclampsia and the other two forms seems to be marked particularly as to the duration of the process. In pre-eclampsia the onset is acute and labor (induced or spontaneous) comes on shortly after, so that the signs are rarely present for more than two weeks, and recovery is prompt.

With the introduction of systematic prenatal care it was hoped that toxemias might be prevented but in spite of close observation, the problem presents itself frequently. The only advance made has been in lessening the severity of the condition by recognizing the abnormality earlier and by instituting measures proved help-

ful. Ability to foretell predisposition to toxemia would indeed be helpful, and there have been studies toward this end. Lash has used an intradermal test of salt but unequivocal results have not been obtained. The present extensive constitutional studies may shed some light on the problem; and Draper has shown a predisposition for toxemias in certain types of women bordering on states of acromegaly and gigantism. These findings lend some verification to the statement, "She looks like an eclamptic." Recognition of the frequency of recurrence of these toxemias is essential, and the history of a previous toxemia and of its character is helpful.

Until more is known of the underlying disturbances of these toxemias we can look for little more improvement in handling them unless it is in still earlier recognition of toxic signs. Most authorities designate a blood pressure of 150-160 systolic with 100 diastolic as the dividing line between toxic and non-toxic cases. It will be noted in several of the cases cited that lower pressures are included. Little has been written specifically on the blood pressure in pregnancy, but it must have been the experience of everyone to find rather low pressures. In 1915, Newell reviewed 450 consecutive cases followed in his clinic, and of these only 29 showed a systolic pressure above 130; and with one exception, every case of toxemia developed in this group. It is also significant that the rise in pressure preceded the albuminuria. Little or no emphasis is laid on the diastolic pressure and yet a rise in the diastolic pressure is of prime importance—so that when the diastolic reaches 90 it must be considered to be a definite warning. Albuminuria and edema other than of the ankles as premonitory signs have been well emphasized; but these more often follow than precede elevation of pressure. After warning signs are heeded comes treatment which varies with respective clinics. Fundamentally, however, most all agree in the principles of rest and restriction in diet, particularly of protein and salt.

In short we find that non-convulsive toxemias of late pregnancy are fairly common and that there is a decided tendency toward recurrence. They also pave the way for permanent cardio-vascular-renal change. As yet, we are unable to foretell or prevent their occurrence, but the diminished incidence in Germany during the period of the war should make us more alert to the earliest warnings. Confronted with the presence of such toxemias we should

not protract the course of the process longer than is necessary for the interests of the child; as the longer the duration of the toxemia, the greater is the chance of recurrence. The history of a previous toxemia and of its character is essential to proper care, and the prognosis for subsequent pregnancies must be guarded.

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A CONSERVATIVE TREATMENT FOR ECLAMPSIA

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Eclampsia, according to the modern interpretation of the term, is an acute manifestation of toxemia occurring during the latter half of pregnancy, usually characterized by convulsive seizures, between and after which there is loss of consciousness.

Eclampsia exacts an enormous toll each year on the price of motherhood. Approximately one fourth of the deaths in pregnant women can be charged to eclampsia and if we exclude puerperal sepsis, the mortality rate in pregnant women due to eclampsia is greater than all the other obstetric complications combined. Any menace which carries a maternal mortality rate of 25 to 33 per cent and a fetal mortality of 33 to 66 per cent should command our attention.

No attempt will be made to hypothecate on the etiology. That phase has been amply covered in a previous paper by the authors. The sum total of our knowledge regarding the causes of eclampsia has not been materially enhanced during the past century. For the purposes of this paper we are content to accept Zweifel's appellation, "A Disease of Theories."

So far as we know eclampsia only occurs in the human race, and is rarely seen among primitive people. The Germans reported fewer cases during the war while their civilians were living on a high vegetable diet with little protein and less fat content. Talbot has shown that X-ray examination of the teeth revealed chronic

sepsis in ninety seven (97) cases without exception.

Improper kidney function has long been considered one of the predisposing factors. Post mortem examination shows that the eclamptic kidney is not diminished in size and the capsule is not adherent. The kidney presents cloudy, anemic appearance and frequently small, punctate ecchymoses are found. Microscopically there are degenerative changes in the epithelium, the capillaries are filled with red blood cells and frequently contain thrombi, thus showing vascular stasis. The liver in gross appearance manifests hemorrhagic areas, sometimes of considerable size. There is a necrosis of the lobule and portal spaces. The peri-portal connective tissue seems to bear the brunt of the damage indicating that the periphery rather than the acini is involved. It might be well to note in passing that many cases going to autopsy will present the entire pathologic picture above described, while in others with identical clinical manifestation the liver involvement is entirely absent, so that any attempt to differentiate clinically between hypatic and renal types is futile.

The pre-eclamptic patient in the last trimester of pregnancy often complains of malaise, headache, edema of the hands and feet, dizziness, blindness, restlessness and epigastric pain. The onset of a convulsion is as a rule preceded by a history of a sleepless night and intense uncontrollable headache. The blood pressure at this time will usually range from 150 to 180 m.m. of mercury or higher and with a high diastolic pressure.

The urinary output is greatly reduced, frequently amounting to a total suppression. Urinalysis reveals a high percentage of albumen and usually hyalin, granular and blood casts. The acidity is marked and the specific gravity high. The urea nitrogen is reduced and Creatinine and amino acids are increased. These symptoms and findings may be followed by a sudden, general convulsion succeeded by a period of coma. In most cases an aura is present—although the number of convulsions varies as does the interval between succeeding convulsions. Five hundred and ninety-three (593) convulsions have been reported in one patient, while occasionally, especially in post partum eclampsia there will be only one. Eighty-one (81) convulsions with a recovery have been reported by Spaulding. The convulsions may succeed each other rapidly or there may be lucid intervals of several hours between

the convulsions. Eclampsia without convulsions occasionally occurs. Post partum eclampsia usually manifest itself within a few hours after delivery. It was formerly thought that the unborn fetus was unable to survive if the mother experiences more than three convulsions but it is well known that many convulsions may occur without causing the death of the fetus in utero. Wenchel has observed that when the fetus dies and pregnancy is not interrupted the woman may have a normal labor without further convulsions.

Following an attack there may be an involvement of the various peripheral nerve groups accompanied by pain and loss of function which may persist for many weeks. A permanent psychosis may result. The eye-ground changes are very important and are often overlooked. Careful ocular examination will show narrowing of the retinal arteries, edema and occasional hemorrhage. Temporary impairment of vision is frequent, but permanent loss is rare. An eclamptic kidney usually quickly regains its normal histologic picture, while the nephritic toxernic kidney shows more or less permanent damage.

The treatment of eclampsia may be divided into two parts, viz:

1. Prophylaxis of the pregnant woman against eclampsia.
2. Treatment of eclampsia per se.

Too much stress cannot be laid upon the advisability of every pregnant woman consulting her physician early in the prenatal period. A thorough physical examination and blood Wassermann should be given, with special attention to any existing foci of infection. Removal of infected teeth and treatment or operation of infected tonsils and sinuses we consider to be as important as pelvic mensuration. If nephritis can result from foci of infection in the non-pregnant, is it not reasonable to assume the pregnant are in even greater danger?

Of vital importance is the caution the patient should exercise in the selection of diet. She should eat plenty of cooked fruits and vegetables, and drink at least six glasses of water daily with one of milk if possible in order to insure the best results. Exercise in the fresh air and sunlight, a morning walk or deep breathing exercises in a room with open windows, will materially improve the general circulation and muscle tone.

Of course it is essential that there be a thorough evacuation of the bowels each day thereby removing excretory products,

bacteria and their toxins. A routine urinalysis, blood pressure reading and weight record every two weeks during the first eight months of gestation and once each week during the last month, furnish a complete index of the patient's condition. When the blood pressure rises as high as 150 m.m. of Hg. and when edema and albuminuria are present in a patient who has previously shown no signs of toxemia, treatment should be instituted at once. Rest in bed, milk diet, and a saline cathartic daily will suffice in most cases. As soon as these pre-eclamptic symptoms subside the patient should be placed on a diet relatively high in carbohydrates, low in fat and protein and free of chlorides.

When meticulous prenatal care is given, eclampsia is practically eradicated, as evidenced by the fact that in 5,775 obstetric patients seen in the out-patient department of the Grace hospital since 1919, only one case of eclampsia is known to have developed and that was post-partum. In the three-year period of 1922 to 1924 inclusive prenatal care in the Detroit Board of Health clinics reduced the cases of death from eclampsia from 1.06 per 1,000 for the city at large to .79 per 1,000 for clinic cases. In this instance the death rate was reduced 24 per cent. Unfortunately only about 20 per cent of the pregnant women of Detroit receive adequate prenatal care.

When eclampsia has actually developed and convulsions are present or pending, the physician in charge is faced with a grave problem. A choice must be made between the so-called radical and conservative methods of treatment.

The average physician is so thoroughly imbued with the idea that the unfortunate patient is suffering from some toxin liberated at or near the placental site that it is a great temptation to empty the uterus as quickly as possible by some radical means. This is usually done by the Caesarian section, either abdominal or vaginal or accouchement force. The development of modern surgical methods makes abdominal Caesarian section particularly enticing. The surgeon is so engrossed with the idea of ending the convulsions that sight is lost of the fact that the patient is the victim of either a partial or complete renal block, extremely toxic and a very poor surgical risk at the best. The primary maternal mortality for abdominal Caesarian section approximates fifty per cent.

This high mortality resulting from radical treatment has challenged the attention

of the best minds in the leading obstetric clinics of the world, with the results that more conservative methods are rapidly becoming universal.

To Stroganoff of Petrograd belongs the credit for the first serious attempt to arrive at a rational therapeutics. He recommends the isolation of the patient in a darkened room with the free administration of oxygen and careful attention to the respiratory processes. His technic demands that morphine be given subcutaneously and chloral hydrate per rectum at stated intervals with chloroform to control convulsions. Stroganoff makes no attempt at delivery unless the cervix is fully dilated. This method practised in 2,208 cases in European clinics reduced the maternal mortality to 9.8 per cent and the fetal mortality to 18.5 per cent.

Hastings Tweedy of the Rotunda hospital believes that intestinal stasis with consequent absorption of toxins is the chief etiological factor in eclampsia. He disapproves the use of morphine on the grounds that it delays excretion and causes respiratory complications. His technic consists briefly of lavaging the stomach with one gallon of sodium bicarbonate solution and administering three ounces of castor oil before withdrawing the tube. The colon is then flushed with several gallons of a sodium bicarbonate solution. The colonic flushing is repeated every six hours. No attempt is made at delivery unless the head is felt in the vagina and not expelled naturally. In a series of 204 cases treated by this method at the Rotunda the maternal mortality was 10.29 per cent.

McPherson of the New York Lying-In hospital recommends a method similar to the Tweedy technic except that he like Stroganoff, practices venesection and administers morphine until the respirations drop to eight per minute. McPherson's present method is especially significant because he was formerly an avowed advocate of radical measures. He has been able to show a decrease in the maternal death rate from 30.8 per cent under radical treatment to 9.6 per cent by conservative measures, and a decline in the fetal mortality from 35 per cent to 25.4 per cent.

While we do not know the cause of eclampsia we believe it could be eradicated or its incidence be materially reduced if every woman could have adequate prenatal care. Unfortunately, probably not more than one pregnant woman out of five actually places herself under the care of her physician throughout pregnancy and con-

sults him at frequent stated intervals. So long as this state of affairs prevails we must prepare ourselves to treat eclampsia and at our first visit be confronted with the spectacle of a woman in convulsions.

The treatment of an eclamptic woman in convulsions entails an enormous responsibility because, as has already been pointed out, several vital organs are seriously impaired. Renal block, either partial or complete, impaired liver function, threatened pulmonary failure and cerebral edema, the latter probably actually causing the convulsions, must all be considered in any attempt at a rational therapeutics.

The work of Meltzer and Auer has shown that the intra-spinal injection of magnesium sulphate in sublethal doses will completely control clonic convulsions and tonic contractions in cases of human tetany. Our observations and experience have taught us that gastric lavage and the administration of a large dose of magnesium sulphate through the Jute tube before it is withdrawn will rid the intestinal tract of bacteria and their toxins as well as materially assist in the process of excretion, thereby lightening the burden on the kidneys.

A careful study of our own experience as well as the observation of others has resulted in the development of the following more or less routine method of treatment.

1. If the patient is having convulsive seizures when first seen morphine is administered at once.

2. Gastric lavage is performed through a jute tube passed through the nose, following the lavage two ounces of a saturated solution of magnesium sulphate is left in the stomach.

3. The patient is given an enema which is followed by a rectal instillation of twenty grains of chloral hydrate and forty grains of sodium bromide.

4. Twenty cubic centimeters of a ten per cent solution of chemically pure magnesium sulphate solution is administered intravenously every hour for three doses.

5. No attempt is made to empty the uterus until convulsions have ceased and the acute evidence of eclampsia disappeared. By this time the patient will usually have delivered herself spontaneously.

During the past year we have used this method of treatment on the following briefly summarized cases:

Case 1, No. 27527. Age 19 years, white, para No. 1. Seven months pregnant. Mrs. M. had complained of severe headaches throughout her pregnancy, with moderate nausea during the first three months and frequency. When admitted December 19, 1926 at 12:35 a. m., she was in a semi-comatose condition, at 12:40 a. m. had a convulsion lasting five minutes. B. P. 180/138. Cath. specimen of urine showed heavy albumin with hyalin casts. Temp. 99.4, pulse 128, resp. 16. Routine eclamptic treatment was instituted on her arrival. On the following day the patient was very nervous and restless and was given an additional 2 c.c. of a 50 per cent solution of mag. sulph. intravenously with three drops of Croton Oil. On December 21, examination showed the cervix not effaced, external os 2 cm. dilated. As her condition improved a manual dilation of the cervix was done and podalic version performed.

A live female child was obtained, weighing 3½ pounds. The recovery was uneventful. She was discharged January 1, 1927, and the urine at this time showed but a slight trace of albumin.

Case 2, No. 30961. Age 37 years, white, para 1, seven months pregnant. Previous to her entrance to the hospital, the patient had had a number of convulsions throughout the day. She entered the hospital by ambulance at 10:30 a. m. in a moribund condition. Pulse 140 with labored respirations. Routine treatment was begun, but the patient never became conscious and expired at 2:30 a. m.

Case 3, No. 27835. Age 22 years, white, para 1. Eight months pregnant. History of one convulsion on January 1, 1927 at 11 a. m. before delivery. Delivered a live child at 8:30 p. m. Had repeated convulsions during the night and on the following day was brought into the hospital by ambulance at 4:30 p. m. At this time had three convulsions in the course of twenty minutes. Was cyanotic and had moist, coarse rales throughout her lungs. Blood pressure 78/40, Temp. 103-8/10. Pulse 140, and urine positive for albumin. Under routine treatment she had no further convulsions and on the fourth day was able to nurse the baby. When discharged on the eleventh day the urine was negative for albumin.

Case 4, No. 27189. Age 19 years, colored, para 1. At term. During the pregnancy had noticed slight edema of ankles, also nausea and vomiting during the first month. Baby delivered at 8:30 a. m. December 4th, 1926. First convulsion at 11:30 a. m. lasted two minutes. Blood pressure 130/80, pulse 120, temp. normal, urine positive for albumin. Under routine treatment there were no further convulsions and patient was discharged December 14, 1926.

Case 5, No. 29041. Age 25 years, white, para. 6-7 months pregnant. A week before attack patient had aching pains in knees, hips and ankles. These areas as well as her eyes were swollen. Upon rising on February 15, 1927, she felt nauseated and vomited. Was given morphia and ether when first seen. Upon entrance to hospital was cyanotic, comatose and in convulsions. Respiration labored. Urine positive for albumin, hyalin casts. Temp. 98, pulse 130, resp. 14. Routine treatment was followed by favorable results and no further convulsions developed. On the 17th of February, 1927 patient developed a chest condition with marked edema which cleared up satisfactorily under atropine medication. Urine negative when discharged on February 27, 1927.

Case 6, No. 29350. Age 32 years, white, pitu-

itary type, para 1. Eight months pregnant. Patient felt well until the beginning of the eighth month. Then complained of abdominal distress. On February 26th, 1927, had a severe frontal headache, spots before eyes and some dimness of vision. In a few hours her face began to swell, she became cyanotic, stiff and convulsive. The first convulsion at 2 a. m. lasted two to three minutes. There was another at 5 a. m. A third at 10 a. m. Fourth at 11 a. m. Fifth in ambulance. She was admitted to hospital at 1:45 p. m. and routine treatment started. At this time her blood pressure was 175/120, temp. 100, pulse 96, respiration 24. Urine positive for albumin and hyalin casts. There were no further convulsions and on the fourth day after her entrance to hospital was delivered of a living child. Upon discharge March 13, 1927, there was a slight trace of albumin.

Case 7, No Age 19 years, white, para 1. At term. Had complained of severe headaches, spots before her eyes and marked edema. Before admission to hospital had three convulsions. Entered hospital on May 13, 1927, in eclamptic condition. Pulse 88, resp. 20, temp. 99. Urinalysis disclosed heavy albumin with many hyalin and a few granular casts. Had no more convulsions after treatment was started and was delivered of a live child on May 15, 1927, and made an uneventful recovery. It is interesting to note that this patient's mother had convulsions in three succeeding pregnancies.

Case 8, No. 2046. Age 32 years, white, para 1. 7½ months pregnant. During this pregnancy there was history of slight edema of the ankles and marked frequency. She was admitted to the hospital March 15, 1926, in a comatose condition, pupils contracted and regular, mouth blood stained from the trauma of previous convulsion. Uterus, two fingers above the umbilicus. No fetal heart sounds present. Blood pressure 175/140, temp. 99.8, Pulse 112, respiration 24, urine positive for albumin, hyalin and granular casts. Routine treatment was immediately started. On the following day she was delivered spontaneously of a still born fetus and left the hospital on the twelfth day. The urine was still positive for albumin but no casts were present.

While this group of cases is too small for any definite conclusions we feel that it shows encouraging results, when compared with empiric methods heretofore employed.

A CASE OF UNDULANT FEVER

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Fortunate is the physician who detects and identifies an unusual and oft undiagnosed disease. The occasion presents him with rare opportunities. Not only does he immeasurably add to his professional ex-

periences, but in knowledge and with confidence he can prescribe specific treatment to an otherwise likely insolvable case. He has the further privilege amounting to duty itself to report clinical phenomena. What follows is a report of a case within this category.

CASE REPORT

Physical Examination—June 7, 1927. H. H. K. an intelligent, well developed, muscular, white adult of 35. T. 101.4, P. 87, R. 16, B. P. 106/70. Otherwise essentially negative. Blood count then made was W. B. C. 8400. P. 46, L. 52, LM 2. Widal negative. X-ray of chest slightly suggestive of early pulmonary tuberculosis. Daily temperature curve 99.2 in the morning to 102 at night. Several examinations of urine were negative.

Symptoms—Patient complained of gradual loss of "pep," general disagreeable sensations of a very vague nature, and profuse sweats, also complained that all the teeth were sore to the extent that he hesitated to bite down on ordinary food. He intimated that he had not felt himself all winter and more specifically for four weeks preceding examination, and had a cold of over a month's duration.

History—Acute catarrhal jaundice of two weeks' duration ten years ago. Early in May of this year, after feeling ill for over six months and gradually getting worse, the patient decided that a soft reddened mass overlying the sacrum had a bearing on his toxicity, whereupon he consulted a surgeon who agreed with this layman's diagnosis. Admitted to hospital May 27th for the removal of a sacral dermoid, routine nursing care disclosed that he was running an afternoon and evening temperature of from 100 to 101 degrees. An examination by the medical resident disclosed nothing, and he was given a capsule believed to be quinine because of the supervening aural symptoms. The sacral dermoid was removed under local anaesthetic, and the wound when seen by us was healing by granulation.

A particularly pertinent historical fact is here interpolated. In August, 1926, the patient went to Grand Bend, Ontario, where he drank copiously of well water and raw milk.

Diagnosis—Because all lung tests were negative a diagnosis of pulmonary tuberculosis was automatically ruled out. Tests for typhoid fever were abortive. From serological examinations and history, lues were ruled out, as was malaria by reason of the fever curve, as well as all acute diseases of short duration. This man had been ill for six months and was gradually getting worse. The removal of the sacral dermoid afforded no relief. We thereupon concluded from history and aforementioned symptoms that there was an overwhelming basis for the opinion that he was suffering from the so-called Malta, or undulant fever in man. Therefore on June 23, we submitted a blood specimen to the Michigan Department of Agriculture at Lansing, the result of which showed the serum to be capable of agglutinating the *Bacillus Abortus* (Bang) in a dilution of 1 to 1,000, our diagnosis being thus confirmed.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

PROGRESS REPORT ON MATERNAL MORTALITY STUDY

In co-operation with the State Medical Society, a study of deaths from puerperal causes was begun in April, 1927, to cover a period of two years. The study was to be carried on by a physician from the staff of the Michigan Department of Health, and was to include all deaths from puerperal causes in Michigan, beginning with deaths in July, 1926. The report which follows is a progress report on the work accomplished from the beginning of the study in April, 1927, to the close of the Department's fiscal year on June 30, 1927.

A letter of introduction from the President of the State Medical Society to physicians, and another to superintendents of hospitals encouraged excellent co-operation on the part of the physicians interviewed. Previously an article by the President of the State Medical Society in the State Medical Journal acquainted the physicians that such a study was about to be started, so that the call of the department physician did not come as a surprise to doctors who had had puerperal deaths. Of the 113 deaths investigated, in only one case was the physician unco-operative, and he entirely refused to discuss the details of his case.

The following counties have already been visited: Berrien, Cass, St. Joseph, Branch, Hillsdale, Lenawee, Monroe, Washtenaw, Jackson, Calhoun, Kalamazoo, Van Buren, Allegan, Barry, Kent, Eaton, Ingham, Livingston, Oakland, Macomb, St. Clair, Wayne, Genesee. Sixty-five places in these counties have been visited. One hundred and thirteen deaths have been investigated, necessitating 28 visits to hospitals, and 160 visits to doctors.

Age groups of the cases investigated were as follows:

Under 20 years.....	10
From 20-25 years.....	18
From 26-30 years.....	32
From 31-35 years.....	23
From 36-40 years.....	22
Over 40 years.....	8
Total	113

Of the 113 deaths, only 20 cases had received adequate prenatal care; in 34 cases the prenatal care was inadequate, and 55

had received no prenatal care whatever. In four cases the amount of prenatal care was not reported. By adequate prenatal care we mean the standard set by the Children's Bureau Publication "Standards of Prenatal Care," which defines adequate prenatal care as follows: "Patients should be examined by a physician at least once a month during the first six months, then every two weeks or oftener as indicated, preferably every week in the last four weeks."

While abortion was given as the cause of death in only four cases, it was a contributory cause in 31 other cases making 35 cases of abortion in the 113 deaths investigated.

While criminal abortion is not included among puerperal deaths according to the International List of Causes of Deaths, they have been included in this study as the history of the case is not known in advance. They will probably not be included in the final tabulation. Of the 35 abortions, 24 were induced, and of these, 8 were probably criminal, although not proved so. One case of criminal abortion was proved in court. Ten cases of abortion were said to be spontaneous, although doubtless some of them were self-induced. Of the 47 cases of septicemia, 28 followed abortion.

The following study of the cases leads one to draw certain conclusions, even with the small number of cases studied:

1. The need of better prenatal care as evidenced by the few cases receiving adequate care. The 19 deaths from albuminuria and convulsions could probably have been reduced by better prenatal care, as might some of the other deaths during pregnancy.

2. The need of better care at delivery. Forty-seven deaths occurred from septicemia out of 113 deaths. Of these 47 deaths from septicemia, 28 followed abortion, leaving 19 following delivery.

3. The need of education of the public as to the part which abortions play in maternal mortality. Thirty-five abortions out of 113 deaths constitute a shocking proportion of deaths from this cause alone.

A study of this nature, carried on over a period of two years, should furnish us

with facts of inestimable value in any attempt to reduce the number of deaths from puerperal causes.

A tabulated report of the work follows:

1. Counties visited:
Berrien, Cass, St. Joseph, Branch, Hillsdale, Lenawee, Monroe, Washtenaw, Jackson, Calhoun, Kalamazoo, Van Buren, Allegan, Barry, Kent, Eaton, Ingham, Livingston, Oakland, Macomb, St. Clair, Wayne, Genesee.
2. Places in counties, 65.
3. Visits to doctors, 160.
4. Visits to hospitals, 28.
5. Number of deaths investigated, 113.
6. Amount of prenatal care received by cases investigated:
 - (a) Adequate, 20.
 - (b) Inadequate, 34.
 - (c) None, 55.
 - (d) No record, 4.
7. Number normal deliveries, 35.
8. Number operative deliveries, 32. No issue, 45. Not reported, 1.
 - (143) Accidents of pregnancy, 12.
 - (a) Abortion.
 - (1) Spontaneous, 1.
 - (2) Induced, 3.
 - (3) Therapeutic, 0.
 - (4) Criminal, 1.
 - (b) Pernicious vomiting of pregnancy, 1.
 - (c) Ectopic Gestation, 4.
 - (d) Other Causes, 2.
 - (144) Puerperal Hemorrhage, 13.
 - (a) During pregnancy, 4.
 - (d) Post partum, 9.
 - (145) Other accidents of labor, 7.
 - (a) Caesarean Section, 2.
 - (b) Instrumental Delivery and other operative procedures, 5.
 - (146) Puerperal Septicemia, 47. (28 following abortion, 19 following delivery).
 - (147) Puerperal Phlegmasia alba dolens, embolus, sudden death, 10.
 - (148) Puerperal albuminuria and convulsions, 19.
 - (149) Causes following childbirth (N. O. A.), 5.
 - (150) Puerperal diseases of the breast, 0. Abortions, 35. Induced, 24, of these, eight were questionably criminal. Spontaneous, 10. Criminal, 1.

—L. R. S.

REGISTRATION OF LABORATORIES

A month ago a letter was sent to all of the laboratories in the State which were known to the Michigan Department of Health, informing them of the new law passed which provides for the registration and supervision of laboratories where live pathogenic germs are handled.

Certain information is required before a registration number can be granted. For this reason a questionnaire accompanied the letter. It was to be filled out as directed and returned to Guy L. Kiefer, M. D., Commissioner of Health, for his ap-

proval. A registration number would then be assigned.

At the present time questionnaires have been returned from only 52 laboratories, approximately the same number remaining unheard from. No cultures will be shipped through the mails to points inside the state unless bearing a label giving the name and registration number of the sender as well as the registration number of the person receiving the culture. The law goes into effect August 29. It is necessary, therefore, that the questionnaires be filled out as soon as possible and returned to the Department of Health before that date.

Failure to comply with the law is punishable by a fine of two hundred dollars or six months' imprisonment.—C. C. Y.

NEWS ITEMS

Fifteen cases of Malta Fever have been found by the Bureau of Epidemiology. These cases do not constitute an acute outbreak of the disease but are located in various parts of the state.

In all instances there is a history of direct or indirect contact with aborting cattle, sheep or hogs. The importance of milk as the vector of infection is now receiving attention. All blood specimens that are negative to the Widal test are examined for agglutinins of Malta Fever.

Dr. Florence Knowlton of the Bureau of Child Hygiene and Public Health Nursing is now in the Upper Peninsula conducting the Study of Maternal Deaths for the joint committee of the Michigan State Medical Society and the State Department of Health.

Dr. A. M. Carr began his duties in the Bureau of Epidemiology August 1st. Doctor Carr has for some years been connected with the United States Public Health Service, working on the development of municipal and county health units. The recent session of the legislature provided for the organization of the county as the public health unit and the abolition of the township as a unit.

Several of the cities that have created a nuisance by disposing of their sewage in rivers and streams are proceeding to abate the nuisance. Previously many of these cities could not proceed because of the amount of bonded indebtedness. The Karcher-Dykstra Act provides means for financing water purification and sewage

disposal plants for cities as a public utility without increasing the bonded indebtedness of the city as a whole.

—D. M. G.

THE 1926 COMMUNICABLE DISEASE RECORD

The final summing up of the incidence of communicable diseases for the year 1926 showed some interesting facts.

There was a decided increase in the number of cases of communicable disease reported—106,258 in 1926 compared with 73,034 in 1925. This amounts to an increase of 33,224 cases, almost 45 per cent. However, approximately 90 per cent of the gain was due to measles which passed through one of its periodical peak years.

Other diseases which showed an increase over 1925 were pneumonia with 1,113 additional cases, diphtheria with 1,528, whooping cough with 1,200, scarlet fever with 563, and syphilis with 204.

Typhoid fever decreased, with 576 cases reported in 1926 compared with 962 in 1925.

The rise in diphtheria was discouraging, in view of the intensive campaigns of immunization carried on by so many communities. But it was, perhaps, to be expected. Like all acute communicable diseases of childhood, diphtheria shows more or less periodicity, and the interval of comparatively low incidence that we have just passed through was pretty certain to be followed by an increase.

The continued high incidence of scarlet fever is equally discouraging. For the past four years there has been no decrease, and while the disease has apparently been mild, with few fatalities, the situation is far from satisfactory.

The following table gives the exact situation:

	Number of Cases	Number of Cases	Increase	Decrease
	1926	1925		
Decreases reported	1926	1925		
Pneumonia	6,821	5,708	1,113	.....
Tuberculosis	5,387	5,785	.....	398
Typhoid Fever	576	962	.....	386
Diphtheria	5,453	3,925	1,528	.....
Whooping Cough	8,776	7,576	1,200	.....
Scarlet Fever	12,866	12,303	563	.....
Measles	39,946	10,332	29,614	.....
Smallpox	548	784	.....	236
Meningitis	96	128	.....	32
Polio-myelitis	107	99	8	.....
Syphilis	14,672	14,668	204	.....
Gonorrhoea	10,707	10,660	47	.....
Chancroid	103	104	.....	1
Total	106,258	73,034	33,224	.....

HEALTH EDUCATION FOR THE YEAR

Annual reports of the eight bureaus of the Michigan Department of Health for the fiscal year ended June 30, 1927, show three of the bureaus to be devoted almost entirely to educational activities.

The Bureau of Child Hygiene and Public Health Nursing conducted a total of 482 classes for women in prenatal and infant care, with an attendance of 5,083. Among those registered in the classes were 91 prospective mothers and 35 midwives. Six counties—Ontonagon, Chippewa, Sanilac, St. Clair, Gladwin and Clare, were visited by the itinerant unit made up of a doctor and nurse that had charge of this work.

Classes for girls in infant care were also sponsored by the bureau, a total of 2,469 such classes having been conducted by department nurses, with an attendance of 55,042. These were carried on in schools, the girls ranging in age from eleven to sixteen.

Campaigns to stimulate breast feeding were conducted in ten counties, Hillsdale, Iron, Alpena, Keweenaw, Baraga, Leelanau, Huron, Mecosta, Montcalm and Oscoda. A total of 1,141 calls were made on mothers of young infants. In the two years that breast feeding surveys have been carried on by the bureau, 17 counties have been included, with 2,846 visits made and 2,545 infants surveyed.

Education along prenatal lines has continued to expand. By means of a series of prenatal letters, by conferences, home visits, and other contacts, 7,072 expectant mothers have been reached during the fiscal year. In three counties, Newaygo, Emmet and Osceola, demonstration prenatal programs have been conducted to teach the value of better medical care during this period.

Certificates of registration of births numbering 99,405 were sent out from June 1, 1926 to June 1, 1927. Accompanying each certificate was a "Message to Parents" on infant care.

The Bureau of Mouth Hygiene, the most recently organized bureau of the department, reported varied educational work for the year. The director visited 84 communities, gave 60 lectures, held 52 conferences, and examined 31 groups of children to demonstrate the need of dental attention. Mouth hygiene leaflets, examination and record cards, honor rolls, and certificates for use in school programs were prepared for distribution. A total of 172,354 leaflets were sent out during the year.

The Bureau of Education reported 584 lectures given, with an attendance of 61,005. More than half of the talks were given to school groups, and more than two-thirds of the attendance was of high school boys and girls.

Poster sets sent out totaled 1,879, made up of 11,791 separate posters. In addition, 9,521 miniature colored sets were distributed for use of individual children. Nearly all of the poster requests were from teachers or public health nurses.

Pamphlet distribution for the year reached the record mark of 759,879. These were sent in answer to the 11,314 requests received in the bureau. The number of separate bulletins issued by the department numbered 65, dealing with communicable disease, child hygiene, mouth hygiene, sanitation, social hygiene, nutrition, and health teaching in schools. The monthly bulletin of the department was issued to a mailing list of 16,500. This mailing list, with the exception of 2,900 names of health officers, public health nurses, superintendents of schools, and newspaper editors, was made up entirely of people who asked to receive the bulletin.

VISITS OF ENGINEERS DURING MONTH OF JULY, 1927

Inspections of Railroad Water Supplies: 17 cities.

Adrian	Flint
Ann Arbor	Grand Rapids (10)
Bad Axe	Grand Ledge
Baldwin	Ludington
Bay City (2)	Manistee (2)
Cadillac (4)	Monroe
Caro (2)	Palms
Caseville	Pentwater.
Cass City	

Inspections and Conferences, Sewerage and Sewage Disposal: 14 cities.

Adrian	Jackson
Clarks Lake	Lansing
East Grand Rapids	Mason
East Lansing	Monroe (2)
Fremont	Mt. Pleasant
Grand Rapids	Muskegon
Holland	Zeeland

Inspections and Conferences, Water Supplies: 7 cities.

Bay City	Lakeview
Bay Port	Marine City
Farmington	Middleville
Kalamazoo	

Inspection of Swimming Pool:

Jackson

Inspections, Miscellaneous: 4 cities.

Lansing, Water Pipes Muskegon, County Drain
Okemos, Nuisance Portland, Piggery

Inspections and Conferences at Institutions: 7.

- Detroit, State Fair Ground, Water Supply.
- Detroit, State Fair Ground, Sewage Disposal (3).
- Grand Rapids, Mich. Soldiers' Home, Water Supply.
- Jackson, Mich. State Prison, Sewerage and Sewage Disposal.
- Northville, Wayne County Training School, Water Supply.

Northville, Wayne County Training School, Sewers.

Traverse City, State Hospital, Water Supply.

Roadside Water Survey:

Trunk Lines covered collecting samples, 2,643 miles.

Samples Collected, 364.

Trunk Lines covered posting samples, 4,683 miles.

Municipal water supplies posted, 130.

School wells tested, 108.

Cas Station and Garage Wells, 34.

Tourist Camp Wells, 24.

PREVALENCE OF DISEASE

	July Report			
	Cases Reported			
	June 1927	July 1927	July 1926	Av. 5 Years
Pneumonia	364	171	176	162
Tuberculosis	532	489	510	500
Typhoid Fever	29	51	43	64
Diphtheria	338	255	333	309
Whooping Cough	586	661	633	698
Scarlet Fever	920	436	641	484
Measles	898	397	946	917
Smallpox	152	95	36	90
Meningitis	18	13	9	10
Poliomyelitis	3	6	2	6
Syphilis	1,378	1,346	1,132	980
Gonorrhoea	717	750	942	905
Chancroid	7	4	7	13

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

	July, 1927			Total
	+	-	+ -	
Throat Swabs for Diphtheria				765
Diagnosis	29	222		
Release	36	88		
Carrier	3	369		
Virulence	5	13		
Throat Swabs for Hemolytic Streptococci				547
Diagnosis	33	144		
Carrier	11	359		
Throat Swabs for Vincent's Syphilis	21	230		251
Wassermann		1		5726
Kahn	1033	4639	52	
Darkfield		1		
Examination for Gonococci	146	1323		1469
B. Tuberculosis				376
Sputum	73	276		
Animal Inoculations	1	26		
Typhoid				232
Feces	5	55		
Blood Culture	8	83		
Widal	17	54		
Urine		10		
Dysentery				43
Intestinal Parasites				7
Transudates and Exudates				140
Blood Examinations (not classified)				209
Urine Examinations (not classified)				337
Water and Sewage Examinations				1318
Milk Examinations				61
Toxicological Examinations				2
Autogenous Vaccines				1
Supplementary Examinations				157
Unclassified Examinations				464
Total for the Month				12105
Cumulative Total (fiscal year)				12105
Decrease over this month last year				1929
Outfits Mailed Out				15224
Media Manufactured, c.c.				442011
Typhoid Vaccine Distributed, c.c.				1348
Antitoxin Distributed, units				11932000
Toxin Antitoxin Distributed, c.c.				14070
Silver Nitrate Ampules Distributed				3040
Examinations Made by the Houghton Laboratory				1353
Examinations Made by the Grand Rapids Laboratory				5604

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

CONCERNING A CONTRIBUTION BY MAJOR LEONARD DARWIN, "ON THE SURVIVAL OF THE UNFIT"

This thoughtful, scholarly and sincere article by a son of the illustrious Charles Darwin, published in the "The Forum," upon which comment has been requested, deserves more serious treatment than it is likely to receive from the one whose initials are signed hereto.

Major Darwin's stressing the matter of "common sense" as necessary to the solution of any pressing problem like that of race deterioration is worthy of the highest praise, but the combining of "all intelligent men" in an "endeavor to promote the adoption of such measures as would affect the birth rates of the different human types in such a manner as to safeguard the race" is obviously an "iridescent dream."

No such co-operation to any end, however worthy, need be even conjectured as possible and no "moral and educational campaign" looking to "changes in social customs" and "economic arrangements tending to check or to encourage parenthood" will ever be scheduled among the numerous "drives" with which a patient public is afflicted. Why then the suggestion?

I write this not in disparagement of an excellent intention, but, never having been given to milling about in the unpractical, or speculating upon the unattainable, I stall at the prospect of an "educational campaign." This would inevitably be conducted by theorists with mouthfuls of eloquence (?) and nothing of value accomplished.

Nothing ever was or permanently can be settled. Emergency matters and those mated to the near future are the only ones with which the present day public need concern itself especially. Every generation has attempted to solve, and always will be necessitated to meet, in one way or another, its problems of the moment.

Most, if not all, post-war treaties that were ever made contemplated relief from future contention but "wars to end wars"

have been fought since the beginnings of history. Constitutions are subject to amendment, and old time ordinance relative to the removal of hitching posts give way to those concerning "parking space."

The pseudo-philanthropists and sweetness-and-light propagandists give no assistance in adjustment to present situations. (I beg the reader to believe that here is reference only to the professional reformer and to that "fringe" immortalized by the late President Roosevelt—not even remotely to the author of the admirable paper under consideration).

Take for example the notorious increase of crime in the United States. Orators spill tons of words over the need (everywhere admitted by the conscientious) of bringing up the young to a realization of the higher life, civic responsibility, morality and good will. Education and training—not home training, this is passe, but some sort of pedagogic program—will accomplish this they declare and a new era of exalted standards will dawn. Meantime, owing to the inadequacy of corrective procedure, criminal bands are wrecking the social structure. What kind of environment will these wisely indoctrinated youngsters find when they mature? "Crime has been more indulgently treated," Major Darwin avers. There is also, he might have added, sloppy sympathy for the misguided one who has had "no chance" or who is handicapped by mental defect. I recently heard the wife of an eminent psychiatrist speak of a "little bandit," emphasizing the adjective. Poor, pitiable, tiny toddler.

I am a Eugenist so far as one may be who hopes, merely for race betterment, but the theoretic possibilities of Eugenics in the light of ignorance, wide indifference, and sex attraction—for which latter there is no accounting—leave me cold. Those undergoing physiological urge will insist upon preparing their own beds legitimately or otherwise, fussy interference on the part of bystanders, to the contrary notwithstanding. Two people matrimonially eligible from the standpoint of the biologist

cannot be paired off by him against their will. Human beings are not in the same category as Holsteins in the corral.

As to birth-control, I fancy that the only ones who would be co-operative in, or materially affected by, propaganda in its favor would be those who if they chose to procreate would be regarded public benefactors.

There are just two practical aspects of this whole matter in my opinion:

First: Crime can be reduced by the death penalty, swiftly and courageously applied in suitable cases. By "suitable cases" is meant red-handed murderers and robbers armed. Once under the sod or his body in the crematorium such a creature could no longer contribute to the world's criminal or defective population; pardoned or paroled, he might and probably would.

Second: Sterilizing quite generally, those unfit to propagate, over whom legal control may be exercised, would be a measure of expediency. Confirmed prostitutes—most of whom are high grade imbeciles—once in the clutches of the law should be unsexed.

Reference is made to the "clutches of the law," but is there any inhibition properly so-called? Who were most vocal in opposition to the death penalty measure before the last Legislature? Mainly, members of the legal profession. Who held up the bill passed by the House of Representatives? The Judiciary Committee of the Senate.

Absence of adequate punishment is responsible for the appalling crime conditions in this country. Courts healthily in action, backed by wise legislation, could assist to solve the race deterioration problem.

"If Loeb and Leopold," said a well-known jurist to me, "had had the advantage of training in a colony for boys" (such as he had projected) "they might have escaped trouble." What puerility! "How could this have been effected," I inquired. "Who could have taken them from indulgent parents?" "Wouldn't the neighborhood have been up in arms?" "Would the boys' parents resisting removal, have lacked legal assistance?"

But what's the use? Theorizing—speculating, cogitating instead of exercising what Major Darwin calls "common sense." What this hitherto happy land needs is a new baptism or expediency and a more stable emotional pendulum.

—C. B. B.

CANCER WEEK REPORT

Dr. R. C. Stone, Chairman,
Council Michigan State
Medical Society.

Battle Creek, Michigan.

Dear Doctor Stone:

At the January, 1927 meeting of the Council of the Michigan State Medical Society it was voted that the Council should be responsible for a concentrated fight against cancer in Michigan. As someone had to supervise this work and since as Chairman for Michigan for the American Society for the Control of Cancer I had been engaged in similar work for years, the direction of the cancer work of the Council has fallen upon me.

February 14, 1927, as you will remember, I sent a letter to each Councilor outlining a plan of organization and asking for co-operation and suggestions. It was finally decided that the medical profession of the state, under the direction of the Councilors of the Michigan State Medical Society, should arrange for free cancer clinics, each in his own district, and that these clinics be held during the week May 9 to 14, inclusive.

As your executive officer I enclose a summarized report of the work done during cancer week, first by cities where the free cancer clinics were held, second in relation to the regional examinations held.

Everything considered, the showing is very creditable. The work is new and that busy men failed to devote sufficient time for the organization of their districts is not to be wondered at. However, the effective work done by a few Councilors illustrates what can be accomplished in cancer education and the discovery of the disease when through the direction of the Councilors each district has been systematically organized.

One is struck with the prevalence of cancer in Michigan, if in a single week nearly 1,000 people apply for examination for cancer and positive cancer be found in 86 or 9.2 per cent of those examined. Almost all were patients where the disease was discovered for the first time, not previously diagnosed cancer or recurrent cancer.

Every clinic should be provided with adequate social service workers either its own or available through co-operation with health agencies whereby these patients with cancer can be "followed up" and persuaded to submit to appropriate treatment.

Otherwise the cancer cases may be discovered but all to no purpose.

It should be borne in mind that the benefits of free cancer clinics are not confined to the number of cases where positive cancer was found, but that untold good may result to patients who are told they have no cancer. There were over six hundred such people in all, greatly comforted when told they had no signs of cancer.

The cancer clinics were free only in a limited way. They were free so far as thorough examination for cancer was concerned. Wherever the patients' means permitted they were expected to pay for treatment.

The great value of proper publicity is shown by the members attending the clinics. Local newspapers are only too glad to be of aid in public health matters if physicians will meet the managing editors half way and give them articles arranged in a form they can use.

It is planned to begin the second campaign early next fall so that each councilor district can be thoroughly organized for the second series of free clinics to be held in May or June, 1928.

Thanking you for your co-operation in this important work, I remain,

Sincerely yours,

Reuben Peterson.

Summarized report of work done during cancer week, May 9-14, 1927, in certain towns in Michigan under supervision of the councilors of the Michigan State Medical Society:

Clinic	Total No. of patients examined	Total No. cases positive cancer	Total No. Cases suspicious Cancer	Total No. negative examinations
Ann Arbor	234	21	52	161
Benton Harbor...	19	7	6	6
Flint	125	21	49	55
Grand Rapids.....	473	25	30	418
Saginaw	75	12	32	31
Grand Total.....	926	86	169	671
Percentage		9.2%	18.2%	71.8%

Report of regional examinations for cancer:

	Patients examined	No. cases positive cancer	No. negative examinations
Mouth	24	8	16
Lip	51	20	31
Tongue	7	0	7
Breast	85	14	71
Stomach	73	6	67
Colon	2	1	1
Rectum	21	4	17
Cervix uteri	64	5	59
Fundus uteri	9	3	6
Skin	160	19	141
Nose	2	0	2
Gall Bladder	5	0	5
Miscellaneous	0	6	0
Total	503	86	423

SIMPSON MEMORIAL INSTITUTE

The Thomas Henry Simpson Memorial Institute for Medical Research at the University of Michigan is now open to receive patients with pernicious anemia. This Institute, which was made possible by the beneficence of Mrs. Thomas Henry Simpson of Detroit who donated funds for the purpose, stands alone as a project in close association with a State University for the study of a wide spread and disabling disease which has hitherto been considered incurable. Due to the careful planning and foresight of the committee of the faculty of the University in charge of the plans of the building, and the sincere co-operation of Mrs. Simpson, a splendid building with unexcelled equipment has been erected for the state and dedicated to the relief of human suffering. Thus an opportunity is afforded to the state of Michigan to engage in a work of universal appeal and one which is based upon the highest motives.

On those who are immediately responsible for the administration of the Institute, a great responsibility is placed. To them is entrusted the judicious expenditure of time, effort and funds in such a way that the greatest possible good may be accomplished.

In recent years it has been determined that patients with pernicious anemia may be benefitted by certain types of diet, notably those rich in liver. A great deal more information is needed, however, before it can be stated that our knowledge is complete on this subject. Investigations are proceeding rapidly and at present we have for use in the institute a "Liver Fraction" which is made under the supervision of the Harvard Pernicious Anemia Commission. This appears to be more efficacious than cooked liver and it is especially desirable for those patients who are unable to consume large amounts of liver daily. From the stand point of investigative study, this is a most profitable time to engage in the determination of the cause, prevention and cure of this disease, for with a new form of therapy available by which a remission may often be purchased, the entire mechanism of recovery from the disease can be observed in the great hope that the underlying causative factor may be discovered. If this information can be obtained, the way is then clear for devising methods of preventing the disease, and it does not seem fanciful to state that some day we may see another fatal disease conquered.

CO-OPERATION DESIRED

The main purpose of this communication is to ask for the co-operation of the physicians of this state and surrounding communities. We shall be glad to receive any patients with pernicious anemia for observation and treatment, subject to the usual rules and regulations of the University Hospital. We promise in return that the facilities of the Institute will be placed at the disposal of the patients and after the treatment has once been begun and proved effective, complete directions will be given to the local practitioner for the continued care of the patient.

In our present state of knowledge it can be said that only those patients with pernicious anemia show definite and conclusive evidence of improvement under the treatment with liver or liver fraction. In order to arrange the dosage of the liver fraction in the most efficient manner, it is highly desirable that the patients should not be fed liver in any form before admission.

In closing, let me extend a most cordial invitation to all physicians to visit the Simpson Memorial Institute and inspect the building and progress of the work, at any time.

C. C. Sturgis, M. D.

WOMAN'S AUXILIARY

The meeting to organize a Woman's Auxiliary of the A. M. A. was held at the Grand Hotel, Mackinac Island, June 18, 1927, with Dr. Crane as chairman.

Dr. Jackson, President of the State Medical Society, spoke to the ladies concerning the aims of such an organization, and informed them that the House of Delegates had recommended such a move.

The by-laws of the Saginaw organization were then read and the idea of state-wide organization was considered.

It was moved and seconded to organize as the Woman's Auxiliary of the A. M. A. This motion was carried.

It was moved and seconded that Mrs. Guy L. Kiefer be made President of such an organization. This motion was carried.

It was moved and seconded that a committee be appointed by Dr. Crane and Mrs. Kiefer to select the remaining officers, their choice being agreeable to all the ladies present.

It was moved and seconded that the meeting be adjourned. Carried.

Kathryn Morrill, Acting Secretary.

HISTORY OF THE HILLSDALE COUNTY MEDICAL SOCIETY

There seems to be no account of a definite Hillsdale County Society until the re-organization of the Michigan State Medical Society under the present medical practice law in 1899. There was prior to this a "Practitioner's Club" formed, with meetings held in Hillsdale, but it was not considered a county society and dropped out of sight when the present county society was organized. The Southern Michigan Medical Society which later became the "Northern Tri-State Medical Society" met often in Hillsdale and largely took the place of a county organization. The names of such men as Murphy, Eastman, Nancrede and Carstens with many lesser lights appeared on its programs and kept the society habit of the county alive.

The present Hillsdale County Medical Society was formed as a unit of the Michigan State Medical Society, August 27, 1902. Doctors A. E. Bulson, President of the State Society, Dr. Haughey, Councilor of the third district and Dr. Hafford then president of the Oakland County Society, were present at its birth and explained its relation to the State Society. About nineteen physicians were present in response to the call of the President of the State Society, Dr. Bulson of Jackson. The meeting was called to order by Dr. Bion Whelan who was made temporary chairman and Dr. H. H. Frazier was made temporary secretary. A constitution and by-laws were drawn up by Dr. W. H. Sawyer, which, slightly modified, were adopted. Nineteen physicians signed the new constitution and by-laws, becoming thus the charter members of the new society and paying the dues which were fixed at \$3.00, for one year, \$2.00 of the dues were paid to the State Society and \$1.00 was to remain in the local treasury.

Names of the charter members:

Dr. W. H. Sawyer, Hillsdale.
 Dr. Bion Whelan, Hillsdale.
 Dr. S. B. Frankhauser, Hillsdale.
 Dr. S. H. Starbuck, Hillsdale.
 Dr. F. C. Mason, Hillsdale.
 Dr. F. H. Spence, Hillsdale.
 Dr. B. F. Green, Hillsdale.
 Dr. H. H. Frazier, Moscow.
 Dr. W. H. Ditmars, Jonesville.
 Dr. W. H. Atterbury, Litchfield.
 Dr. J. J. Hester, Litchfield.
 Dr. Alex Striemer, Ransom.
 Dr. Wm. Bower, Camden.
 Dr. H. C. Miller, Cambria.
 Dr. H. F. Hughes, Cambria.
 Dr. D. W. Fenton, Reading.

Dr. T. H. E. Bell, Montgomery.
 Dr. Chas. Barnaby, Somerset Center.
 Dr. A. G. Doty, Frontier.

Officers were then elected for one year:

President, Dr. Bion Whelan.
 Vice President, Dr. D. W. Fenton.
 Treasurer, Dr. W. H. Ditmars.
 Secretary, Dr. H. H. Frazier.

It was voted to hold meetings quarterly or oftener at the judgment of the society. Standing committees of three members each, were to be appointed yearly by the President on—Program, Public Health and Legislation, and Entertainment.

During the year, the following members were added to the society:

Dr. F. M. Gier, Hillsdale.
 Dr. Maxwell Vardon, Hillsdale.
 Dr. C. Harris, Hillsdale.
 Dr. C. F. Niblack, Reading.
 Dr. F. R. Robson, Reading.
 Dr. W. R. Ditmars, N. Adams.
 Dr. Fred B. Fisk, N. Adams.
 Dr. Ira J. Stoner, Ransom.
 Dr. R. W. McLain, Allen.

Early additions (1903 to 1905) to the society continued:

Dr. F. M. Stearms, Frontier.
 Dr. R. C. Traver, Somerset Center.
 Dr. J. A. Bates, Camden.

In 1905 and later were added the following:

Dr. P. B. Tolford, Pittsford.
 Dr. Morton, N. Adams.
 Dr. M. Graham, Jonesville.
 Dr. H. M. Warren, Jonesville.
 Dr. E. A. Martindale, Hillsdale.
 Dr. W. H. Waller, Frontier.

Within the last twelve years the following were added:

Dr. O. G. McFarland, N. Adams.
 Dr. J. H. Johnson, Hillsdale.
 Dr. J. L. Yeagley, Waldron.
 Dr. J. M. Barnes, Waldron.
 Dr. G. R. Hanke, Ransom.
 Dr. John S. Sterling, Jerome.
 Dr. E. C. Bechtol, Montgomery.
 Dr. W. A. Oliver, Camden.

The first few meetings were very enthusiastic and on January 9, 1903, Dr. Bion Whelan and Mrs. Whelan gave a banquet to the members, their wives and the visiting physicians, of whom there were several. A most enjoyable meeting both scientific and social. In the early years of the society, the meetings were held in the afternoon with sometimes a short evening session. This made possible an address by some prominent surgeon or other specialist and several papers or clinical cases by local members. In these meetings such men as Peterson, Wyman, Bulson, Aaron, Canfield, Loree and others of like prom-

inence appeared on the programs along with the local talent.

The officers elected by years after the first year are as follows:

1903 (for 1904) President, D. W. Fenton; Vice-President, W. R. Ditmars; Treasurer, F. H. Spence, and Secretary, B. F. Green.

1904 President, W. R. Ditmars; Vice-President, F. C. Mason; Treasurer, S. B. Frankhauser, and Secretary, B. F. Green.

1905 President, W. H. Sawyer; Vice-President, B. F. Green; Treasurer, P. B. Tolford, and Secretary, S. B. Frankhauser.

1906 President, B. F. Green; Vice-President, H. C. Miller; Treasurer, P. B. Tolford, and Secretary, S. B. Frankhauser.

1907 President, H. C. Miller; Vice-President, S. B. Frankhauser, and Secretary H. H. Frazier.

1908 President, S. B. Frankhauser; Vice-President, I. J. Stoner; Treasurer W. F. Waller, and Secretary B. F. Green.

1909 President, I. J. Stoner; Vice-President, H. H. Frazier; Treasurer, W. H. Waller, and Secretary, B. F. Green.

1910 President, E. A. Martindale; Vice-President, M. Graham, and Secretary-Treasurer B. F. Green.

1911 President, W. R. Ditmars; Vice-President, D. W. Fenton, and Secretary-Treasurer, B. F. Green.

1912 President, T. H. E. Bell; Vice-President, B. F. Green, and Secretary C. T. Bower.

1913 President, B. F. Green; Vice-President, O. G. McFarland, and Secretary-Treasurer C. T. Bower.

1914 President, B. F. Green; Vice-President, H. H. Frazier, and Secretary-Treasurer, E. A. Martindale.

1915 President, H. H. Frazier; Vice-President, O. G. McFarland, and Secretary-Treasurer, E. A. Martindale.

1916 President, O. G. McFarland; Vice-President, H. C. Miller, and Secretary-Treasurer, E. A. Martindale.

1918 President, O. G. McFarland; Vice-President, H. C. Miller, and Secretary-Treasurer D. W. Fenton.

1919 President, O. G. McFarland, Vice-President, S. B. Frankhauser, and Secretary-Treasurer, D. W. Fenton, who has been continued until the present time, (1927).

1920 President, O. G. McFarland; Vice-President, T. H. E. Bell.

1921 President, T. H. E. Bell; Vice-President, G. R. Hanke.

1922 President, G. R. Hanke; Vice-President, C. T. Bower.

1923 President, C. T. Bower, Vice-President, E. C. Bechtol.

1924 President, C. T. Bower; Vice-President, H. C. Miller.

1925 President, J. H. Johnson; Vice-President, H. C. Miller.

1926 President, J. H. Johnson; Vice-President, E. C. Bechtol.

1927 President, H. C. Miller; Vice-President, E. C. Bechtol.

The meetings were held with more or less regularity for some years, but interest seemed to wane, in spite of fine programs with speakers of national and even international reputation. The meetings were not always held at Hillsdale, some being

held at Osseo, North Adams, Clear Lake, Ind., and Reading. The meetings outside of Hillsdale were fairly well attended and seemed to be popular. They were not always held quarterly, only forty-five meetings having been held up to the end of the year 1916, instead of fifty-two as would have been the case in the thirteen years if there had been four each year.

There is no record of any meeting in 1917, several of our most faithful members having joined the Medical Reserve Corps, or were preparing to do so, as will be shown later and had little time for society work. The entrance of the U. S. into the world war took up the attention of all.

However, on May 3, 1918, a meeting was called "To do the business of the Annual meeting of 1917 which was not held," thus keeping the society alive and holding its position as a unit of the State Society. Members present:

Doctors O. G. McFarland, President for 1916, S. B. Frankhauser, C. T. Bower, T. H. E. Bell and D. W. Fenton. The secretary being absent the reading of the minutes was omitted. On motion and second the following officers were elected for 1918:

President, O. G. McFarland; Vice-President, S. B. Frankhauser, and Secretary-Treasurer, D. W. Fenton.

The next meeting was called May 24, 1918, "For the purpose of naming a committee to make a canvass of the county for the purpose of ascertaining how many and what physicians of the county are eligible for service in the Medical Reserve Corps, and can and will volunteer if needed." A circular letter from Secretary of State Medical Society Warnshuis was read. Dr. W. H. Sawyer already a member of the League of National Defense, gave a clear explanation of the relation of the American Medical Association and through it, of the various state and county societies, to the League and the National Government.

The President, Dr. McFarland, appointed the following as members of this committee—C. T. Bower, chairman; members, O. G. McFarland, T. H. E. Bell, F. B. Fisk and D. W. Fenton.

The canvass was promptly made and practically every physician in the county, regardless of age, signified his willingness to serve if called. But long before this, Dr. Sawyer had been a member of the examining committee for the Volunteer Medical Service Corps, member of the

Hillsdale county Draft Board, etc., as will be shown later.

ROSTER OF THE DOCTORS OF THE COUNTY

To tell of all the good work of the members of this society is, of course impossible in the space allowed me, so I can only speak of a few of the honors of our members, notably of the record of such as served in the World War. First to enter service, Dr. J. H. Johnson enlisted at Battle Creek April 17, 1917. Transferred August 11, 1917, to Fort Benjamin Harrison, Indiana Officers Training Camp, until November 16, 1917, when he was ordered to Vladivostock. He was stopped, however, at Honolulu, where he was retained as chief of the eye department until his discharge June 17, 1919, as Major. Fellow American Medical Association, Member Michigan State Medical Society and County Society.

Second, Dr. B. F. Green, Fellow A. M. A. and A. C. S. Member Michigan State and County Societies, Councilor of second district, Trustee Hillsdale College. Entered United States service August 10, 1917 with rank of First Lieutenant, served three months at Fort Benjamin Harrison, Indiana. Then transferred to Camp Shelby and promoted to Captain. Then sent to France with Base Hospital No. 111, stationed at Bordeaux. Promoted to Major M. C. Discharged at Camp Dix June 23, 1919.

Third, W. H. Sawyer, M. D., L. L. D. In addition to the wartime activities already spoken of, was a member of the Michigan State Committee of Defense, 1917 contract surgeon assigned to Hillsdale College S. A. T. C., member Executive Committee of State Committee of Volunteer Service Corps during the war. In private life he has been Regent U. of M. since 1906. Trustee Hillsdale College since 1903. Member Hillsdale School Board 1894 to 1926. Has been a member of the State Board of Medical Registration. Is a fellow of the A. M. A., member of the Michigan State Medical Society (was President in 1913). Fellow of the A. C. S., member Tri-State Medical Society, Cor. member Academy of Medicine, Detroit. Surgeon of N. Y. Central Railway company since 1892, member U. S. Pension Board.

Fourth, Dr. E. A. Martindale, entered the service from Hillsdale county at Camp Custer Base Hospital, remaining there until March 1918, when he was sent to Camp Greenleaf, Fort Oglethorpe, Ga. From there transferred to Hampton Institute,

Va., where he remained until his discharge as Captain in January 1919.

Fifth, Dr. W. H. Atterbury, member Hillsdale County Medical Society, Michigan State Medical Society, Fellow of American Medical Association. Entered Medical Reserve Corps at Fort Benjamin Harrison, Ind., as Lieutenant. Then stationed at Camp Devans near Boston. Later served in A. E. F. emerging as Captain at his discharge February 1919.

Sixth, H. C. Miller, M. D., member Hillsdale County Medical Society, of Michigan State Medical Society. Fellow of A. M. A. Entered United States service May 19, 1917. Served at Camp Clark, Mo., Fort Benjamin Harrison, Ind., and Camp Custer, Mich. Then in France ten months, commanding Field Hospital No. 338. Served on Verdun, St. Miehil and Meuse Argonne Sectors. Received citation from Maj. Gen. Summerall after battle of the Argonne. Returned to United States and discharged as Major M. C. May 19, 1919.

Seventh, T. H. E. Bell, M. D. Member Hillsdale Medical Society, Michigan State Medical Society and Fellow of the A. M. A. Was commissioned August 3, 1918 as Captain. Called November 3rd when he was ordered to Base Hospital at Chillicothe, Ohio serving until May 22, 1919, finding plenty to do among the sick and wounded soldiers there. The grilling work and severe exercise required of the officers all told on a constitution already broken by hard work and he returned home with impaired health which doubtless contributed to his untimely death. He was tendered the rank of Major in the M. C. on his discharge, but refused it, preferring to return to his private practice.

Eighth, Dr. A. J. Hamilton had begun premedical studies, but stopped them to enlist as a private soldier, serving until the close of the war. He then finished his medical course and after that was commissioned Lieutenant in the United States Navy, where he served from June 1924 to September 1926, when he resigned to settle in Rearing, Mich. Fellow A. M. A., M. S. M. S. and County Society.

The other members at present in good standing in the Society are:

S. B. Frankhauser, M. D., present Mayor of Hillsdale. Fellow A. M. A., Member M. S. M. S. and County Society.

C. E. Clobridge, M. D., Fellow A. M. A., Member State and County Societies.

C. T. Bower, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

John S. Sterling, M. D., Fellow A. M. A., Member State and County Societies.

J. L. Yeagley, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

Jas. M. Barnes, M. D., Member Michigan State Medical Society and County Society.

G. R. Hanke, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

H. F. Hughes, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

Jas. A. Bates, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

E. C. Bechtol, M. D., Member M. S. M. S. and County Society.

W. H. Ditmars, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

F. B. Fisk, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

D. W. Fenton, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

F. R. Robson, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

O. G. McFarland, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

C. J. Poppen, M. D., Fellow A. M. A., Member M. S. M. S. and County Society.

July 11, 1922, owing to the failing attendance it was voted to hold only an evening session, in the view that members would more readily come out after their days work was done. This hope was not realized, and early in 1925 the members of the societies of Branch and Lenawee counties were invited to meet with us May 19 and accepted. Another joint meeting was held at Adrian later in the year, and one at Hillsdale; but after that the Lenawee County Society declined further joint meetings. In December of that year a joint meeting was held at Hillsdale, of the physicians and dentists of Branch and Hillsdale counties. Since that time the societies of the counties of St. Joseph, Branch and Hillsdale have continued to hold their meetings jointly in rotation, in Sturgis, Coldwater and Hillsdale and are trying to hold them as nearly as possible monthly; the reports being sent to the State Journal by the secretaries of the counties in which they are held. The annual meetings are held only by the individual societies. A dinner is given at the joint meetings and we of Hillsdale county have greatly enjoyed our association with our colleagues of Branch and St. Joseph. We are hopeful of being able to continue this arrangement.

A few have left the society and a number have removed from the county, of some of whom the latter history is unknown. The known dead are: Doctors Malcom, Graham, F. M. Gier, S. H. Starbuck, W. W. Bower, C. F. Niblack, T. H. E. Bell, W. A. Oliver, H. M. Warren and F. C. Mason.

This year marks the quarter century of existence of the society. It has acted

powerfully in drawing the physicians of the county together and promoting harmony, good fellowship, and fraternal feeling among them, in addition to its educational function and has enabled us to work effectively with the State Society and the American Medical Association in our own interest and for the public welfare.

D. W. Fenton, Secretary.

HISTORY OF THE LENAWEЕ COUNTY MEDICAL SOCIETY

The Lenawee County Medical Society was organized in October of the year 1901. The credit for this as it appears in the records belongs to Dr. D. L. Treat, who on October 12, 1901, sent out an invitation to all the physicians of the county to attend a meeting at the Hotel Gregg at Adrian, for the purpose of organizing a medical society.

There were about twenty-five physicians responded to the call and the meeting was held on October 22, 1901. Dr. D. L. Treat was elected temporary secretary and the following officers were elected:

President, Dr. Daniel Todd.
Vice-President, Dr. George Howell.
Secretary-Treasurer, Dr. D. L. Treat.

A motion was made and carried that the meetings be held on the first Tuesday of each month.

A motion was made by Dr. George Howell that the President appoint a committee on membership. Carried. Doctors F. E. Andrews, I. L. Spalding and A. S. Young were appointed.

A vote of thanks was given to Dr. D. L. Treat for his efficient work in bringing about the organization of the first Medical Society in the history of the county.

The Constitution and By-Laws of the Michigan State Medical Society were adopted as those of the County organization.

All the doctors present were enrolled as charter members, and it was voted to leave the charter open until all the physicians in the county were given an opportunity to join.

A motion that the dues for the County Society be made \$1.00 per year was carried.

This is a record in brief of the first meeting.

Since its first meeting the Lenawee County Medical Society has been active except for 1916 when no meetings were held at all due to the fact that a considerable

number of members were away in military service.

The following members served in the military service during the World War:

L. J. Stafford	A. B. Hewes
H. H. Hammel	A. W. Chase
George M. Lochner	Eslie T. Morden
Chad H. Van Dusen.	

The following is a list of the Charter Members of the Lenawee County Medical Society:

A. M. Allen, F. E. Andrews, V. A. Baker, A. W. Chase, H. D. Hull, W. E. Jewett, Sr., W. E. Jewett, Jr., J. C. Johnson, C. Kirkpatrick, E. T. Morden, M. R. Morden, G. B. M. Seager, D. L. Treat, Daniel Todd, J. C. Westgate, J. Williams, Jr., Adrian; W. J. Marks, Addison; H. Patton, Britton; J. C. Jordan, James McDonald, A. E. Wilcox, Clayton; W. E. Colbath, Fairfield; N. D. Yale, Deerfield; Len Towne, Geneva; E. P. Felch, R. H. Nelson, N. Prentice, I. L. Spalding, Hudson; J. W. Nixon, Holloway; Oat Whitney, Jasper; W. S. Morden, Macon; C. M. Butler, C. M. Coffin, Medina; C. A. Blair, H. S. Older, Morenci; A. D. Worting, Ogden Center; Garry Ross, Onsted; W. B. Sprague, Palmyra; E. Ross, Rome Center; Samuel Catlin, George Howell, J. F. Jenkins, O. Q. Jones, W. H. Maddox, Pauline Wilson, Tecumseh; O. N. Rice, Tipton; A. S. Young, Weston.

The following is a list of officers and a summary of meetings held by the Lenawee County Medical Society since it was organized:

Adrian, 1902—President, C. Kirkpatrick; Vice-President, Oat Whitney; Secretary-Treasurer, E. T. Morden. Two meetings.

Adrian, 1903—Same officers. Four meetings.

Adrian, 1904—President, C. Kirkpatrick; Vice-President, W. H. Maddox; Secretary, D. L. Treat; Treasurer, E. T. Morden. Three meetings, one in Blissfield.

Adrian, 1905—President, R. M. Eccles; Vice-President, L. S. Towne; Secretary, D. L. Treat; Treasurer, E. T. Morden. Six meetings. Forty-six members.

Hudson, 1906—President, L. S. Towne; Vice-President, D. L. Treat; Secretary-Treasurer, E. T. Morden. Six meetings, two in Adrian, one each in Hudson, Tecumseh, Blissfield and Devils Lake.

Adrian, 1907—President, D. L. Treat; Vice-President, O. N. Rice; Secretary-Treasurer, J. C. Johnson. Seven meetings, one each in Hudson, Devils Lake and Blissfield.

Adrian, 1908—President, O. N. Rice; Vice President, L. G. North; Secretary-Treasurer, J. C. Johnson. Twelve meetings, one each in Tecumseh, Morenci, Sand Lake and Blissfield.

Adrian, 1909—President, L. G. North; Vice-President, G. H. Lamley; Secretary-Treasurer, J. C. Johnson. Twelve meetings, one each in Devils Lake and Deerfield.

Adrian, 1910—President, G. H. Lamley; Vice-President, Oat Whitney; Secretary-Treasurer, A. W. Chase. Six meetings, one at Sand Lake.

Adrian, 1911—President, Oat Whitney; Vice-President,; Secretary-Treasurer, A. W. Chase. Seven meetings.

Adrian, 1912—President, W. B. Sprague; Vice-President, A. W. Chase; Secretary-Treasurer, I.

L. Spalding. Eight meetings, one held jointly with Monroe at Monroe.

Adrian, 1913—President, A. W. Chase; Vice-President, I. L. Spalding; Secretary-Treasurer, G. M. Lochner. Six meetings.

Adrian, 1914—President, I. L. Spalding; Vice-President, G. M. Lochner; Secretary-Treasurer, F. A. Howland. Eleven meetings, one at Monroe Piers.

Adrian, 1915—President, G. M. Lochner; Vice-President, F. A. Howland; Secretary-Treasurer, W. S. MacKenzie. One meeting.

No meeting held in 1916.

Adrian, 1917—President, W. S. MacKenzie; Vice-President, L. J. Stafford; Secretary-Treasurer, Oat Whitney. One meeting.

Adrian, 1918—Same officers. Five meetings.

Hudson, 1919—President, R. H. Nelson; Vice-President, R. M. Eccles; Secretary-Treasurer, E. T. Morden. Eleven meetings, one at Sand Lake.

Adrian, 1920—President, E. T. Morden; Vice-President, J. W. Beardsley; Secretary-Treasurer, H. H. Hammel. Eight meetings, one at Sand Lake.

Adrian, 1921—President, C. H. Westgate; Vice-President, T. C. Krumling; Secretary-Treasurer, O. N. Rice. Nine meetings.

Adrian, 1922—President, Oat Whitney; Vice-President, C. H. Heffron; Secretary-Treasurer, O. N. Rice. Five meetings.

Adrian, 1923—President, L. J. Stafford; Vice-President, C. H. Heffron; Secretary-Treasurer, A. B. Hewes. Three meetings.

Adrian, 1924—President, L. J. Stafford; Vice-President,; Secretary-Treasurer, A. B. Hewes. Two meetings.

Adrian, 1925—President, A. B. Hewes; Vice-President, H. H. Hammel; Secretary-Treasurer, A. W. Chase. Four meetings.

Adrian, 1926—President, H. H. Hammel; Vice-President, S. J. Rubley; Secretary-Treasurer, R. G. B. Marsh. Eight meetings, two in Tecumseh and one in Morenci, and Sand Lake.

Tecumseh, 1927—President, H. H. Hammel; Vice-President, H. H. Heffron; Secretary-Treasurer, R. G. B. Marsh.

The following is a partial list of prominent men who have been speakers at Scientific Meetings of the Society:

- Dr. J. V. White of Detroit.
- Dr. Guy L. Kiefer of Detroit.
- Dr. V. C. Vaughn of Detroit.
- Dr. L. J. Hirschman of Detroit.
- Dr. Angus McLean of Detroit.
- Dr. P. M. Hickey of Detroit.
- Dr. Hugo Freund of Detroit.
- Dr. Hugh Cabot of Ann Arbor.
- Dr. George McKean of Detroit.
- Dr. Frank B. Tibbals of Detroit.

The Society is now very active, and an excellent spirit of good fellowship exists among the members, the officers receive co-operation from any of the members who are called upon, and there is every prospect that continued progress will be made.

Compiled by F. E. Andrews, M. D., the oldest active member of the Society in age and years in practice.

COUNTY HEALTH UNITS

There is reason for careful thought before any endeavor is made to establish or

extend county health units. Important factors must be carefully weighed ere a policy and plan of activity is instituted. To that end are we imparting, for the information of our members, the following interesting report:

REPORT OF THE COMMITTEE ON PUBLIC HEALTH AND PUBLIC RELATIONS OF THE CATTARAUGUS COUNTY MEDICAL SOCIETY, ADOPTED AUGUST 4, 1927

To the Cattaraugus County Medical Society:

Your Committee on Public Health and Public Relations has requested your Secretary to call this special meeting for the purpose of considering public health in this county, a matter which is of vital importance to the physicians and the citizens in general.

For the past four and one-half years there has existed in Cattaraugus County a County Board of Health, created by the Board of Supervisors to make possible participation by the county in the Rural Health Demonstration of the Milbank Memorial Fund. The Milbank Memorial Fund, and its agent, the State Charities Aid Association, following the creation of the County Board of Health, entered into some form of agreement with the county to supply for a period of five years, part of the funds necessary for the activities which the Board of Health would undertake. It also offered its services in the determination of the various activities, and the amounts to be expended for each activity.

The period of five years, for which this agreement runs, expires at the end of this year. Judging from correspondence received from the Milbank Memorial Fund by physicians and others in the county, it has become apparent that the Milbank Fund is quite desirous of extending the period of its demonstration in this county. Within the past two weeks the newspapers have reported an action by the City Council of Salamanca, endorsing the demonstration and requesting its continuation. We are informed that the Executive Committee of the County Tuberculosis and Public Health Association has before it at this time a similar proposal.

As yet the Medical Society itself has not been approached, nor has its approval as an organization been solicited.

However, your Committee has considered the advisability of determining the feeling of the physicians of the county, and more particularly the members of the County Medical Society, relative to an endorsement by the Medical Society of the continuation of the Demonstration.

The essential relationship of the practicing physician to public health, and his particular fitness to judge its benefits, its efficiency, and its worth, make it important that his opinion in regard to the particular plan of public health work in existence in this county, be made available at this time, when a consideration is being given to its continuation and extension.

We have felt that this opinion might be of value and assistance to the officials of the county, the members of the County Board of Health, and the staff of the Milbank Memorial Fund and State Charities Aid Association.

The efficiency of questionnaires in the accumulation of frank opinions is well known. Your Committee, after mature deliberation, determined to send to each physician in the county, whether

a member of the society or not, a clear cut and concise questionnaire, dealing with the Demonstration. This has been done. It is for a consideration of the data so obtained, and for appropriate action thereon, that this meeting is being held tonight.

Briefly, the manner of procedure in the questionnaire was as follows:

Questionnaires were prepared containing questions with which you are already familiar. Each question was stated in such a way that the answer would be brief and definite. After the preparation of the questionnaire, 64 copies were signed and sealed by a notary. The cards sent to non-members were signed by the notary in red ink, and those sent to members, in blue-black ink. With this exception there was no mark of identification on the cards.

The names and addresses of the physicians were then carefully checked by a clerk, and the 64 copies were mailed by the notary and an assistant to the 64 practicing physicians in the county.

A notation on each questionnaire stated that the physician's signature was not necessary. This was thought advisable, in order to obtain the fullest and frankest opinion.

Of the 64 questionnaires sent out, 52 have been returned. When the questionnaires were received they were checked by the notary, and identified as the questionnaires sent out. It was necessary to send out three additional questionnaires, two physicians losing theirs, and one having made mistakes in filling his out.

Following the checking of the returned questionnaire, a summary was made by the notary, of the answers. This summary is hereby submitted.

Total number of questionnaires sent out, 64.

Total number returned, 52.

Number received from non-members (red signature) 10.

Number received from members (blue-black) 42.

Of the 52 cards received, 18 were from local health officers. Summary of answers.

Question No. 1—In the event that the present Health Demonstration were to consider remaining in this county for another five years, would you favor the County Medical Society endorsing and requesting such a move?

"Yes".....non-members 2, members 10, total 12
 "No".....non-members 8, members 30, total 38
 Indefinite answers 2

Question No. 2—In the event that the Demonstration withdraws at the end of this year would you favor the continuation of the County Board of Health?

"Yes".....non-members 5, members 22, total 27
 "No".....non-members 5, members 18, total 23
 Indefinite answers 2

Question No. 3—Do you approve of the County Health Unit idea as developed and demonstrated in this County?

"Yes".....non-members 4, members 15, total 19
 "No".....non-members 6, members 23, total 29
 Indefinite answers 4

Question No. 4—Do you favor the co-operation of lay and unofficial bodies (such as the Milbank Fund and the State Charities Aid Association) in the official health work of this County?

"Yes".....non-members 3, members 9, total 12
 "No".....non-members 7, members 32, total 39
 Indefinite answer 1

Question No. 5—Has the present Health Demonstration affected your practice?

"None at all".....26
 "Favorably"14
 "Adversely"11
 Indefinite answer 3

Question No. 6—Do you believe that the present Demonstration is having a pauperizing effect on the people of the County?

"Yes"35
 "No"14
 Indefinite answer 3

Question No. 7—Do you think that the present Demonstration has increased or lessened respect for the practicing physician in the County?

"Increased"12
 "Lessened"32
 Indefinite answer 8

Question No. 8—What part or parts of the work of the present Demonstration do you think have proved of most value?

Tuberculosis work39
 Laboratory39
 Venereal disease clinics26
 Health education and publicity16
 Sanitation11
 Nursing11
 Infancy, maternity and child hygiene..... 9
 Communicable disease control 4

Question No. 9—What age group are you in?
 20 to 40 years, 14; 40 to 60 years, 25; over 60 years, 12; not answered, 1.

Question No. 10—Are you a local health officer? "Yes", 18; "no", 34.

Question No. 11—Do you think that the people of the County have had "value received" for the County's expenditures in the County Board of Health?

"Yes".....non-members 3, members 12, total 15
 "No"non-members 6, members 28, total 34
 Indefinite answers 3

We further feel that the County Medical Society should frown on efforts on the part of any organization to inject politics and political considerations into the public health situation in this county.

We, the members of your Committee, feel that there has been a good deal of propaganda dealing with "experts" and "expertness" which has reflected on the county, its people, and its medical men.

We feel that a good public health nurse must be primarily a good general nurse, and a good public health official primarily a good practitioner. One must first have experience in the disease, before one can effectively and with co-operation practice prevention.

We resent also the continuous campaign of glorification which has been a part of the present demonstration. We can see no more reason for such a campaign of praise of the workers of the County Board of Health than there is for similar adulation of any other officials of the county or the cities who are doing their duty, and we resent the efforts of interested persons to exploit the profession in which we are engaged.

We disapprove of premature and overenthusiastic reports in general. We resent in particular reports reflecting directly or indirectly, purposely or otherwise, on the practicing physician. We feel that the Demonstration has no monopoly on philanthropy. Physicians in this county year after year unostentatiously do a vast amount of progressive preventive medicine. They did so before the arrival of the Demonstration, and they will do so after its departure.

Your Committee therefore, moves the adoption of the following resolutions:

Resolved: That the Cattaraugus County Medical Society go on record as desiring the withdrawal of the Milbank Demonstration from this county, and opposing any request for its continuation after the termination of this year.

Further Resolved, That the Cattaraugus County Medical Society, go on record as favoring and supporting a county board of health, conducted on a modest and practical scale, and operated without interference from the State Charities Aid Association or other unofficial bodies.

Further Resolved, That the Cattaraugus County Medical Society, while expressing its appreciation to the Milbank Memorial Fund for its Cattaraugus County effort, records its opinion that this experiment has demonstrated the ineptitude of lay bodies to bring about properly the transfer of the theoretical to the practical.

Further Resolved, That a copy of this report be sent to the Committee on Public Relations of the New York State Medical Society, and that a copy of the minutes of this meeting be sent to our State Medical Journal.

The motion was carried.

It is evident from a study of the above answers that 52 out of 64 physicians, or over 81 per cent of the physicians, thought the questionnaire deserved consideration.

It is evident also, that 38 physicians in this county, much more than half of the total number in the county, definitely do not want to see the present demonstration continue. Only 12 are definitely in favor of its continuation.

In the event that the demonstration withdraws at the end of the present year 27 physicians would like to see the County Board of Health continue, but only 19 would have it continue in the way it has been developed and demonstrated so far.

Only 12 physicians in the county record themselves as favoring the entrance of lay and unofficial bodies such as the Milbank Fund and the State Charities Aid Association into the health work of this county.

In answer to the oft repeated assertion that the demonstration is helping the physician, 26 answer that they have experienced no such effect, and 11 report an adverse effect.

That the present demonstration is pauperizing the public is stated definitely by 35 doctors, and it is interesting to note, in a study of the questionnaire cards, that one of the physicians recording himself as favoring the demonstration, nevertheless reports this tendency.

It is an undisputed fact that the backbone of all effective public health endeavor is the family physician, yet 32 physicians record themselves as believing that the present demonstration is lessening respect for the practicing physician.

A study of the answers brings out, likewise, the fact that these opinions are held by non-members of the Society to as great an extent as by members.

Tuberculosis work, the laboratory, and venereal disease clinics meet with much more approval from the physicians than the other branches of the work, with communicable disease control, infancy, maternity and child hygiene, and public health nursing, as they have been conducted in *this* county, meeting with very little approval. Those activities which have been successful are those which have been proved elsewhere, are not experimental, and not subject to unofficial interference.

A study of the answers, tabulated by age

groups of those answering, shows that opposition to the demonstration is not confined to the older men, but is just as acute in the younger group.

To the question as to whether the county has had its money's worth, for the money the county itself has expended, 34 physicians give "no" as their opinion. The opinion of the physicians on this question is one which is of great interest due to their peculiar and fitting position to judge. No expert, no matter how competent, and regardless of where he is from, can, in a few days study of the situation here, form an opinion as valuable as that expressed by 34 physicians who have seen the demonstration at first hand, and clearly, for nearly five years.

Your Committee is of the opinion, after a careful study of the questionnaires, and after conference with medical men in this county, that the Cattaraugus County Medical Society should go on record as opposing a continuation of the present health demonstration after the end of the present year. We feel that five years of the Milbank Demonstration has demonstrated little that affects this county favorably, and it is in this county that we are interested. Rather has the demonstration demonstrated that, wherever lay bodies have attempted to interfere with and guide official health work, the result has been inefficiency and chaos. We, therefore, wish the Society to put itself on record as favoring a county Board of Health, but not the type of county board of health that Cattaraugus County has experienced during the past four and one-half years. We wish to record ourselves as favoring separate municipal health departments in the two cities of the county. We wish the Society to put itself on record as favoring and pledging its support to official health workers, not guided by the whims and fads of at times inexpert lay experts. To quote the words of a writer in the July 2, 1927 issue of the Journal of the American Medical Association:

"We have every confidence in all those specialists in public health who are legitimately specialists. We have a quite natural suspicion of those lawyers, politicians, business men, preachers, and otherwise unoccupied ladies, grouped so loosely and thoughtlessly as "social workers" who have not had basic training or understanding of those subjects to which we have so seriously and with single-hearted zeal devoted our whole preparation and life." And further quoting the same writer:

"We are back of every sensible measure of accredited preventive medicine. We are more than willing to play our essential part in the program of public medicine. We are not, however, a class prone to accept without due consideration the vapors of every volunteer amateur Moses."

We wish the Society to oppose any tendency to build up in this county an expensive and unwieldy health machine. We feel that there are limits to the amount of money that can be spent with profit for public health, and limits to the numbers in personnel which a county of this size should support. We feel that the farmers of this county, whom we recognize as its backbone, should not be asked to support the large number of public health nurses which they now, through state and county taxes, are supporting. We feel that public health work, like other public works, is ruled by a law of diminishing returns, and that increasing expenditures are not necessarily followed by corresponding increasing returns.

MONTHLY COMMENTS

Medical—Economic—Social

The sympathy of our members goes forth to Dr. W. K. West by reason of the death of his wife that resulted suddenly from a heart infection. Mrs. West was the first vice-president of our Woman's Auxiliary, assuming office at the Mackinac meeting.

The House of Delegates of the A. M. A. passed a resolution setting forth that physicians are under no obligation to provide information for insurance companies without remuneration. We submit this information for those who are being so imposed upon.

Post-graduate conferences are being resumed. During September, four have been booked. Mail notices, enclosing the program, will be sent to each member in the district. We urge anew that you avail yourself of these opportunities—you can ill afford to miss them. Each one will be of profit to you and is well worth the time expended.

Within the week we learn of two typhoid deaths and also the death abroad of one of America's leading financiers. We wonder who it was that failed to urge typhoid vaccination. Typhoid deaths result from pure neglect and in most instances may be prevented. Urge your patients to be vaccinated and point out to them the protection that will be afforded to them.

Again do we call attention to the department conducted by the State Commissioner of Health. In this issue there is contained a progress report on the Maternal Mortality Survey that is being conducted through the state. It imparts some very pertinent facts. Make it a point to read all that is published in this department each month.

The Clinical Congress of the American College of Surgeons will convene in Detroit, October 3 to 7. Some clinics will also be conducted at the University Hospital, Ann Arbor. Dr. A. W. Blain is chairman of the local committee on arrangements. The evening sessions will be held in the new Orchestra hall on Woodward avenue. All the hospitals in Detroit will participate in the clinical program.

The postoffice department has ruled that the recipient of unordered goods is not responsible for their receipt or return. There is noted an extending practice of some business firms to send out ties, handkerchiefs, cigars, etc., to a miscellaneous list and then request you pay for or else return these unordered commodities. If you haven't ordered, don't return the goods; keep 'em, for that is the best way to stop this imposition. The stuff is never a bargain and in most instances they are cheap, shoddy material.

A large portion of our advertising copy changes each month. New commodities are announced and new facts are stated. New advertisers also appear. These advertisers patronize and so make The Journal possible. They are entitled to your

patronage. We urge anew that our members give preference to these advertisers, when placing orders for drugs, supplies and equipment. We need these advertisers, they desire your business: please enter into business relations with them.

Dr. C. B. Burr, Durant Hotel, Flint, Chairman of the Special Committee that is compiling a medical history of Michigan, desires to secure pictures of historical interest as well as authentic items of the pioneer days of Michigan. Pictures of pioneer physicians with horse or pony and saddle bags; pictures of saddle bags and horse equipment; pictures of medicine cases and bags, the old sulkey and snow shoe equipment. Please aid Dr. Burr by going through your files and storage places and send to him such pictures and articles as you may deem to be of historical interest.

We receive between seventy and eighty Journals in exchange each month. We endeavor to review each one for it affords an excellent means for keeping abreast with scientific and organizational progress. We sense also the trend of thought and individual opinions. Thinking, unselfish, aggressive leaders, working for the common weal are perceived and we follow with keen interest the achievements that they are recording. We gain a broad perspective and glimpse the high ideals that are evidenced. We experience a thrill and in turn are urged on to add our mite to the composite whole. And then we endure a depression because we detect such a widespread evidence of disinterestedness on the part of the large number of the rank and file who remain unresponsive. We witness their pursuit of selfish interests and the manner in which they ignore their co-worker. We wonder why? We wonder also how they may be aroused and united in support of our policies and activities.

September brings about the resumption of County Society meetings following a summer's vacation. The interest in a meeting and the percentage of attendance is a responsibility that rests upon the program committee. Members will not attend meetings that create no interest. We fully recognize the difficulty of constructing interesting programs. They cannot be plucked from the air. To formulate them requires advance planning and thinking. Case reports always arouse interest and should be incorporated in each program. One or two short papers with designated members prepared to open the discussion ever proves profitable. Your neighboring County Societies will exchange programs with you. This office will aid in every possible manner to assist in securing speakers. What we desire to stress is that you plan your program several meetings ahead and cover a definite list of subjects.

Following the endorsement of the Hennepin County Medical Society at the last annual meeting, its president appointed a committee of seven

members to survey the general hospital at Minneapolis. The committee on health and hospitals had previously held a special meeting to discuss a proposed increase in the capacity of the hospital; the appointment of the survey committee arose out of this discussion. The committee was requested by the council committee of seventeen to broaden the scope of the survey so as to furnish a report which would indicate the further needs of the hospital. Before proceeding, the subject of the survey was formally placed before the board of public welfare which authorized the survey with the understanding that a report should be submitted to the board before being published or given to any other organization. There is no question, it is said, of the popularity of the general hospital, but before increasing the bed capacity, it was considered best to analyze the hospital situation and to determine its normal function. Among the conclusions reached by the committee were the following:

That the general hospital has assumed a function and a dignity in the community which is not consistent with its normal character, which was never contemplated by its creators, and which is not in accordance with the intent of the laws governing its existence, and which has imposed an unnecessary burden on the tax-paying part of the community.

That, under the present standard for indigency as used for admission to the hospital and dispensary, an unreasonably large part of the population would be eligible to free care.

That the present methods of investigation of persons is inadequate and inaccurate and encourage the use of these facilities by many persons who are not entitled to public relief.

That an appreciable number of people are now admitted who do not necessarily require hospital care.

That the present system of computing the obligations of the part-pay patient is unsound and based entirely on inadequate information.

That the present congestion in the hospital is due to some extent to the presence of patients not entitled to service in a charity institution.

That it is impossible to estimate or predict either the present or future needs of the general hospital until a thorough system of investigation of applicants and a better scheme of indigency has been established and in operation for at least two years.

Among the recommendations were the following:

That the board of public welfare be requested to establish an "admitting and collection department" for the general hospital and auxiliary institutions, this department to be in charge of a trained financial investigator and credit man who will have complete control of the eligibility of all persons making application for hospitalization or treatment at public expense and be responsible only to the board of public welfare.

That an advisory committee be created, composed of one member of the board of public welfare, one member of the Hennepin County Medical Society, and one member from the Minneapolis Tax-Payers' Association; this committee to meet twice a month with the admitting officer for the study of questionable and borderline cases with a view to developing satisfactory rules for his guidance.

Evidently our members are not keen for im-

parting "What They Know," for our series of questions in the last issue evoked but one reply, which we are imparting. There is one error—Hugh Cummings is Surgeon General of the U. S. Public Health Service, while Merritt W. Ireland is Surgeon General of the Army. These answers will supply information which should be of interest to all.

1. What is the latest treatment of pernicious anemia?

Cut down on all sweets, sugars, and starch. As a rule cases of pernicious anemia have low blood pressure; therefore give them quite a nitrogenous diet, with plenty of vegetables and fruits, whole wheat bread, only one egg a day, if any, for breakfast preferably. Eat cooked calve's liver, about seven or eight ounces a day for a month, then probably less of it will do. Live on a plus diet, with liver for lunch and dinner at night, four ounces each time. A helping of tender beef-steak occasionally is fitting. If you eat butter, cream, sugar, and starches, it will keep you away from eating the things you need, the fruits, vegetables, meats, and liver. Use no tonics, no iron, no arsenic, and no hydrochloric acid.

2. What are the steps necessary to become a member of the A. M. A.? (b) A Fellow of the A. M. A.?

To become a member of the A. M. A., it is first necessary to be a member of a County Medical Society which holds a charter from the State Society. The Constitution of the Michigan State Medical Society provides that the members of the State Society shall be the members of the Component County Medical Societies. His membership in the State Society makes him a Member of the A. M. A. He must pay his state and county dues annually to the Treasurer of his County Society, and the Treasurer forwards his state dues to the State Society, his certificate of membership in said State Society comes from the state office each year.

(b) To become a Fellow of the A. M. A., it is necessary for one to be a Member of the A. M. A. and then pay an additional fee of \$5 to the A. M. A. This fee also covers the price of subscription to the Journal of the A. M. A.

3. What is the present day treatment of erysipelas?

First, avoid spread of infection by isolation of the patient. Particular care to keep the patient away from puerperal cases or young children. All dressings should be removed and burned. Use an antistreptococcus serum. There is also an erysipelas phylacogen which may be used.

4. What is the purpose of HYGEIA, published by the A. M. A.?

HYGEIA is a magazine of Health. Its object is to bring prominently before the public the factors of Preventive Medicine, putting them in such a way as to be interesting to the lay mind, at the same time holding strictly to scientific facts. It aims to bring to the reading public the methods of disease prevention. It tells a patient the things about modern health progress, sanitation, diet and exercise that a doctor wants them to know. It is the medium for a better understanding of the medical profession by the public.

5. Give five reasons why a person should submit to a periodic physical examination.

(a) Because such an examination will increase your chances for longer life.

(b) Because if your physician finds that you are in good health, it will be valuable and stimulating for you to know it.

(c) Because your doctor may find beginning trouble which can be corrected without delay, saving you future pain and suffering.

(d) To prevent, to anticipate and to correct any degenerative or other disease, and teach one to practice individual hygiene.

(e) To make a proper record of our findings.

6. Where do you find the column, Tonics and Sedatives? Who writes it?

It is found in the back part of the Journal of the A. M. A., the center column with an advertising column on either side of it. Dr. Morris Fishbein writes it.

7. Who and where do they live?

President of A. M. A. Dr. Jabez N. Jackson, Kansas City, Mo.

President Michigan State Medical Society. Dr. Herbert E. Randall, Flint, Michigan.

Secretary of the A. M. A. Dr. Olin West, Chicago, Illinois.

Surgeon General of the Army. Dr. H. S. Cumming, Washington, D. C.

Chairman of the Council. Dr. R. C. Stone, Battle Creek, Michigan.

State Commissioner of Health. Dr. Guy L. Kiefer, Detroit and Lansing.

Secretary, Board of Registration. Dr. Guy L. Connor, Detroit.

President, Board of Registration. Dr. Geo. L. LeFevre, Muskegon.

Dean of Detroit College of Medicine and Surgery. Dr. W. H. McCracken, Detroit.

Dean of Medicine Department, U. of M. Dr. Hugh Cabot, Ann Arbor.

8. How many members in your County Society? 78. How many eligible non-members in your county? 64.

9. What is the differential diagnosis of extradural and subdural hemorrhage?

Extradural hemorrhage is outside the dura. It is due usually to injury to the cranium. Subdural is beneath the dura; it is found not infrequently in the insane. There are no characteristic symptoms which serve to distinguish between them; no distinction between them during life.

10. State five facts revealed by our Special Committee on Hospital Charity in their report published in the July issue.

(a) Some of our training schools are preparing nurses for social welfare work. The expense of this should come out of the community, rather than out of the patient in the hospital that is helping support the training school.

(b) To guard against inefficiency, no doctor should be imposed upon to donate services to those who might pay part or all of the regular fee, and that it should be his privilege to refuse service if he sees it is just and best.

(c) At the University Hospital the professional fees obtained from patients amount to about enough to pay the present salaries of the chiefs and assistants.

(d) Those counties which have poor hospital facilities send to the University Hospital a larger proportion of patients than those counties which are well supplied with hospitals.

(e) In its present equipment and operation, the University Hospital has digressed from its original purpose, that of furnishing clinical material to the Medical School.

Answered by Dr. A. B. Corbit, Oxford, Mich.

DEATHS

DR. SAMUEL BELL

Dr. Samuel Bell, died July 16, 1927 at his summer home at Algonac. Dr. Bell was born in St. Johns, New Brunswick, March 5, 1856. His early education was in the Province of New Brunswick. He graduated from the Detroit College of Medicine in 1881 as physician and surgeon. Later he took post-graduate work in Bellevue Hospital, New York. He studied abroad in 1909. He was medical superintendent of the Upper Peninsula Hospital for the Insane from 1895 to 1903. He was appointed a member of the first State Board of Medical Registration in the state of Michigan by Governor Hazen S. Pingree about 1899. He was appointed a member of the State Board of Corrections and Charities by Governor Edwin B. Winans in 1891.

He was an honorary member of the Wayne County Medical Society, a member of the Michigan State Medical Society and of the American Medical Association. Fraternally he was a member of Damascus Commandery, Knights Templar and Moslin Temple and of the Mystic Shrine of Detroit.

Dr. Jean Vernier Bell, his widow, and two sons, Herbert D. Bell and Leland D. Bell, survive him. Dr. Bell retired from active practice in 1920 because of ill health.

DR. JAMES R. KINGSLEY

Dr. James R. Kingsley, for the past twelve years one of Three Rivers most prominent physicians and surgeons, died suddenly July 1, 1927. Dr. Kingsley was at work at the former Three Rivers Hospital, which he was preparing for the occupancy of his family, when he was suddenly stricken and death was probably caused by the rupture of a blood vessel while lifting.

Dr. Kingsley was born in Monroe County, Mich., June 5, 1869, where he lived until fourteen years old when the family removed to Ypsilanti. He graduated from the high school and in 1890 from the State Normal. For a period of three years he was principal of the Chassel, Mich., schools and in 1893 entered the University of Michigan medical school, graduating in 1897. After graduation he was in charge of the Eloise Hospital, and in September 1897 located in Sheboygan, Wis., where he practiced for eighteen years. In 1915 he came to Three Rivers and purchased the building and grounds known as Bonnie Castle and in September of that year opened the institution known as Three Rivers Hospital. He was head of the hospital for six years and during the World War and the epidemic of influenza his services to the community were such as never can be estimated. During the past six years he has devoted his time to the practice of medicine.

Dr. Kingsley had a wide circle of friends in his community and was very successful as a surgeon. His efforts, combined with those of Mrs. Kingsley, who was matron of the hospital, have saved scores of lives as he held the highest standard of devotion to duty and obligation to the clients and patients whom he served. He was also very active in civic affairs. Besides his widow he is survived by a daughter, Miss Zelda Kingsley, and a son James Palmer Kingsley.

O U R O P E N F O R U M

Affording Opportunity for Personal Expression

STATE MEDICINE

Mt. Pleasant, Mich.

Editor of The Journal:

As I read Dr. Fishbein's article in the August Journal I could not but wonder why he did not discuss the real cause of the growth of state medicine, the real cause of socialization of medicine.

For thirty years my practice has been among the common people and I can see just when the socialistic idea began to develop in the practice of medicine, just why the University of Michigan collects \$10 per head annually, from all students entering the University, about \$100,000 or more, for very poor medical service. Socialism of medicine has grown rapidly since the profession refused to make a charge until they could look up the patient's bank account.

When I was in college it was safe to call in a doctor in case of illness. We knew he would give the best service possible to render, and the bill would not send us home penniless. What happens today? Even the State Hospital will not admit a patient until they write to the patient's home to learn how much can be squeezed out of him or her. Socialism of medicine at the University of Michigan started to protect the students from the doctor's extortion. That only has caused the growth of free clinics of various kinds.

Instead of being ready to render service for a reasonable price until the time came that the doctors had educated the people to know the value of disease prevention, the doctor took advantage of all these efforts to promote public health to collect as long fees as he could, at the same time some of the people knew the doctor was selling his service to insurance companies for a very small fee, in fact the Insurance company and the Indemnity company dictate the fee the doctor receives, which will not average above 25 per cent of the fee the doctor would charge a private patient for the same service.

What can be done to meet the situation we now face?

Organize clinics in each county for the examination of all the people who will come, not just the children, all the people. Give no advice without pay. Let the doctor dictate the time, place, and manner of conducting these clinics and in a very short time the health organization will be assisting the doctor in this work, not the doctor assisting the Mt. Pleasant Welfare Society. Such men as Blodgett of Detroit hold free clinics in their office once a month.

I say that if the doctors will try they can put all the health societies in Michigan out of business in one year.

Fraternally,

Chas. D. Pullen, M. D.

MEDICAL EDUCATION

Detroit, Mich

Editor of The Journal:

Replying to your letter of June 24, I will advise you that I will accept the appointment made

by President Randall as a member of the Committee on Medical Education of the Michigan State Medical Society.

Any services that I may be able to render the Society are always at its disposal.

Yours sincerely,

W. H. MacCraken, M. D., Dean.

EXAMINATIONS

Chicago, Ill.

Editor of The Journal:

Will you kindly make an announcement that the American Board for Ophthalmic Examinations will conduct an examination at Detroit on September 12, 1927, and that particulars pertaining to the application for the certificate of the Board can be obtained from the Secretary, Dr. W. H. Wilder, 122 S. Michigan Ave., Chicago.

Thanking you for your attention to this matter, I am,

Very truly,

Wm. H. Wilder, Secretary.

WAYNE SOCIETY MEETINGS

Editor of The Journal:

Please insert in the September number of the Journal of the Michigan State Medical Society, notice of meetings of the Wayne County Medical Society as follows:

September 20.—General meeting. Installation of the President-Elect, Geo. VanAmber Brown, M. D. Address by Hon. Fred W. Green, Governor of the State of Michigan.

September 27.—Surgical Section. "Surgical Treatment of Suppurative Diseases of the Lung (Non-tuberculous)." Wm. A. Hudson, M. D., Detroit.

Very truly yours,

F. M. Meader, M. D.

Chairman, Program Committee,
Wayne County Medical Society.

EPINEPHRINE IN PROGRESSIVE MYOPIA

Meyer Wiener, St. Louis (*Journal A. M. A.*, August 20, 1927), reports his observations on the effect of epinephrine on myopia. Local instillations of epinephrine hydrochloride, 1:1,000 were made, three times daily, in a series of patients believed to be affected with myopia of the progressive type. Reading, or the use of the eyes for close work, was not restricted, except in the sense that it should not interfere with daily regular outdoor exercise. A rational wholesome diet was also advised. More than fifty cases have been treated in this manner. None of the cases showed as much progress for worse as before epinephrine was administered, and in only two cases was there any increase in refraction at all after the epinephrine had been administered. Many of them showed actual improvement. It seems fair to assume, then, that the beneficial influence of suprarenal secretion on progressive myopia, both locally and generally, though exercise and diet, is probable, or, to say the least, strongly suggestive.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Doctors F. L. Seger and Harry Weinburgh of Lansing, plan sailing for Europe the middle of September.

We failed to receive report of the annual meeting of the Upper Peninsula Medical Society in time for publication in this issue.

Dr. Millard Smith of Boston, has been added to the Simpson Institute staff of the University.

Dr. A. A. Rosenberry and Miss Grace Perrian of Benton Harbor, were married on July 26th.

Dr. Frank Holdsworth is the new president of the Munson Hospital staff, Traverse City.

Dr. R. A. Stephenson, formerly Health Commissioner of Flint, and for the past two years engaged in post-graduate work in pediatrics, resumes practice in Flint on September 1st.

The Genesee County Medical Society will tender a complimentary dinner on September 9th to Dr. H. E. Randall, President of our State Society.

A Travel Club, composed of forty British medical men, will spend two days of their American tour in Grand Rapids on September 8 and 9. They will be entertained at dinner by the Kent County Medical Society.

The Johnston Optical Company of Detroit, have opened a new office in the Medical Arts Building, Grand Rapids.

INCREASING IMPORTANCE OF POSTMORTEM EXAMINATIONS

In this country necropsies are assuming a rapidly increasing importance in connection with medical education, medical practice and public welfare. In the opinion of medical educators, so often heard of late, the percentage of necropsies in a hospital is an index of the hospital's actual efficiency. Through postmortem examination a better understanding is obtained of the symptoms and signs noted in the clinical examination of patients and of the causes of deaths of patients suffering from peculiar or complex conditions. Through necropsies, indeed, medical students and physicians ascertain what particular pathologic condition underlies each of the signs or symptoms noted in the living patient. The hospitals in which necropsies are held on the highest percentage of persons who die are also those that keep the most accurate records of their patients, particularly with regard to the actual causes of deaths. In such hospitals the value of the various forms of treatment followed is carefully ascertained. But necropsies have still another important function to perform. Medical practice apparently is coming more and more to be carried on in hospitals and by groups of physicians rather than by individuals. Through necropsies a reasonable check is kept of the possible errors of omission and commission made by the members of a staff—a check which all honorably conducted hospitals voluntarily provide and which should doubtless be a requirement in all other hospitals. This check changes the atmosphere of a hospital from that of one conducted for revenue only to one that is endeavoring to furnish the best possible service for the public. With such high purposes in view, the friends of deceased patients are to an increas-

ing extent willing to have the necropsies performed; indeed, without such high purposes the performing of a necropsy is not justified. In order to secure the best results from postmortem examinations, the hospital must necessarily have on its staff a physician who is not only expert but who specializes in pathology. To secure the highest service from necropsies, also, they should be held in connection with conferences in regard to deceased patients attended by interns and members of the staff. In hospitals having this routine of necropsies and conferences, the most satisfactory instruction can be provided for interns. There is created an atmosphere of investigation into the causes of disease and the possibilities of their cure. The intern learns to realize the greater service that such hospitals are rendering to their patients. As there are now many more hospitals seeking interns than the annual output of medical graduates will supply, the Council on Medical Education and Hospitals has adopted a ruling that, after January 1, 1928, hospitals will not be approved for the training of interns unless necropsies are held on at least 10 per cent of patients dying in the hospital. This requirement automatically makes it necessary also for each hospital to establish a well ordered pathologic service headed by a physician specializing in pathology. This ruling is neither drastic nor unreasonable, since most of the hospitals approved for the training of interns are already voluntarily obtaining increasingly higher percentages of necropsies.—*Journal A. M. A.*, August 20, 1927.

PARATHYROID HORMONE AND CALCIFICATION OF FRACTURE CALLUS

On the assumption that, because the injection of parathyroid extract increases the calcium in the blood stream there will be more available calcium for deposit in fracture callus, have been based certain clinical trials of parathyroid extract in the treatment of delayed union of fractures. The occurrence of union after the use of the hormone has confused the issue. It is the belief of Edwin P. Lehman and Warren H. Cole, St. Louis (*Journal A. M. A.*, August 20, 1927), that parathyroid extract is being widely used on the misapprehension that it is of such value. They undertook a simple series of experiments which tend to support concretely the *a priori* reasoning outlined, and which present evidence that the favorable results in delayed union that have occurred following the use of parathyroid extract have not resulted from any beneficial action of the hormone. Four litters of white rats totaling forty individuals were employed. In the white rat, the injection of parathyroid extract does not hasten the calcification of fracture callus. If the injection of parathyroid extract has any influence on the rate of calcification of fracture callus, it tends to delay the process. The untreated controls showed an average callus strength of 69.6 per cent of the strength of the normal bone, as compared with 63.7 per cent in the rats given parathyroid injections.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EATON COUNTY

The annual picnic of the Eaton County Medical Society will be held at Pine Lake, Olivet, Thursday, August 25th, 1927. Dinner will be served at 1 p. m., E. S. time—Pot luck. Bring your dishes, sandwiches and one other dish. Coffee will be furnished.

Scientific program at 2:30 p. m., as follows:

1. Dr. C. A. Stimson of Eaton Rapids, will give a short paper on "Rectal Pathology Due to Extra-Rectal Causes."
2. Dr. A. M. Barrett of Ann Arbor, will address us on "Some Psychiatric Problems of the Present Day."

Every one make a special effort to bring the family and be present.

H. J. Prall, Sec'y.-Treas.

ALPENA COUNTY

A joint meeting of the Alpena County Medical Society and the Northern Michigan Medical Society, the latter embracing the counties of Antrim, Charlevoix, Emmett and Cheboygan, was held at The Pinehurst Inn, Indian River, Mich., July 21, at 4 o'clock, p. m.

There were some 30 physicians present together with their wives and families and a most enjoyable meeting and social time was had.

Papers were read or addresses were delivered by the following physicians.

1. The Medical treatment of Appendicitis, Dr. A. J. McKillop, of Wolverine, in which the doctor made a strong plea for a more careful medical study of our cases of appendicitis and less haste in urging operation. This paper was freely and fully discussed and many interesting points brought out.

2. What about the Vitamines? Dr. D. H. Duffie of Central Lake. This paper was unique both in subject matter and in the manner of presentation. Those of us who know Dr. Duffie recognize his ability as a student and thinker and he told us much of Vitamines that was highly practical in our every day work.

3. Blood transfusions. Dr. F. J. O'Donnell of Alpena. This was a very timely paper calling attention to the more urgent need and frequent uses of blood transfusion and giving a simple workable method for its employment.

4. Management of the more common injuries and diseases of the eye, Dr. W. B. Newton of Alpena. This talk was a brief review of the more common eye conditions as first seen by the general practitioner with some timely suggestions as to their treatment.

Following the program a lovely dinner was served by the management of The Pinehurst Inn, following which we had the pleasure of a fine heart to heart talk by Dr. Guy L. Kiefer touching on the work of the State Department of Health, in which Dr. Kiefer made a strong plea for closer co-operation between his department and the physicians of Michigan.

W. B. Newton, Secretary.

GRAND TRAVERSE-LEELANAU CO.

The regular monthly meeting of the Grand Traverse-Leelanau County Medical Society was held Tuesday, August 2, at the General hospital. During the day Dr. Ralph Balch of Kalamazoo, conducted a surgical clinic, operating several cases (three hernias, one carcinoma of the breast, one carcinoma of the lip, one osteomyelitis of the heel, and one exploratory gall bladder).

At six o'clock dinner was served in the recreation parlor of the general hospital, at which time Dr. Balch reviewed the work he had done in the afternoon. Dr. Roger Morse of Cincinnati, who is a summer neighbor of Dr. Victor C. Vaughn at Old Mission, gave an interesting talk on the various heart affections. Dr. E. H. Cary of Dallas, Texas, who also summers here, spoke on the subject: "Diarrhea due to Otitis Media," which was very profitable to us. All these papers were freely discussed by many present. Other outside guests were Dr. Huntly of Lansing, Dr. O. E. Chase of Chicago, and Dr. O. L. Ricker, District Councilor, of Cadillac. Dr. Roger Morse was instructed to convey to Dr. Victor C. Vaughn, who is ill, the love and esteem in which he is held by all the members of this society.

On August 9, Dr. Ernest A. Pohle, assistant professor of Roentgenology and in charge of Physiotherapy at the U. of M. hospital, gave a round table talk on Radiology and Physiotherapy, at the Golf and Country club. Everybody was there, to enjoy the good dinner and the splendid talk given by Dr. Pohle. Many laboratory workers from neighbor cities were present, and the evening was a most profitable one. Dr. Pohle was ably assisted by Dr. Berby, of the University hospital staff.

Our annual picnic was held July 29. Dr. J. J. Brownson of Kingsley invited us to his beautiful summer home at Arbutus lake. It was a great day, a fine large gathering, and a wonderful dinner. Dr. and Mrs. Brownson know how to do it. Everybody went, taking their wives, children, grandchildren, and a few sweethearts thrown in.

Dr. and Mrs. E. L. Thirlby sail September 2 for England, to be gone two or three months.

G. A. Holliday, Secretary.

LENAWEE COUNTY

May 19, 1927.

The regular monthly meeting was held in Adrian, at the Public Library. Only six members were present, this being the smallest attendance this year.

The program consisted of moving pictures showing how the different biological products of the Park, Davis company are made. Dr. J. A. Boersig of that company gave an explanatory talk previous to the showing of the pictures, and after they were shown he answered questions asked by the members. The informal discussion

lasted over an hour and the men who were present felt well repaid for coming.

June 9, 1927.

The regular monthly meeting was held in Morenci, at the hotel. This meeting was held early in the month so that there be no interference with school or college graduations or the State Meeting.

The members of Fulton County, Ohio, were present in good numbers. Dinner was served in the dining room of the hotel at seven o'clock; thirty-six being seated.

After the table was cleared the program was opened with a paper by Dr. C. H. Heffron of Adrian who talked on the "Bedside Differential Diagnosis of Diseases of the Upper Abdomen." In his paper he included, Renal Colic, Gallstone Colic, Acute Pancreatitis, Intestinal obstruction, thrombosis of Mesenteric Artery, and Appendicitis. In his talk he laid special emphasis on the importance of a careful and complete history, the importance of pain, hemorrhage, and jaundice, and last, reliable laboratory study. Dr. Heffron spoke just seventeen minutes, but covered his subject very well considering the magnitude of it.

The second paper was given by Dr. L. J. Stafford of Adrian, who spoke on the "Surgical Treatment of Diseases of the Upper Abdomen." Dr. Stafford emphasized the importance of a careful history and the fact that each case must be individualized. His paper included Peptic Ulcer, Gallbladder, and Stomach. He spoke on the anatomy of the stomach, hyperacidity, perforation and indications for the removal of the Gallbladder. Dr. Stafford spoke for eighteen minutes.

The discussion was opened by Dr. Saulsbury of Fulton County, and was followed by Dr. Murbach, also of Fulton County. The informal discussion was continued by remarks by Doctors Chase and Westgate.

Dr. James D. Bruce of Ann Arbor, Councilor of this District was present and brought with him from Ann Arbor, Dr. Sundwall, who gave a very interesting talk on the work being done in the field of Preventive Medicine.

Dr. Lane of Hudson described a fatal case of Carcinoma of the Trachea, observed in his practice at a recent date.

Adjournment.

R. G. B. Marsh, Secretary.

JOINT MEETING OF NORTHERN MICHIGAN MEDICAL SOCIETIES

An unusually pleasant and profitable meeting was held Thursday, July 21, 1927, at the Pinehurst Inn, Indian River, by the Northern Michigan Medical Society and the Alpena County Medical Society, the following physicians being present:

J. B. Brown, Levering.
 C. A. Carpenter, Onaway.
 W. E. Chapman, Cheboygan, President Northern Michigan Society.
 D. H. Duffie, Central Lake.
 E. L. Ford, Gaylord.
 R. O. Ford, Gaylord.
 F. F. Grillet, Alanson.
 G. L. Grillet, Alanson.
 G. L. Kiefer, Lansing, Commissioner Public Health.
 W. H. Mast, Petoskey.
 F. C. Mayne, Cheboygan.

A. J. McKillop, Wolverine.
 G. L. McKillop, Wolverine.
 F. F. McMillan, Charlevoix.
 A. R. Miller, Harrisville.
 N. C. Monroe, Rogers City.
 W. B. Newton, Alpena, Secretary Alpena Society.
 F. J. O'Donnell, Alpena.
 W. F. Reed, Cheboygan, Secretary Northern Michigan Society.
 H. E. Shaver, Boyne City.
 A. C. Tiffany, Mackinaw City.
 B. H. Van Leuven, Petoskey.

Dr. A. J. McKillop read a paper asking consideration for medical treatment of appendicitis in absence of definite symptoms for surgical intervention. He cited the increased mortality in this disease, stating the figures to be fully as favorable for routine medical as for routine surgical treatment. He scouted the existence of chronic appendicitis as a surgical disease, quoting G. W. Crile as saying that in most of his cases operated on for chronic appendicitis the symptoms were unrelieved.

Dr. D. H. Duffie presented an informal paper dealing with the prevalent morbidity due to partial and unsuspected vitamin deficiency. Shortage of vitamin B is shown to produce a variety of gastro-intestinal disease, ranging from anorexia and constipation to appendicitis, colitis and gastrin ulcer. Attention was called to whole grain products as logical source of vitamin B, and to yeast or the yeast extract "Vegex" where whole grain bread is not obtainable. The problem was considered particularly from the point of view of the poor patient in small north-country communities, showing several whole grain products now obtainable through Chicago mail order houses, and also a 100 per cent whole wheat bread produced by a local baker.

Dr. F. J. O'Donnell gave an excellent paper on blood-transfusion as a procedure for the isolated practitioner. He feels that most of the so-called direct methods are too tricky for one using them only occasionally and that the methods of choice for the practitioner are the citrate method or the syringe method of Krouse. Blood typing requires only a small quantity of known sera of types two and three, procedure being rapid and simple. Where not urgent, a few drops of blood from donor and recipient can be drawn into a c. c. of normal saline and sent to the laboratory for typing. He called attention to the fact that in severe hemorrhage, as from gastric ulcer, immediate transfusion tends to stop rather than to renew the hemorrhage. He urged transfusion in all severe anemias as well as a pre-operative procedure in all cases where the subject is not a perfectly good surgical risk.

Dr. W. B. Newton gave a most helpful talk on the handling of eye diseases and injuries by the practitioner. He stressed the importance of complete ocular anesthesia in the removal of foreign bodies and prefers Butyn. He advised curetting of the blackened corneal tissue underlying hot bodies and not bandaging the eye for trivial injuries. Vital importance of atropine in all cases of iritis and in penetrating injuries was strongly emphasized: When in doubt use atropine: the only contra-indication—glaucoma—being readily differentiated by the pupil being already dilated. He strongly deprecated the advice too often given parents of a squinting child that the child would "out-grow the trouble." By the time it is realized that "out-growing" will not do

the trick, vision in the turned eye is permanently lost. He pointed out that practically all convergent squint is due to a strong hypermetropia and suggests the simple expedient of blurring the good eye with atropine thus conducing to the use of the turned eye which then often becomes the straight one. In many cases it is useful to keep the eyes alternately under the influence of atropine, each one for a month at a stretch. By this simple means atrophy from disuse is prevented until the child is old enough for refraction and glasses.

Following a particularly enjoyable banquet which was enlivened by the presence of the wife of each of several of the doctors the assembly was addressed by Dr. Guy L. Kiefer, State Commissioner of Public Health who spoke of the Relationship of the Physicians of Michigan to the State Department of Health. He voiced the importance of all reports to the Board: that of the births that the increase of population might be known; that of deaths that the rate of decrease of the population; and especially that of contagious diseases that the Board might work with the physicians to control and abate epidemics and to study with the physicians how best to prevent such diseases. He showed that the Board needed the practitioner just as much as the practitioner needed the Board and that one was fully in accord with the other.

The meeting was thoroughly enjoyed by all present and there were many wishes that we might repeat the experience or at least have a similar meeting at no distant date.

W. F. Reed, Secretary.

CLOSING THE BACK DOORS TO MEDICAL LICENSURE

The standards of both preliminary and medical education in medical licensure have advanced, although not so rapidly as in medical schools because the securing of legislation is necessarily a slow and sometimes hazardous process. Since the investigation and classification of medical schools began, licensing boards in gradually increasing numbers have secured legislation authorizing them to refuse to examine graduates of low grade medical schools. By 1920, the diplomas issued by such schools were scarcely worth the paper they were printed on in all but a few states. Since 1920, indeed, only three states, Arkansas, Connecticut and Florida, continued to provide wide open doors for the licensing of poorly qualified doctors. These three states also had separate boards of eclectic medical examiners. The eclectic boards were legally limited in their examination of physicians to graduates of eclectic medical colleges. Since only one bona fide and one nominally eclectic still existed, the numbers applying for license were comparatively few. During 1921, however, the Electic Board of Connecticut, as shown in the state board statistics published in 1922, apparently threw open its doors to all applicants possessing credentials which could serve as an excuse for their admittance. Instead of licensing from one to five candidates each year, Connecticut suddenly increased the numbers to sixty-six in 1921 and seventy-four in 1922. The statistics published in April, 1923, led to an investigation in Connecticut, and by June, 1923, the licenses of about fifty physicians, declared to have been illegally secured, were revoked in that state. The exposure of the Missouri diploma-mill ring in October, 1923, added impetus to the activities in Connecticut, and the licenses of 167 physicians

were revoked. This action in Connecticut closed one of the three open doors for the licensing of incompetent doctors.

In Florida, when a single composite board of medical examiners was established, Dr. G. A. Munch, the secretary of the former eclectic board, refused to turn over his records to the new board and continued to issue licenses which, by being dated back, were given the appearance of legality. Munch added diplomas of a nonexistent medical college to his wares whereby he could fully equip would-be doctors with all the essentials. A year ago, however, the secretary of the composite board of Florida, aided by the inspectors of the Post Office and Narcotic departments of the government, secured evidence against Munch by which, last May, he was convicted of using the mails for fraudulent purposes, was fined \$1,000, and was sentenced to serve five years in the penitentiary. This vigorous action stopped the licensing in Florida of improperly qualified physicians.

Arkansas is now the last state which, through its board of eclectic examiners, is still willing evidently to license any nominally "eclectic" candidate, however lacking he may be in educational qualifications. Although the diploma mills of Missouri have had their charters revoked, new charters were easily obtained and new institutions have arisen from the ashes of their predecessors, occupy the same sites, and apparently are conducted by the same interests. One of these new institutions is "eclectic," but the other is silent as to its intentions. A third low grade apparently regular school in Boston has now distinctly adopted the eclectic label, probably in order that its "graduates" may secure licenses through the only remaining wide-open door provided in Arkansas. How long is Arkansas willing to stand for such a procedure?—*Journal R. M. A.*, August 20, 1927.

ACTION OF CARBON DIOXIDE INSUFFLATION OF FALLOPIAN TUBES OF DYSMENORRHEA

Of fourteen women with dysmenorrhea whose tubes were insufflated by G. L. Moench, New York (*Journal A. M. A.*, August 20, 1927), one was much benefited by the carbon dioxide insufflation; another was slightly improved; two were better for one or two months and then relapsed to their previous state; and one was better for a month and then worse than before. Of the remaining nine patients, seven were no better at all, and two were made worse. The pressure needed to force the gas through the tubes had no relation whatever to the results achieved. Those women who had dysmenorrhea due to pelvic congestion, salpingitis, perimetritis, parametritis, perioophoritis and prolapsed ovaries, or had cervicitis, were with one exception never improved. Women with actually anteflexed uteri but with cervixes that easily allowed the passage of the cannula (about 3 mm. in diameter) were also not improved. The only patients benefited were, with one exception, those in whom the cervical canal was very narrow so that the cannula had to be pushed in under pressure, thus acting as a dilator. There were four such patients, of whom one had an infantile uterus, one a very acutely anteflexed uterus, and two a hyperinvolved uterus following prolonged lactation. In all these patients the lessening of the uterine pain lasted only from one to two months, and in one instance was even worse later on, apparently because of external circumstances, since a gynecol-

ogic examination did not offer any explanation for this occurrence. In order to test out further whether the action of the insufflation test was due only to the dilator action of the cannula, Moench dilated the narrow cervixes of six of the women, with sounds of increasing size. Following this procedure the menstrual flow of all six became much less painful, or even painless, for a period of at least several months. These six women had all had more or less pronounced premenstrual dysmenorrhea, suffering from pain especially before the flow started or was definitely established. Two of the women had been better for one month following the Rubin test; four had not been affected in any way. Judging from these results, it would seem that the old method of dilation of the narrow cervix in cases of premenstrual dysmenorrhea is not to be deprecated.

TREATMENT OF CENTRAL NERVOUS SYSTEM SYPHILIS

Joseph Earle Moore, Baltimore (*Journal A. M. A.*, August 20, 1927), states that adequate treatment of neurosyphilis depends on a thorough study of the patient, and the means at hand for his treatment. Certain types of neurosyphilis call for certain treatment systems. These are: (a) For "minimal" neurosyphilis, routine antisyphilitic treatment. (b) For early meningeal and late meningovascular neurosyphilis, an intensification of routine treatment. For serologically resistant cases from these groups, tryparsamide, malaria or both. (c) For selected cases of tabes, intraspinal treatment. (d) For general paralysis, tryparsamide, malaria or both. (e) For optic atrophy, intraspinal treatment. Treatment must always be individualized and must often proceed according to a system of trial and error. With these methods of treatment, it has been possible in an ambulatory clinic to obtain 62 per cent excellent or good combined clinical and serologic results in early meningeal neurosyphilis; 59 per cent in late meningovascular neurosyphilis, and 31 per cent in tabes. Remissions have been secured in 57 per cent of a small series of patients with early general paralysis, and 40 per cent satisfactory results were obtained in early primary optic atrophy. In tabes, the addition of intraspinal therapy to the treatment scheme enhances the incidence of excellent results to 43 per cent. In primary optic atrophy, Moore believes that intraspinal treatment offers the only chance of arresting the process. In late meningovascular neurosyphilis, on the other hand, it appears to be of little added value. The parietic formula in the spinal fluid of any type of neurosyphilis is of serious prognostic import. The best treatment for neurosyphilis is the adequate treatment of early syphilis. When it is generally recognized that neurosyphilis can be prevented by the intelligent use of spinal fluid examination early in the course of the infection, with alterations in the treatment system to meet the exigency of positive results, there will be little clinical neurosyphilis to treat.

COEXISTING TYPHOID AND MALARIA

The literature contains many instances of the coexistence of typhoid and malaria in the same patient, especially in malarial districts; and typhoid, while not the only condition that lights up a latent malaria, appears to do so more fre-

quently than other infections, perhaps because of the severe strain of a wasting disease on the functions of the body. Most frequently the typhoid is the dominant disease, lighting up a latent malaria. The malarial paroxysms, however, may alter the typhoid temperature curve at the onset, during the course, or, most frequently, during convalescence. Lewis H. Hitzrot, Philadelphia (*Journal A. M. A.*, August 20, 1927), found that of 543 typhoid patients in a Philadelphia series, only two gave clinical and laboratory evidence of superimposed malaria. A third case, reported by Hitzrot, differs from the large majority of recorded cases in that the malaria, at least while the patient was in the ward, appeared to be dominant. The temperature curve resembled that of double tertian infection, with tertian parasites demonstrated in the blood. Simultaneously, cultures of *B. typhosus* were obtained from the feces and urine; and the Widal reaction, which had been negative on entry, eight and twelve days later was strongly positive. This, and the dispatch with which the organisms disappeared from the excreta under treatment, are evidence that the patient was not merely a typhoid carrier. The course of the illness described was mild while under observation.

ABSORPTION OF STROPHANTHIN FOLLOWING SUBLINGUAL AND PERLINGUAL ADMINISTRATION

A review made by Carry Eggleston and Thomas J. White, New York (*Journal A. M. A.*, August 20, 1927), of the literature on the sublingual and the perlingual administration of strophanthin failed to reveal any satisfactory evidence in support of the efficiency of the method. Striking evidence was found in one paper advocating the method which showed that no significant absorption of strophanthin followed its sublingual administration. Fifteen patients were studied under conditions of rigid control, twelve receiving strophanthin sublingually and three perlingually. Both methods proved very objectionable to the patients on account of the excessively bitter taste of the drug. No evidence was found in these investigations that strophanthin was absorbed satisfactorily following either its sublingual or perlingual administration. On the contrary, they showed that absorption did not occur to any satisfactory or even demonstrable extent. These results are in harmony with evidence recorded by others, though they are opposed to their interpretations. All patients except one were proved to be fully responsible to the oral administration of digitalis. Therefore, it is concluded that both the sublingual and the perlingual methods of administration are unsuitable for the therapeutic use of strophanthin, since neither of them results in the absorption of the drug and the development of its actions on the heart.

DIAPHRAGMATIC PLEURISY: DIAGNOSTIC TEST

Gerald B. Webb, Colorado Springs (*Journal A. M. A.*, August 20, 1927), has found that if a patient has diaphragmatic pleurisy he will have an increase in pain if placed on the side suspected. This increase in pain is no doubt due to the preliminary increase in the excursion of the dependent diaphragm and serves as a diagnostic test. Strapping the chest for this condition is not usually helpful and the patient instinctively is apt to rest with the affected side uppermost.

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ORIGINAL ARTICLES

ARTHRITIS

RALPH PEMBERTON, M. D.
PHILADELPHIA, PA.

Mr. Chairman and Members of the Society: I am very glad to be with you here tonight, not only because it is always a privilege and a pleasure to have the opportunity of speaking to an audience of the caliber of this one on a topic in which one has long been interested, but more especially because your kind invitation to me signalizes, together with other events, the growing interest which is arising in the age-long problem of arthritis.

I don't know whether you realize that arthritis is the oldest disease of which we have any record. It antedates the advent of man and goes back to the cretaceous period and was the cause of suffering and deformity in the dinosaurs of that remote age.

At the outbreak of the war there was under way in England a large movement, under the leadership of Strangeways at Cambridge, whose aim was the study of arthritis, based upon the conclusion, after a thorough study of the situation, that of all the diseases presenting in the United Kingdom arthritis was the one which most needed study. As long ago as 1885 it was pointed out by Charcot in his salpetriere lectures that arthritis is only one branch of a large pathologic tree and in studying this disease we are studying a morbid process whose manifestations are many and varied. It is by no means the narrow topic which some people think is implied by the term rheumatism or arthritis.

My remarks will be based upon a series of 1,200 cases which, so far as I know, is

the largest number that has been studied in a critical way. I will refer briefly to the question of classification because it is necessary to have some common starting ground and it is our belief in Philadelphia, at least, and it has long been the belief in Boston, that the classification of Nichols and Richardson into the proliferative and degenerative type is the best we now have, if only because it is the simplest. The proliferative type may be regarded as that which is often called the atrophic and the degenerative, as that which is sometimes known as the hypertrophic.

A significant step in the grasp of the topic of arthritis was taken when we first realized the importance of focal infection in this disease as well as in others. I wish time permitted me to go into the question of focal infection because there are many angles of that topic which are of great interest, but I am quite sure that with an audience of this sort, it isn't necessary for me to stress the importance of infected teeth and tonsils and so on. With your permission, what I will have to say on focal infection will have to do with the manner in which it seems to have its influence. There is nobody here who believes more firmly in the importance of focal infection than I do but I am sure nobody realizes more definitely than I do the limitations of the influence. The fact that many persons have foci and have not arthritis, alone shows that other factors must be operative. The removal of focal infection does not always cure, as every

one of you must know. Many cases get well by measures of a totally different nature even in the presence of foci. I want to call your attention to the fact that in the army, where we had the opportunity of studying four hundred cases, three times as many men got well in the presence of focal infection as got well after the removal of it. That is not an argument for leaving focal infection inside. I mention it merely because I want to try to evaluate what the influence of focal infection is, what infection does and how it does it.

The influence of the nervous system is obvious, to any student of arthritis, in the condition known as Charcot's joint. Rowntree has recently called attention to the influence of the operation of sympathectomy and the relief thereby of symptoms in the lower limbs in one case. Cecil in New York has called attention to the influence of the menopause and there are other factors showing that something apart from focal infection is operative in many of these cases. But even assuming that focal infection is the only causative factor in arthritis, how does it bring about its results?

In order to explain, on the one hand, the unfavorable action of focal infection, exposure, fatigue, overeating, the menopause and the high incidence of arthritis in mid-life; and, on the other hand, to explain the action of factors making for convalescence, such as heat, massage, exercise, a reduced diet, and metabolic stimuli like arsenic and radium, it is necessary to admit a disturbance or underlying physiology expressing itself widely throughout the economy and subject to many influences.

In a recent study we have made of seven hundred cases in civilian life we have found a number of interesting points which I think will bear some emphasis. Women predominated in the proportion of two to one, a fact which has been known before. The average age of onset was thirty-five to fifty-five years. The onset was gradual in fifty-five per cent of the cases. Exposure played an important role in precipitating the disease among men. The origin of arthritis in sixty per cent of the soldiers was immediately consequent upon exposure and forty-two per cent of the men civilians gave the same history. Heredity is a big etiologic factor. Sixty per cent of these cases were undoubtedly hereditary, either collateral by or directly, and one must recognize that if, in a large family of eight or ten, there are perhaps one or two cases of arthritis, the disease

can almost surely be postulated sooner or later in some other members.

The chief sites of the foci of infection in these cases were found in civil life in the teeth, tonsils, and genito-urinary tract in the order named and, in the army, in the tonsils, teeth and genito-urinary tract. In other words, in civil life the teeth play a more important part in infection than the nose and throat.

The nervous system is involved in arthritis with surprising frequency. Twenty-five per cent of our cases showed paresthesiae, of various sorts, including headache, numbness, tingling, muscular twitchings or cramps. Many of these individuals have a low blood pressure and I think it is fair to say that low blood pressure is a concomitant of arthritis, especially of the proliferating type and that it probably contributes to the refractory nature of the disease.

An interesting point has been brought out by my associate, Dr. E. G. Pierce, which may help to explain the incidence of arthritis in women, and that is the fact that in a series of arthritics, thirty-two per cent of the men showed a red cell count lower than 4,500,000, whereas sixty-seven per cent of the women showed a red cell count below 4,500,000. This seems to be due to the fact that the red cell count is normally lower in women and if, as seems to be the case, the blood flow and the blood itself are factors in the production of this disease, this difference in the red count of women may be one of the reasons for the greater incidence of the disease among them. The effect of anemia, so common in this disease, would be to aggravate this influence.

Among the various studies which we have carried out were those upon basal metabolism, which is slightly lowered in 20 per cent of all arthritis. Without taking your time to go into chemical findings, I will say that the nitrogenous metabolism is apparently normal. There is no apparent justification for withholding a red meat from the arthritic. The influence of the streptococcus haemolyticus and other organisms is toward anemia, and it is certainly unwise, by and large, to withhold from the arthritic those elements best calculated to build up the hemoglobin and the red cell, namely, proteins.

One of the most interesting things we came across during the army work was through a study of the metabolism in respect of carbohydrate, and I am going to ask you to disabuse your minds of any-

thing you may have heard relating to what is known as a lowered sugar tolerance. The arthritic burns his sugar perfectly well, but by a study of the carbohydrate metabolism in the arthritic, we can develop some points of considerable interest. If one feeds sugar, glucose, to the arthritic by mouth, one finds it is not removed from the circulating blood as rapidly as in the normal. This obtains in sixty per cent of all cases.

The degree to which the removal of sugar is delayed in the arthritic is quite striking. For example, one case studied was a boy nineteen with severe arthritis in one hip and badly infected tonsils, and there was great delay in the removal of sugar in the blood after feeding one hundred grams. The sugar reached diabetic figures. After taking out his tonsils, the boy made a prompt recovery from the arthritis. Two weeks after that, upon repeating the same test, the rate at which the sugar was removed from the blood after ingestion by mouth was perfectly normal. This experience was repeated so often that I can state to you with entire confidence that there is no doubt whatsoever of the parallelism of this interesting pathological deviation with arthritis. It occurs in some other conditions also but it parallels no others, so far as I know, as it does focal infection in arthritis. I could show you, were there time, that the return of the delayed sugar removal to normal follows the recovery of the arthritic by whatever means, whether by non-specific protein injection, by the removal of infection, by a reduced dietary or what-not. So close is this parallelism that we thought that if we could throw light upon the mechanism involved here, we would also throw light upon the mechanism of the disease itself.

A very interesting fact was observed in connection with further study along this line, namely, that if one studies the blood showing this delayed sugar removal, one finds that the oxygen in the blood also suffers a similar change, in that it increases in amount. What we speak of as the percentage saturation, rises. In other words, as the blood circulates through the body in the arthritic the sugar is not removed as quickly as it should be and, probably for the same reason, the oxygen is not. We tried to explain that upon a chemical basis, studying the so-called dissociation curves of hemoglobin for oxygen and carbon dioxide, but the results were negative from a chemical standpoint and we were

driven to try to find a mechanical explanation for it. An explanation could be aduced on the basis of a more rapid blood flow because Wells has shown that blood coming from a hyperemic area contains more oxygen and less carbon dioxide than normal. If one studies the blood from the superficial veins of a man being exposed to external heat one finds, under these conditions of a whipped up circulation a greater amount of oxygen in the peripheral venous blood because the blood goes around so rapidly that the oxygen is not removed as it passes through the tissues. We thought that this might be the explanation of our findings, but, to make a long story short, it apparently is not. We were driven to the view finally that the oxygen piles up with the sugar because, apparently the blood fails to reach all of the tissues of the body adequately. We therefore conducted an experiment to try to bring this about artificially by taking arthritics, who showed a normal sugar tolerance, and interfering with the blood supply in three limbs. Carrying out this experiment while feeding them with glucose, we were able to induce in sixty per cent of our cases the lowered sugar tolerance just as we see it in the arthritic. In other words we were able, experimentally to reproduce part of the dynamic pathology which accompanies this disease.

I wish there were time to go into the question of the influence of some of the measures which benefit arthritis because they also reflect something of the pathology underlying the disease. I will take time merely to say that heat and massage and exercise are among the three agents of most value to this syndrome and they have been from the time of Hippocrates. Heat, briefly, produces an alkalosis. Exercise produces an acidosis. Obviously the chemistry of those two measures cannot operate in the same way to modify the disease. We studied massage to see whether it did either of these things. It does neither but it does increase the red cell count. To make a long story short, we found from studying these three measures of real value to the arthritic syndrome, that the common denominator is apparently their influence upon the circulation.

Now, if it be true that the circulation is disturbed in arthritis, it ought to follow that a suggestion of this could be picked up in studying the blood count at the periphery and my associate, Dr. Pierce, has recently completed and published a very careful study of the red cell count in

arthritis. It appears pretty clearly that, whereas in the normal individual the first drop of blood that comes out from the finger has a red cell count higher than the red cell count of the fourth or subsequent drops, in the arthritic, in the majority of cases, the opposite holds. The first blood coming out from the periphery is lower in red cell count than the fourth or subsequently issuing drops.

Dr. Pierce and I have also tried to check this up in terms of the capillaries. As you probably know, the work of Lombard fifty years ago, was buried in obscurity for quite a while but has recently been resurrected—and a profitable study of the capillary beds can be carried on under the microscope by using a drop of paraffin on the cuticle of the nail. By making a careful study of the capillaries, in this way, I am able, as a preliminary statement, to report that it seems that in the arthritic the capillary system is less filled with blood than in the normal.

The evidence that we have suggests that the capillaries in the arthritic tend to be closed down somewhat and in that way can we best explain at present the anomalies of the blood count and the delayed rate of sugar removal which I have hastily described to you.

It ought to be possible, therefore, to correct this delayed sugar removal and perhaps to benefit the individual clinically by means of vasodilator drugs. I may emphasize again in this connection that the dilatation which follows massage, exercise and heat is an important factor in helping the arthritic symptoms.

Again, to make a long story short, by giving sodium nitrate to these individuals, we were able to show two things:

1. The delayed sugar removal observed in the arthritic after ingestion, can be restored more or less toward normal by the induction of vasodilatation, with sodium nitrite and comparable drugs.
2. In 30 per cent of a limited number of cases—we have been able to show a clinical betterment from the use of these drugs. I beg of you not to take this statement as any recommendation of a panacea. It is not that at all. The greatest value of the observation indeed is in corroboration from the clinical side of the precise laboratory evidences we have tried to adduce. Don't, please, feed your arthritics sodium nitrite thinking you can thereby make them well. This is simply a measure which may be regarded as more or less analogous to the use of heat, and, therefore, with patients

on the border-line of convalescence you may sometimes be able to help them over the edge.

One more word about the pathology and then I want to speak to you about treatment. In giving a talk last spring at Dallas, Texas, along somewhat similar lines before the Section on Orthopedic Surgery, my remarks were discussed by Dr. Stern of Cleveland. He quoted the work done by Wollenberg in 1908, who ligated the patellar vessels in dogs on the basis that the blood flow might be concerned and was able to show that there follows an overgrowth of bony nature suggesting the changes of arthritis. My colleague, Dr. Goldhaft, of Vineland, New Jersey, working with us, has been able in a small series of dogs, to reproduce that work and after about four to six months it has been of the greatest interest to us to see that if one ligates the blood vessel of the patella in dogs, there takes place in about that time an overgrowth of the margins of the patella extending downward and forward much as one sees in the degenerative type of arthritis.

So much for a brief survey of the pathology of arthritis, which I have presented to you because I feel very strongly that any attempt successfully to treat this disease must be based upon a broad angle vision of the problem and not upon a narrow, fixed viewpoint.

There will not be time to go into the various factors of treatment. I cannot take up with you tonight the influence of the removal of focal infection, of vaccines, non-specific protein and so on. I will have to confine my remarks to a few measures which bear upon the concept of the disease as a whole from the standpoint of dynamic pathology. With the exception of the therapeutic procedures I have just mentioned, most measures of value in arthritis achieve their effect through their influence upon the blood flow or the metabolism or both. This is true of exercise and massage, of heat, radium and the x-ray. Recently the Germans have had quite a flair in the use of the x-ray in arthritis locally with reputed success. Of course, that is a measure which must be used with great caution.

It is interesting to notice that during pregnancy an intercurrent arthritis may subside to an extraordinary degree and in pregnancy as you know, the metabolism may be increased as much as thirty per cent.

I want to stress the influence of arsenic

in this disease. I don't know how many of you know its value here but it is one of the greatest helps we have. In those cases characterized by anemia, it is quite remarkable what it will bring about, especially during the period when the blood count is coming up. Later in the disease when the blood count becomes normal, its influence may often seem to abate.

It is interesting to observe the not infrequently favorable influence of excitement and worry upon the arthritic. Such an influence cannot be used as a therapeutic measure, but is of value in helping us to make deductions as to influence of some measures that improve the disease. Peterson's recent work on the nervous, especially the sympathetic system and the influence it has upon the physical chemistry of the cells and plasma is precisely in line with this observation, and it is fair to say that the influence of non-specific protein injections is due, in part at least, to their influence on the sympathetic system.

If it be true that arthritis is characterized by a disturbance in the metabolism, possibly through the blood flow, and if measures which influence the metabolism help the disease, it should also follow that anything which will lighten the burden upon the metabolism should have value in benefiting the disease, and indeed this seems to be the case. In a certain proportion of selected cases, possibly thirty or forty per cent in all, the influence in this direction of a reduced diet is extraordinarily real. It is no panacea, any more than anything else is, but in a number of arthritics, especially of the proliferative type and especially well-nourished women who are not anemic, a lowered caloric diet has great value. It probably operates in several ways—in the first place, through its influence upon a struggling metabolism, as I have just tried to indicate; but it also cuts down the bacterial substratum in the intestinal tract, which sometimes, at least, is probably the source of a large amount of toxemia from the organisms abundantly growing there. There is no time to develop this matter of diet to the length it deserves, perhaps, but it will call your attention to the fact that when catabolism runs ahead of anabolism the arthritic, in my experience, feels the greatest benefit. The patient must not lose weight indefinitely and there are limitations to the degree that one can push dietetics in arthritis but from an academic standpoint the above fact is of great interest. I must cau-

tion you, however, not to use a low diet in the anemic or asthenic subject, the person who is undernourished or the person having removable focal infection. Like most other measures of value it is a two-edged sword and will cut both ways.

If diet is of importance to the arthritic, it might follow that the intestinal tract as a whole is also concerned. You all know the "flair" which colonic irrigation has had in this and many other diseases, and it is only fair to state that that which is removed by colonic irrigation is precisely in large part that which is put in by the mouth. It is something of an Augean task to flush out the colon unless one controls the intake but there are nevertheless cases in which colonic irrigation alone will accomplish a great deal. I sometimes think that colonic massage is almost as important as the irrigation but when they go together they will often prove of great value to the arthritic and you will be able to dispense with the use of diet in some of these cases, through these agencies.

I want to call your attention also to another group of measures of which you have perhaps not heard enough and which in general have not been sufficiently stressed; namely those developed by the orthopedists, especially the Boston school. I am not now referring to the question of braces for bent knees or support for weakened muscles. I am referring to the concept of the individual as a dynamic whole, a mechanical entity, and Goldthwaite, Osgood and their co-workers have developed here a most useful viewpoint. Orthopedists have had to see and treat so many cases which have been mishandled by all of us that they have acquired a wide experience and have developed many sound physiological considerations of value to internal medicine. Appreciation of the importance of a narrow costal angle, the flat chest, ptosis of the viscera, shallow respiration, atrophy of muscles from disuse and the whole complex that goes to make up the "secondary invalid," so to speak, affords a most useful outlook, and I have no stronger urge to leave with you than that you look up, if you have many of these cases to treat, the very splendid work which the Boston group of orthopedists has done in the regeneration of arthritis and other examples of chronic disease.

How much does treatment at large accomplish in arthritis? There are few diseases gentlemen, for which more can be done. Arthritis has been cast into the limbo of unprofitable and hence uninter-

esting diseases but the study of it has been a liberal education to me and my associates. It has taken us into the most difficult phases of physiology and biochemistry and into nearly every field of clinical medicine. There is no disease I know of in medicine, unless it be syphilis, which touches more branches of medicine. Only with an adequate conception of the extent of this disease, it seems to me, can one realize what can be done and therefore what must be done.

In one hundred and eighty-eight carefully analyzed cases we found that in civilian life twenty-four per cent recovered completely, seventy-three per cent were definitely improved or cured and varying numbers below that point were benefited in varying degrees. In the army group seventy-seven per cent recovered completely, which was three times as many as among the civilians. But if one considers the type we have referred to us from all over the country, many in the last stage of the disease and almost hopeless in the eyes of those who send them on, one realizes that this is a pretty fair proportion after all. The significance of youth must be borne in mind. It was probably a big factor in the recovery of so many soldiers and points to the hopefulness of treating the young. It suggests that we ought to get better results than is often the case in this disease, especially if the disease be treated vigorously from the start.

I see that my time is up and I realize how inadequate a survey of this sort must be in an attempted analysis of so large a subject. I want therefore, if I may, to recapitulate some of the leading points in my remarks.

Don't forget that arthritis is only one branch of a large pathologic tree and in treating it you are treating the formations of a host of other potential diseases—skin conditions, ocular disturbances, disease of the nervous system showing symptoms difficult of classification. The rheumatic syndrome is precipitated by a variety of factors of which perhaps focal infections and infectious diseases are as important as any, but exposure, heredity, age, the menopause, intestinal malfunction and a disturbed metabolism are factors of equal or even greater weight. Apart from local bacterial depredation in the joints, which of course sometimes occurs, the effect of foci and the several other factors is apparently through the intermediation of a disturbance of underlying physiology.

It is my belief that some of the bony

changes take place by virtue of the interaction of carbon dioxide or alpha hydroxy (fatty) acids, developed at the site of lowered metabolism with the fixed bony bases. The evidence for the view that arthritis is a disease characterized largely by disturbance of the finer vascular supply, with secondary metabolic changes, is to be found in the changes in basal metabolism, in the delayed sugar removal, the reproducing of an anemia of the limbs, in the studies on massage, exercise and heat, the use of nitrites clinically, in the red cell counts I have mentioned to you, and in the general nature of the agents which influence arthritis and which, by and large, hasten the blood flow, the local or systemic metabolism or both.

Successful treatment of this disease depends upon appreciation of the many factors involved. Focal infection there is no time now to stress. The clinical value of arsenic, radium, heat, massage, exercise and the work which the orthopedists have done I have tried to outline briefly. It is important to remember that if arthritis is characterized by a disturbed local or systemic metabolism in the manner indicated, there should be value in lessening the burden on it, and that seems to be the case following the uses of a lowered diet. Don't forget that the colon is an important factor in a large number of cases and irrigation may be of great assistance.

I am convinced that many more cases can be helped in this country than now are. It is important in treatment to combine various sound measures more frequently than is usually the practice. Don't be content with taking out tonsils or teeth as treatment often only begins then. Bear in mind, however, that the arthritic is a sick individual who cannot necessarily stand an extensive amount of therapeutic activity at any one time. There is no panacea in this disease and only an intelligent combination of the measures which are of value will help in the majority of established cases. You may be able to succeed with some given measure in three or four cases, but it won't necessarily apply to a larger group; whereas, if you have a number of measures at your command and know the relation they bear to each other and to the disease, you will be able to accomplish a great deal more.

Finally, let me say to you that while it is important for us to study arthritis and learn more about it—nobody appreciates that perhaps more than I do myself—it is equally important for the profession to

learn what is known about this disease. A vast amount of information is available, from a variety of sources, which is not adequately utilized and I have tried to suggest to you where to turn to take advantage of it.

Those of us who are studying this disease are in the position, if I may make such an analogy, of Trudeau fifty years ago in his struggle against tuberculosis. He had to educate society to know what the disease meant and develop a program among the laity and profession alike before its seriousness was appreciated. Arthritis is undoubtedly one of the great scourges of society. There are few diseases that constitute a greater economic burden than it does and in order to tackle it successfully one must know at least what is known today about it. It is only through the assistance of my associates, Dr. E. G. Pierce and Dr. F. A. Cajori of Philadelphia and my colleague, Dr. Robert B. Osgood, in Boston that we have been able to accomplish what we have in the study and treatment of this problem. The patients who come to us are not all relieved—anyone who pretends to cure all cases of arthritis is either ignorant or worse—but we help them in sufficient numbers for me to be able to say to you that, of the hosts of arthritics in this country, thousands are doomed to wheel chair invalidism who could be save from it, if adequate use were made of the measures which already exist in the treatment of this disease.

THE THERAPEUTIC VALUE OF HILL GROWN GRAPEFRUIT*

E. C. TAYLOR, M. D.

R. H. ALTER, M. D.

JACKSON, MICHIGAN

The efficiency of citrus fruits, particularly grapefruit, as a medicinal agent, has been known for several years to the profession of Florida, especially to those doctors located in the central part—or ridge section of the state—where the highest quality fruit is grown. In the last four winters which I have spent in Florida I have heard much of this, but gave little heed to it. Two years ago I heard discussions about the wonderful results obtained in diabetic conditions, arterial hypertension, etc., especially the former, by the free use of grapefruit grown on the hills of Lake County. I was still skeptical and advised analysis of the grapefruit

grown in different sections of the state in the laboratories of Johns Hopkins, the University of Chicago, or the University of Michigan, to determine what element—was present which might produce the results claimed. I pointed out that, if such results were obtained, an effort could be made to secure thorough investigation and possible approval of the profession, but that the greatest caution should be exercised in using any general public advertising or propaganda in the meantime.

When I reached Florida about January 1 of this year, I found that an effort had been made to follow out my suggestions, but the whole matter had been badly bungled and no reports of any kind had been made. I was staying at the Hotel Floridan at Howey-in-the-Hills, where the greatest citrus fruit development in the world exists. The W. J. Howey Co. was so much in earnest about going to the bottom of the question in an ethical way that they had established a laboratory and small clinic which had been for a year or more in charge of Dr. Emile Roy, a thoroughly ethical physician formerly of Tulsa, Okla., a good laboratory man, scientific by nature and practice.

Dr. Roy himself had come to Howey-in-the-Hills three or four years previously, an advanced and hopeless diabetic, covered with boils and abscesses. All modern treatment (and diet) including Insulin had been thoroughly tried, to no purpose, but having discovered a short time before in his practice that cases of persistent vomiting from disturbed metabolic conditions were instantly relieved by grapefruit juice, he decided to try it in his own case. The result was that after six months of intensive use of grapefruit grown in the Hills he had gained sixty pounds in weight, all gangrenous abscesses had healed, and all sugar had disappeared months before. His health has been good up to the present time: he contemplates returning to his practice. Whatever there is in this discovery belongs to Dr. Roy, who has enlarged upon his investigations until he has a very large number of clinical cases with positive and most gratifying results.

Dr. Roy makes the convincing statement that every case of diabetes and glycosuria, where no degeneration of the pancreas has taken place or no cerebral pressure from brain growth exists, will become sugar free in a few days under the usual anti-diabetic diet and six grapefruit daily, grown in proper soil conditions on the hills. In addition he says:

Replying to your request of yesterday, it would be a hard, long, and tedious labor to give you all the data relating to my clinical work with the grapefruit. Principally would it be out of the question to write a monograph now on the wonderful merits of the highland grapefruit in such conditions as hypertension (high blood pressure) and diabetes, for the good and simple reason that my investigations are not completed and therefore have not been submitted to any reliable body of medical men. However, the preliminary report of the work is in the hands of the American Medical Association. To give the details of what I have done and what remains to do would be dry reading for the lay mind, but the following no doubt will interest you and your friends.

So far as I know, up to this time I am the only one that has done any scientific and systematic medical work with the grapefruit as a therapeutic agent, and the only one in possession of the active principal contained in it or developed in the process of metabolism, and of its physiologic and therapeutic properties. Even the Bureau of Chemistry of the Department of Agriculture at Washington has not done anything further than the determination of soluble solids, sugar, and acid.

My investigation and analysis have proved to me long since that the acid contained in the strawberry, red raspberry, pineapple, and even some grapes, is the readily oxidized citric acid of the citrus fruits, but never have I been able to get with the above fruits the results I obtained with the orange and more so with the grapefruit, to the point of controlling with the grapefruit an acid cystitis in a very short time.

As you know, high blood pressure is not a disease, but a symptom of disease, and often an effort of nature to obtain a balance or harmony in the working of the different organs. For instance, in old people with arterio-sclerosis, if it was not for the high blood pressure to force the blood to remote parts of the extremities, a gangrene would result, etc. Hence to depend only on the highly designed mathematic instruments of today, and neglect the incomparable clinical experience might prove disastrous.

Without going any further into this, let me make the statement now, that unless the high blood pressure is due to a destructive organic lesion, grapefruit will restore a normal condition in the blood flow and an equilibrium in metabolism. The same holds true in glycosuria.

If you bear in mind my own case and the reports you have received from your friends, it all substantiates what I claim.

I have very much to do yet, and much that I cannot do at the present time, before I can commit myself in toto. Now, as last year and before, I stand back of the statements, written and verbal, which I made that our grapefruit possesses potential value in the treatment of disease due to faulty metabolism, which is not to be found in anything else.

The fruit diet and fruit fast that I am preaching and practicing bring incomparable benefits, and you may be sure without any contradiction by those who know as I do, that nature has given us in the Hills a grapefruit which has restored me and scores of my patients to a former good health.

With personal regards,

Yours sincerely,

EMILE ROY, M. D.

Dr. M. M. Hannum of Eustis, Fla., has also had considerable experience in his practice with the hill grown grapefruit. Dr. Hannum is one of the most prominent and conservative men in central Florida. I have had two conferences with him on this subject and the following is his statement:

Eustis, Florida,
January 10, 1927.

Eustis Hospital,
M. M. Hannum, M. D.

I began to use Howey-in-the-Hills grapefruit in the treatment of diabetes about April 10, 1925. Up to date I have treated nine cases of diabetes with most satisfactory results. I put these nine cases on a strict grapefruit diet until the sugar was negative, taking diet similar to Joslin's, of course keeping them on grapefruit all the while. These cases varied as to sugar content, age, general physical condition, etc., but everyone cleared up in from two to three days and remained clear so long as I had grapefruit to use.

I want to impress upon you that grapefruit from the lowlands will not produce these results and the only kind that will, in my opinion, is that grown at Howey-in-the-Hills. I judge that fruit grown on the same soil as that at Howey will give the same results, but I have not found it.

I find that Howey grapefruit will clear the system of sugar much quicker than insulin will, and it is more simple and more pleasant.

I have only treated two cases of "simple high blood pressure" with grapefruit. Several of my cases of diabetes have high blood pressure and I am pleased to report that these high blood pressures were reduced from ten to thirty points.

One case of simple hypertension of 200 gradually came down to 158, and the patient is feeling much better in every way. The other case had a pressure of 196 and was reduced to 170 in ten days, but he had to go north and I have no further record of him.

My experience with grapefruit in the treatment of diabetes leads me to believe that we have discovered something which will prove to be much better than insulin in every way.

I just had a letter from a man in Salem, Mass., asking me to send him a box of grapefruit from Howey-in-the-Hills. He is a patient of Dr. Harry Phippen and reports great improvement after using grapefruit.

Yours very truly,

M. M. HANNUM.

Again on February 24, Dr. Hannum gave me clinical reports on several additional cases that came under his care after the above statement, with only one failure, and in that case, a very chronic one, the sugar disappeared rapidly, but an ascending pyelitis developed with pus and albumin, and the grapefruit was discontinued for a time.

Perhaps Dr. W. A. MacKenzie of Leesburg, Florida, was the very first medical man to use grapefruit extensively in his practice. Dr. MacKenzie is now retired, but still retains the reputation of being Florida's best known and most conspicuous

physician, and is now one of the most prominent candidates for the next governor of his state. After a long consultation with him, he gave me permission to tell of his experience, which was as follows:

In October, 1918, he was in Washington under service to the War Department when the influenza epidemic broke out. In the south the death rate was unusually high. He hastened home to Leesburg, and was appalled at the conditions he found. After talking over the treatment then in use with the local doctors, he decided that a radical change was necessary, and, appreciating the importance of establishing an alkaline media in the digestive tract and as far as possible in the blood stream, he immediately began the administration of grapefruit juice and soda bicarb, given alternately. No other medicine was used and practically no other diet given. During the epidemic he treated over five hundred cases without one death. The reports of his results caused the Florida State Department of Health to ask for his treatment, which was broadcasted to the doctors of the state. He has received many letters of commendation, not only from Florida but from Europe as well. During the epidemic of influenza in London, England, a few months ago, health officials in that city had posters up all over the town advising people to use grapefruit and soda as a preventative and cure for influenza. Unfortunately for London the best quality of grapefruit for these conditions were very scarce in that city.

One of the outcomes of this agitation was to stir up the largest distributors of citrus fruits in Europe, and I personally saw an earnest appeal from them to the largest producer of hill grapefruit in Florida for a contract to furnish them 50,000 boxes of his grapefruit per year at an exceedingly fancy price, but the demand had to be cut in half because of his inability to furnish such an amount until more groves come into bearing.

My own observation and experience, both clinical and laboratory, during the months of January and February covered a total of perhaps forty cases, all of them advanced, twelve of them diabetic. In every one of these cases sugar disappeared inside of six days, and in every one occurred the most remarkable improvement in general health that I have ever observed in my long professional life.

The reduction in blood pressure in every one of twenty-five cases of hypertension was beyond belief. I will give briefly two cases to illustrate the many.

C. L. P.: of Plainfield, N. J., age 82, a former prominent attorney in a Vermont city, retired sixteen years before on the discovery that he was diabetic. He has led the most careful life in every way possible since that time and has been under the watchful care of his physician constantly. He consulted me on February 18, when he had not been sugar free in sixteen years. He had a blood pressure of 238/92, urine: Sp. gr. 1010—acid—

albumin negative—sugar 5%. I did not change his usual careful diet, but advised him to discontinue any medicine he might be taking for a few days. He returned to Orlando. I instructed him to take with him part of a box of the hill grapefruit and eat six daily. He returned on the morning of February 23, four and one-half days later. Examination showed blood pressure 180/82, absolutely sugar negative. I cut him down to three grapefruit daily, and he advises me by letter that he feels fine and continues sugar free.

Mr. McF.: of Oklahoma City, age 62, diabetic for two years. Arrived at Howey, January 20. Was so debilitated that he could hardly walk unsupported. Because of a uremic retinitis he was almost totally blind, and could walk through the hotel lobby only by supporting himself by the chairs, thus feeling his way. He had gone the extreme limit of insulin dosage without benefit, and the nephritis had constantly increased. Examination was made January 20 by Dr. Roy: blood pressure 264/150, urine loaded with both sugar and albumin. He was put on six grapefruit daily. I examined him four days later with Dr. Roy, and again on the fifth day. Blood pressure was then 150/120, sugar negative, scarcely a trace of albumin, and eyesight 50% improved. Two days later he was albumin free, sugar free, and the diastolic blood pressure had dropped to 90. He continued rapidly to improve in weight and strength, took long walks alone, and his eyesight became practically normal. After four weeks of this freedom from sugar and albumin, I put him on lowland grapefruit for 36 hours, and the sugar promptly returned. I switched him back to the hill fruit, and in 24 hours he was entirely free again and remained so up to the time I left.

I tried the change to other grapefruit in nearly every case I saw, with exactly the same result.

Upon my return to Michigan in March, at a meeting of the Jackson County Medical Society, I made an extended report of my clinical experience with "Howey-in-the-Hills" grapefruit in diabetes, hypertension, and acidosis, and immediately received, not only commendation, but universal co-operation from the members of the Society. Patients were turned over to us for treatment, and many others were given the grapefruit under our advice, but directed by the family physician. In a few instances, enough interest was shown by the doctors and patients themselves as to diet and care, to make possible a fair chance for good results.

Since March 20, we have had under our care 41 cases. Approximately 60% of these were constant users of insulin, and in every case it was discontinued immediately upon beginning the grapefruit. In only one case has a single dose of insulin been given after the treatment was started. That one case was a boy of 13, who, in the absence of his mother, broke into the pantry and stuffed himself with everything he could get his hands on, with the

result that he brought on an attack of coma, which necessitated insulin. As this case had been made sugar free on three occasions and each time he had brought on a relapse by the same proceeding, we discontinued our services.

Of these 41 cases, approximately 80% became sugar free inside of five days after the grapefruit treatment was started, and continued negative so long as anything like proper diet was used. Of these cases, 28 were under our direct care, and of these 28, 100% became and continued sugar free so long as we could get the grapefruit. Practically everyone is still negative up to the present time, August 1.

Some of the most remarkable results obtained have been in cases where the treatment has been directed by mail and the patients never seen, histories being sent in by attending physicians and by patients themselves, who, by long experience and education, were able to carry out dietary measures intelligently.

Dr. R. H. Alter, who has been associated with me in this investigation, has, in the main, had charge of the diet in most of the cases under our direct charge. In 10 very bad cases, selected for the purpose, he did complete blood chemistry, with the results appearing in the three sample cases, which are typical of them all.

All patients at the beginning of treatment had the nature of their disease and the necessity of the strictest co-operation explained to them. Each was then supplied with a pair of diabetic scales, a diet slip showing the number of grams of each article to be eaten during the day, and a urine bottle graduated in cubic centimeters. They were requested to bring a specimen of the mixed twenty-four hour excretion to the office each morning for examination, noting the number of cubic centimeters of urine voided in the twenty-four hours.

They were placed at the beginning of treatment on a low caloric diet, which was gradually increased until the patient developed a glycosuria. When this point was reached, the treatment varied according to the nature of the case. In a general way those patients who had a glucose tolerance of approximately ninety grams per day or less were given six grapefruit per day in addition to their previous diets, being instructed to eat one grapefruit with each meal, one between meals, and one at bedtime. Those having a glucose tolerance of above ninety grams were also instructed to eat six grapefruit per day like the

others, but their previous diet was reduced in such a way that their glucose ingestion, including that found in the grapefruit, was below the tolerance of normal individuals.

The grapefruit used were very uniform in size, and the edible portion weighed approximately 300 grams. Chemical analysis shows that they contain 31.2 grams carbohydrates, so that when the six grapefruit were added we were increasing the carbohydrate content of their diets by 187.2 grams.

The results were uniformly good when the patient co-operated well.

CHART NO. 1—MRS. M. K.

Date	Protein	Fat	Cho.	Glucose	Number of Grapefruit	Urine in c.c.	Gms. Sugar Excreted	Blood Sugar
5-4	34.1	163.8	29.7	65.7	0	1530	.....	.....
5-5	34.1	163.8	29.7	65.7	0	1485	0	.....
5-6	34.1	163.8	29.7	65.7	0	1461	0	.....
5-7	34.1	163.8	29.7	65.7	0	1425	0	.....
5-8	54.3	210.5	37.3	89.4	0	810	0	.....
5-9	54.3	210.5	37.3	89.4	0	990	10	.....
5-10	54.3	210.5	37.3	89.4	0	.....	8	.....
5-11	54.3	210.5	37.3	89.4	0	1035	11	.....
5-12	54.3	210.5	37.3	89.4	0	946	20	0.18
5-13	54.3	210.5	37.3	272.6	6	1560	18	.....
5-14	54.3	210.5	37.3	272.6	6	1260	0	.....
5-15	54.3	210.5	37.3	272.6	6	1140	0	.....
5-16	54.3	210.5	37.3	272.6	6	1320	0	.121
5-18	54.3	210.5	37.3	272.6	6	1250	0	.10
5-20	54.3	210.5	37.3	272.6	6	1380	0	.098

Chart No. 1 is the record of Mrs. M. K., a woman 37 years of age, weighing 207 pounds, who gave a history of having had diabetes for over a year. It will be noted that she remained sugar free until her diet was increased to the point where it contained 89.4 grams of glucose. In the following 5 days she averaged excreting 13.4 grams of sugar daily. She was then instructed to eat six grapefruit daily in addition to her previous diet. This increased the carbohydrate ingestion from 89.4 grams to 272.6 grams, yet she became sugar free the following day. She has continued on this diet for two months without showing a glycosuria, except for an occasional day when she broke diet and ate additional carbohydrates. Her blood sugar has remained within normal limits since the fourth day following the beginning of the grapefruit diet.

Chart No. 2 of Mrs. A. W. K., is the record of a more severe diabetic. Over a period of 5 days she excreted on an average of 21 grams of glucose. She was then given six grapefruit in addition to her diet, and for the following 5 days the sugar output was increased. Her diet was then increased to contain eight grapefruit per

CHART NO. 2—MRS. A. W. K.

Date	Protein	Fat	Cho.	Glucose	Number of Grapefruit	Urine in c.c.	Gms. Sugar Excreted	Blood Sugar
5-6	34.1	163.8	29.7	65.7	0	.....	.....	.....
5-7	34.1	163.8	29.7	65.7	0	1800	20	.....
5-8	34.1	163.8	29.7	65.7	0	1780	21	.....
5-9	34.1	163.8	29.7	65.7	0	1620	20.2	.....
5-10	34.1	163.8	29.7	65.7	0	1680	14	.....
5-11	34.1	163.8	29.7	65.7	0	3600	30	.....
5-12	34.1	163.8	29.7	248.9	6	2800	36	.....
5-13	34.1	163.8	29.7	248.9	6	2880	36	.....
5-14	34.1	163.8	29.7	248.9	6	2640	41	.....
5-15	34.1	163.8	29.7	248.9	6	2880	42	.....
5-16	34.1	163.8	29.7	248.9	6	3120	47	.....
5-17	34.1	163.8	29.7	315.3	8	.....	.....	.....
5-18	34.1	163.8	29.7	315.3	8	2640	.....	.....
5-19	34.1	163.8	29.7	315.3	8	2640	38	0.17
5-23	34.1	163.8	29.7	315.3	8	2614	.....	.....
5-24	34.1	163.8	29.7	315.3	8	3120	.....	.....
5-27	34.1	163.8	29.7	315.3	8	2640	0	.....
5-28	34.1	163.8	29.7	315.3	8	4560	10	0.15
6-4	34.1	163.8	29.7	315.3	8	2890	0	0.12
6-5	34.1	163.8	29.7	315.3	8	2740	0	0.09

day. On the second day following this, her sugar output was still 38 grams, but when she returned 7 days later she was sugar free. The next day she again showed a trace of sugar, but when questioned she admitted eating additional carbohydrates. She has remained sugar free since that time with a normal blood sugar.

CHART NO. 3—MRS. S.

Date	Protein	Fat	Cho.	Glucose	Number of Grapefruit	Urine in c.c.	Gms. Sugar Excreted	Blood Sugar
4-25	29.2	129.9	20.8	50.7	0	1080	12	.....
4-26	29.2	129.9	20.8	50.7	0	.....	0	.....
4-28	34.1	163.8	29.7	55.7	0	3000	0	.....
4-29	34.1	163.8	29.7	65.7	0	2040	0	.....
5-3	54.3	210.5	37.3	89.7	0	1980	0	.....
5-4	54.3	210.5	37.3	89.7	0	2880	0	.....
5-5	92.7	220.2	87.	162.7	0	2280	0	.....
5-6	92.7	220.2	87.	162.7	0	2280	25.3	.....
5-7	92.7	220.2	87.	162.7	0	4200	82.0	.....
5-8	92.7	220.2	87.	162.7	0	4920	85.	.....
5-9	92.7	220.2	87.	162.7	0	3960	82	.....
5-10	45.9	144.4	90.	165.	4LL	2800	58	.....
5-11	45.9	144.4	90.	155.	4LL	4200	60	.....
5-12	45.9	144.4	90.	165.	4LL	2040	81	.....
5-13	45.9	144.4	90.	223.	6	3180	85	.....
5-14	45.9	144.4	90.	223.	6	3960	121	.....
5-15	45.9	144.4	90.	223.	6	6000	141	.....
5-16	45.9	144.4	90.	223.	6	3240	162	0.21
5-17	45.9	144.4	90.	223.	6HL	3310	130	.....
5-18	45.9	144.4	90.	223.	6HL	4120	85	.....
5-20	45.9	144.4	90.	223.	6HL	3980	31	.....
5-21	45.9	144.4	90.	223.	6HL	4260	6	.....
5-22	45.9	144.4	90.	223.	6HL	3300	0	.....
5-24	45.9	144.4	90.	223.	6HL	2850	0	.....
5-27	45.9	144.4	90.	223.	6HL	2640	0	.095

Chart No. 3 is of particular interest. Mrs. S., is a very mild diabetic, not showing a glycosuria until the glucose content of the diet was increased to 162.7 grams. She was then given four grapefruit daily grown in the lowlands of Florida. The diet was changed as shown on the chart. On this diet she continued to show a marked glycosuria. Three days later she was given six lowland grapefruit daily with the result that she excreted an addi-

tional amount of sugar almost equal to the amount added in her diet. She continued to use the lowland grapefruit for a week but without any tendency to become sugar free. Then without changing the diet, with the exception of substituting the grapefruit grown in the highlands for the lowland variety, she became sugar free on the fifth day.

An analysis of our cases has established certain well defined conclusions:

First, that grapefruit grown on the hills of Florida, where the soil is composed of a top layer of Norfolk loam and a very deep subsoil of red sand clay carrying about 3% of iron oxide, will produce the results obtained by us in diabetic conditions. Fruit from many different localities in Florida was tried, and either no results were obtained or blood sugar was greatly increased under its use. In 18 cases sugar re-appeared in the urine in forty-eight hours after its administration, although in every case there had been from ten to twenty days of freedom from sugar, preceding the use of the lowland fruit. Substitution of the hill grapefruit resulted in as prompt disappearance of the sugar. The fruit grown on the south shore of Lake Harris in Lake County, the section known as the Howey development, is the only fruit we found possessing these merits. We have good ground for the belief that this fruit carries an enzyme, that, in addition to its wonderful power of increasing the alkalinity of the blood and gastro-intestinal tract, and assisting in restoring faulty and unbalanced metabolism, brings these results. I am convinced that any high ridge country grapefruit in Florida will bring good results in hypertension, acidosis, gall bladder and colon infections, but not in diabetes. Our investigations will be energetically carried on until the problem is solved.

Second, our best results were obtained by the administration of six grapefruit daily, analysis of which gives to each grapefruit 2.4 gms. protein, 0.6 gms. fat, 31.2 carbohydrates, which are converted into 32.65 gms. of glucose and equal 139.8 calories. Six grapefruit thus have 839 calories. It will readily be seen that the addition of this number of calories to the usual diet of 1600 or 1800 calories of the chronic diabetic taking insulin regularly would necessarily increase the blood sugar enormously, especially if the insulin be withdrawn immediately after beginning the grapefruit. We found it advisable to cut down the number of calories, prin-

cipally carbohydrates, to an amount equal to one-half, at least, of the total added calories contained in the grapefruit. This, I believe, could be avoided by continuing one-half the usual amount of insulin formerly taken by the patient for three or four days after the grapefruit is started. We did not find this necessary, however, as we started all our cases on our No. 2 diet list, containing 1369 calories, and we never found it necessary to go back to insulin. Every patient almost immediately began improving in general health as soon as they started the grapefruit treatment. At least three patients, who had been declared hopeless and had for months been confined to their beds, were up and about the house and yard inside of two weeks, and all were sugar free within a week after the treatment was begun. An old lady, who had spent months in a well known Michigan hospital, and had not sat up in bed for five months, in two weeks came eighteen miles to Jackson in the family automobile and walked into my office unsupported.

Third, our clinical experience and our blood chemistry have clearly demonstrated that this grapefruit burns much more blood sugar than insulin, and also does what insulin does not, that is, corrects the cause. Its effects are much more lasting than insulin, and we believe that a very large percentage of the cases are substantially cured. I have seen several such cases in Florida, and, while the work has not been carried on in Michigan for a sufficient length of time to make a positive favorable prognosis, there are several cases under our care which are very encouraging in this regard. One briefly follows:

Dr. Dale of Springport, this county, 72 years of age, a busy country physician for 45 years, discovered himself diabetic 27 years ago. He has had the best of professional care, and the most restricted diet, but had never been sugar free except for a few days about 12 years ago, when under a starvation anti-diabetic diet and enormous doses of soda bicarb he got a sugar negative urine but could not hold it. He started the grapefruit about April 1 last, using six daily. In three days he was sugar free and has continued so every day up to August 18, when he last called upon me. He began cutting down on the grapefruit after the first month, and he tells me that for the last month he has taken only a half of one daily, with his breakfast, and his general health has continued to improve.

We do not claim that this treatment will act as promptly as insulin in cases of threatened coma from greatly excess sugar, because it cannot be given hypodermically, but after the grapefruit treat-

ment is well started it has proved to us almost beyond doubt that no such condition will arise unless invited by the patient.

Our results in arterial hypertension in about the same number as the diabetic cases have proved even more satisfactory. In every case where well defined arteriosclerosis did not exist we got a great reduction in blood pressure, in some cases as much as 80 points. Forty and 50 points were common, and up to this time there has been no recurrence. The improvement in assimilation in all of these conditions has been beyond belief.

SOME FACTORS INTERFERING WITH GOOD RESULTS IN ANO-RECTAL SURGERY

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In certain quarters surgical operations for the relief of diseases affecting the ano-rectal region have fallen into disrepute. Patients who have had reason to expect relief, if not cure, have been grievously disappointed after having received surgical attention, oft-times from surgeons of excellent repute and unquestioned integrity.

Surgeons themselves have not been perfectly satisfied with their results in the field of surgical proctology, and many of them would rather assume the care of patients suffering from most any other disease, than one affecting the anus, or rectum. There is no reason why the patient suffering from ano-rectal disease requiring a surgical operation, should not expect as good a result as one suffering from a diseased condition of equal severity, affecting any other part of the body.

Too large a proportion of the patients consulting the proctologist are patients who have been previously treated surgically either by the occasional operator, or the well-qualified general surgeon. From the results of their attempts at operative relief, which the examination of many patients in any proctologic clinic discloses, one is forced to the belief that there is something lacking in the treatment of these patients. There is no reason why the patient suffering from a rectal affection requiring surgical treatment should not expect, with good reason, a result equally as favorable as one who has some disease of the pelvic organs, the urogenital tract or any other locality.

In a busy general surgical clinic, it has usually been the practice for a general surgeon to start with his abdominal, his goitre, or his hernia operations and leave the rectal cases until the end of the session. The surgeon is tired, the hour is late, and the rectal case is operated upon either in a hurry, or turned over to the assistant or the interne to finish as best he can. The surgeon loses all interest in his rectal case after the operation, and the patient receives little, if any, special attention in dressings or after-care and the result is obvious.

Patients who have not received the relief which they expected, and to which they were entitled, after being treated by surgeons of good repute, do not hesitate to condemn the surgical treatment of rectal diseases. Thus they are easily persuaded by the glib advertising of the irregular to try some non-surgical methods of treatment—the results of which are “guaranteed” by their exploiters!

A few pitfalls which can easily be avoided will be mentioned in connection with the discussion of the after-care of the three most common diseases affecting the ano-rectal region, namely: hemorrhoids, fistula and fissure.

Because of the fact that the administration of a general anesthetic is not unaccompanied by some danger and also because there is always more or less cyanosis, which is manifested particularly around the anus, a general anesthetic is to be avoided, wherever possible, in ano-rectal surgery. It is impossible to secure complete local relaxation unless the patient is deeply anesthetized and forced resistance is used to overcome the natural tendency of the sphincter muscles to remain in a contracted state.

How often has it been observed by the surgeon who feels that he must divulse the anal sphincters before operation, that the respiration of the patient is affected by his sphincteric assault; and the patient stops breathing entirely and in some instances has not started to breathe again in spite of all efforts at resuscitation?

When the surgeon has to use so much effort to overcome the normal muscular contraction of the sphincters, it usually means that this result is achieved at the expense of torn and damaged sphincter fibres. Loss of sphincter function, either partial or complete, can usually be traced to this forceful divulsion. One gets such perfect and complete relaxation from local, sacral or para-sacral anesthesia that there

is no comparison between the two methods at all.

In the operative treatment of hemorrhoids recurrences are more frequent after a clamp method of removal than any other. The reason for this is that the deeper layers of varicose veins cannot be grasped by a clamp placed on the skin or mucous membrane covering a hemorrhoid.

When an open method is used there is less likelihood of recurrence because one can see whether all varicose veins are removed or not. This is not possible with the closed or clamp method.

Stricture and ulceration are produced more often after the use of the cautery than after any other form of procedure. A burn of the mucous membrane lining a cylindrical cavity tends to contract as all burn scars do. Moreover the use of the clamp means the removal of too much mucous membrane or skin in order to accomplish the removal of the varicose veins beneath with the resultant stenosed orifice remaining.

Stricture and ulceration is also produced by the pernicious method of placing silk or linen ligatures around the hemorrhoids and allowing the stumps to slough.

No technique which includes sloughing is a surgical procedure in any part of the body. The infection of decaying tissue causes ulceration, healing by granulation and contraction. An open operation after first ligating the blood vessels which supply the hemorrhoids, with absorbable catgut, and the excision of just enough mucous membrane for exposure, then the removal of the varicose veins composing the tumor, down to the sphincter is a safe, sure, and surgical method.

Hemorrhoidal wounds should never be closed by suture. They should be allowed to remain open for drainage, as the imprisonment of the bacterial inhabitants of the lower bowel by wound closure invites infection and impairs the result of the operation. The use of electricity in various forms to destroy hemorrhoids is to be deprecated because here again the mucous membrane covering the tumors is unnecessarily sacrificed. Skin tags remaining after hemorrhoidal operations are evidence of incomplete removal of the hypertrophied skin folds which either cover the external varicosities or are produced by extrusion of internal hemorrhoids. They are always found in cases where edema follows a hemorrhoidal operation.

They can be avoided by excision of the hypertrophied skin folds in a direction

radial to the anal opening and corresponding to the position of each internal hemorrhoid removed. The removal of just sufficient of the external skin folds, and not too much, is one of the niceties of a good operation for hemorrhoids.

The use of plugs or packing is to be absolutely avoided after every hemorrhoidal operation. If one has been careful in his hemostasis there is no occasion for gauze or tubes to be left in the rectum excepting in very rare instances, in hemophiliacs. There is no point to keeping the sphincter muscles "in extension" by the use of rectal packing or plugging. These packs or plugs act as foreign bodies and irritate the rectum, producing an early desire for defecation. Peristaltic efforts to expel these contribute largely to the spasmodic pain of which the patient complains when they are used.

After the sphincters have been relaxed by regional anesthesia, they remain relaxed as a rule for several hours after an operation and spasmodic pain is the exception instead of the rule.

If the patient in his preparation for an operation for hemorrhoids or any ano-rectal operation has received cathartics during the preceding day, he is quite apt to have an evacuation either during the operation or shortly following it, particularly if the rectum is also irritated by packing. Therefore cathartics have no place in the preparation of patients for rectal operations. The colon can be cleansed more easily by the use of alkaline or saline enemata.

In the treatment of anal fissure many surgeons still administer nitrous oxide, gas or ether and "paralyze" the sphincter by divulsion. It is true that by putting the sphincters at rest, fissures frequently heal after this treatment. Unfortunately, however, this unnecessarily severe and brutal treatment of the sphincter causes temporary or partial and sometimes complete or permanent incontinence.

As has been stated before, the amount of force necessary to overcome the normal sphincteric resistance is so great that the sphincter fibres are torn asunder, and the nerve supply of this important muscle oftentimes is permanently injured. If the crescentic fold of hypertrophied integument located at the outer extremity of the fissure or ulcer is not removed, a good result cannot be obtained. This so-called sentinel pile is usually indurated and non-elastic, and the adjoining tissues are held apart,

prevented from healing and tend to split again.

It is better by far, to put the sphincter at rest by an incision at right angles to the direction of its fibres usually, but not necessarily, through the fissure itself. This incision should be carried well out into the skin and the edges of the wound trimmed off for an eighth to a quarter of an inch on each side, the full length of the incision. It is not advisable nor necessary to suture or pack the wound. The edges will fall together.

Only spurting vessels should be ligated. Here again it is inadvisable and decidedly bad practice to use plugs or packs for the reasons mentioned above. In multiple fissure but one incision through the sphincter is necessary to effect a cure.

The cardinal point to be observed in the treatment of all fissures or ulcers of the anal canal is to secure drainage and physiologic rest. One incision through the sphincter will produce rest. Drainage is secured by the trimming of any rough or granular edges, and the incision through the outermost point of the fissure or ulcer carried outside of the sphincter, and well out onto the skin.

While unsatisfactory results have not been infrequent after operations for hemorrhoids or anal fissures, the most unsatisfactory and deplorable failures have followed operations for anal and rectal fistulas. There are many reasons for these failures. I should head the list with failure to make an accurate diagnosis. The mere fact that an opening exists on the skin surface in the vicinity of the anal canal which discharges is important, but unless one knows the origin, direction, extent and ramification of the fistula itself, successful treatment cannot be instituted.

Probing the opening is not only worse than useless, but dangerous, if one uses an ordinary stiff probe or a grooved director. The injection of a colored solution is of some value, because its escape inside the anal canal gives some definite information as to the location of the internal opening.

The only safe and accurate way of making a complete diagnosis is to inject bismuth paste into the external opening and make stereoscopic radiographs. In this way only can the various ramifications, side-tracts, and irregularities in shape, contour and direction be ascertained.

False passages are easily created by the use of stiff probes and examining instruments which are inserted blindly through

the external opening. If any probe is inserted, it should be made of the softest, most pliable suture wire, which will yield and give to any deviation in the shape or direction of the fistulous tract.

Such a probe can be passed with much greater ease after the injection of bismuth paste. The paste being composed of two-thirds vaseline makes an excellent lubricant for the probe. If one observes the anal canal through an anoscope, while injecting the bismuth paste through the external opening, the appearance of the bright yellow paste against the pink background of the anal canal as it emerges from the external opening, is most striking!

Because of the fact that a fistula has an external and an internal opening, many surgeons take it for granted that the fistula is a direct channel from one to the other, and forcibly push the probe or director from the external through to the internal opening. They then incise all the tissues between this instrument and skin and mucous membrane. Inasmuch as this procedure usually misses the major portion of the fistulous tract, recurrence, or more properly speaking continuance of the fistula is assured.

Radiographic studies of fistulas have demonstrated that the straight or slightly curved fistulous tracts leading directly from the internal to the external opening are the exception and not the rule.

The practice still indulged in by some surgeons when an internal opening cannot be discovered, of forcing a grooved director through the tissues into the anal canal, thus creating one is extremely reprehensible. This converts an external sinus into a fistula, making matters much worse!

If one wishes to secure incontinence after a fistula operation, a sure way is to incise the sphincter fibres at an oblique angle. Incontinence is almost sure to follow an oblique incision of the sphincter. If one wishes to insure good sphincter union after an incision, then that incision should be made at right angles to the sphincter fibres.

However, even an incision at the proper angle will be followed by incontinence if the severed ends of the sphincter muscle are not allowed to come into contact with each other. How can sphincter fibres grow together and reunite if they are kept apart by gauze packing? Gauze packing should never be used in the post-operative treatment of fistulas! It defeats the very purpose for which it is used. Packing not

only keeps the ends apart, but the mechanical irritation of the tissue by the gauze stimulates the formation of fibrous tissue, which fills up the gap between the sphincter ends.

This gap being filled with non-elastic fibrous tissue prevents complete closure of the anal canal and produces fecal incontinence. After the fistula is excised the skin, (and mucous membrane to a less degree), should be trimmed back from the wound so as to convert the trench from which the fistula was removed into a flat saucer-shaped wound. The sphincter ends will reunite if not prevented by gauze packing. The muscle and underlying tissue will heal up to the surface before the skin heals.

Another reason for disastrous results following fistula surgery in the hands of the general surgeon is his yielding to the temptation to suture the wound after the excision of a fistula.

Primary union of fistula wounds is not successful in one per cent of the cases and is a dangerous procedure. In the first place it is impossible to secure an aseptic wound which is the only kind which should be sutured. In the second place, the wound is constantly exposed to fecal soiling. In the third place it is impossible to keep a sutured wound in this region at rest. In personal practice, recurrences after someone's attempts to suture fistula wounds are very common.

Every fistula must be made to heal by granulation. The skin must be restrained from healing as fast as the underlying tissues, and nothing must be allowed to remain in the wound which will interfere with complete drainage.

After all rectal operations care must be exercised to keep the bowel movements from becoming either too liquid or too solid. This is best accomplished by the use of mineral oil given nightly in sufficient quantity to lubricate the passages and not enough to produce oil leakage.

The use of saline or hydrogogue cathartics is to be avoided because liquid stools are always irritating to normal mucous membrane, let alone wound surfaces. Moreover, the use of these cathartics interferes with the formation of a soft formed stool which is nature's dilator.

Contraction and stricture formation is invited if formed stools are not encouraged, and liquid stools produced by hypercatharsis. Dressings should be changed frequently enough so as to keep the parts as clean as possible. Parts should be par-

ticularly well cleansed after each bowel movement.

There are many other factors which interfere with and prevent good results in ano-rectal surgery, but time will not permit their detailed consideration. All that is necessary is to plan the indicated operation with anatomical and physiological principles in mind; to refrain from general anesthesia wherever possible; to indulge in a minimum amount of tissue removal, and to refrain from suturing and packing and to use the same common sense in refraining from meddlesome after-care and still not neglect the essentials that one would use in the surgical treatment of any abdominal case.

ULTRA-VIOLET THERAPY IN GENERAL PRACTICE

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Having become interested in ultra-violet therapy in the summer of 1925, when I used a quartz lamp for several months in my practice with wonderful results, this summer I purchased a lamp and installed it in my office.

I have used the lamp in various open diseases both of the body and scalp and in neuritis, sciatica, arthritis and anemias, rickets, pruitus, vulvi, and ani, in boils and carbuncles, post operative scars and in infected wounds and injuries.

This modality is not a cure-all, but is certainly a very useful adjuvant in the treatment of various diseases. Its widespread use and adoption by all the larger sanatoriums and hospitals, as well as by the leading medical men of the country, is absolute proof of its usefulness and practicability. Its main use several years ago was in the treatment of X-ray burns and rickets and was also used in sanatoriums in the treatment of tuberculosis.

First, I will endeavor to explain the lamp, its construction, etc.

Second, its germicidal action and surgical uses.

Third, dangers.

Fourth, indications.

Fifth, review of case reports of various men using it.

Sixth, conclusions as to benefits to be derived from it.

There is no question but that the field of physiotherapy is a big one and the recent appointment by the A. M. A. of a

council of physiotherapy at least assures us that this new field will be censored and the proper credit given.

Diathermy is another large field that is being used and excellent results are obtained with it. Industrial surgery certainly is using ultra-violet therapy and it is a fact that all auto factories in Detroit use this modality in their hospitals.

The use of ultra-violet in ununited fractures and in infections and wounds of various sorts. Pigmented skin is infection proof and some surgeons operate under the rays of ultra-violet lamps.

The dosage of ultra-violet light is still undeveloped but generally speaking:

1. Stimulative treatment— $\frac{1}{2}$ minute at 30 inch distance.

2. Regenerative treatment—1 minute at 20. inch distance.

3. Destructive treatment— $\frac{1}{2}$ minute to 1 minute at 10 inch distance.

First—I shall endeavor to explain the lamp. The Sun Lamp, air cooled, is the type lamp I own and the one I am the most familiar with. The burner is the most important part and is of the quartz-mercury-anode type. It consists of an arc tube about five inches long with two transverse mercury containers and the electrode vessels all of pure transparent quartz. The electric current is conducted through the burner by ground-in-mercury sealed electrodes to which leads are attached. Fan shaped metal coolers are mounted on the mercury containers and serve to diffuse the heat generated at the electrodes, regulating the current density and intensity of the rays.

The sun lamp hood in which this burner is mounted is of two hemispheres—one rotating inside of the other on pivots. It is of aluminum and one-half is equipped with a selective shutter with openings of different sizes. This is mounted on an upright of nickled steel with an internal counter balance; all of which is mounted on a mobile base with the transformers also on the base.

Second—Action of ultra-violet ray and its uses: Ultra-violet light destroys bacteria, fixes calcium, phosphorus, iron and iodine, breaks down bacterial toxins, increases haemoglobin, normalizes the red and white count, increases blood and lymph flow, accelerates elimination, sedative action on the nervous system, normalizes glandular activity and metabolism and eases pain.

Quoting one of the leading authorities, who has given over 30,000 treatments,

ultra-violet therapy offers to the physician a modality which is:

1. A direct germicide.
2. An indirect germicide.
3. A counter irritant.
4. Increased resistance to infection.
5. An analgesic.
6. Means to depress metabolism.
7. Means to increase metabolism.
8. Means to stimulate sympathetic nervous system.
9. Regulate mineral metabolism.
10. Balance endocrine secretions.
11. Overcome disturbances caused by vitamines deficiency.

Third—Dangers of ultra-violet The main danger of ultra-violet treatment is severe erythema or sunburn and also the danger of conjunctivitis. The eyes should always be covered with goggles and the delicate parts of the body may also be covered. Blondes are more susceptible than brunettes and some people are more sensitive than others. There are four degrees of erythema:

First—Reaction so slight that it causes no subjective symptoms.

Second—Symptoms of mild sunburn and reddening visible and granular exfoliation.

Third—Symptoms of a severe sunburn. Reddening is intense and epidermis can be peeled off.

Fourth—Blister production.

Pigmentation often occurs following sunburn and this necessitates increased dosage. Active pulmonary cases are stirred up with lamp treatments and care must be used in these cases.

The general use of ultra-violet therapy in all leading hospitals, sanatoriums, children's hospitals, industrial plants, athletic and college training tables certainly proves beyond a question of a doubt that good results are being obtained.

This, of course, will depend on the case to be treated and the lamp will not make the diagnosis nor take the place of other necessary treatment. Infra-red, visible sunlight and ultra-violet are the only energies from the sun in nature which effect man. It is accepted that ultra-violet energy acts upon the chlorophyll of plants in the presence of carbon-dioxide and water and builds up formaldehyde and carbohydrates. The uses are governed largely by the wave lengths of ultra-violet used.

The skin allows ultra-violet energy of wave lengths greater than 2,900 angstrom units to penetrate 80 to 120 microns. For the shorter wave lengths the penetration

is only 2/10 of a micron. The slight penetration or rapid absorption is the factor which makes ultra-violet the constructive force and distinguishes it from the destructive forces of X-ray and radium.

About 86% by weight of the solids of the human body consists of calcium. The result of calcium deficiency is a change in the hydrogen-ion concentration of the blood leading to acidosis. Acidosis occurs frequently in children, is associated with disturbances of the nervous system and causes gastro-intestinal disturbances. In under-nourishment and inanition acidosis is the rule. During pregnancy and puerperium there is a diminished amount of calcium in the blood. Any unbalance in the mother's calcium metabolism affects the foetus. This calcium unbalance may cause fatty infiltration and later fatty degeneration of liver cells. This may lead to eclampsia. Calcium phosphate is very valuable, but its absorption is governed by the parathyroid glands, necessitating sometimes stimulation of the sympathetic nervous system by ultra-violet light.

Auto-intoxication is associated with acidosis and calcium deficiency benefited by the ultra-violet. The action of ultra-violet on the sympathetic nervous system is the control of the endocrine or ductless glands shown in the treatment of adolescent goitre of young women, ultra-violet and small doses of iodine and proper diet.

Pacini gives the following table:

Death points of various bacteria exposed to Ultra-Violet light
Seconds to kill.

Diplococci—	
Gonococci	6
Meningococci	6
Staphylococci—	
Pyogenes Albus	10
Pyogenes Aureus	12
Streptococci—	
Viridens	14
Haemolyticus	18
Mucosus	25
Pneumococci—	
Group 1	25
Group 2	20
Group 3	25
Group 4	15
Bacillus—	
Influenza	18
Diphtheria	10
Tubercle	12
Leprae	15
Colon	18
Typhoid	18
Dysentery	20

Organisms suspended in clear sterile water. Colonies grown from clinical material.

In summarizing the treatment of Radium and X-ray dermatitis, Pacini says:

1. Ultra-violet energy may be used as a preventative against the erythemas produced under X-ray.

2. Ultra-violet energy through its cellular regenerative forces assists in the reconstruction of indolent X-ray ulcers.
3. In the treatment of acute and chronic X-ray and radium dermatitis the biotic qualities of air cooled and abiotic qualities of water cooled should be used.
4. Neither proved or disproved that ultra-violet will prevent damage to cellular structures deeper than 75 to 100 microns.
5. Air cooled or biotic ultra-violet is useful in all forms of acute X-ray dermatitis and in raising tissue resistance in Chr. X-ray. Water cooled or biotic owing to its disquamative capacity does much to relieve acanthosis.

Ultra-violet exerts an influence on body metabolism:

1. Change in quantity of expired co 2.
2. Change in rate and depth of respiration.
3. Increased rate of growth in light compared to darkness.

It has been fully established that exposure to ultra-violet radiations, either sun or lamp, affords protection from rickets to animals and human beings.

A summary of a paper by Dr. Hess concludes on antirachitic properties developed in human milk by irradiations of the mother are increased. Fractionization of the milk showed that this effect was due to an augmentation of the antirachitic (Non-saponifiable) factor.

Suggests that this be done to protect infants from rickets and nursing women from excessive drain of calcium phosphorus.

Ultra-violet lamp therapy is still in the early stage although it has been used for many years. It should be used intelligently and not as a cure-all. Its field is large enough and further studies will bring this out.

OCCUPATIONAL THERAPY AS A METHOD OF TREATMENT OF MENTAL DISEASES*

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Dr. Pattison tells us that "Occupational Therapy is any activity, mental or physical, definitely prescribed and guided, for the distinct purpose of contributing to and hastening the recovery from disease or injury."

Back in ancient times there were temples in Egypt dedicated to Saturn. Beautiful pictures and pieces of statuary were assembled there and surrounding these holy retreats were gardens and fountains. To

these delightful spots, patients suffering from melancholia were taken and their minds soon diverted from their unpleasant thoughts.

Pinel of the French school was the first advocate of occupation as a means of cure for the mentally sick, and in his book written in 1791 on the subject, tells of using the lunatic as a beast of burden in the fields. He writes that disobedience on the part of the individual met with severe punishment, but in time proved to be a sure cure. While this form of treatment seems rather harsh, it was a step in advance of anything heretofore attempted.

The first history of occupation used as a means of cure in this country comes from the state of New York a little more than one hundred years ago. At that time Thomas Eddy proposed to the Board of Governors of that state that there should be some form of employment among the insane and so it was decided that they should be trained to do some of the work about the institution. The men were put out in the fields to do some of the lighter tasks while the women were employed in the laundry, and sewing room. This not only proved to be of great benefit to the patients but it was of economic value as well for fewer attendants were required to care for the same number of patients.

The therapeutic results were so noticeable at that time that this means of occupying the patient soon spread to similiar institutions, and it was not long before it became very evident that occupation as a means of cure was a necessary factor in every well organized mental hospital.

To Miss Susan Tracy belongs the credit of giving the first systematic training in occupation. It was she who gave a course to nurses at the Adam's Nerve in Boston in 1906. A few years later the first teacher to devote her whole time to craft work among the mentally ill was employed at the MacLean Hospital at Waverly, Mass.

In 1918, the first school for training occupational therapists was established and about the same time, as our war veterans returned and this same method of treatment was used as an aide to recovery, the public became interested and amazed that this sort of work had been used for so long in our mental hospitals. At that time the work became better organized, the so-called "arts and crafts departments" became known as occupational therapy departments; the work took on a decidedly different nature, and trained instructors were a necessity to carry on the work in

* Read at convention of Michigan Hospital Association held at Kalamazoo State Hospital, June 24, 1927.

these newly established classes. Kindergarten and habit-training classes were formed for certain groups of patients, these being followed up by diversional, occupational, industrial, and in many cases vocational training, while in several mental hospitals there has already been established within the last few years, continuation work with the patient after leaving the institution.

In working with mental patients the primary purpose of occupational therapy is to divert the patient's mind from unpleasant thoughts. The secondary purpose that of giving him a means of livelihood after leaving the institution. Patients who are only slightly demented and already skilled in some form of work are easy to find employment for, those tasks where supervision and not personal attention is required, are well suited to their needs. Such patients are able to work long hours without becoming fatigued, but those who form the real problem for the occupational therapy department, and who derive benefit, are those unskilled in any form of handwork and so absorbed in their own troubles that they take no interest whatsoever in their surroundings. Such patients must be aroused, encouraged to use their own ideas as far as possible and praised for the effort even though the result is of little value. In working with this type of patient, articles made, besides being of a useful nature, as far as possible, should be such as are quickly finished so that the results will not be too long delayed. Most mental patients are much like children, they need a lot of encouragement and praise while criticism should be spared as far as possible. A piece of work poorly done is better than none at all.

Those patients who have been hospitalized for a great many years are, no doubt, our greatest problem and yet they are a most fascinating group. It sometimes takes years to see the slightest improvements but even so, the time and interest spent are well worth the effort. Some patients deteriorate in spite of all that can be done but with the majority the results of occupational therapy within the past ten years have proven to be at least a means to an end.

Those patients recently brought to the institution should be given employment immediately upon arrival. The work should start before the patient has too great an opportunity to observe the mental condition of those about him. The work given to such patients should be so very inter-

esting and the day's program so full that there is no time for self-interest.

In any large mental hospital there are many types of cases and the therapist must have some insight into the condition of each before prescribing the occupation. Not all patients respond to the same treatment, there are no two alike, each is an individual case and must be treated as such. Take for instance the excited maniac, he must be given something sedative; work on a rug loom might help in working off surplus energy, but some craft which is better accomplished while sitting at a table would probably give better results. Clay modeling is soothing, and materials which may easily be destroyed should be avoided.

The depressed patients must be aroused, something bright to work on or some very new craft, is often stimulating while materials which might suggest suicide should be avoided. A contest for such patients is always interesting.

Old people as a rule, regardless of their psychosis, prefer to do something which they have learned long ago, and it is often best to give in to their whims. They seldom have the courage to attempt anything very difficult.

Perhaps the most interesting group of patients are those of the dementia praecox class. These people are not of inferior mental capacity as many are inclined to believe, it is only as far as social adjustments are concerned that they cannot cope with the outside world. Because they cannot make these proper adjustments it is up to us to do all that we can to re-awaken these former activities. The best means of doing this is to draw them into groups as far as possible so that they may be able to work together. This can be done in various ways: raveling, tying and winding burlap, preparing rags, planning work for some other class, making Christmas gifts for some other group of patients, etc. In doing work of this sort they cannot help but observe one another and if the work does entail conversation so much the better.

At the present time there are about 450 patients working daily in the occupational therapy department. There is the kindergarten class composed of about 20 dementia praecox women. These patients are taught to cut and paste, some like to draw, others enjoy putting picture puzzles together, and some can do slightly more advanced work. While at first they are able to do only routine work, their ability varies and many of them often make good

supervisors over other groups of patients.

Then there is another class of women who are very destructive and great care must be used in the selection of work for them. Tearing and raveling are two of the occupations most generally used but the material to be torn or raveled must be in no way similar to anything used about the ward. If bed ticking is torn it should be first dyed. If these patients tear their clothing they are given a needle and thread, and must repair the damage. Material that can be thrown from the window must be avoided. In time many of these patients turn out very creditable work, and are often transferred to a ward from which they may be sent to the occupational therapy centre.

In the receiving hospital for women two classes are conducted daily, one group of disturbed patients is given individual attention, while a group of more comfortable patients are busy at work doing any number of things, the spirit of work is contagious and it is not long before the patient who at first approach insists that she did not come here to work, will often before the end of the week, beg for something to do.

There is still another group of women patients who prefer to work in their rooms and so each is visited twice a week and given materials enough to last until the next visit is made.

As the patients in these various classes improve, a prescription is written by the doctor in charge and the patient comes to the occupational therapy centre, where she is given more advanced work. Basketry, weaving, rug-making, pottery, and many other crafts are carried on here, each craft given to a certain patient for some particular reason. It is generally much better for the patient to learn some new craft than to continue with something with which she is already familiar. A record is kept each week of the patient's progress and as she improves she is graduated to some other department or very often she goes home.

On the men's side there are three classes all just as interesting as those composed of women. One class of old men is especially worth while. About 60 men assemble for two hours each day. Their work is principally sand-papering, and raveling, although some reed, rug work, etc. is carried on. These men are so eager to work that they often conceal burlap under their coats so as to keep busy until the following morning.

Another group of men is able to do more advanced work: toys, bird-houses, small pieces of furniture, rug weaving, etc. are taught here. Then as these men improve, they are sent by prescription to another larger shop where there are greater facilities for working, including jig-saws, lathes, looms, etc. Fibre-reed furniture, lamps and willow work (willow being raised here) are also carried on and larger pieces of furniture are constructed. From this shop the men graduate to the industrial building while others go home, after having learned something which will be of some value to them later.

Each year about fifteen of the women are instructed in gardening. Each is allowed a small plot in which she raises vegetables which do not require cooking, and also flowers. This is another group problem. Many difficulties arise as to the ownership of the implements but by the end of the season peace is maintained. A prize is offered for the garden best cared for; this stimulates keen rivalry and holds the enthusiasm until the end. Some of the patients have raised enough in their own small lots to furnish the whole ward with something special.

During the summer months the patients are taken for walks several times weekly during the occupational therapy classes. These trips are made with some definite object in view. Various articles are gathered which they later use in their work, pine-cones, pine-needles, acorns, long grasses, native clay, butterflies, milk-weeds and wood from the wood pile are some of the products gathered.

Several times a year 75 or more of the occupational workers, both men and women, meet together for a party. Games, stunts, dancing and refreshments are the usual order of procedure. At Christmas there is a tree with gifts—all the work of the patients. In the summertime outdoor picnics take the place of the parties and each fall we plan to have a weenie-roast at the colony farm. Such occasions as the latter are long to be remembered and furnish subject for much reminiscing during the winter months. We plan to let them know in advance. Anticipation is worth so much.

Another feature which takes much of our time and which is especially interesting to the patients is the making of costumes and properties for the plays and pageants which are given each year. In making these costumes much waste material is used and many interesting dis-

coveries have been made through necessity. For instance, discarded window shades are boiled and used. Material in its natural state makes excellent Indian features, fringe, hats, banners, etc. One play called for a duck. That also was constructed of the same material.

Each year fewer articles are made for sale while more work is done for the institution. Rugs, table runners, lamps and wastebaskets have been made for some time. The newest feature to be introduced is that of interior decorating. It began in a very small way, somewhat under protest, and quickly spread to all parts of the institution so that now the larger dining rooms and many of the smaller ones are improved with curtains, screens, special window shades, chair covers and other accessories until they quite resemble any hotel dining room. This work is not confined wholly to the dining rooms but many of the day rooms and dormitories have also been made more attractive. Most of the material used is woven in the industrial department, dyed, decorated, etc. in the occupational therapy department. The patients are extremely interested in this phase of the work and not only look forward to the time when their own dining room or day room will receive its share of attention, but take great pride in the care of these furnishings.

You will have learned by this time that our program is quite varied and involves much work which at first might seem quite foreign to the term occupational therapy, but in working with mental patients the therapist must always be ready to do whatever is asked of her whether or not it is anything which she has previously attempted. Clara Barton once replied, when asked what her mission was in life, "I have no mission and I have never had a mission but I have always had more work lying about than I could do and in trying hard to get it out of the way so as to do one thing more, I have found greater things to do." It seems to me that these words express the typical life of a therapist in a mental hospital. There is seldom an hour during the day when she is not planning some new feature or wondering how best to overcome some difficulty of the previous day. She must have a great amount of patience, and tact, an artistic sense, business ability, and above all she should be able to fit into other departments of the institution. A good therapist should not only be familiar with every possible form of handcraft but she should have a

knowledge of its history and source of materials used and she should be always ready and willing to accept new ideas. If one thing does not appeal to the patient there is sure to be something which will eventually hold the patient's attention if only for a short time, and it is up to the therapist to find that special piece of work. There is always some method of approach.

It is not the amount of work accomplished or the sales turned in each month, but when the patient whose stay is of short duration can be made happy and contented and one whose residence has been of long standing can be trained so as to become an asset rather than a liability, the true purpose of occupational therapy will have been established.

CORONARY OCCLUSION*

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I am well aware that I am not giving anything new in this present paper, but I believe that coronary occlusion is a condition much more often met with than recognized by the average practitioner, and it is on this account that I feel there is an excuse for bringing it to your attention.

Harvey reports a case in the death of "A noble knight, Sir Robert Darcy," which was undoubtedly one of coronary occlusion, with autopsy done in which was found a rupture of the left ventricle, through apparently an old scar from a former thrombosis. Its symptoms, of course, went unrecognized at the time. Von Leyden in 1884 reviewed the literature and described the symptoms of coronary occlusion, but his paper was overlooked by the clinicians of his day. In 1906 Broadbent made the statement that there are no characteristic signs or symptoms by which thrombosis of the coronary arteries can be diagnosed. In 1910 came perhaps the first recognized systematic account of this condition, in a paper by two Russians, Obratzon and Strocheska. They described three cases in rather minute detail, two of which were diagnosed before death. Prior to this, however, the Frenchman, Huchard in 1905 recorded some 185 autopsies, and described the status anginosus, symptoms of myocardial insufficiency showing an attack of pain, pericarditis, and pericardial friction rubs, the feeble cardiac impulse, and distant heart

* Chairman's Address, Section on Medicine. Dr. Karshner died from acute hemorrhages four days before our Annual Meeting. This is his last medical contribution.

sounds, pulmonary oedema, pulmonary infarction, and other embolic phenomena. Cardiac infarction, cardiac scars, and aneurysm, sudden death, delayed death, and even recovery from the accident are quite minutely described. Also the German clinician, Krehl, states many of these symptoms in his monograph, "Diseases of the Heart Muscle" which appeared in 1901. He clearly described cardiac infarction with subsequent information, and its general effect on myocardial efficiency. He concludes that the location of the damage is an important factor in determining the occurrence of the functional disorder, as in occlusion of the anterior descending branch of the coronary, which may be unattended by any conspicuous symptoms, and yet, autopsy years later, may reveal an old calcified infarct. At other times the accident may be accompanied by intense stenocardia, and the onset of severe myocardial insufficiency. Death may come instantly, or hours or days later, or recovery may take place, the grave danger only being revealed later, or by autopsy probably years later. The scars may give rise to aneurysm with rupture and sudden death. In old patients with diffuse sclerosis of the vessels, symptoms are usually milder, while in young healthy vessels they are more apt to be relatively severe. He confesses mystification at the remarkable suddenness of death, not like death from circulatory failure, and was unable to explain what occurred in the heart.

In "Some Notes on the Coronary Arteries," Dock records instances in 1896. Osler in a monograph on "Angina" describes the condition in 1897, and later in 1910. The subject of coronary occlusion is not found in text books, or "Symptoms of Medicine." Not more than 17 years ago, perhaps because of mental confusion existing between angina pectoris and coronary diseases, coronary occlusion was considered merely one of the incidences in the progress of angina pectoris, and was not by any means considered an independent clinical condition. It certainly was not described so clearly and accurately that any physician familiar with its outlines might recognize it at a glance. The diagnosis was rarely made ten years ago, and was almost unheard of fifteen years ago, except as an explanation of sudden death in angina pectoris. Thayer as late as 1923 gives some interesting observations upon coronary occlusion under the caption "Reflects Upon Angina Pectoris." Hochhaus in 1911 reported four cases, the second

two being recognized before death. In 1912 Herrick definitely described the condition—the first of a series from American clinicians. He emphasized particularly the possibility of a recovery from the accident, the possible presence of a large branch being occluded without death. Then followed papers by Libman, Levine, and Tranter, Smith, Gorham, Pardee, Paulin, Williams, Robinson; and Herman, Longscope, Thayer, Wearn, Gardineir, Faulkner, Marble, Englehart, and Sternberg, and White, among Americans. Albutt recognized the condition and discussed at great length the cause of the pain and sudden death.

It might be well at this point to consider the anatomy of the coronary circulation. This has been best described by Gross in his treatise on "Blood Supply to the Heart," which appeared in 1921. According to Gross, the right coronary artery supplies the entire right ventricle, with the exception of the left third of the anterior wall. It also supplies the right half of the posterior wall of the left ventricle, and a small strip of the interventricular septum. The left coronary artery supplies the whole remaining part of the left ventricle, the left anterior portion of the right ventricle which is not supplied by the right coronary, and a small anterior strip of the interventricular septum. The remaining portion of the septum and the papillary muscles are supplied by branches derived from both the right and the left coronary. Many vascular twigs from both coronaries are distributed to the epicardial fat. These vessels are extremely important in determining the symptoms following coronary occlusion. They form an extensive plexus of anastomosing vessels which increase in importance with advancing years. The anterior descending branch of the left coronary is of special importance from the fact that upwards of 4/5 of the occlusions occur in this branch. Distribution of the coronary vessels, however, is subject to wide variation in different subjects which may influence to a great extent the symptoms in a given case. We do not yet know why the same accident is accompanied by such a wide difference in symptoms in different patients, ranging from sudden death to practically an absence of any symptoms whatever. In experimental occlusion in animals, sudden death is always accompanied by ventricular fibrillation—possibly this may be the case in the human also. Some patients move on to recovery, but with various

forms of cardiac irregularity on the way. It is universally accepted¹ that there is an abundant anastomosing between the right and left coronary, both in their capillary and their precapillary distribution; also between the coronary vessels and those adjacent and attached organs. Though abundant, these anastomoses are not free enough to prevent infarct or the block of a large vessel, but it has been noticed frequently that the area of infarction is smaller than the area supplied by the vessel occluded. This collateral supply is capable of wide development, and if the vessel be small, and gradually occluded, it may finally close, and the heart muscle supplied by it still remain adequately nourished. Anastomoses become much more extensive and effective with age, so a heart of a man 60 can stand occlusion better than one at 20. The extent of the infarction that follows occlusion depends upon many factors: size, location, rapidity of occurrence, condition of the general, and of the coronary, circulation; and the age of the patient. Symptoms may be very slight in the case of gradual occlusion of a large vessel, and they may be even unnoticed, if a small vessel is involved, unless several of them have been plugged. Myocardial insufficiency may develop gradually as a result of myocardial degeneration and fibrosis; it is these cases which are known as chronic fibrous myocarditis. According to Wearn the classical symptoms of coronary occlusion do not occur in the presence of myocardial insufficiency. There is usually merely an increase in the dyspnoea and cyanosis already present, and only the suddenness of the change may suggest the real cause.

SYMPTOMATOLOGY

Hamman has classified the symptoms of coronary occlusion under four headings: the immediate symptoms; the symptoms associated with myocardial damage; the symptoms associated with myocardial infarct; and additional symptoms may be of greater or less importance.

The immediate symptoms are characterized by an extremely sudden onset. The condition may be suspected in any sudden onset of myocardial disease, especially if accompanied with pain. It is here that a careful history is important. The pain is similar to that of angina, but is more severe and more prolonged. It may last hours or even days, and morphine may be inadequate for relief. It is known as "The status anginosus." The location of the

pain in a general way is similar to that of angina, but is usually quite circumscribed, and is in rather unusual locations. It is frequently referred to the epigastrium, accompanied by tenderness and rigidity of the abdominal muscles, distension, nausea, and vomiting. It may be such as even to lead to laparotomy for relief of some upper abdominal accident. There is profound shock accompanied by an ashen hue to the skin, sweating of the forehead, and a feeble pulse, which sometimes is inpalpable. The extreme prostration continues long after the pain has subsided, while the degree of shock is usually proportionate to its severity. Occasionally there is no real pain—only a feeling of numbness or oppression associated with the striking symptoms of shock. The patient may even be afraid that death will not come to relieve him. There is conspicuous fall in the blood pressure, which may go to less than 100 mm., which accounts for the extremely weak pulse at the wrist. This fall in blood pressure is an extremely important symptom if the patient's pressure before the onset of the accident is normal or above. In angina there is always a rise with the paroxysm which, however, may be of only a short duration. The blood pressure may become so low as to result in actual suppression of urinary secretion. The symptoms associated with myocardial damage include dyspnoea, following the pain and shock, which becomes an extremely prominent symptom. This may occur in patients who have previously been suffering from myocardial insufficiency, but shows, occasionally, in others who have had no previous history of impaired heart action. Its sudden onset and its intensity are its main features. Another important feature is the degree of passive congestion present which is marked by cyanosis and pulmonary odema. The cyanosis appears early, is often extreme, and usually persists through the convalescence. Pulmonary oedema is never absent in those cases with severe or moderately severe symptoms. Moist rales may be present over the lower lobes or fine crepitant rales may be present over both lungs from apex to base. There is usually an irritating hacking cough, which may occasionally be persistent and exhaustive, and may produce small amounts of serous sputa, frequently streaked or frankly bloody, if pulmonary infarct has occurred. Occasionally pleural effusion may develop. Other symptoms of passive congestion come on gradually, and are not remarkable. The liver

swells, and may be tender to pressure; there may be albumen in the urine; and oedema in the subcutaneous tissue. Libman suggests that early and marked swelling of the liver points to occlusion of the right coronary vessel. Cheyne-Stokes respiration appears quite commonly. There is little found on examination of the heart itself. There is no throbbing, and no tumult. This is probably due to the extreme weakness of the cardiac muscle, which accounts also for the distant heart sounds. The area of cardiac dullness is not enlarged, and the trouble may appear to be upper abdominal if nausea and vomiting, and epigastric pains are present. Existing murmurs may be left unaffected, or a new murmur may appear, or an old one disappear without enfeeblement of the beat. Gallop rhythm, or embryocardia (tick-tack rhythm) may be present, and irregularities are quite common, only a small proportion showing a constantly regular pulse. Auricular fibrillation, auricular flutter, block, pulsus alternans, and paroxysmal tachycardia may occur. Ventricular tachycardia is an unfavorable symptom as it is sometimes followed by ventricular fibrillation and sudden death. There is a marked variation in heart rate on the least exhaustion.

Among the symptoms associated with the myocardial infarct may be mentioned fever and leucocytosis which are seldom absent. The temperature rises usually after 24 hours, and sometimes before, to 100 or even 102 degrees, or more. It may subside in three or four days or may persist for weeks. There is a leucocytosis present which may run as high as 25,000. According to Libman the leucocytosis is one of the most important symptoms in the diagnosis of coronary thrombosis. It may occur in one and one-fourth ($1\frac{1}{4}$) hours after the onset of symptoms, and even then, may be as high as 20,000. More than half of his cases showed from 15,000 to 20,000, with from 78% to 91% polynuclear leucocytes. It is best to examine for this about 6 to 12 hours following the beginning of an attack. If the leucocytosis persists, we suspect a progressive necrosis, or an intraventricular thrombus. This latter is rare. Occasionally the leucocytosis occurs later on as in chronic aneurysm. He emphasized its importance as an aid to prognosis and treatment. It must be mentioned, however, that it alone will not serve to differentiate from an acute abdominal accident with leucocytosis. It is probably due to the absorption of necrotic

tissue from infarcted area. Polynuclears in large numbers have been found present in the infarcted area at autopsy, sometimes resembling an abscess from the large number present. Pericardial friction is an extremely important finding when present, and establishes the diagnosis when accompanied with other symptoms before mentioned. It may be transitory and not intense. Wearn found it present in only two of his series of 19 patients. It must be watched for very carefully, as it is localized over only a small area, and may easily escape detection. Its absence in so many cases is probably accounted for by the fact that most infarcts are deep in the myocardium and hence the pericardium is not affected. Embolic phenomena are more common than pericardial friction rubs, but are equally important from a diagnostic angle. Cardiac infarct usually involves both chambers of the heart. Thrombi form on the surface of the infarct, and may break loose, and float free in the chamber. Those on the right side go to the lungs, while those on the left pass into the general circulation, and may bring up in the brain, the cord, liver, kidney, or even in the large vessels of the extremities. If the patient survives, the infarct softens, is digested, absorbed, and replaced by scar tissue, which may later on bulge and form an aneurysmal sack, or it may even rupture and cause sudden death.

ADDITIONAL SYMPTOMS

The pain may be epigastric, and the formation of gas may cause attacks of true angina. Flatulence, distension, nausea and vomiting, are quite frequent and occasionally there may be even diarrhea and jaundice. An observer may diagnose gall stones, colic, rupture of a gastric ulcer, or general peritonitis, and may even advise operation. The facies of coronary occlusion is quite characteristic. The patient is blanched, has an anxious look, and is deeply shocked. The features are pinched and betray intense suffering, and mental anguish. As the pain leaves there remains extreme weakness, prostration, dyspnoea, and cyanosis. The skin is ashen gray. Sansom describes it as "leaden tint spread over an earthy hue." This may persist for months following the accident, but in rare cases may not be present. Various vasomotor phenomena are often present such as blanching, sweating, or transient flushing, associated with the sensation of intense heat. Patients generally remain conscious, but may not do so, and may die un-

conscious. Usually there is a profound fear of death present, fainting may occur after the slightest exhaustion, or convulsions may occur. Coronary occlusion may be only suspected in cases which die instantaneously, but it is quite probable if the patient is over 50, if there is a rather marked degree of general arterio sclerosis, and more particularly if there is a previous history of angina. Occasionally there may be only a history of attacks of mild "indigestion." Death may be extremely sudden. It may come during conversation in the very middle of a word. There must be more to this than a mild stopping of the circulation, and it may possibly be due to the onset of ventricular fibrillation. Those patients who live a few hours or days usually have characteristic symptoms, and the diagnosis is not difficult, but the milder cases which recover are much more difficult to diagnose, and the condition may be overlooked. It should be suspected in all cases of mitral insufficiency coming on suddenly with pain or followed by fever, or leucocytosis, or embolic phenomena. The medical attendant should be particularly interested in these milder cases which improve after treatment, as they may influence the condition to a remarkable degree.

Coronary occlusion in about 90 per cent of the cases is associated with coronary sclerosis. It is uncommon before 50 and exceedingly rare before 40. Osler stated that it was limited or confined to the upper classes, but this may be due to the fact that most cases thus far reported have come from private practice, and not from large hospital clinics. John Hunter, Charcot, Nothnagel and William Pepper were victims of this disease, as was, also, probably Ex-President Harding. According to Wearn hereditary syphilis and rheumatic fever have an unimportant relation to the disease. There is no apparent relation to any previous disease, nor do alcohol, tobacco, tea, or coffee, effect its incidence. There is a question whether or not vascular hypertension has any association with the future onset of coronary sclerosis, but this question should be studied further. Patients generally display generalized arteriosclerosis, but it must be remembered that coronary occlusion may not follow the other arteries in this respect. Libman advised the examination of the arteries of the legs particularly. Its relation to hypertension, as said before, is impossible to tell. The blood pressure usually falls during an attack, but in most cases we do not know what the blood pressure was previ-

ous to the attack. Syphilis affects the aorta, but very seldom invades the coronary. Previous history is unimportant except in those cases with a history of previous angina attacks.

ELECTROCARDIOGRAPH

There may be alterations in the electrocardiograph tracing, which, however, merely shows changes in the heart muscle. I have known of these, but they are not particularly characteristic of the condition, although some observers, particularly Levine, emphasized the inversion of the T wave. This, however, cannot make diagnosis of coronary occlusion certain, it can only indicate changes in the heart muscle. These changes may be signs if taken with other signs or symptoms, especially if the tracings are made frequently and directly following the accident.

PATHOLOGICAL ANATOMY

Hamman mentions four (4) possible causes of coronary occlusion. Diseases of the coronary artery, thrombosis, disease at the root of aorta, and embolism. The chief cause is usually disease of coronary arteries with the final closure due to thrombosis. These two causes as a rule work together. Coronary disease alone works slowly, and may allow collateral supply to establish itself with the result that no symptoms are noticed. This, however, probably occurs very rarely as thrombosis usually supervenes. Thrombosis never occurs in a healthy valve. Disease at the root of the aorta may cause obstruction by compression and swelling over the mouths of the coronary. This more often occurs in leucic aortitis, but seldom in arterio sclerotic disease. Lues seldom invades the coronary arteries themselves. Embolism is an unusual cause of occlusion. It may, however, be due to vegetation from the aortic valve, or to a ribbon of vegetation waving in the blood stream, and floating into the coronary.

PROGNOSIS

Prognosis is rather difficult to give on account of the lack of data upon the disease which is thus far available. There may recur a recovery in some seemingly desperate cases, and also many cases undoubtedly go unrecognized to recovery. Autopsy alone reveals scars as evidence of a former accident. Death often times occurs during apparent convalescence when it may come with extreme suddenness in a patient seemingly out of danger.

DIFFERENTIAL DIAGNOSIS

The disease must be differentiated from angina pectoris. The symptoms may be alike, and often times the lesion may be similar. Death in angina is nearly always due to an occlusion, and coronary occlusion is usually preceded by attacks of angina. Diseases of the coronary arteries are not always the cause of angina, but contrary to the claim of Albutt it is undoubtedly an important one. The rapid closure of a small vessel may give symptoms like angina or no symptoms at all, but the sudden closure of a large vessel gives typical symptoms quite marked from angina. The pain is more severe, and more prolonged. The patient can usually tell the difference between the two conditions, speaking now of those who have experienced angina. The prostration is more profound, and there is a fall in blood pressure, while angina is accompanied with a rise of blood pressure. There is a fever and leucocytosis and myocardial insufficiency which further differentiate it from angina, and the pain is not relieved by nitroglycerine. The presence of pericardial rub makes the diagnosis complete. Myocardial insufficiency may mask symptoms of occlusion of the coronaries. One should search for it in a person past middle life, who develops a sudden myocardial insufficiency, but who has had no heart trouble previously. Rupture of the aorta is hard to distinguish from this condition, while rupture of a branch of the coronary, or rupture of the heart itself may closely simulate it. Perhaps the greatest difficulty comes in differentiating coronary occlusion from some grave abdominal disorder. Levine and Tranter cite incidences of mistakes where it has been taken for acute pancreatitis, rupture of gastric or duodenal ulcer, renal colic, and hepatic colic. Faulkner, Marble and White have emphasized its similarity to cholelithiasis. In the diagnosis the history is of first importance. It occurs uncommonly before 50, while gall stones usually occur before that age. It is more common in men, while gall stones are more common in women. In spite of the greatest care, clinicians of experience are bound sometimes to slip into error.

Among the late results of coronary occlusion we may mention an aneurysmal bulging in the scar, if the scar is large. Probably most aneurysms of the heart have their origin in this manner, as it is usually found at the apex of the left ventricle, due to the fact that the anterior descending branch of the left coronary is

most usually affected. Again adhesions may bind it to the diaphragm or to the chest wall.

As it is corollary to treatment early recognition is most important. Early treatment may mean permanent recovery. First of all the patient must be given absolute rest, any strain upon the heart has a damaging effect. They should be kept at rest for a long time, especially those patients where the heart has been previously damaged by rheumatism. Morphine must be given in large doses, enough to control the pain. Levine recommends caffeine and camphor for collapse, and practically all clinicians recommend digitalis to full digitalization. There is no history of rupture of the heart following the use of drugs.

STERILITY IN WOMEN, WITH SUGGESTIONS FOR TREATMENT*

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This study has been made on the records of 300 women who have entered the University Hospital in the past six years giving sterility as their chief complaint. Although on subsequent examination, after their histories were taken, many other patients were found to be sterile, their cases were not taken into consideration.

AGE

The average age of the patients was 29.1 years and the length of time married 7.4 years. This shows that, on the whole, women do not consult their physicians until rather late and after the period of greatest fertility has passed. Some patients, of course, become worried over their sterility very soon and others wait as long as two and a half decades. The earliest patient seen was two months after marriage and the longest period of sterility was 27 years. These two exceptions are by no means the rule, but it shows that women may become interested in bearing children at any time during married life. Two patients entered the clinic when menopausal symptoms had already begun.

TYPES

The cases have been divided into two groups, absolute and relative sterility. The former group included those patients who had never been pregnant and the latter,

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patients who had been pregnant at some time in the past, either having gone to term or aborted, but at the time of examination stated they were unable to again become pregnant. In the former group there were 248 cases and in the latter 52. These figures show that nearly 83 per cent of the patients studied fell into the absolute group.

MENSTRUATION

It is usually thought that irregularity of the menstrual periods has a great deal to do with sterility, either as a cause or as a symptom. This was found to be the case in those patients, who for want of a better name, we placed in the endocrine group. However, in the whole series it was found that 217 women (72.3 per cent) had regular menstruation while 83 were irregular.

FAT DEPOSIT

It is interesting to note that 46 patients (15.3 per cent) stated that there had been a rapid increase in weight within a very short time after marriage. Whether or not this abnormal deposit of fat would have taken place had the patients not entered the marital state, we are not prepared to state. It is generally conceded that this condition is due to some abnormality in function in the endocrine chain, although no doubt many are due to indiscrete dietary habits.

WASSERMANN REACTION

There were, in all, 19 cases (6.3 per cent) where the Wassermann reaction was returned as four plus. A very interesting observation in this regard is that all these patients were in the absolute type of sterility cases. Syphilis is usually conceded to be an etiologic factor in cases of repeated abortion. There were eight cases where abortion had taken place two or more times, in one case eight times, and in none was the Wassermann returned as positive.

HUSBAND

Due to the fact that a large majority of the patients seen in the clinic come from considerable distances, it was possible to examine the husband in only twelve cases. In two of these no spermatazoa whatever were found, and in one the few found were immobile. We believe that in every case, where it is at all possible, the seminal fluid of the husband should be carefully examined microscopically.

RUBIN TEST

Inflation of the Fallopian tubes was attempted in 168 cases, or 54.3 per cent. The reason for these seemingly small percentages is two fold. Firstly, it was often impossible to do the inflation on the day the patient entered the clinic, and on being given appointments for the test, many of them did not return. Secondly, we have never done an inflation where there was any evidence of an acute or subacute inflammatory process in the pelvis. The tubes were found to be closed in 98 cases, or 57.3 per cent of the patients inflated. In 70 cases the tubes were found to be open.

RETROVERSION

Twenty-one patients had complete or third degree retroversion of the uterus. In over 50 per cent of these cases there was found to be an associated inflammatory process in the pelvis. In six cases an anterior subfascial shortening of the round ligaments was done. In only one case, as far as the records show, did subsequent pregnancy take place. This was in a patient where there had been constant backaches since girlhood, and who had been married two and a half years. When last heard from she was three months pregnant. It should be remembered that this patient had a dilatation and curettage at the same time and the dilatation of the cervix might have had something to do with the subsequent pregnancy, but this is rather doubtful. Eventually she might have become pregnant without any operation so that no definite conclusions can be drawn from this.

PELVIC INFLAMMATORY DISEASE

Definite bilateral pelvic inflammation, with thickened tubes, was made out in 105 cases or 35 per cent. In the great majority of these the etiologic factor was undoubtedly Neisserian in nature, although the characteristic diplococcus was infrequently isolated. The question arises as to what should be done in these cases. Randall states that he believes less than 1 per cent of tubes are opened by inflation, adding that he believes spasm is present in many cases which seem to be closed and eventually the tubes are permeable to gas. In these cases he advocates the administration of belladonna or some other antispasmodic drug. Many authors, particularly Rubin, advise the injection of lipiodol for the purpose of locating the tubal obstruction. We have not had a great deal of ex-

perience with the use of lipiodol, but have as yet had no ill effects from its use.

The possibility of plastic operations on the tubes should always be entertained, but so far the results of these operations in all clinics have been found to be rather discouraging. Many writers, particularly Estes in this country, have recommended the transplantation of the ovary into the uterine horn when the tubes are absolutely closed. He reported four cases of pregnancy following this operation in some 50 cases. The operation described by Estes, has been performed about seven times in our clinic, but to date no case of pregnancy has been reported. As can be seen chronic bilateral salpingitis is the greatest cause of sterility and surgery in this particular field is as yet in its infancy and better results can be hoped for in the future.

FIBROMYOMATA

There were seven cases in which single or multiple fibromyomata were evidently the cause of the complaint. Unfortunately, in the four patients operated upon it was found necessary to do a supravaginal hysterectomy, but we believe that myomectomy is the operation of choice in these young women if it is at all possible. The psychologic effect of removing the body of the uterus should always be considered.

We have one case in which a cervical polyp seemed to occlude the cervical canal almost entirely. This was enucleated.

DYSCRASIA

In 34 cases an endocrine dyscrasia of some type was taken to be the cause. In 23 of these women the uterus was found to be small and infantile in type. Unfortunately the whole subject of endocrinology is just beginning to be studied and up to the present, most forms of treatment are hopeful rather than scientific. We have, however, been encouraged by what seems to be good results in several cases with two subsequent pregnancies, following the long continued administration of ovarian extract, the whole gland being used.

RELAXATION

We believe that bad perineal relaxation should be repaired in order that the seminal fluid will not be entirely lost after coitus and also that severe cervical infections should be cleared up in as conservative a way as possible.

VAGINAL REACTION

We have done very little work from this particular angle. There is as yet no satisfactory technique for determining the degree of reaction either acid or alkaline of the vaginal and cervical secretions. We have, however, in a few instances been able to examine spermatazoa taken from the seminal pool.

Although, in many of our cases we were unable to find any cause whatever for sterility, unless it be in the husband, whom we were unable to examine, we believe this whole subject of sterility presents a very fertile field for study and that great advances will be made in the next few years. A decrease in mental strain, an increase in familial accord and a great deal of personal satisfaction will be the result of these labors.

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REPORT OF PREGNANCY FOLLOWING INVERSION OF THE UTERUS*

L. W. HAYNES, M. D.,
 DETROIT, MICHIGAN

In a recent article, by Dr. Norman F. Miller in the *American Journal of Obstetrics and Gynecology* a review of 55 cases collected from the literature was given, and the 56th one reported of pregnancy following inversion of the uterus. The author says that: "Certainly thousands of inversions have occurred and many of these women must have conceived later, but they have gone unrecorded in the literature as is the way with many other interesting conditions." Dr. Miller's article has stimulated me to place on record the following case.

At the 57th annual meeting of the Michigan State Medical Society in 1922, held in Flint, Michigan, I read a paper entitled, "Acute Complete Inversion of the Uterus." This was published in the *Journal of the*

* Reported at the Detroit Obstetrical and Gynecological Society Meeting, May, 1927.

Michigan State Medical Society in February, 1923.

CASE REPORT

The case reported in this article briefly was as follows:

Mrs. S., age 34. Primipara—rather tall, slight build. Physical condition good. Had first period at age of twelve years. Had always been regular and flow lasted from three to five days. Since periods established she had no pain. Family history negative. She had never had any serious illness excepting a fistula 11 years previous to pregnancy, which was successfully operated. At this time she had two small cysts removed from an ovary. She did not experience any nausea or vomiting during pregnancy. Urine was negative throughout.

Wassermann negative, and blood pressure ranged from 110 systolic, 68 diastolic, to 118 systolic and 70 diastolic. Pelvic measurements were normal. The third month she developed a moderate jaundice with temperature of 102. Temperature kept up for one week and jaundice gradually disappeared. With this the patient had quite a severe cough and tenderness over lower abdomen. As life was noted and motion increased, abdominal soreness continued and she was never free from it until the baby was born.

Patient entered hospital at 3:30 a. m., July 31st, 1921. Pains every 10 to 20 minutes—membranes had ruptured at 8 p. m., and flow of fluid had been gradual. Rectal examination was made and the head was in the pelvis; cervix was soft and dilatation was three fingers. At 5 a. m. dilatation was complete and there was rectal bulging. She was taken to the case room, placed under obstetrical degree of ether anaesthesia, and a seven-pound two-ounce baby was delivered without laceration. One-half c.c. of pituitrin was given. After waiting about twenty minutes, moderate crede was done by the assistant while I held the cord, using no more pressure than in any other case. Crede was used only when uterus was contracting. The placenta was delivered and was attached to the completely inverted uterus. The patient was not out from under the anaesthesia and as the placenta was delivered she gave several sharp cries from pain. As I noted that the mass was too large for placenta alone and was thick at the vulva, the assistant remarked that he could not find the fundus. The cord was an average length. The patient had a moderate pallor and the pulse was 120 per minute. The bleeding was only moderate and the uterus did not noticeably increase in size.

Hot packs were at once applied over the placenta and uterus and with as little exposure as possible the membranes were separated. By firmly grasping the body of the uterus with the fingers of the right hand it was pushed into the vagina as far as possible. Then with the thumb and index finger, pressure was put on the side of the fundus. This portion of the inverted uterus began easily to invaginate and with a steady increased pressure with the fingers the whole uterus gradually invaginated and slipped through the cervix. The closed fist followed the fundus back into the pelvis so that the fundus could be grasped with the left hand through the abdominal wall and was held in this position while one-half c.c. of pituitrin was given and followed by one c.c. of ergot. Then 300 c.c. of normal saline was given in the breast tissue.

During the above manipulation the pulse remained at 120 and was a good quality. As the uterus began to contract, the hand was carefully withdrawn and a plain gauze pack was inserted into the uterus. Patient was removed to her bed in twenty minutes with pulse 100 and good quality. The next morning at 11 a. m. patient was in good condition, pulse 100, moderate lochia. Packing was removed. Blood pressure 110 systolic, 70 diastolic. For ten days tenderness was only slightly more than normal over abdomen. Highest temperature was 98.6. Pulse gradually decreased from 100 on second day to 72 on the 13th day when she was discharged.

She was in perfect health and had regular menstrual periods until December, 1924, when she again consulted me. The November period was missed and the December period was of short duration and scanty. Examination showed the uterus in a second degree retroversion with no signs of pregnancy. Her period January 17th, 1925, was a normal one. This was her last period and when she consulted me again on April 24th, I found the usual signs of pregnancy at about two and one-half to three months. The estimated date of confinement was October 24th. Life was noted the 1st day of June. Twice during the prenatal care the patient had a bloody discharge lasting about two days. She was put to bed during these periods. Development was normal until the fifth month, when it was noted that the fundus was not at its usual height. At seven months, the top of fundus was level with the umbilicus. October 3rd, the ninth month, the top of fundus was level with umbilicus; position was L.O.A. When the patient was two weeks over due and as uterine inertia might be expected from previous history she was given two complete trials of quinine and castor oil without effect. When she was 17 days overdue she was sent into the hospital and a bougie inserted at 6 p. m., November 9th, 1925.

No contractions resulted, although at 11 a. m. the following day when the bougie was removed, there was 2½ c.m. dilatation. At this time under gas anaesthesia a Vorhees bag was inserted. Twenty-four hours later, as there were no contractions a pound weight was fastened to the bag. Seven hours later the bag was dragged through the cervix and the dilatation was 6 c.m., but she had not experienced any pain. Quinine, two grs. each hour, was started and 2 m's. of pituitrin every thirty minutes; although the patient did not experience any pain after two hours a slight contraction was noted every two to three minutes. At such intervals she was instructed to bear down and soon the membranes ruptured. Contractions continued

to increase and at 3 a. m. of the 12th, a normal child, 6 pounds, 6 ounces, was delivered. The cord was around the neck once. One-half c.c. pituitrin given at birth of head. Ten minutes later the placenta was delivered without Crede. During the delivery of placenta there was a definite tendency for the fundus to slip into the pelvis.

She made an uneventful recovery and was discharged on the twelfth day. I have examined her several times since this delivery. The uterus is in a first degree retroversion without symptoms. Her periods began after seven months when baby was weaned, and have been regular and normal since.

GOLF BALL INJURY, HEMOPHILIA, OPTIC ATROPHY

GROVER C. PENBERTHY, M. D.

HOWELL L. BEGLE, M. D.

DETROIT, MICHIGAN

CASE REPORT

C. P., age 31, an American, while working on September 24th, 1926, as a laborer on a golf course, was hit by a golf ball below the right eye. The right side of the face began to swell immedi-

ately and the swelling soon spread to the left side of the face. A physician, called to attend him, ordered rest in bed and ice packs applied to the face. The next day the right eye was swollen tightly shut, but before this occurred he states that he had tested his vision in the right eye by separating the lids with his fingers and found that he could see.

The swelling of his face increased to an alarming extent and he was admitted to the Michigan Mutual Hospital on September 26th. The patient gave a history suggestive of hemophilia, stating that three years before this accident, he had bled profusely following the extraction of a tooth and that physicians had used serum repeatedly by injection, to stop the hemorrhage. His maternal grandfather was said to have been a "bleeder," but it is his belief that his two brothers are not.

The patient was placed in bed with head and shoulders elevated. The entire head and neck were swollen, scalp, face, eyelids and lips being involved. The lips were fully an inch in thickness. The skin had a dark, greenish color which spread not only over the face and neck, but down over the chest as far as the nipples.

The skin at the site of the injury did not appear to be broken but was marked by several confluent deep green blebs. The lids of the right eye were so swollen that they could not be separated for inspection of the eyeball. The lids and conjunctiva of the left eye were swollen but slight separation was possible.

The patient's mental condition was clear, but he was restless. Respiration was difficult. His temperature on admission was 97, pulse 52. Heart and lungs appeared normal and the urine showed no evidence of a pathological change.

Desensitizing doses of hemostatic serum were given followed by 5 c.c. of the same injected intravenously and two subsequent intravenous injections of a similar amount. Twenty grains of calcium lactate were administered every four hours. Boric compresses were applied to the face. Morphine, grain 1/6, was employed for restlessness. Fluids were forced. Blood clots forming in the nose and mouth were frequently removed.

The bleeding continued, the skin discoloration extending a hand's breadth below the nipples. The temperature did not go above 99, the pulse reached 102. Skin areas where fresh bleeding was suspected had a greenish color. The skin over older extravasation became mottled with the tints ranging from green to yellow that characterize ecchymoses.

On September 28th a blood examination showed hemoglobin 55 per cent and red cells 3,000,000. The swelling began to subside on October 2nd, although slight bleeding is recorded as late as October 4th. On October 7th the swelling of the right eyelids had subsided to such an extent that the eye could be examined. The conjunctivae were ecchymotic. The eyeball was intact but the pupil was dilated and did not react to light. The optic nerve was whitish and the margins blurred. The retinal vessels appeared about normal. There were no retinal hemorrhages nor was there blood



Photo by Ruslander

in the vitreous. The left eye appeared normal and had good vision.

X-ray plates of the head taken on October 9th were negative for evidence of fracture. The swelling gradually subsided but on the 21st of October there was still some swelling of the right side of the face and the right eyelids. He complained of a numb area over the right eye.

On November 24th the right pupil was dilated, there was complete optic atrophy and no vision with the right eye. He complained of difficulty in judging distances.

From November 28th until December 9th the patient complained of pain and stiffness in the right elbow. The right forearm could be flexed only to a right angle. This condition subsided and he was discharged from the hospital on December 9th. Compensation was allowed for loss of right eye.

It is not clear what was the cause of the optic atrophy. The atrophic changes observed in the right optic papilla as early as the 13th day following the accident suggested the possibility that the atrophy was present before the accident occurred. There is considerable variation in the time which various observers have found to elapse from the date that the optic nerve is injured in the orbit or the optic canal and the date when the atrophy is found to have reached the papilla. Pallor has been noted as early as the sixth day while after 12-21 days the atrophy is generally held to be very prominent. There was nothing further, however, to support the conjecture that there had been a pre-existent optic atrophy. The patient was frank and straight forward, denied any previous trouble with the eye and his complaint of having difficulty in judging distances suggested the recent loss of binocular vision.

Blows about the orbital margins not infrequently cause fracture of the orbital bones or even of those forming the optic canal and in such occurrences the optic nerve may be torn or compressed. Vision in such instances is usually immediately affected which does not agree with the patient's statement that he could see with the eye before the lids were completely closed by the swelling.

Whether there was orbital bleeding or not cannot be stated. The signs of orbital hemorrhage, exophthalmus and immobility, would probably be masked by the swelling of the lids. That an orbital hemorrhage would cause complete and permanent loss of function of the nerve seems improbable.

AN ADDRESS TO THE WAYNE COUNTY MEDICAL SOCIETY

By

Hon. FRED W. GREEN
GOVERNOR OF MICHIGAN

Gentlemen:—

I appreciate most keenly the cordial welcome you have given me tonight. May

I assure you that it is not a sense of duty that brings me here this evening but a sincere personal pleasure in meeting with a professional group that not only stand high in my own regard but who, as no other profession, possess the respect and esteem of the public at large. You doubtless have your moments of discouragement when it appears that your services and sacrifices are not appreciated by patients or public. As a layman I can assure you that such occasions are an incidental minority by no means an attitude consistently adopted by the majority.

It seems to me that the wholesome respect and admiration in which the laity at large hold you is illustrated by the reception the public gave to the literary efforts of Sinclair Lewis. This author, as you well remember, painted a portrait of a Business Man, and the portrait so caught the public fancy that Babbitt no longer is the name only of a novel, but is a new word in the vocabulary of the street to describe a type. So much is it on the tongue of all that the ardent member of Rotary or Kiwanis and other luncheon clubs never knows when he is to be insulted by the epithet Babbitt being hurled at him.

Lately this same author has dipped his pen in gall and acid and caricatured the ministry with Elmer Gantry. Many clergymen have felt the pressure of this book and leapt to the defense of their profession.

Arrowsmith, written by the same author, was intended as an unlovely portrait of your profession. Doubtless put out by the author in the hope that it would direct shafts of ridicule at the career of medicine and doctors in general—it fell upon unresponsive soil. The public think too well of you and know you so well by personal experience, that the book did not cause a ripple of interest and is now practically forgotten.

You are therefore to be congratulated for keeping your house in such good order that scoundrels and charlatans cannot mingle with you, let alone attain recognition.

I presume that this keeping up of ideals in your profession is one of the objects of the Wayne County Medical Society. Doubtless you have other purposes and objects as part of your program as a group. A layman always steps warily when advising physicians what to do. It is too abrupt a step for us to assume lightly. We sit so often at the receiving end that it is like preempting Caesar's chair to

* Delivered September 20, 1927, Wayne County Medical Society Meeting.

advise you. But I am interested as a citizen and I am interested as your Governor. Health—Public Health is a matter of prime importance. The Surgeon General of the United States Public Health Service said that "The difference between good government and bad government is measureable by the sickness and death rates." It surely must have been apparent to you physicians where I stood on that platform when I drafted one of your own respected members for the office of Health Commissioner.

However I am not going to launch into a discussion or defense of Michigan's Public Health program. It needs no defense in this audience and any discussion can be conducted better by its able chief. But I have an idea or two that I would like to have you consider as a group—as a society. The group—or Wayne County Society can do effectively certain things which single physicians can only do sporadically.

The first suggestion I have is regarding the children of Michigan. The second refers to medical students and the third to adult laity. These are just a layman's notions.

1—I believe all too little time is spent in our public schools apprising the coming generations of the heroism and supreme self sacrifice and unselfish devotion of you men of science—both in the past and in the present.

A Lindbergh can fly across the sea and his name is on every tongue and his most worthy feat will probably never be forgotten. He doubtless did great good, and his heroic feat may turn out to have led civilization another step forward. But how many of us—old or young among the laity, know the story of the conquest of Yellow Fever or Smallpox—or Diphtheria and those other dread maladies over whom you will be able to stand victor in a short time. Gentlemen—we say all too easily—"Peace hath her victories no less than war," but the heroes of mankind are still too easily recruited from the ranks of Mars. I would have every child know the story of Jenner, Pasteur, Lister, Gorgas and others as they know about Washington, Napoleon, Lincoln or Wellington. This, I understand has been started by your Joint Committee on Public Instruction, and I commend it.

Certainly it is a legitimate and worthy work this your Society can carry on with our education.

My second plea as a layman is to implore you to maintain among your medical students those high ideals of service that have characterized your profession in the past and won it the high position it now holds in our hearts.

Two dangers stand tempting the modern medical student. One is the lure of high fees. Perhaps we laymen have encouraged you in that. The other is the passion for the science of medicine in the abstract.

Whenever a medical student regularly gets so interested in the progress of a case as it develops as to lose sight of the fact that it is a human being in distress, then his place is in the laboratory and not at the bedside. No doubt we need men to delve in the laboratory with test tube and microscope—but even there I do not doubt but that the man who gets the results, who works tirelessly—is the one who sees human beings tossing on beds of pain and pants with eagerness to aid them.

For my last suggestion I fear I am treading on sacred ground. Forgive me if I misstep—for I have only the desire to help you and the public to get closer together. It is difficult for the average layman to understand the difference between ethical and unethical conduct. Of course I am not referring to the extremes where common notices of decency and law would advise a man. I am thinking of that border-line that perhaps troubles you at times—when you wonder what is proper publicity and what forbidden.

As a business man I cannot see why the tremendous weapon of newspaper publicity should be snubbed by you and left as a terrible weapon in the hands of quacks and charlatans. I am not pleading now that you devise some way to use publicity for your own sake. You do not need it. But I ask it for the sake of the public. Perhaps you say that the public should discriminate. But, surely your experience in homes where you see the lack of ability to discriminate in such simple matters as proper eating, will tell you that too much cannot be expected of us laymen in the matter of discriminating intelligence.

So I believe that one of the finest things you members of the Wayne County Medical Society could do would be to make an earnest effort to discover ways of educating the public in how to choose their doctor.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

DIPHTHERIA

In 1921, Michigan had the highest death rate from diphtheria of any state in the United States, and probably of any country in the world. Since that date the rate has shown a satisfactory decline, reaching the minimum of 8.5 per 100,000 population in 1925.

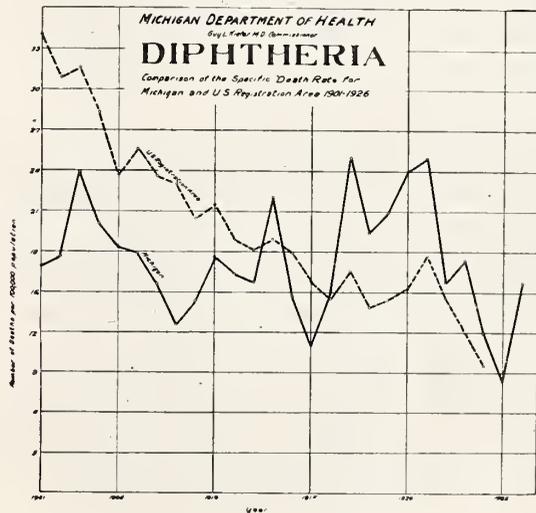
The year 1926, however, showed a considerable rise, both in the number of cases reported and in the deaths, although relatively the deaths increased much more than the cases. This was probably due to the fact that the fatality rate was higher,—that the disease was more virulent, although we have been unable to demonstrate this by any laboratory procedure. Clinicians generally seem to think it was due to a higher virulence.

In order to understand the comparative value of these figures we have made a comparison of the rate in Michigan for the past twenty-six years with the corresponding period in the registration area of the United States. The last available rate for the registration area was for 1924, so that we are unable to tell whether the rate for 1925 was correspondingly lower as it was in Michigan, and if it showed a corresponding rise in 1926. Many reports from cities which are available for 1926 seem to indicate that the increase was not confined to Michigan.

Below will be found a table giving the rates for the registration area and for Michigan for the period indicated and also an illustration which will enable the reader to visualize just what this means. It will be observed that the trend has been continuously downward in the registration area but that while Michigan has had periods of downward trend, it has also had periods of decided upward trend. In other words, the ratio of decrease has not been as consistent as it has been in the registration area.

It would be unfortunate for anyone to assume that, because of the progress made in the last few years in Michigan, the diphtheria problem has been solved. For 1927, up to and including August 27th, there was a slight increase in the number of cases reported over 1926. While this in-

crease amounted to only about 4 per cent, it is exceedingly serious because it indicates that the figures of last year are not going to be reduced unless some very careful and painstaking effort is made by physicians who must be constantly on the alert and regard every case of sore throat as possible diphtheria until proven otherwise.



DIPHTHERIA RATE

	United States Registration Area	Michigan
1901	34.0	16.8
1902	30.8	17.6
1903	31.7	23.9
1904	28.3	20.0
1905	23.6	18.3
1906	25.7	17.8
1907	23.6	15.6
1908	21.5	12.6
1909	20.4	14.3
1910	21.4	17.6
1911	18.9	16.3
1912	18.2	15.7
1913	18.8	22.0
1914	17.9	16.2
1915	15.7	11.1
1916	14.5	15.0
1917	16.6	25.0
1918	13.9	19.5
1919	14.7	21.1
1920	15.3	24.1
1921	17.7	25.0
1922	14.6	15.8
1923	12.1	17.5
1924	9.4	12.1
1925	.....	8.5
1926	.....	15.8

THE KAHN TEST

An indication of the growing appreciation of the Kahn test came from St. Louis, Missouri, recently, in the form of a letter sent to local physicians by the St. Louis Division of Health.

"You are undoubtedly well aware that about five years ago Dr. R. L. Kahn at the Michigan Department of Health evolved a test for syphilis which began to attract considerable attention among clinicians and laboratory workers. This test, known as the Kahn test, had been perfected during 1923 and since that time has proved itself to be highly specific as a diagnostic agent and in many regards more dependable than the Wassermann. The Kahn test is generally accepted to be more sensitive than the Wassermann in early primary, latent, and in treated syphilis. The Health Division Laboratory has conducted the Kahn test as a matter of routine on all blood specimens submitted for the Wassermann test for the past four years and there has been very close agreement between the two tests.

"Because of the many advantages of the Kahn test, the St. Louis Division of Health has decided to make this test standard and discontinue the Wassermann test. Beginning with August 8, 1927, Kahn tests will be made daily on all incoming specimens of blood. All specimens received before 10 a. m. will be reported by mail before 5 p. m. on the same day. It is believed that the daily Kahn reports will render a needed service to physicians and should stimulate interest and inspire greater confidence in the serological diagnosis of syphilis . . ."

CHILD HYGIENE NOTES

The Michigan Department of Health conducted a conference for children between the ages of one and three years at the Michigan State Fair held in Detroit, September 5 to 10. At this conference children between the ages mentioned were given a complete physical examination by graduate physicians connected with the Department, and were scored according to the standard score card issued by the American Medical Association. Prizes were awarded to the highest scoring babies in the various groups.

It was hoped that the conference would have a decided educational value, since physical defects were pointed out to parents and leaflets were given out on child care.

Beginning September 12, Little Mother's League Classes will be started in Ottawa, Montmorency, Alcona and Iosco counties.

Grand Traverse county will begin a prenatal nursing program under the super-

vision of the local physicians in September. The program will continue for a period of one year. Sylvia Krejci, a nurse on the staff of the Bureau of Child Hygiene and Public Health Nursing, has been assigned to the work which is similar to that already conducted in Newaygo and Osceola counties and now in progress in Emmett county.

September will also mark the starting of a series of women's classes on prenatal and infant care in Antrim and Kalkaska counties, under Dr. Rhoda Grace Hendrick and Charlotte Ludington of the bureau staff. These classes will continue for a period of about nine weeks.

Breast Feeding Surveys have been carried on in the following counties during the summer:

Chippewa, Charlevoix, Missaukee, Otsego, Schoolcraft, Ontonagon, Mecosta, Mackinac, Alcona and Oscoda.

LABORATORIES ALREADY REGISTERED

The following laboratories have been assigned registration numbers in accordance with the new law requiring that "all laboratories and other places where live pathogenic germs are handled or cultivated shall be registered with the Michigan Department of Health, and a registration number shall be issued to each place registered."

Reg. No.	Location	Name of Laboratory
4.	Ann Arbor	City Laboratory
5.		St. Joseph's Mercy Hospital
6.		University of Michigan Hospital
7.	Battle Creek	American Legion Hospital
8.		Battle Creek College
9.		Battle Creek Sanitarium
10.		City Department of Health
11.		L. Y. Post Montgomery Hospital
12.		U. S. Veterans Bureau, Camp Custer
13.	Bay City	City Department of Health
14.		Mercy Hospital
15.	Detroit	City Department of Health
16.		Detroit Testing Laboratory
17.		Delray Industrial Hospital
18.		Children's Hospital
19.		Digestive Ferments Co.
20.		Frederick Stearns & Co.
21.		Grace Hospital
22.		Henry Ford Hospital
23.		Dr. H. A. Meinke
24.		National Pathological Laboratory
25.		Owen Clinical Laboratory
26.		Physicians Service Laboratory
27.		Providence Hospital
28.		Receiving Hospital
29.		Stafford Biological Laboratory
30.		Sherman Laboratory
31.		St. Joseph's Mercy Hospital
32.		St. Mary's Hospital

Reg. No.	Location	Name of Laboratory
33.	East Lansing	Michigan State College
34.	Escanaba	St. Francis Hospital
35.	Flint	City Department of Health
36.		Hurley Hospital
37.	Grand Rapids	Butterworth Hospital
38.		Blodgett Memorial Hospital
39.		Burleson Sanitarium
40.		Brotherhood Laboratory
41.		St. Mary's Clinical Laboratory
42.		Western Michigan Clinical Laboratory (Hills)
2.		Western Michigan Division Laboratory, Mich. Dept. of Health
43.	Ironwood	Grand View Hospital
44.	Highland Park	Highland Park General Hospital
3.	Houghton	Branch Laboratory, Michigan Department of Health
45.	Jackson	Mercy Hospital
46.	Kalamazoo	Borgess Hospital
47.		Department of Health
48.		Kalamazoo State Hospital
1.	Lansing	Laboratory, Michigan Department of Health
49.	Manistee	Mercy Hospital
50.	Mt. Clemens	St. Joseph Hospital X-ray and Clinical Laboratory
51.		Braun Clinical Laboratory
52.	Menominee	St. Joseph's Hospital
53.	Muskegon	Hackley Hospital
54.		Mercy Hospital
55.	Olivet	Olivet College
56.	Pontiac	City Department of Health
57.		Oakland County Department of Health
58.	Port Huron	St. Clair County Laboratory
59.	Saginaw	Central Laboratory
60.	Sault Ste. Marie	Chippewa County Memorial Hospital
61.	Sturgis	Sturgis Memorial Hospital
62.	Traverse City	Traverse City State Hospital
63.	Wyandotte	Wyandotte General Hospital
64.	Ypsilanti	Beyer Memorial Hospital

 VISITORS

Varied nationalities were represented by the visitors to the department laboratories during August. Time spent in observing the work ranged from one day to ten weeks, several of the guests having registered in June and July.

Dr. I. H. Fuhs, Clinical Pathologist, Canton, Ohio. (2 days).

Dr. George M. Cameron, Bacteriological Department, University of Tennessee, Knoxville, Tenn. (1 day).

Dr. Everette Atkinson, Commissioner of Health, Perth, West Australia, (1 day).

Dr. E. Robertson, Chief Health Officer, Victoria, Australia. (1 day).

Dr. Robert Dick, Director of General Public Health, New South Wales, Sidney, Australia. (1 day).

Dr. Val Robinson, Clinical Pathologist, Chicago, Ill. (3 days).

Dr. W. A. Pearson, Dean Hahnemann Medical College, Philadelphia, Pa. (1 day).

Margaret Hicky, Laboratorian, Detroit, Michigan. (1 day).

Dr. L. F. Desannier, Clinical Pathologist, Chicago, Ill. (2 weeks).

Dr. Oscar Vargas, Director Public Health, San Jose, Costa Rica, C. A. (2 weeks).

Margaret L. Low, Provincial Health Laboratory, Halifax, Nova Scotia, Canada. (2 weeks).

Miss J. G. Neversel, Laboratories, Asheville, N. C. (4 days).

Dr. Jesus Jimenez, Institute of Hygiene Alfonso XIII Madrid, Spain. (6 weeks).

Dr. W. M. Pearson, Kirksville Clinical Laboratory, Kirksville, Mo. (1 day).

Dr. Gavro Vujicic, Department of Public Health, Belgrad, Yugoslavia. (3 weeks).

Dr. R. B. Lal, Epidemiological Institute, Punjab, Lahore, India. (6 weeks).

Dr. E. R. Miller, Health Department Laboratories, Cleveland, Ohio. (3 days).

Dr. Xavier Hernandez, Nation Department of Public Health, Mexico City, Mexico. (6 weeks).

Dr. K. V. Krishnan, King Institute, Madras, India. (3 weeks).

Harriet Bixby, Assistant Director of Laboratories, Department of Health, Connecticut. (2 weeks).

Dr. Joseph Chandler, Hahnemann Medical College, Philadelphia, Pa. (3 days).

Dr. M. B. Kurtz, Michigan State College, East Lansing. (6 weeks).

Jean Bradford, Laboratorian, Lansing. (10 weeks).

Miss S. R. Mershon, Laboratorian, Louistown, Montana. (10 weeks).

Dr. Victor G. Heiser, Rockefeller Foundation, New York City. (1 day).

Dr. Rolland J. Brown, University of Michigan, Ann Arbor. (1 day).

Dr. Philip R. Johnson, University of Michigan, Ann Arbor. (1 day).

Dr. Helen C. Hirshland, Clinical Pathologist, Reading, Pa. (3 days).

 VISITS OF ENGINEERS DURING AUGUST

Inspections and Conferences, Sewerage and Sewage Disposal: 25 cities.

Ann Arbor	Higgins Lake
Augusta	Howell
Bad Ave	Island Lake
Bay View	Jackson
Cadillac	Lansing (2)
Caro	Lapeer
E. Grand Rapids (3)	Middleton
East Lansing (6)	Niles
Elk Rapids (2)	North Branch
Elsie	Ottawa Beach
Escanaba	South Lyon
Fordson	Ypsilanti
Greenville	

Inspections and Conferences, Water Supplies: 33 cities.

Alpena	Manistique (2)
Anchor Bay	Middleton
Bangor	Midland
Bay City (3)	North Park
Benton Harbor (2)	Oxbow Lake
Birmingham (2)	Petoskey (2)
Cadillac (7)	Rockford (2)
Capac	Romeo
Charlevoix	Saginaw
Decatur	Saugatuck
Dexter	Saranac
East Grand Rapids	South Haven (7)
Farmington	St. Joseph
Flint	St. Ignace (2)
Greenville (2)	Whitehall
Lansing	Ypsilanti
Mackinaw City (2)	

PREVALENCE OF DISEASE

	August Report			Av. 5 Years
	Cases Reported			
	July 1927	August 1927	August 1926	
Pneumonia	171	122	114	114
Tuberculosis	489	447	462	473
Typhoid Fever.....	51	88	75	98
Diphtheria	255	212	326	306
Whooping Cough.....	661	674	625	646
Scarlet Fever.....	436	298	273	330
Measles	397	103	231	192
Smallpox	95	59	40	44
Meningitis	13	3	9	7
Poliomyelitis	6	31	13	23
Syphilis	1,346	1,424	1,201	948
Gonorrhoea	750	940	797	853
Chaneroid	4	13	5	12

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

August, 1927

Inspections and Consultation on Swimming Pools: 3 cities.

Detroit	Ypsilanti
Hudsonville	

Inspections and Consultations, Stream Pollution: 6 cities.

Alpena (4)	Kegonic
Elk Rapids	Kent City
Holland	Owosso

Inspections of Camps:

Charlevoix, Sanitation.
Jeddo, Y. W. C. A. Camp, Water Supply.
Trilby, Toledo Public Health Association, Sewage Disposal.

Inspections and Conferences at Institutions:

Detroit, State Fair Grounds, Sewers (6).
Eloise, Wayne Co. Home, Sewage Disposal.
Grayling, Nat'l Guard Camp, Sewage Disposal.
Hillsdale College, Sewage Disposal.
Northville, Wayne Co. Training Sc., Sewers (3).
Northville, Wayne Co. Training Sc., Water (2).

Information and Conferences, Miscellaneous:

Belding, Garbage Disposal.
Lansing, Garbage Disposal.
Lansing, Nuisance.
Lansing, Water Softening.

Roadside Water Survey:

Trunk lines covered collecting samples, 1486 miles.
Samples collected, 71.
Trunk lines covered posting samples, 1487 miles.
Municipal water supplies posted, 24.
School wells tested, 15.
Gas station and garage wells, 5.
Tourist camp wells tested, 7.

	+	-	+ -	Total
Throat Swabs for Diphtheria				643
Diagnosis	42	248		
Release	35	126		
Carrier	2	134		
Virulence	5	1		
Throat Swabs for Hemolytic Streptococci				399
Diagnosis	46	167		
Carrier	9	177		
Throat Swabs for Vincent's.....	23	268		291
Syphilis				6065
Wassermann		1		
Kahn	1028	5000	33	
Darkfield	1	2		
Examination for Gonococci.....	164	1601		1765
B. Tuberculosis				357
Sputum	79	259		
Animal Inoculation.....		19		
Typhoid				578
Feces	27	186		
Blood Cultures.....	18	143		
Urine	1	84		
Widal	29	90		
Dysentery				182
Intestinal Parasites.....				15
Transudates and Exudates.....				128
Blood Examinations (not classified)				223
Urine Examinations (not classified)				351
Water and Sewage Examinations				951
Milk Examinations.....				103
Toxicological Examinations.....				8
Autogenous Vaccine.....				5
Supplementary Examinations.....				299
Unclassified Examinations.....				718
Total for the Month.....				13081
Cumulative Total (fiscal year)				25186
Decrease over this month last year				847
Outfits Mailed Out.....				16994
Media Manufactured, c. c. (special)				175788.3
Typhoid Vaccine Distributed, c. c.				16539
Antitoxin Distributed, units.....				17621000
Toxin Antitoxin Distributed, c. c.				16130
Silver Nitrate Ampules Distributed				2808
Examinations Made by the Houghton Laboratory.....				1341
Examinations Made by the Grand Rapids Laboratory.....				4128

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

UNIVERSITY POST-GRADUATE SCHOOL

We are very pleased to publish the following statement which is an official announcement of the Regents of the University, authorizing the establishment of a Post-Graduate Medical Department of the University:

Dear Doctor Warnshuis:

I have your request for a statement of the recent action of the Board of Regents relative to the establishment of a Department of Post-Graduate Medicine in The Medical School at the University, and also for a general outline of the proposed plan of operation.

You will recall that late in the fall of 1925 the president of the State Society and the chairman of the Council were authorized to invite representatives of the Detroit College of Medicine, The Medical School of the University, The State Board of Registration in Medicine, the State Board of Health and the Division of Public Health and Hygiene to meet with the Council to consider the development of Post-Graduate in Michigan.

The District Clinical Conference inaugurated by the State Medical Society had been in operation for a considerable period and had proven very successful and the demand for further opportunities for Post-Graduate study seemed to warrant serious consideration by those concerned with medical education as well as those responsible for the care of the sick and the administration of Public Health.

There was a very free and full discussion at this joint meeting and a committee of three appointed to study the question and report back at the next annual meeting of the Council at which time the same group would be assembled. The committee consisted of Dr. Donald representing the Detroit College of Medicine, Dr. Camp the University Medical School and I was asked to represent the State Medical Society.

After a years study of the problem the committee confirmed the opinion of the Council as to the demand on the part of the profession and of the need of such opportunities if adequate service to the public was to be maintained.

The committee felt that many avenues of activity might be developed in the prosecution of the work and that helpful contributions might be looked for from many different agencies. The need for follow up work on the part of Medical Schools was emphasized and the obligation of the tax supported Medical School of the University was especially stressed.

The committee recommended that a division or department of Post-Graduate Medicine be established in the university. In making this recommendation it was not contemplated by the com-

mittee that all or even a major part of Post-Graduate activities would be done in Ann Arbor but did believe that Ann Arbor by reason of its diversified educational facilities and mechanical equipment offered what seemed needed most at this time—an established base from which to operate and assist in the co-ordination of the many agencies so necessary to the successful development of this important enterprise.

After a full and free discussion which was opened by President Little and participated in by practically everyone present a resolution was passed accepting the recommendation of the committee. This report with the recommendation of Dean Cabot was put forward by President Little at the June meeting of the Board of Regents who authorized the establishment of a Department of Post-Graduate Medicine, set aside a small budget for the coming year and asked me to undertake the organization. When you recall that this development is in response to recommendations from the State Medical Society together with practically all of the other organizations in Michigan having to do with Medical education and the care of the sick, you will I believe share my view—That each should have an opportunity to meet and advise with those immediately responsible for its development. The reasons back of this development have to do with the highest ideals of service and men whose opinions are entitled to respect believe it the most worth while obligation recognized by the university in many years.

Since the authorization of this work by the Board of Regents time has not permitted the getting together of the various groups interested so I'm sure you will agree with me that further discussion as to plans and policies would be unwise at this time. However, I have every reason to believe that we will begin with the general plan outlined in the recommendation of the committee which you published in the Journal of February or March.

The development of this work and its ultimate value is dependent not only in the administration but in even greater measure on the degree to which its opportunities are utilized, and on the support and co-operation of a limited profession.

For November 18 and 19 we plan clinics with the Minnesota Game, which is always good, on the afternoon of the 19th at this time I am hoping that we may be able to discuss this subject more intimately.

Cordially yours,
JAMES D. BRUCE.

THE RANDALL BANQUET

Visitors to the Genesee County Medical Society continually remark upon the friendly spirit that characterizes this organization. Never was this more splendidly demonstrated than on Wednesday evening,

September 7, when about 200 doctors and eminent laymen assembled in the Hotel Durant ballroom to compliment Dr. H. E. Randall, President of the State Medical Society. This banquet was one of those delightful affairs that are not soon forgotten. The feast, the decorations, the music, the speeches, the contagiously jovial spirit—all were satisfying.

Dr. Marshall called the assemblage to order and conveyed the greetings of the society to our guests. Several congratulatory telegrams were read, after which he introduced the toastmaster Dr. C. B. Burr. In his own inimitable manner, the venerable ex-president conducted the program graciously and skillfully, keeping the company in a jovial mood at all times by his wit and apt remarks. Dr. Burr, in introducing Dr. Louis J. Hirschman, of Detroit, said he knew "piles" about Louis. Dr. Hirschman, a most skillful raconteur, kept the audience in good humor as he told many tales of Dr. Randall's student days. Dr. W. J. Kay, of Lapeer, for six years an associate of Dr. Randall, responded eloquently to the toast: "The Country Doctor." The specialist is made in the schools but the training of the country doctor is a matter of growth. He must be a life-long student, a resourceful worker, and a good fellow with broad sympathies.

Dr. Angus McLean of Detroit spoke on "The Surgeon." He briefly outlined the progress of surgery in the last 30 years. General McLean was never more eloquent than when he pleaded with us to maintain the traditional humanitarianism of the profession. Let the surgeon "live by the side of the road, and be a friend of man" and he would prove to the cynic that "life was not an empty dream."

Dr. B. R. Corbus of Grand Rapids, speaking for the State Medical Society paid a fitting tribute to the work of Dr. Randall on the Council, where his idealism and rich experience contributed in no small way to the manifold accomplishments of the society.

Dr. G. Kiefer of Lansing, liked Flint for its good fellowship, its Buicks, and its Randall. He made an earnest plea for every doctor to be a practitioner of preventive as well as of curative medicine.

Col. James Parker, Judge of Circuit Court, responded to the toast "The Soldier." He paid an eloquent tribute to the honesty of the Genesee profession in court matters. He pictured President Randall as a typical American-born of the soil—educated in our own institutions—and

fervently devoted to his country and her causes. Such as he have made America what it is.

Dr. Manwaring of Flint, in responding to the sentiment "The Colleague," recounted Randall's accomplishments as a surgeon. He eulogized his gift of pouring oil on troubled waters, his helpfulness to doctors who needed support, his honesty, his modesty, and his gift for organizing.

Dr. J. H. Dempster of Detroit, responded to the toast "The Ladies." He is an enthusiastic medical historian and made a plea for the co-operation of the profession with the editors forthcoming medical history of Michigan.

Congressman Crampton of Lapeer, speaking for the mere patient, recounted many humorous incidents of Randall's life in Lapeer. He made the observation that our president's success was not due to carefully planned aspirations, but was due to the fact that he did each day's duty well. When Lapeer folks speak of "Old Doc Randall" it was an expression of endearment.

President Randall responded appropriately and thanked the profession for their favors. He said that his only claim to eminence was that he was the only Michigan surgeon of thirty years standing who had not done a Nephropexy. Flattery would not hurt him, "for it was like moonshine—it only hurts you when you swallow it."

Dr. Randall's work for the profession will not end with his presidential year. His wise and kindly counsel will be sought for years to come. We feel that it will be for a great many years, for Randall, loving life in its fullness, loving humanity with its frailties, loving his profession devotedly, has developed that remarkable "Acquanimitas" which keeps men young.

W. H. M.

OVER SPECIALIZATION

During a recent visit of a travel club composed of British surgeons, one of the British visitors, by request, imparted the following observation: "That the surgical profession of America was over-specialized. That he had noted in some of the Clinics visited that one man, day after day, was doing nothing but thyroidec-tomies in a manner just as a mechanic tightened nut 211 during the construction of a flivver. Other men were doing the same thing in the other surgical specialties. This over specialization and narrow-

ing of ones operative field was deplored." That in substance was the opinion voiced.

In a measure our British friend is right—the observation made, however, is not typical of American surgeons. It is encountered only in certain of our larger clinics. The surgeons as a whole should not be appraised by the policies and practices exemplified in possibly a half dozen clinics. On the contrary the large majority of our surgeons do not so limit their opera-

tive field, they are possessed of wider diversified surgical ability and embrace a wider range of surgical conditions.

The comment, however, provides food for thought. We admit an increasing tendency to specialization and limitation of work. It can be over done. Our schools and clinics should not be unmindful of this trend. They should prevent such a tendency. We want more, well trained general surgeons and fewer specialists.

MONTHLY COMMENTS

Medical—Economic—Social

Every member is entitled to a copy of the Manual for the Conduct of Periodic Examinations of Apparently Healthy Persons, prepared by the A. M. A. We have endeavored to distribute these through county officers. We have a small supply on hand. If you failed to secure your copy, write us.

On September 15 the following County Societies constituted our honor roll of 100 per cent paid membership for 1927. We are eager to increase the names on this roll and urge county secretaries to make an effort to collect the dues of delinquent members.

County Societies—Memberships all paid: Calhoun, Clinton, Gogebic, Grand Traverse, Huron, Kalamazoo, Lenawee, Manistee, Mecosta, Muskegon, Oceana, Newaygo, Omcoro, Schoolcraft, Shiawassee, Midland and Luce.

"This demonstration has demonstrated that whenever lay bodies attempt to interfere with and guide officials health work, the result is inefficiency and chaos." This is the conclusion of the Cattaraugus County, New York, Medical Society following a four and a half years observation of the Milbank Health Demonstration. We impart this conclusion for the information and guidance of our members and county units when dealing with lay controlled clinics and lay sponsored health movements. It must be apparent that without competent medical direction and guiding support of the profession all such lay attempts will result in failure and be valueless to the community.

On September 1, the Genesee County Medical Society issued Volume one, Number one of an eight page semi-monthly Bulletin. Dr. W. H. Marshall has been appointed to the editorship. It can be confidently predicted that under his editorship the Bulletin will materially enhance the activities of the society and create a greater solidarity of the Genesee profession. Genesee Society has always stood in the fore-rank of organized activity achieving very creditably the ideals of organization. We congratulate the Society on its Bulletin and feel assured we will unite with the Genesee profession in profiting from reading each issue.

The following County Societies issue printed

Bulletins at regular intervals: Wayne, Kent, Kalamazoo, Calhoun and Genesee. Dr. E. G. Martin, who has edited the Wayne County Bulletin for the past two years relinquished his editorial duties on September 1. During his editorship Dr. Martin has awakened a wide interest in the Bulletin. He was fearless in mercilless publicity of radicals, quacks and self-seekers, he roasted the profession fearlessly when it needed it but fought for it always. During his tenure of office, Dr. Martin, materially enhanced the profession's interest. Dr. Reveno assumes his duties as the new editor of the Wayne Bulletin.

We recognize that only the larger County Societies can afford to publish a Bulletin. We venture to suggest that Bay, Saginaw, Ingham, Jackson, Oakland and Washtenaw Counties give consideration to the establishment of a Bulletin. The advertising receipts will defray the printing and mailing expense. A Bulletin will accord the opportunity of conveying to local members at regular intervals items of interest, committee work and news notes in addition to announcing the program. It is really a "house-organ" capable of stimulating interest and support. Every County Society that can should regularly issue a Bulletin.

"Died During the Night", "Found Dead In Bed"—All too frequently do these headlines greet one as he reads the morning paper. Is there a more convincing argument for regular, periodic examination of the apparently well. We are quite convinced that these reports of suddenly terminated lives would have been postponed to a considerably distant future had these deceased individuals secured the benefits of periodic physical examinations. Less you choose to have such an announcement appear for you, possibly tomorrow, we urge anew that you obtain today a thorough physical examination. Secure a personal audit—and be guided by the findings so as to forestall being found dead tomorrow.

We have quite frequently noted that there is a marked tendency on the part of doctors to direct their treatment to the Wassermann reaction and not to the patient and his symptoms. Treatment should be directed to the patient after a very careful and detailed examination of physical findings with special attention directed to the neural

system. A four plus reaction can be treated for years and still the blood will evidence the same four plus. The patient will present no clinical symptoms, continuance of treatment is futile for it is almost a certainty that a negative response will never be attained. Examine such patients carefully, have them report regularly for re-examinations and administer treatment only when findings and symptoms demand treatment. We repeat: do not treat blood reports; treat the patient's symptoms.



The above picture taken by Dr. Henry Cook of Flint is published for record. It was taken on Mackinac Island at the time of the re-dedication of the Beaumont monument. In the center are President-elect Randall, Ex-President Biddle, President J. B. Jackson and Dr. A. R. Corbus. Others are: Carl Moll, J. D. Brook, A. M. Hume, W. J. O'Reilly, L. J. Hirschman and Henry Cook.

Physical Culture magazine is now out to get the good will of the medical profession. After years of mud slinging and scathing denunciation of doctors through the columns of this lurid magazine McFadden has reached the point in his career where he finds it unprofitable to have the practical men of medical science against him. He has expressed a creed or code which he wants each doctor to subscribe to by signing a self-addressed post card.

We would suggest that he first convert his publishing facilities into a medium for health education based upon the discoveries and deductions of such men as Koch, Pasteur, Lister, Jenner, Carrell, Osler and others, and when the influence of this has raised the confidence of the people in the high standards of scientific medical progress there will be no need of self addressed post cards to carry back the good will of a waiting medical profession.—H. B. K.

Judge Elbert H. Gary, late chairman of the board of directors of the United States Steel Corporation, included in his will recently filed for probate in Nassau County, New York, the following sound advice to the beneficiaries:

"I earnestly request my wife and my children and descendants that they steadfastly decline to sign any bonds or obligations of any kind as surety for any other person or persons; that they refrain from anticipating their income in any respect; that they refuse to make any loans except on the basis of first-class, well-known securities and that they invariably decline to invest in any untried or doubtful securities or property or enterprise or business.

"They should reject any representations or

opinions of others if involved in any doubt. They will be approached frequently with suggestions for investment that are not entitled to be relied upon from a business standpoint."

Unless one is thoroughly familiar with the principles of investment banking and their application, the investor must rely, in the last analysis, upon the integrity and judgment of the bond house.

The Council on Medical Education and Hospitals of the A. M. A. has made the following requirements imperative before a hospital will be listed as recommended for internship:

1. Only general hospitals are eligible where a variety of medical, surgical, obstetrical and pediatric cases are treated.

2. The staff must be proficient in general practice or the specialties and must be willing to provide instruction to the interns.

3. The hospital must have a competent pathologist and radiologist who in addition to routine duties can render instruction to the interns.

4. A new stipulation provides that necropsies must be obtained in 10 per cent of hospital deaths in the year 1928 and 15 per cent after January 1, 1929.

5. Interns must have opportunities for instruction in the giving of general and local anesthesia, in laboratory technic on patients on their services, in the performance of necropsies under supervision.

6. Hospital records shall include history, physical and laboratory examinations, preoperative and postoperative diagnoses and the much neglected progress notes; and the records shall be in charge of a trained secretary.

7. Provision should be made for a hospital library for intern use containing at least ten medical journals.

8. Interns shall be recruited from class A or B medical schools.

9. Provision should be made for physical recreation and working hours limited to eight or at most ten hours a day for the period of twelve months.

10. There shall be a printed set of rules governing the interns.

In short the training afforded shall be the best obtainable in preparation for general practice.

That the medical profession itself is in part responsible for the growth of quackery and of anti-medical cults in the United States was asserted by Dr. Donald B. Armstrong of the Metropolitan Life Insurance company in speaking here today before the Michigan Conference of Social Work. Dr. Armstrong based his statements upon the thousands of letters received by insurance companies and other national agencies from people all over the country seeking health advice and medical guidance.

"From this experience," stated Dr. Armstrong, "it is clear that the public wants protection against quackery and fraud. Many who write for advice suspect that the advertised cures are fakes, but don't know where to turn for safe and sound medical advice and treatment.

"One person writes: 'My wife and I have almost made up our minds to try an advertised cure for diabetes. Yet we are hesitating and decided that you might possibly give us what knowledge you have of the — treatment for diabetes.'

"A sufferer from cancer writes: 'Am I waist-

ing valuable time in trying to purge myself through the blood?"

"Many of these people are new in their communities. They do not feel certain that they know the difference between a regular doctor and a so-called 'doctor' of one of the many flourishing varieties of quackery. They may want a specialist, or think they want one and do not know how to secure one. At present, in most communities, there is no responsibility agency to which they may turn. Hence the flood of more or less futile inquiries to national offices."

Dr. Armstrong pointed out that the people throughout the country not only want to be protected against quackery, but they are willing to accept and actively desire direction to safe and helpful medical and health services and facilities. In seeking reliable services, however, many go wrong and get into blind alleys, through lack of guidance. They are so often fooled by quackery in the guise of medicine that they frequently lose faith in the medical profession as a whole.

"To an increasing extent also," Dr. Armstrong added, "the people want positive health guidance. Health Departments and other agencies have told them to see the doctor regularly in order that he may help them keep well. They have been told to go to the doctor for a thorough medical and health examination once a year. They want advice as to how to live and how to prevent disease. Now, the doctor has been primarily trained to treat the sick and he has hitherto not been very much interested in well people. Consequently an increasing number of people who are seeking advice from physicians are going away from the doctor's office disappointed because the doctor is not yet prepared to give the kind of service that is being sought. Many doctors, instead of giving a thorough medical examination for which most people are prepared to pay a reasonable fee, are inclined to slap the patient on the back, tell him he is O. K., and not to worry. That's 'old stuff' and won't go much longer. It's another reason why many of these people turn to so-called medical institutes run on a fake advertising basis."

In summarizing the situation Dr. Armstrong pointed out that the medical profession was in part responsible for the development of quackery, first, because its members were not yet ready to meet the increasing demand for personal health service. This situation could be remedied only by teaching more preventive medicine in the medical schools, the development of post-graduate education for doctors, carried out through county medical societies, etc. Furthermore, there existed at the present time, practically no machinery in local communities for giving medical guidance to those in need of it. To the thousands of letters which these people write to national agencies every year, the only reasonable answer is "See your doctor". But they haven't any particular doctor and don't know how to get a real one. The Health Department and social agencies can help some of these people. However, many of them want to know where to get a thorough medical examination, how and when to take insulin for diabetes, what is a good diet for Bright's disease, how to find a reliable physician, where to get a skin or other specialists, etc.

Dr. Armstrong expressed the belief that to meet these needs there must be established in most communities, a Medical Guidance Bureau where its citizens could secure the help needed. If such a bureau were to be run under unprejudiced med-

ical auspices, with the co-operation of the Health Department and social agencies, and were to be properly advertised in the community, it would perform a most valuable service. It would combat the development of quack medicine; it would direct individuals to sound medical service; it would stimulate doctors to meet the demands for health advice on the part of the people; it would increase the work of the medical profession, and would open up to that profession, the great and growing field of private practice of preventive medicine.

DEATHS

Dr. Alfred E. Lemon of Sault Ste Marie was found dead in his office on August 15. Death was due to apoplexy. Dr. Lemon was 56 years old and came to the Sault from Canada about 35 years ago. He was one of the best known physicians in Chippewa County and for several years was coroner of the county. He also had a long war record. Dr. Lemon is survived by one daughter and his parents who live in Toronto.

Dr. James Crawford, who for 19 years practiced medicine in Sunfield, but in 1926 moved to Ypsilanti, died September 8 at his home 112 Perrin street. He was 64 years old. He graduated from Ontario College of Medicine and practiced 14 years in Detroit, Niagara two years and Sunfield 19 years.

Dr. Eugene Smith, Detroit's oldest practicing physician, died September 12 at his home 109 Taylor avenue. He was 82 years old. Dr. Smith was born in Albany and was graduated from the University of Buffalo and spent several years in study in Europe. He founded the eye, ear, nose and throat section of the American Medical Association and was a fellow of the American College of Surgeons. He was a member of the faculty of the Detroit College of Medicine for 30 years and held the chair of professor of Laryngology at his death. In 1926 Dr. Smith was elected an Honorary Member of the Wayne County Medical Society and the Michigan State Medical Society. He is survived by his wife, a son, Dr. Eugene Smith, Jr. and a daughter, Karolyn Smith Crookston of Birmingham.

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Editor of The Journal:

I am in receipt of the Text-book by Dr. Aaron, which you sent me as a prize in the contest. I thank you very heartily for the gift, and prize it very much. It covers a subject in which I am much interested, and always have been. This book being the very last word on the subject, makes it of great value, and I expect to gain much useful knowledge on a subject important to every physician.

Yours very truly,

Aileen B. Corbit, M. D.

NATIONAL CRIME REVIEW

Tecumseh, Mich.

Editor of The Journal:

I have recently been visited by Miss Evelyn Barrett Nora-Gon. She had quite a story to tell and a great many letters from County Society officers all over the southern part of the state, telling her that they thought she was doing a great work in exposing the various cults. The ultimate end of her visit was to obtain subscriptions to a magazine called "The National Crime Review".

Who and what is she? I would like to see what would happen if she called on a neurologist.

Yours truly,

R. G. B. Marsh, M. D.

WAYNE INVITES YOU

Program

Wayne County Medical Society October, 1927

October 4—General Meeting—Orchestra Hall, 8:00 p. m. Invitation American College of Surgeons.

October 11—Medical Section—8:30 p. m. "Pathological Clinical Conference on Diseases of the Liver." Plinn F. Morse, M. D.

October 18—General Meeting—8:30 p. m. Symposium on Sanitation of Detroit River. Hon. John W. Smith, Mayor, City of Detroit; Hon. John Reid, Commissioner of Public Works; Mr. Perry Fellows, City Engineer; Wm. C. Hoad, Professor of Sanitary Engineering, University of Michigan.
(City Council invited to be present.)

October 25 — Surgical Section — "Confirmatory Evidence for Radical Excision and Surgical Treatment of Chronic Ulcers of the Stomach and Duodenum." Wm. J. Cassidy, M. D.

F. M. Meader, M. D.,

Chairman Program Committee.

The Wayne County Medical Society wishes to extend a cordial invitation through the columns of the State Journal to the various County Societies of Michigan, Ohio and Western Ontario to attend the scientific meetings which are held

weekly in the Wayne County Medical Society auditorium, 1124 Maccabee building.

William P. Woodworth, Secretary.

MY VACATION

In company with my son, I left home on June 24th by automobile to New York City and Brooklyn, where we had an apartment.

After an enjoyable three weeks in the metropolis, I started to Boston, going by boat to Providence. Leaving the pier at Christopher street and going down the North river, one has a sky-line view of Lower Manhattan which can hardly be excelled. Winding around the Battery and up the East river, one gets a view of the Old Castle Garden and Battery Park on the left; Jersey City and Hoboken, Statue of Liberty, Governor's Island, Brooklyn navy yard, and Long Island City water front, on the right. The bridges that we pass under need to be mentioned: Brooklyn bridge, Manhattan bridge, Williamsburg bridge, all suspension, and all 135 feet above water. The Queensboro bridge is a cantilever bridge and is the same distance above water. Farther on, is the most wonderful bridge of all, the Hell Gate bridge, which, with the approaches, has a total length of three and one-half miles, and cost \$27,000,000. It is also 135 feet above water.

The trip through Long Island Sound was made after dark, and the lights along shore were very pretty. We reached Providence after daybreak. From Revolutionary times, Providence has been an important industrial center. During the last few years the city has undergone a remarkable growth as a commercial port. It is now the largest North Atlantic distributing point for oil products. Vast storage tanks are to be seen along the shore of the river.

I made the trip from Providence to Boston by rail, and reached the South Station in a deluge of rain.

Boston is the natural starting point for grasping the loveliness of New England. The old Bean Town presents innumerable fascinations on personal acquaintance. You can go anywhere in the city proper and in two minutes stir up a historic gem.

That first afternoon, going over the Cambridge bridge, which is the successor to the old "bridge with the wooden piers", I visited Cambridge, a city of 115,000. I saw the site of the Washington Elm under which General Washington took command of the American army. I saw the site of the First church and parish in Cambridge where Thomas Hooker was pastor in 1633. It is said that "no existing building in Massachusetts can compare with it in the number of distinguished men who at different times have been assembled within its walls."

Cambridge contains many historic residences. Lowell says "there is no place like it, no, not even for taxes." The Longfellow House, probably built in 1735, was long the headquarters of Gen. George Washington, and became the home of

Longfellow in 1837. The home of Dr. Richard Cabot is next door to it. The President's house, facing Quincy street, is next to Emerson Hall. The birthplace of Oliver Wendell Holmes is now owned by Harvard college. "Elmwood", the home of James Russell Lowell, stands among beautiful trees on Elmwood avenue. I also saw the home of the "Village Blacksmith." An old colonial house, painted yellow, stands on the corner of the campus near Harvard Square, and was used by General Washington as headquarters when he came to take command of the army, July 3, 1775. It is called the Wadsworth House, and is now used as an administration building of the college. Harvard was founded in 1636, and is the oldest college in the United States. It has long since outgrown the "Yard", and even Cambridge. It really belongs now as much to Boston as to Cambridge, for the medical school, the finest in the world, the big athletic field and stadium, the Arnold Arboretum and Bussey Institution are within the limits of Boston.

I went to Lexington over the same route that was covered by Paul Revere on the night of April 18, 1775. Christ Church on Salem street is the oldest church edifice now standing in Boston, built in 1723. It was in the tower of this church that the signal lanterns of Paul Revere were hung that night. His home from which he started is not far from this church.

The Lexington Common is a triangular piece of ground containing about two acres. At a point about midway between Lexington and Concord is a large tablet showing the spot where Paul Revere's ride ended. Farther on is the Grape-Vine Cottage, the home of the parent vine of the Concord grape. "Old Wayside", the home of Hawthorne, and the Orchard House home of the Alcotts, are a short distance east of Concord. The "Old Manse" built by the Rev. William Emerson in 1775, stands a short distance from the North bridge. At one end of this bridge is the statue of the Minute-Man by French, and at the opposite end is the monument to the British soldiers.

One day I spent at Marblehead and Salem. Marblehead is situated on a rocky headland extending out into the ocean; in no other town in America will you see so many quaint houses, such wandering, narrow, irregular streets, so many historic landmarks.

In Salem I saw the Custom House where Hawthorne was surveyor of the port; the House of Seven Gables; the old Witch House where Roger Williams once lived, and the oldest house in Salem. I saw Gallows Hills, where eight persons were hung for witchcraft in 1692. Salem is an attractive city with beautiful streets and handsome public buildings; on Chestnut street are the finest colonial doorways in New England.

I went to Provincetown by boat. The wharf from which one starts is located where the wharf was when the British troops landed in Boston in 1768. The principal point of interest in Provincetown is the monument which is very beautiful, and from which one gets a superb view.

One day I went to Plymouth, leaving from the wharf which is very near the location where the famous Boston Tea Party occurred. The points of chief interest in Plymouth are the Rock with its canopy and railing, Pilgrim Hall, Burial Hill cemetery, containing the graves of Governor

Bradford, John Howland and many other Pilgrims.

I visited Dorchester Heights, where a fine view of Boston Harbor can be seen. On these heights were built the American redoubts which compelled the evacuation of Boston by the British army.

Other famous places I saw in Boston were the Old State House, the Old South Meeting-House, Faneuil Hall, the Granary Burying Ground, Copps Hill Burying Ground, and several others. Boston Common and the State House on Beacon Hill, the Massachusetts general hospital, and the Arnold Arboretum are all points of great interest. At Sudbury I visited the Wayside Inn, which is now the property of Henry Ford.

In Charleston I visited the navy yard and saw the old frigate, "Constitution"; also saw the Bunker Hill battle ground and monument.

At Quincy I saw the Dorothy Q House, the site of the John Hancock Meeting-House, the birthplaces of Presidents John and John Quincy Adams; also the first Parish Church which contains the crypts where the remains of these two ex-presidents are interred.

I left Boston on August 2, feeling that it was a season well spent. The impressions it gives one, seeing the spots where our history was made, so many things connected with our forefathers and their struggle for independence, and the difficulties they fought. Certainly we are impressed with their greatness.

A. B. Corbit, M. D.,
Oxford, Michigan.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. William J. Stapleton, Jr., of Detroit has returned from an extended summer tour through Europe.

Dr. R. C. Stone, Battle Creek, has recovered from a repair of a ventral hernia. He resumed practice on October 1.

Dr. C. M. Ryno of St. Joseph has recovered from an illness that has incapacitated him for several months.

Dr. S. R. Light of Kalamazoo has been re-appointed as a trustee of the State Psychopathic hospital.

Dr. E. C. Taylor of Jackson has removed to Florida and relinquished practice.

Dr. H. H. Hammel, Tecumseh, president of the Lenawee County Medical Society, left, September 15, for a six weeks pack train trip in the Canadian Rockies, to hunt mountain goat, caribou, moose and bear.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

MANUAL OF THE DISEASES OF THE EYE—Charles H. May, M. D.—12th Edition. 374 illustrations. William Wood & Co., New York. Price \$4.00.

This is a concise, practical and systematic manual. Revised to date in this new edition. It imparts enough but not too much. Physicians will find it a splendid reference assistant.

THE MEDICAL CLINICS OF NORTH AMERICA—(Issued serially, one number every other month.) Volume 11, Number 1, (Chicago Number—July, 1927.) Octavo of 294 pages with 26 illustrations. Per clinic year (July 1927 to May, 1928.) Paper, \$12; Cloth, \$16 net. W. B. Saunders Company, Philadelphia and London.

THE SURGICAL CLINICS OF NORTH AMERICA—(Issued serially, one number every other month.) Volume 7, Number 3, (Chicago Number—June, 1927.) 330 pages with 81 illustrations. Per clinic year (February 1927 to December 1927.) Paper, \$12; Cloth, \$16 net. W. B. Saunders Company, Philadelphia and London.

DISEASES OF THE STOMACH—Diagnosis and Treatment of Diseases of the Stomach, with an introduction to Practical Gastro-Enterology. By Martin E. Rehfuess, M. D., Assistant Professor of Medicine at Jefferson Medical College. Octavo volume of 1236 pages with 519 illustrations, some in colors. Cloth, \$12. W. B. Saunders Company, 1927, Philadelphia and London.

The author is well known. The achievements that have classified him as an authority are reflected in this text. Excellent in detail, accurate in every respect, clear in description and well illustrated are all outstanding features of this text. It is comprehensive in scope and specific in conclusions. This text at once assumes a prominent place in our gastric literature.

THE ANATOMY OF THE NERVOUS SYSTEM—(Third Edition)—From the standpoint of development and function. By Stephen W. Ranson, M. M., Ph. D., Professor of Neuroanatomy, Washington University, Medical School, St. Louis, Mo. Third Edition, Revised. Octavo volume of 425 pages with 284 illustrations, some of them in colors. Cloth, \$6.50 net. W. B. Saunders Company, Philadelphia and London.

This is an excellent text and accords material assistance to the student as well as he who devotes his entire time to neurology.

PERNICIOUS CHIROPRACTIC SCHOOLS

A chiropractic institution in Chicago bearing the pretentious title of "The American University" has for a number of years quietly carried on, mainly by correspondence, a business of supplying chiropractic degrees to would be "doctors," the chief, if not the only, requirement being the purchase price. Statements published in the literature circulated from this institution have laid great stress on the beauty of the degrees furnished and the princely incomes possible for the holders of these degrees. Within the last few months, instead of a covert, unnoticeable existence, this institution has begun to insert advertisements of the home institution or of "branch" offices in newspapers in widely distributed parts of the country. A "branch" of the American University at Houston, Texas, is openly heralding, through advertisements in two papers in that city, the great incomes that chiropractic doctors

can earn. An advertisement of the main institution in Chicago has also recently appeared in the newspapers of Richmond, Va. Judging from the amazing lack of equipment or teaching facilities in the home office, the "branches" are probably even more meagerly equipped to furnish an education of any value. At this time when the scientific methods used in the diagnosis and treatment of human diseases have reached so high a stage of development, the distribution of diplomas whereby ignorant and untrained "doctors" of chiropractic or any other type may attempt to care for the sick is all the more dangerous and reprehensible.—*Journal A. M. A.*, August 20, 1927.

INSULIN AND HYPOGLYCEMIA

The increasing use of insulin in clinical medicine is serving to direct attention to the possible untoward symptoms for which this hormone may become responsible under exceptional or unanticipated circumstances. The most noticeable feature of overdose with insulin is, of course, the resulting hypoglycemia. The low concentration of blood sugar is attended with manifestations of weakness that are readily relieved by suitable administration of sugar. The now widespread custom of making estimations of blood sugar for diagnostic purposes has brought to light the fact that hypoglycemia is by no means as uncommon as has been assumed. Some observers have been inclined to attribute many of the instances to what they glibly designate hyperinsulinism. It is questionable, however, whether hypoglycemia and hyperinsulinism are invariably closely interrelated. A lowered content of sugar in the blood may be attended by weakness, dizziness, pallor, sweating, hunger, disorientation, occasionally syncope and stupor, all symptoms of overdosage with insulin. On the other hand, all these typical manifestations may be missing even when the hypoglycemia is accurately established. Conversely, Harrop* has demonstrated at the Johns Hopkins Hospital that the administration of carbohydrate to unconscious persons in insulin reactions does not always have the immediate prompt effect that we have been led to anticipate. The degree of hypoglycemia apparently does not accurately determine the severity of the reaction, nor does the administration of sugar always relieve it. Recovery of consciousness may occur spontaneously even when the blood sugar is at a low level of concentration. Harrop regards it as probable that the toxic effects noted, especially the marked mental disturbances, may be due partly, or in certain cases entirely, to some other action of insulin. These are possibilities that need to be recognized in these days when insulin has come to occupy a prominent place in therapy.—*Jour. A. M. A.*, September 17, 1927.

* Harrop, G. A.: Hypoglycemia and the Toxic Effects of Insulin, *Arch. Int. Med.* 40:216 (Aug.) 1927.

THE STORAGE OF WATER IN THE BODY

The extent to which the human body serves as a reservoir of water is rarely appreciated until

we are reminded of the facts through the medium of numerical statistics. As water represents little less than two thirds of the entire organism, a person of average weight is the carrier of approximately a hundred pounds (45 Kg.) of the fluid. The disposal of these few gallons of water is regulated to a nicety. Compensation for the losses through the various excretory paths is regularly made up by the intake of fluid, together with the contribution of water derived from the oxidative processes in the body whereby hydrogen is converted to water. There are, however, times of stress when the compensatory regulation fails. The balance is upset: water may be lost without being restored; or the excretory organs may fail to remove the surplus with their usual efficiency. Experience teaches what distress may attend either of these eventualities. The extremes are represented in thirst with attendant anhydremia on the one hand, or in the different manifestations of edema on the other. What happens to the water reservoirs in times of unusual stress? A partial answer to this is given by recent observations of Skelton* at the University of Minnesota. They confirm the fact that half the water of the body is in the muscles; the skin contains about one-fifth; and the blood—the most “watery” of all the tissues—holds only about 7 per cent, or one fourteenth of the fluid. Skelton withdrew water from the body by the device of hemorrhage; and he added water by injection of fluids. Thus he ascertained that, although the muscles lose the least per unit mass of tissue, they give up more fluid than any other tissue when there is marked withdrawal of water from the body; and they also take up by far the greatest portion of any water added per se or as hypotonic salt solution. The liver and intestine appear to respond more quickly than any other tissues when there is an alteration in the water content of the body. The skin is also drawn on in extreme dehydration emergencies. But the main result of Skelton's study is that the muscles represent the most important water reserves of the body. They store the greatest quantity of any excess, and act as a safeguard against the loss of too much water.—*Jour. A. M. A.*, September 17, 1927.

* Skelton, Harold: The Storage of Water by Various Tissues of the Body, *Arch. Int. Med.* 40.141 (Aug.) 1927.

CIRCULATION AS FACTOR IN PROSTATIC SURGERY

George Gilbert Smith, Boston (*Journal A. M. A.*, September 17, 1927), has investigated the causes of death in 150 prostratetectomies. There were sixteen deaths; pneumonia or pulmonary infarct caused four; sepsis caused two; pyelonephritis, duodenal ulcer, cerebral hemorrhage and carcinomatosis caused one each; cardiac disease caused six. In at least two others the cardiovascular condition played a very important part. One man who died of pneumonia had a severe myocarditis; the man who died of cerebral hemorrhage had a blood pressure of 200 systolic and 115 diastolic. In addition to these fatal cases, a number of others showed evidences of more or less serious disturbance of the circulation at some time while in the hospital. One patient, whose heart became acutely dilated, was set straight again by venesection. In some cases cardiac crises developed rapidly; in others there was a gradual development of cardiac insufficiency, the signs of which were a falling blood pressure, rales in the pulmonary bases, a rising pulse rate, and

a diminishing output of urine. The condition of myocardium and its arteries is the important factor in the behavior of the heart during and after prostatectomy. In the selection of the time and method of operation and the type of anesthesia, the surgeon must attach even greater weight to the condition of the cardiovascular system than to the condition of the kidneys. The surgeon must understand the essentials of cardiac physiology and therapy if he would give his patients who undergo prostatectomy the best chance to survive.

BREAST FEEDING PROBLEMS

In the Portland Welfare Clinics, breast feeding is especially emphasized. During the first three years of the clinics, among the 685 babies registered under 2 years of age, the mortality was 0.8 per cent, while the coincident city death rate for the same age group was 6.5 per cent. That the breast feeding is too short in the majority of cases, as asserted by C. Ulysses Moore and Helen G. Dennis, Portland, Ore. (*Journal A. M. A.*, September 17, 1927), is demonstrated by the fact that in many communities not more than 15 per cent of infants are breast fed for nine months or more. The presence in breast milk of antibodies for human diseases merits more consideration. Increased emphasis on breast feeding reduces morbidity and mortality. The commonest breast feeding problems of the infantile period are hypergalactia and hypogalactia. Illustrative cases are given to indicate solutions. Establishing or re-establishing a flow of breast milk is often complicated by the infant's refusal of the breast. A breast feeding device called the breast feeder has been developed which enables a baby to obtain complementary food while nursing at its mother's breast. Parenteral and enteral diseases are more permanently cured by keeping a baby on the breast than by weaning it. A good rule to follow is that any mother who is well enough to care for her child is capable of nursing it.

PREVENTION OF ANOREXIA IN CHILDREN

The plan of prevention of anorexia in children outlined by C. A. Aldrich, Winnetka, Ill. (*Journal A. M. A.*, September 17, 1927), consists first of all, in instructing mothers and nurses as to the nature of anorexia while their babies were young, at 2 or 3 months of age. They were emphatically told never to urge their children to eat except under express orders, and were asked to report refusal just as they would report vomiting or loose stools. Treatment of the first attack always consisted in a reduction of food. It should be taught that anorexia is usually the first symptom of infection and that it precedes all other signs of the common cold. Therefore, when a baby first refused its bottle the mother was told to reduce the feedings and to look out for an illness. Since it was soon found that many cases had their beginning at the weaning period, prevention of weaning difficulties became important. To this end, all babies were given an occasional bottle from birth, often enough so that they remembered the bottle as a friend. This practically eliminated difficulty in getting babies to take bottle food. Since it was often difficult to get babies to make such marked changes as from cereal to vegetable, these variations were made gradually and mothers were instructed not to force new food on them. Cod liver oil and orange juice were given from the first few weeks of life to avoid later struggles.

All babies were put on the minimal diet which would cause a satisfactory gain in weight. After the first year, diet lists were given but parents were told to let the child's appetite be the sole judge as to the amount of food to be taken. No caloric diets were prescribed. Mothers were told to leave their children alone at mealtime as much as possible and not to talk about eating. They were told to try to develop a detached attitude toward the child at meal time and never to force food. The child's appetite was given the choice of food. It was not considered advisable to "make the child eat everything so that later on he would like everything." Parents were instructed that nothing could be worse for appetites than pitched battles over meals. When the child was about 1 year of age, all parents were asked to begin reading books on child psychology, and a list of some of these was recommended. Nourishment between meals was not advised for any child. The results of such prophylactic treatment, as shown by statistics obtained in 199 consecutive cases, demonstrates that (a) in this series it was not harmful to the nutrition of the children to advise strongly against forced feeding, as the group averaged 3.6 pounds above weight for age, and (b) there were no children in this group who were malnourished except those suffering from physical disease.

STUDIES OF STAPHYLOCOCCUS FILTRATES

Freshly isolated strains of staphylococcus aureus were obtained by Isador Pilot and M. L. Afremow, Chicago (Journal A. M. A., September 17, 1927), from various lesions, such as furuncles, carbuncles, abscesses of the breast and kidney, and from fatal cases of staphylococcus septic pyemia. They produced typical pigment, and on blood agar 50 per cent of the strains caused hemolysis. Both hemolytic and nonhemolytic strains produced potent toxins in the filtrates. All strains tested yielded exotoxin, which, however, varied considerably in potency. Sterile broth filtrates of staphylococcus aureus produce a skin reaction when injected intradermally in the forearm of man. These reactions are neutralized by serums of the rabbit and horse immunized by injection of staphylococcus filtrates. It would appear that such filtrates contain a soluble toxin which forms antitoxin when introduced into rabbits and horses.

RELATIONS OF CARDIOVASCULAR DISEASE TO HEMIPLEGIA

There are three causes developing hemiplegia in the course of cardiovascular disease: embolism, thrombosis and rupture of a blood vessel. The relation of cardiovascular disease to hemiplegia in those nine cases out of ten that are not due to primary disease in the brain is that of cause and effect, and after the accident has occurred the treatment still remains at least a 50 per cent cardiovascular problem. In those examples of hemiplegia, either transient or chronic, that come under the care of the cardiologist, little has been gained by emphasis of the neurologic problem, while much improvement has often resulted from the fundamental treatment of the arteriosclerosis and cardiosclerosis that usually go with it. In the experience of Louis Faugeres Bishop, New York (Journal A. M. A., September 17, 1927), those patients with hemiplegia have done best in the way of restoration if they promptly attained

and continuously maintained a compensatory high blood pressure, while those who remained of the asthenic type with low blood pressure and a general softness of all the tissue were the ones who degenerated much more rapidly. While one can never escape from the fear of sudden accidents in cardiovascular disease, nevertheless the more experience one has, the more one dreads the certain death that follows the gradual deterioration of bedridden, overfed and overdressed patients. In coronary disease of the heart, it is Bishop's policy with regard to this accident in patients who have had a definite appoplexy of the heart, as it might be called, involving excruciating pain of hours' duration, functional failure of the heart and everything that pertains to the classic picture of coronary disease, to instruct them, after a reasonable amount of rest, that exercise must be begun. He starts these patients on graduated exercises, teaches them the use of glyceryl trinitrate symptomatically to relieve pain, and tries to build up in every way their physical strength and improve their general physiologic condition. Under this plan he has seen many restored to a useful, though, of course, restricted life, who under the old idea that rest treatment must continue until the tendency to pain disappears, would have drifted into a life of chronic invalidism.

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ORIGINAL ARTICLES

SUBSTITUTE OPERATIONS FOR ENUCLEATION OF THE EYEBALL WITH SPECIAL REFERENCE TO AUTOGENOUS CARTILAGE TRANSPLANT

W. T. GARRETSON, M. D.

Henry Ford Hospital, Detroit, Mich.

Historical: Proper enucleation of the eyeball was first performed by Bonnett in 1841. Previous to this date very little attention was directed to the anatomical structures connected with the eyeball, and the operations for the removal of this organ, were for the most part performed by surgeons who were more or less unfamiliar with ophthalmology. Bonnett¹ based his operation on the study of the anatomical structures surrounding the eyeball, especially what we know as the capsule of Tenon. This capsule is also called, in his honor, Bonnett's capsule. Enucleation, as practiced today, consists of detaching the conjunctiva from its insertion at the corneal scleral junction and the dissection of the conjunctiva from the globe until the recti tendons have been reached. These are detached in turn from the sclera. The capsule of Tenon is then further entered and completely separated from the globe by blunt dissection until the optic nerve has been reached. The optic nerve is then severed, usually with scissors curved on the flat. The tendons may or may not be stitched to the opposite side. This depends on the opinion of the different operators. However, a purse string suture is commonly used to approximate the conjunctiva. No attention whatever is paid to the extra-ocular muscles or to the anterior orbital fascia or tarso-orbital fascia and the cheek ligaments, which anchor the eyeball in its position in the outlet of the orbit. This operation as com-

monly practiced today by ophthalmologists is directly attributed to the ideas of Bonnett although others attribute the origin of the modern enucleation to Farrett in 1841. Choberey described a similar operation in 1826.

THE INDICATION FOR REMOVAL OF THE EYE

To this, I shall only briefly refer. Only those eyes which have no claim to be considered as organs of vision but require surgical treatment either for relief of pain or for the removal, in whole or part, of a damaged organ which if untreated might prove a source of danger to the possessor—either from sympathetic ophthalmia or infection, should be removed, etc. The question of the best and safest cosmetic operation to cover removal of an eye has been extensively discussed, especially during the late war, as wounds of the eye formed an extraordinarily large proportion of total injuries. The relative value between enucleation and its substitute is still not settled in spite of the discussion, but in general ophthalmic surgeons agree that the eye should not be removed without some attempt by a substitute operation to give the individual a movable stump so that the prosthesis or artificial eye will rotate.

A brief classification of substitute operations which have been advocated from time to time may be listed as follows:

Group 1. Those which consist in re-

removal of the entire globe followed by implantation of some substance in the cavity of the capsule of Tenon.

Group 2. Those in which the whole or some portion of the eyeball is retained. Under this classification are those (a) without implantation and (b) those in which some substance is implanted within the fibrous coats of the eyeball.

In the first group belong the following:

1. Filling the sac with paraffin after the contents of the eyeball have been eviscerated—after the method of Sucher² Ramsey³ and Spratt⁴.

2. Turning a piece of integument either from the lower lid—Maxwell's⁵ operation or from the temple—Cross's⁶ operation.

3. Inserting glass or gold sphere—Frost's⁷ operation.

4. Inserting a rabbit's eye—Chibret's⁸ operation.

5. Inserting a mass of fat—the operation of Prof. Berraquet⁹ of Barcelona, Spain.

6. Inserting a circular piece of skin from the deltoid region after the method of Rallet¹⁰.

Many other substitutes have been used but fat, glass and gold balls and cartilage give the best results.

To the second group in which some or the whole of the eyeball is retained belongs the following:

1. Opticiliary neurectomy — Bouche-ron¹¹.

2. Anterior amputation with retention of a part of the contents of the globe after the method of Crichton¹².

3. Mule's operation which consists in the removal of the cornea from the globe and the removal of the contents of the eyeball, and following this the insertion of a gold or glass sphere in the scleral envelope and suturing the sclera over it; after which the conjunctiva is approximated in the opposite direction.

4. Dimitry²¹ of New Orleans has apparently a very valuable modification of Mule's operation. His operation consists in the removal of the posterior pole of the eyeball including the section to which is attached the optic nerve. The cornea is also removed. In this procedure the extra-ocular muscles are not disturbed. A gold or glass sphere is placed in the scleral envelope, and the remainder of the operation is completed after the method of Mules.

It is to be noted that ophthalmic surgeons have long endeavored to find a suit-

able procedure which would give a better cosmetic appearance following enucleation of the eyeball than could be secured by the simple enucleation as above outlined, but of the various methods which have been advocated from time to time—many of these are not based on sound reasoning, especially the one in which the rabbit's eyeball is implicated. Frost's substitute, which is glass or gold, sooner or later in many cases gives rise to irritation after which the sphere, acting as a foreign body, is expelled. However, in many cases, especially glass or gold give rise to little or no irritation and give an excellent result. Of the percentage of failures I can find no definite statistics, but a rough estimate would be about 25 per cent.

The scope of this paper will include only those most worthy of consideration in the light of modern surgical procedures. To return again to the ordinary enucleation, this operation gives three highly unsatisfactory and undesirable results from the cosmetic view point, namely:

1. *Deeply sunken eye socket*—Which is due to atrophy of fat with displacement of anterior orbital or tarso-orbital fascia. A sunken eye socket gives marked asymmetry with the opposite side. In young children simple enucleation gives rise to marked asymmetry of the head and face as a result of failure of this side of the head to grow in accordance with the other side.

2. *Sagging of the upper eyelid*—This is due to absence of orbital fat and the stretching of the anterior orbital fascia and the obliteration of the retro-tarsal fold.

3. *The artificial eye stares rigidly and vacantly into space.*

The above undesirable results lead ophthalmic surgeons to seek methods which would obviate this poor cosmetic appearance. We consider the three following procedures the best of all that have been devised.

1. Gold or glass ball implant—In 1884 Mules, an ophthalmic surgeon, was so dissatisfied with the cosmetic appearance following operations of previous surgeons that he proposed to place a hollow glass sphere in the empty scleral sac to make a prominent stump for the artificial eye. His method, with slight modifications, remains one of the best cosmetic operations, but as previously stated there are dangers and failures. The operation, as usually done, is attended with severe reactions locally with pain and swelling and the glass ball is frequently extruded and oc-

asionally is a source of danger to the other eye from sympathetic ophthalmia²¹. Dimitry's modification, I believe, would greatly obviate much of the difficulty met with in the operation of Mules in that the posterior window in the scleral envelope permits the serous exudate, resulting from the presence of the foreign substance in contact with the sclera, to be absorbed by the orbital tissue. In this way the danger of extruding the sphere by the pressure of the exudate would be less. Dimitry claims that there is little or no danger from sympathetic ophthalmia, and he also claims for it that it furnishes a filled-up eye socket with its several advantages and a firm seat for a prosthesis. He also states that there is absence of sagging of lids and hence normal lacrimal secretion and drainage. He does not believe that his operation interferes with the development of the face when enucleation has to be done in childhood. He also claims that the recti muscles are undisturbed and the retro-attachment of the conjunctiva furnishes a deeper retrotarsal fold which permits unrestricted excursions of the prosthesis.

2. Fat transplant—The operation of Prof. Barraquer⁹ of Barcelona, Spain, which consists of a transplant of a mass of fat from the abdominal region into the capsule of Tenon, is one widely used by many ophthalmic surgeons and many ex-

cellent immediate results are reported from this operation, but unfortunately after a period of time considerable atrophy of fat takes place and a less favorable cosmetic appearance results.

3. Costal-cartilage transplant — In 1912, the costal-cartilage was first suggested by Sallter, a German, but references in literature are very meagre, only a few can be found. Capt. Aymard¹³, an English surgeon, published in 1917, his modification for the obtaining of costal-cartilage, but gives no results of his operations. His published technique does not include suturing the recti muscles and only includes the suturing of the conjunctiva over the cartilage.

Magitot, a French ophthalmologist, during the late war suggested the use of ox cartilage as an implant. The cartilage is taken from young oxen and was kept in 65 per cent alcohol. Now Magitot keeps the ox cartilage in 10 per cent formalin solution, and at the time of the operation the cartilage is steamed, sterilized and cut down to one-half the size of the eye to be enucleated and then inserted into the capsule of Tenon. I have been unable to secure information as to the percentage of results. However, an idea of the general results may be obtained from the papers published in 1922 by Donald J. Lyle of Cincinnati, Ohio, who did five operations after



Illustrating Dr. W. T. Garretson's article on "Rib Cartilage Transplant to the Eyesocket Following Enucleation."

Magitot's method before this date and gives the results in the five cases, as follows: In the one the cartilage had to be removed on account of pain nine months later. The remainder of the five have given excellent results to date, one or more years afterward. It is interesting to note the histological report of the cartilage which had to be removed. This is the only reference in literature to microscopic histology of any of the cartilage transplant which had been reported. The author notes that removal was quite difficult owing to the close penetration of the cartilage by the orbital tissues. The histological picture showed cartilage for the most part uninjured, but showing connective tissue in growth with blood vessels. Along the edges of the specimen there are a few small areas of bone formation. Dr. Malone, Professor of Histology at the University of Cincinnati, made the diagnosis on the specimen as tissue necrosis with fibrous infiltration and with beginning bone formation and further observes in the removed insertion the following changes:

1. The original unchanged cartilage.
2. Necrotic cartilage.
3. Calcification.

He further notes that had the tissue remained it would probably in the course of a year changed into true bone. (This, however, would give the pathologists and histologists food for thought as to where the osteoblasts would come from which would produce the true bone.)

Like many other surgeons, we were dissatisfied with the poor cosmetic result following simple enucleation and the thought occurred to us that *autogenous cartilage graft* could be used with comparative safety providing our technique in the operation was satisfactory. The operation, which we are doing, is as follows:

A local anesthetic of 2 per cent novocain with two drops of adrenalin to the dram is used; blocking the first division of the fifth nerve at the apex of the orbit or by injection into the capsule of Tenon or by blocking the ciliary ganglion filaments. We more frequently do this than blocking the first division because it is easier and gives satisfactory results. Novocain $\frac{1}{2}$ per cent with two drops of adrenalin to the dram is injected into the skin and deep tissue along the cartilage to be removed.

The cartilage is first procured by exposing the sixth, seventh, and eighth costal cartilages, preferably on the right side, taking about one and three-quarters inches of the full thickness of the sixth cartilage

without regard to the perichondrium. This is cut into two pieces and the edges rounded off so that they will fit well into the capsule of Tenon. These are then placed into warm physiological saline until the eye is enucleated. The latter is now carried out as follows:

The conjunctiva is detached from the corneal-scleral junction and the capsule of Tenon is dissected free from the anterior part of its attachment to the eyeball. Each rectus muscle is picked up with tenotomy hook and its tendon is fixed by means of through and through circular knot with triple O catgut ligature introduced with needle, and the ligature is then firmly tied leaving both ends long. The scleral insertion of the tendon is then severed, incorporating some of the scleral fibers of its attachment. The remaining recti tendons are then treated in a similar manner and the oblique tendons are severed without regard to their attachments. The capsule of Tenon is then completely detached from the eyeball and the optic nerve is severed as in simple enucleation. The hemorrhage is then controlled by hot saline packs.

The two pieces of cartilage are now placed into the capsule of Tenon, one behind the other. The two ends of the ligature of the superior rectus are then threaded and the needles are then introduced into the capsule of Tenon to each side of the inferior rectus tendon and brought through into the conjunctival sac well away from the free margin of the conjunctiva. Similarly the inferior rectus sutures are introduced about the superior rectus muscle and through Tenon's capsule. Likewise, the external and internal recti muscles are similarly fixed. A purse string suture is then introduced and when tied approximates the cut margins of the conjunctiva. Before the final tie of this suture is made a rubber dam drain is placed in the remaining opening. This permits of escape of the serous exudate for the first twenty-four hours, after which it is then removed. The postoperative treatment consists of cleansing with boric acid solution and 10 per cent argyrol. After a period of three to six weeks an artificial eye may be worn. It will have to be a temporary one as the orbital tissues readjust themselves in such a manner that the artificial eye no longer fits. In these cases the artificial eye should be made to order as the stock eye does not fit very well in this eye socket.

Twenty-six cases have been operated in

the above manner since 1923. None have had to be removed on account of any sort of irritation. Two were removed because of suppuration. One was due to a break in operating room technique since the rib incision was infected as well as the socket. The second was probably infected as a result of a pyo-ophthalmitis in which the laceration extended into the sclera thus carrying bacteria into the capsule of Tenon.

As to the final results—time only will give the true worth of these efforts, but the writer's immediate results in this operation are as follows:

1. Full socket with symmetry with its fellow.
2. Non-dropping upper lid.
3. A fair range of movement in the prothesis in all directions.
4. A non-staring eye.
5. Improved lacrimal drainage as compared with simple enucleation.
6. The possibility of building a socket where some infected globes will not permit a Mule's or Dimitry operation.

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HEALTH FINDINGS IN CHILDREN OF SCHOOL AGE—2,989 EXAMINATIONS

(Dubois Health Center Demonstration of
the Tuberculosis Society of Detroit,
Wayne County)

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Having completed the examination of 75 per cent of the children of the school age in this area, we now feel justified in giving our findings as representative of that group. Also, since this area is as near a cross section of the City of Detroit

as it is possible to get, on a basis of 25,000 population, it is fair to assume that our report represents a true picture, with minor corrections, of course, of the city as a whole for the ages of 6 to 15 inclusive.

In addition to the examination of the 2,700 children of this area, 1,500 more children were examined in the Wayne County rural schools, giving a three fold study of children in public, parochial and county schools. For purposes of comparison, the figures of the parochial school are again cited. (1).

The public school examination of 1,023 pupils was carefully carried out and on the same principles as that in the parochial school (with an additional 135 new pupils in the latter), all the examinations being performed by one of the writers (D.S.B.)

On the basis of the von Pirquet skin results, the public school shows a higher percentage of tuberculosis infection than the parochial school, giving us the data in Fig. I as the average in that age group for our demonstration area. In the parochial school the percentage positive of all children given the von Pirquet test (1,184 children) was 32.2, while in the public school it was 41.81 (484 children tested). Of the contacts, those exposed for a continued period to open cases of tuberculosis (sputum positive for tubercle bacilli), the parochial school gave 65.2 per cent positive reactions as against 75 per cent in the public school. Likewise, the positive of the non-contacts was 30.9 per cent and 37.5 per cent respectively.

Dividing the contacts into two groups general 4 and 5 (under nourishment and under-development), and general O-3 (within normal limits), the general 4 and 5 in the (2) parochial school gave 75 per cent positive von Pirquet reactions and the public school 100 per cent. The general O-3 in the two groups gave 63.0 and 70.6 per cent positive reactions respectively. Of the children in the two schools who were non-contacts, the general 4 and 5 group in the parochial school gave 47.6 per cent positive reaction and 57.69 per cent in the public school. Again, of the general O-3, the von Pirquets were 28.6 per cent and 37.03 per cent positive respectively. It is of interest for future preventive work that we were able to obtain von Pirquet test permission in 77.7 per cent of the parochial and but 47.2 per cent of the public school children.

The linear diagram (Fig. 2) gives the general 4 and 5 of the three groups according to age. There is in all three lines a

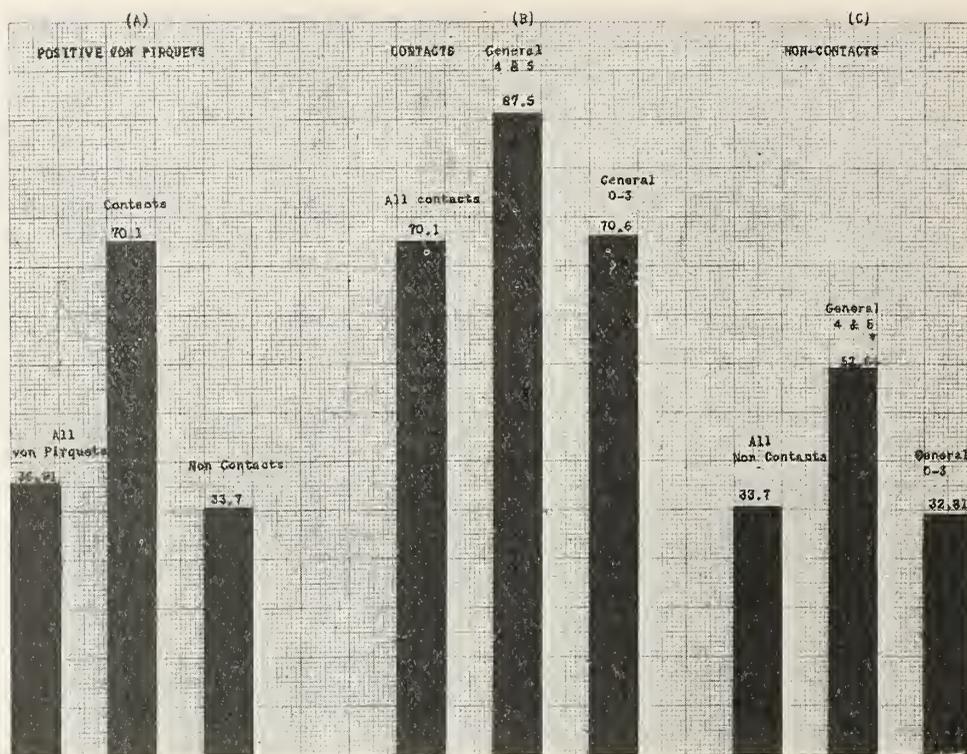


Figure 1

Showing the percentages of positive von Pirquet reactions in school children of the area (A) contact and non contacts. The contacts (B) and non contacts (C) are further divided into normal and abnormal nourishment and development groups.

GENERAL 4 and 5

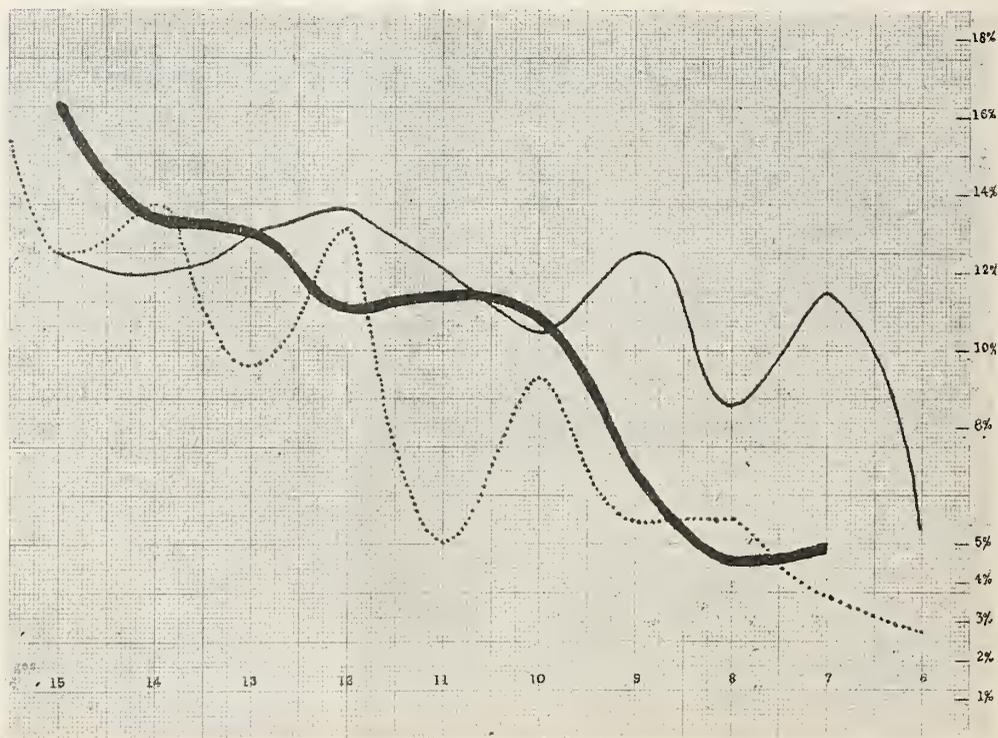


Figure 2

Undernourishment and underdevelopment in 1542 children of parochial school ████████, 1023 of public school , and 424 of county school , in age groups.

tendency for progressive increase in percentage of general 4 and 5 from six years upwards. The public school line rises

suddenly after the six-year period with its actual height at the age of twelve, but the trend is distinctly progressively upward,

though the differences from age seven upwards are slight. In the parochial school, there is a definite progressive increase of general 4 and 5, each age group, with only two very slight exceptions, being definitely

greater than the preceding one. The county school group shows a comparatively low percentage up to and including age eleven. There is then a sudden marked rise at the age of twelve with the height

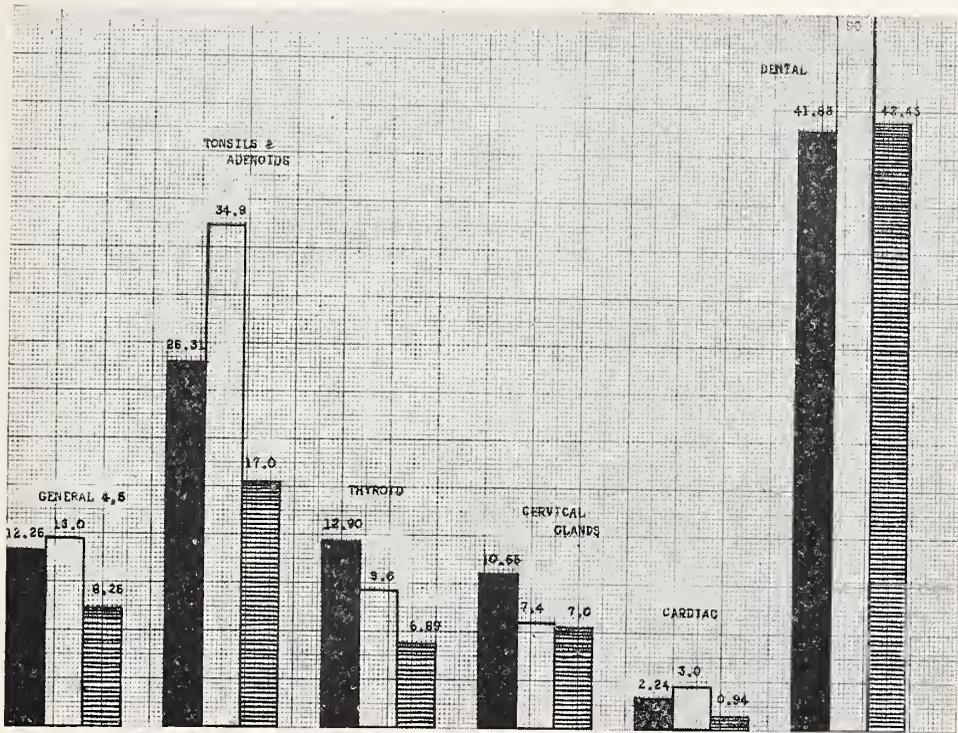


Figure 3

Showing correction percentages recommended in public school, parochial school, county school.

CORRECTIONS 2989 CHILDREN

	General 4 and 5	Tonsils and Adenoids Operations			Thyroid		Cervical Glands		Heart		Dental		von Pirquet	
		4	5	00	4	5	4	5	Disease	Obs.	4	5	Pos.	Neg.
Parochial School 1542 children	201 or 13%	365	536 or 34.9%	196 or 13.4%	138	10	100	14	46 or 3%	25 or 1.6%	90%		386 or 32.2%	812 or 67.8%
Public School 1023 children	116 or 12.25%	313	259 or 25.31%	162 or 15.83%	126	6	102	7	23 or 2.24%	15 or 1.46%	72	356 or 34.8%	201 or 41.61%	282 or 58.39%
County School 424 children	35 or 30.1%	108	72 or 17%	49 or 11.55%	22	3	63	3	4 or .94%	4 or .94%	111	69 or 16.27%	Not tested	
					25 or 5.89%		66 or 7%				180 or 42.45%			

Figure 4

level practically persistent to the age of sixteen, the older age children being in the high school.

The comparative percentages of the various corrections recommended in the parochial and public school children as well as in those of the county rural schools are given in Figs. III and IV. The public school excels over the other two in the matter of gross dental corrections required. The county schools give a lower percentage of corrections in all but the dental. However, in investigating further and considering the dental as 4 and 5, the 4 group chiefly requiring fillings only and the 5 group extractions, we get a different picture.

Of the 428 pupils 41.83 per cent requiring dental corrections in the public school, 356 or 34.8 per cent were number 5 (requiring extractions) as against 72 in the number 4 group. On the other hand, in the county schools, there were but 16.27 per cent requiring extractions in the total of 42.45 per cent so that in reality the dental condition of the county school children group is much superior to that of the public school group. Thus our study points as a whole to better physical condition in the county school children examined than in either the public or parochial school, in every phase.

Arrangements made for dental work in the parochial school (90 per cent corrections) will certainly result in a greatly improved picture for the future. The county children examined, in every instance, were members of schools under the care of health nurses (at that time members of the American Red Cross and recently under the township) and our figures show conclusively that better physical results follow such school health supervision.

Operation for tonsils and adenoids has been recommended only in those children with number 5. The writer does not believe in indiscriminate removal of all enlarged tonsils and followed practically the same principles as laid down by F. M. Meader, Detroit Board of Health. It is advisable to say at this point that the results fully justified this procedure. In the figures for heart disease there is little difference between the two city groups, both, however, being distinctly higher than the county group.

The percentage for cervical glands enlargement in the public school is 10.65 per cent as against 7.4 per cent in the parochial. The positive von Pirquet reactions in the total of public school children form

41.61 per cent and 32.2 per cent in the parochial. It will be noted that the proportions are very similar and one can safely deduct that at least part of the greater number of positive von Pirquet in the public school results from infected, if not active, cervical glands. A further important reason for the higher percentage of positive von Pirquets in the public school is the presence of negro children, these giving 31 positive in 58, or 53.44 per cent.

In this demonstration area, the parochial school children lead those of the public school in thyroid, cervical glands, and positive von Pirquet results, while the general 4 and 5 show very little difference, less than 1 per cent in favor of the public school. There is, however, definite differences in favor of the public school in tonsils and adenoids, in teeth and slightly so in heart disease.

The two open air rooms, part of the public school studied, contain 77 pupils. The results in this group are given separately in Fig. V. It may be noted here that these open air rooms particularly, as well as open window rooms, are invaluable assets to a large school and should form part of all schools having an enrollment of 1,000 or over. In the county, too, these open air rooms would soon justify their installment, as has been shown very conclusively in the city, there now being 33 in Detroit. Of the total of 77 children, but 23, or 29.87 per cent (less than one-third of all) were general 4 and 5, this being slightly more than double that found ordinarily in the schools. Amongst the pupils we found asthmas, healed hilum foci, cervical gland involvement and anemias, in addition to many contacts of open tuberculosis. Taking the results as a whole it is apparent that in order to comb the schools of children having certain apparent or latent diseases, it is necessary to make a thorough physical examination, inspection alone being useful only to a very minor degree. When properly arranged and managed, the continued fresh air, proper nutrition and rest periods of the open air routine are invaluable for many physical disabilities. Open air schools result not only in curing of many early diseases and preventing others, but also prevent many economic breakdowns of later life with the consequent loss to the individual, the family and the state.

The pupils in this area requiring corrections are followed up from year to year

with continued pressure being brought to have the corrections carried out. More often, however, it is found necessary to have the required treatments arranged for by the Center, a great deal of explaining and coaxing resulting finally in permission being granted. It is an outstanding fact that sending a slip with recommendations home for the parents' information produces very little action.

in the other four being very good. The contact history, too, was negative. The oldest child was then requested to attend the clinic preliminary to a home investigation. On further detailed questioning we ascertained that two people with open tuberculosis lived with this family over a period of eight months.

This is a negro family and since the Metropolitan Life Insurance Company

OPEN AIR SCHOOL

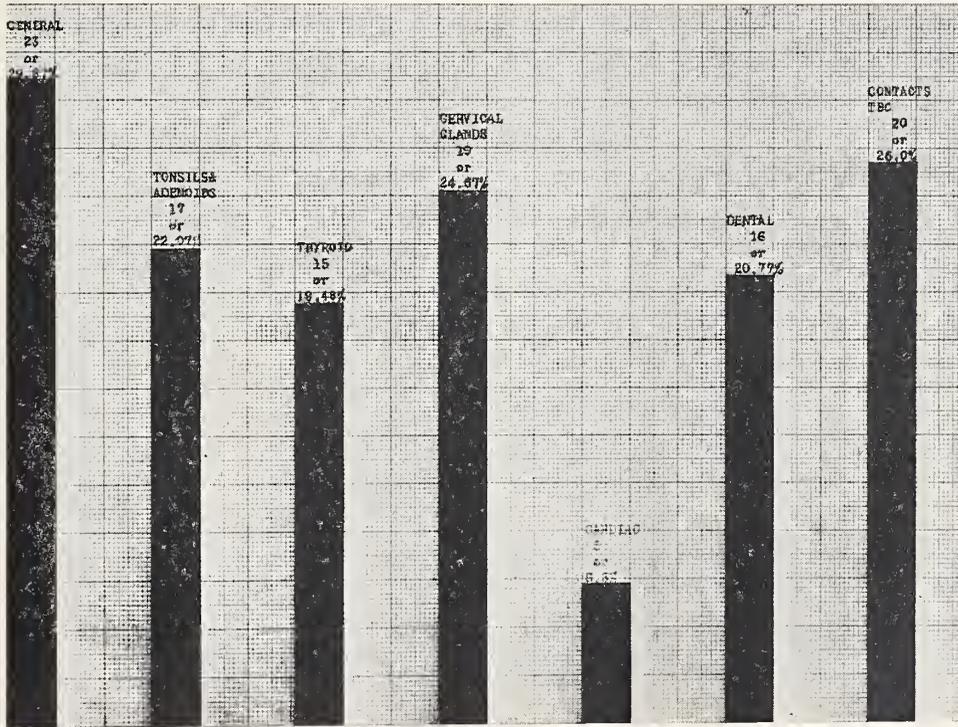


Figure 5

Correction percentages recommended in the Open Air School—two rooms containing 77 children.

This year arrangements have been made for the graduating classes of the two large schools in the area to receive a final thorough examination, including exact testing of sight, hearing and observations on color perception. A certificate of good health will be issued to those found normal, a duplicate copy being obtainable on request by reason of requirements in further studies, in industrial fields, etc.

Concluding, by thorough examination as here shown, we are able to greatly lessen the loop through which pre-tuberculous children escape us. Let us cite a specific example: In the recently finished public school examination we found that five of our positive von Pirquets were members of one family. Of these five only one showed under-nourishment and under-development and then but to a slight degree, the results of physical examination

records show that the negro tuberculosis death rate in the industrial group is more than three to one of that in the whites, it is apparent that ordinarily several of this family would fall victims to this disease. Our preventive work, however, starts practically at once for they will all be recommended to the City of Detroit summer camp (Wm. H. Maybury Sanatorium, Northville), living in the open air and exposed to natural sunlight (with the minimum of clothes) for two months. On their return to school next season they will be in the open air rooms, getting proper rest, fresh air and wholesome food. On graduation they will be helped in further education or training for jobs that will not later expose them to the trials and tribulations of unsuitable labor.

We wish to express our marked appreciation of complete co-operation from the

Board of Health, Public Welfare Department, and Education Department of the City of Detroit, the executive heads of local parochial and public schools and all the other public and private organizations with whom we came into contact, without exception.

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3. Copies of descriptive classifications and recommendations are procurable from the Detroit Board of Health.

HYDRONEPHROSIS—CASE REPORT

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The following case is, I believe, worthy of presenting, illustrating as it does, a tetrad of factors in sequence in the production of ureter block with resulting upper urinary obstruction, back pressure with renal tissue atrophy and hydronephrosis.

Patient, well nourished male, 23, married, presented himself at this office for examination, February 11, 1927. Family history, negative. Usual diseases of childhood. Otherwise well until three years ago, when he contracted Neisserian urethritis which lasted about eight months, during which time there was no epididymitis, but definite posterior involvement. Since his apparent cure, there has been no recurrence of his infection. Four months following termination of his urethritis he had an attack of sharp pain in the left lumbar region, which radiated to the groin. This attack lasted for about four hours and was relieved only by morphine. He has had several similar attacks during the past two years but has noticed that every one, including the first, followed immediately in the wake of a drinking bout, each one growing in duration and intensity, the last of which having continued for three days.

Physical examination reveals nothing of note, with the exception of the elicitation of slight tenderness in the region of the left kidney. No definite mass can be palpated. The prostate is slightly enlarged and firm. It is slightly irregular over the left half and the left vesicle is fibrotic. Massaged fluid shows pus, mostly in clumps. No bacteria are seen in the stained specimen. Urine is negative but for small pus content. Blood pressure, 122/78. Blood N.P.N., 24.4 per 100 cc. Wassermann, negative. Cystoscopy reveals a normal bladder with a good functioning right ureter but no flux from the left. Indigocarmine appears from the right ureter in deep concentration in four minutes. None is seen from the left in fifteen minutes' observation. No. 5 X-ray catheter passes to the right kidney pelvis without obstruction. No pus in urine from right kidney. Impassable obstruction was encountered

four cm. up the left ureter. Several attempts were made to pass this point without success. A Blasucci spiral tip catheter was introduced as far as possible and a pyeloureterogram, as illustrated below, was obtained.



Fig. 1

Pyeloureterogram showing three constricting areas, kink from vessel and hydronephrosis.

Patient was allowed to go home, and in a few hours suffered further pain, which he said was similar to the attacks following drinking parties of the past two years. The usual signs of upper urinary infection supervened and he was transferred to the hospital, where examination revealed a tender mass in the left lumbar region. Mercurochrome 220, 50cg. was given intravenously in 25cc. of 50% glucose solution, eight hours following which, the temperature dropped to and remained at normal, the mass decreased in size and tenderness, the pus content of the urine diminished and the patient improved rapidly. The blood pressure and N.P.N. content were normal and operative intervention was instituted February 21st.

Under paravertebral anesthesia, the left kidney and upper third of the ureter were exposed. The kidney was hydronephrotic, with advanced extrarenal dilatation. There was a definite constriction of the ureteropelvic juncture. A large lower polar artery crossed the ureter anteriorly, just above the termination of the upper third, apparently a stem from the aorta. This vessel was ligated and divided; the ureter was treated likewise and cauterized. The patient was given a slight amount of ethylene while dense adhesions were removed from the hilus, the regular vessels ligated, and the kidney removed with the upper third of the ureter. The wound was closed in two layers with drainage. Recovery was uneventful. Although warned as to the dangers of excessive use of alcohol, he is quite pleased to be free from the "day after" pain of the past two years.

COMMENT

Too often do we overlook the primary as well as the secondary etiological factors in the production of a hydronephrosis. Here is a young individual with four cardinal reasons for his kidney destruction, three of which could be considered primary. Take away all but one, and he would still have been destined to calectasis or pyelectasis. 1—Congenital narrowing of the ureteropelvic junction. 2—Large vessel compressing the ureter. 3—Stricture at seminal vesicle relation of ureter as a result of intrinsic or extrinsic infection sequelae following upper genital in-



Fig. 2

Specimen injected. Great extrarenal and intrarenal dilatation. Pyeloureteric constriction and lower polar artery to right.



Fig. 3

Roentgenogram. Injection of kidney pelvis under pressure, showing thinning of cortex and medulla. Catheter in situ. Probe indicates direction of aberrant artery.

ure of compensatory dilation of the ureteropelvic juncture, due to its characteristic construction; and the presence of normal thickenings of the perirenal fascias as well as inflammatory adhesions which acted to further contribute to obstruction and hydronephrosis.

THE BEHAVIOR OF CHILDREN IN RELATION TO MEDICAL TREATMENT

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GRAND RAPIDS, MICHIGAN

fection three years ago. 4—To hasten the process, and to cause immediate symptoms at intervals, the increased secretion of a large amount of urine of low salt and nitrogenous content as a result of response to alcohol was enough to cause immediate overdistention of the blocked hollow viscus with the characteristic resulting colic.

Secondary factors so well illustrated here are: tilting forward of the tumor mass due to gravity, increasing the vessel compression of the ureter; the usual fail-

Books, articles, pamphlets describing, studying and explaining the conduct of children have increased in number during the last ten years. The way children act has become of intense interest. Because of the increasing complexity of modern life and the necessity for instilling additional inhibitions in the course of the education of the plastic mind of the child, some of these problems have been presented to the attention of the physician. A fund of exact knowledge concerning conduct is rapidly being accumulated. This knowledge has

attracted not only the attention of educators but also of legislators who have promoted legislation to conserve the welfare and train the young so that they may develop the right type of social consciousness which will be of the utmost benefit to the future of the state. Prevention has become the keynote of this widespread movement which has as its aim the improvement of the physical and mental condition of childhood in its relation to the growth of the self, the family, the group and the state.

Obviously the physician in his close association with family life has the opportunity in many instances for aiding in the regulation of behavior in children. It is becoming increasingly necessary that the pediatrician must also be a psychiatrist. Each disease in childhood has its definite psychoneurotic element with which the disease itself is so closely interwoven that the two elements can not always be separated. More often the relationship is not appreciated. If it were appreciated there would be fewer neurotic children and in consequence fewer adult neurotics to crowd our institutions and increase the ranks of medical religious sects.

It is important to remember that the child is not a miniature adult, but that he is an individual whose diseases and development are characteristic only of that period of life. A child's nervous system is undeveloped, unstable, poorly controlled, and over-sensitive to external stimuli and subject to very rapid changes.

Methods of treatment must obviously be altered to meet these conditions, and the psychic condition of the child considered before any type of therapeutics is undertaken.

To further prove the truth of this premise, I wish to cite several instances of such neurotic elements which might have led to an entirely different type of continued treatment if not so appreciated.

1—Junior F. was a boy of eighteen months, a twin, the smaller of the two, but a well developed, well nourished infant. This case was brought to the attention of the physician because, at a regular time between ten and eleven p. m., after having been put to bed, he would begin to cough, rise up on his hands and knees, and eventually vomit his evening meal. He had continued this process with great regularity for the previous three months. He never vomited at any other time during the day, except at occasional intervals after a fit of temper, when prohibited from carrying out what he wished to do. Upon physical examination no cause was elicited for this vomiting. His feeding was considered satisfactory for his age. After vomiting in the bed each evening, he was accustomed to cry very loudly for his mother to come and clean him

up, after which he lay down and slept well the rest of the night. In conference with his mother, it was decided to abate this nuisance by allowing him to lie in his vomitus, upon its next occurrence. His mother was very co-operative, and upon the next occasion, in spite of his cries, allowed him to lie in this manner during the rest of the night. Following this episode, he never vomited in this manner again.

2—Tommy H. was a boy of four years, well developed and well nourished, with a mental age of six years. At this period in Tommys' life, he acquired a baby sister. Previous to this, Tommy had been the object of the exclusive attention of his father and mother. After the advent of his sister, Tommy felt that he was somewhat neglected. He accidentally discovered that by winking his eyes frequently, that such an action attracted the attention of his parents, and was the cause of much concern on their part. This action he found when continued resulted in a diversion of attention to him. No physical basis was found to account for this condition. His parents were advised to obviously neglect the younger sister and concentrate their attentive efforts on him. They did so, and kept him very closely occupied, with the result that in about two weeks these facial grimaces were discontinued and have never reappeared.

3—Carl M. was a well developed, well nourished, intelligent boy of three, living in a foster home. One day in playing with his older brother, he apparently received a blow on his left elbow. It was evidently not a very severe blow, as there was no swelling, redness, or abrasion of the skin. For a whole day he refused to move his elbow, and would scream in apparent terror whenever movement was attempted. His foster mother believed that his arm was broken. Upon examination, no bony displacement was found. By diversion of attention, accompanied by gradual movements of the elbow, he began to realize that the elbow could be moved without pain. When this realization was forced upon him, he moved his arm without effort, and in a few minutes was playing with his train on the floor.

4—Vernon D. was nine years old, and had been wetting the bed each night for the preceding seven months, since he had started to school in September. His mother prided herself upon her efficiency in the home and her expert hygienic care of her children. She always was present when her children returned from school; her meals were always exactly on time. The child arose at exactly the same time each morning, and went to bed with only a few minutes' variation from the regular time each night. She boasted that his clothes were always mended, that fresh clean clothes were always available. She said that the pantry was always filled, and that proper lunches were always available. Everything in this home was carried out exactly upon a routine basis. This boy's mother had not been to a card party or an afternoon entertainment since the birth of this child, because she felt it her duty to always be present when the child returned from school. He had never been allowed to go to the corner grocery by himself, to make purchases. The child was evidently then entirely dependent upon his mother. He had no responsibilities of his own. Upon analysis of this case, it was believed that this failure to delegate responsibilities to this boy was the basis for his bed-wetting. His mother was instructed to relax her routine, give him minor responsibilities, and the boy was told that it was proposed to give

him some medicine each night to cure him of this habit. He had a great aversion to the taking of medicine, and promised his mother that if she would not give him the medicine, he would cease to wet the bed. He carried out his promise, and up to the present time has ceased his enuresis.

5—Edward W. was a boy of ten years, of normal intelligence, who had been living in an institution, but had been transferred to a boarding home. During his stay in the institution, he had developed a fecal incontinence, which the attendants were not successful in curing. No physical basis for this incontinence was found. He was placed under the care of a foster mother who was an elderly lady, very firm, and positive, who was instructed to make an attempt to cure him of this habit. She tried corporal punishment, removal of food, putting him to bed, making him wash his own clothes, but these were without success. Finally she hit upon the plan of making him wear a sign pinned to his clothes in the back, upon which was written: "Edward Stink-pants." This was pinned to his clothes on Saturday morning, and he was forced to wear it in the presence of the two other children in this home, and upon the visit of his father, and he was told that if this habit was not stopped, he would be sent to school on Monday morning with the same sign glued to his back, and that his teacher would be asked to exhibit this sign to the other pupils in his room. This threatened action effected a cure, and his foster mother has had no further difficulty.

Vera D. was a well nourished, well developed girl of three years, who had an older brother, and who in the course of their play, stepped on her left wrist. During the whole day this girl refused to move her wrist, and screamed if her mother attempted it. It was determined upon physical examination that there was no injury present in the wrist, and the child was induced to move the wrist after sufficient diversion of attention had been developed. Upon being convinced that her wrist was not injured, the child was able to resume her play and use her arm as freely as before the injury.

7—Elizabeth G. was an undernourished girl of ten, who ate an insufficient quantity of food, had many nightmares, and became excited at the mention of deaths of unknown persons. She was constantly alarmed about the possible illness of her infant brother of six months. Her grades in school were excellent. She frequently had emotional attacks in which she cried for a considerable period of time, if accidental deaths narrated in the newspapers were mentioned in her presence. Due to her malnutrition, it was decided that a regime of rest should be instituted. It was arranged that she should have one-half hour's rest instead of her gymnasium period in school, and another half hour's rest following her luncheon, along with twelve hours' rest at night. Mild sedatives were given her at night to induce this rest. In four months' time, with this schedule, she gained nine pounds; her appetite improved; the emotional attacks ceased, and the nightmares disappeared. This increase in weight brought her up to the average weight for her height. Upon the attainment of this weight, her psychoneurotic actions disappeared, her mother described her as being a different child.

8—Janet M. was an institutional child of two years, who was markedly undernourished, and refused to eat. When forced to eat, she almost immediately vomited up a large portion of her food. After a great many of these vomiting at-

tacks, Janet was wrapped in a blanket, and fed by gavage. This procedure was repeated once and the vomiting ceased. In order to induce the child to eat, thereafter, it was only necessary to bring forth the stomach tube and threaten her with its use.

9—Eleanor B. was an infant of one year, who was brought to the physician because she cried and screamed at various intervals during the night. Upon examination she was found to have a dermatitis of the buttocks which was found to be due to an ammoniacal diaper. The crying spells were found to be identical with the liberation of ammonia from the urine on the diaper. Measures were instituted for curing of the ammoniacal diaper, and the screaming and crying ceased.

10—Joyce C. was five years old, of average intelligence, ordinarily well behaved and an obedient child. She was an only child, and was very desirous of having considerable attention paid to her actions. She had found that by carrying out various practices, such as rubbing her umbilicus, or picking her nose until it bled, it would cause great concern on the part of her mother, to such an extent that a physician was called in to see her. One day her mother discovered a small vesicle on the inside of one cheek. For some reason this did not cause very much concern upon the part of her mother, and Joyce was assured that this amounted to nothing. Upon the request of the child the mother later looked into her mouth, and discovered that there were a great many abrasions of the mucous membrane on the inside of both cheeks. In great alarm, the mother did call her physician, who discovered that these abrasions were caused by the biting of the inside of her cheek, and were arranged in a perfect line corresponding to the occlusion of the teeth. The reason given by the child for this action was that she wished to see the doctor.

11—Tommy H. was a fat, well developed boy of thirteen months, who had been exclusively breast fed up to this age. His mother had been unable to induce him to take other food. At this time it was decided that it was high time that he should be weaned. The nursing was abruptly terminated by the mother leaving town for three days. The child was left in the care of a supposedly competent practical nurse. Upon their return they found the child acutely ill. He had refused to take any other food and even water during her absence. The child was hastily removed to a hospital with a very acute acidosis from which he slowly recuperated. Thus you see a starvation acidosis is quite possible, when feeding habits have been previously neglected and a child with a stubborn personality refuses to eat other than the food to which it is accustomed.

Refusal to sleep and eat are perhaps two of the most common problems presented to the attention of the physician, and obviously they are difficulties which directly affect the child's health. It is quite often true that refusal to sleep is due to perversion of suggestion. If each bed-time is accompanied by struggling and crying in the attempt to put the child to bed, so that these acts become associated, the result is that a habit is formed which presents itself on each occasion. For example, it is more rational to make going to bed an interesting event. Interesting

events are not ones in which children are very suddenly compelled to carry out orders. To make going to bed interesting it may be desirable to tell bed-time stories so that the child will be anxious to go to bed in order to hear the story. The procedure may be begun slowly, all toys first being put in their place, and then clothes carefully folded. Going to bed then is to be treated as a daily event which is of no especial concern to the parent, but one which is inexorably carried out, with an interesting background. Restlessness at bed-time is quite often evidence of an overstimulated brain. The child who has had an exciting romp with a parent prior to bed-time or one who is excessively physically tired often finds it difficult to sleep. Obviously this restlessness can be cured by discontinuing the romp or curbing the daily activities.

Refusal of food may be treated in somewhat the same manner. It has been definitely proven from a physiological standpoint that there is a close relation existing between appetite, digestion and the mental state. Quite often refusal of food ceases when children learn to feed themselves, or learn not to be waited upon, or find that their struggles to refuse food do not cause the usual parental alarm. The parent should cultivate a disinterested manner and in order to emphasize the length of time required for eating should sometimes take the plate away before the child is finished. Such methods of treatment are the common accepted principles upon which these refusals of food or sleep are treated. It is evident that the matter of sleeping and eating has a distinct bearing upon the child's physical development, and is a matter of earnest concern to the physician. Because of the relationship existing between physical development and habits, it is then imperatively necessary for the physician to be able to outline a system of training which will attempt to cure these defective habits.

The cases just cited are to my mind examples of the close relationship existing between the psychic side of a child's life and the medical treatment which might have been otherwise instituted on the supposition that the child had an organic illness. It emphasizes the need for realization of the psychoneurotic elements which must be taken into consideration when children's illnesses are connected with their behavior. It emphasizes what I have stated before, that every pediatrician must

also be a psychiatrist, and be able to correctly evaluate behavior.

This study I believe has become the frontier of pediatrics and has brought about a close relation between pediatrics and psychiatry. It has become quite the order of the day for mothers to talk to their children's physicians concerning I. Q.s and various kinds of inferiority and superiority complexes, on which subject the pediatrician must be capable of giving satisfying advice. Mothers and fathers wish to know, for example, why their child has developed an extreme negativism. Oft-times the imitativeness of the child causes concern when it is reflected in his form of speech. He may develop an authoritative voice which is always demanding or grasping. These forms of speech are evident developments in the growth of a child's personality, consequently mothers and fathers often inquire whether they may prevent their child from developing such undesirable traits.

It is required that the pediatrician shall answer questions concerning the suggestibility of children. Have you not been asked many times over how this child may be made to eat cereals or drink milk, when he absolutely refuses to do so? What answer can you give to the mother who inquires the best method of curing her child of a fear of the dark, or of animals, or of falling, or the sight of blood? What advice can you offer the mother who states that her child is wakeful and has nightmares? What is to be done with the child who is excessively timid? What answer can you give a mother who complains that her child has the habit of masturbation? Can you explain to her that it is not a criminal practice, and not of moral interest, but that it is a habit of the same character as thumb-sucking? It is far better to have the mother understand that the habit is one in which she should make the child have a sense of disgust; she should not appear alarmed, or give any evidence of the worry which it presumably causes her. There are many other questions which are constantly asked by parents regarding such habits as head-banging, dirt-eating, neurotic constipation, breath-holding, thumb-sucking, and stammering.

Perhaps one of the most common habits which is presented to the attention of the physician is that of enuresis. It is perhaps unnecessary to repeat to you the fact that enuresis is a habit, but this idea has not permeated the general intelligence of

the community to such an extent that it is commonly regarded as a habit. Many cases of enuresis are cured by such simple measures as by talking to the physician in his office, by a system of rewards, by a system of charts, on which is kept a daily record of this habit, or by a great many other methods which are suited to the individual child.

It has seemed to me that the history taken on admittance of the child and parent to the office should not only include questions concerning the physical condition of the patient, but also should include questions regarding his habits which may throw some light upon the treatment of his physical condition. With merely an idea of suggesting some such trend of questioning, I should like to submit the following questions as an example of what might be asked a parent in regard to his infant's habits:

When does he cry?—Is it a cry of hunger, fear, rage, or does he wish to be carried or petted?

- Does he have temper tantrums?
- Is he restless?
- How does he treat his pet animals?
- Is he hungry?
- Does he recognize his nurse's authority ?
- Does he jump at sudden noises?
- Does he kick off the covers?
- Is he curious?
- Is he imaginative?
- Is he imitative?
- Is he happy and contented?
- Is he obedient?
- Is he destructive?
- What is the type of his play?
- Is he affectionate?
- Is he selfish?
- How does he get along with his playmates?
- Does he sleep quietly?
- Does he have to be coaxed to eat?
- Does he like to be bathed?
- In what position does he prefer to sleep?
- Does he cry when the other children cry?
- Is he afraid of persons outside the family?
- What are his especial dislikes?

Such questions as these, while not in any way complete, may lead you to discoveries which may be very helpful in not only developing the child's personality, but also in correcting physical ailments.

It is to be remembered that differences in temperament are to a large extent due to the parental attitude. Fears are practically always communicated to children by the expressed anxiety of their parents. Habitual obedience or implicit subordination may make a very dull child, because of the inhibition of spontaneity, but on the other hand it should be the aim of parents to promote a gradual growth of independence. Undisciplined children on the contrary provoke negativism when their con-

trol is not achieved. Such lack of control results in appeals, expostulation, threats, ineffective punishments, tears, and fits of temper, when the child attempts to have its own way. Negativism is quite often a symptom of unrest, caught from the disturbing atmosphere of a broken home. These briefly are some of the parental problems which you may be called upon to help settle as the friendly family physician.

The behavior and training of children has become a matter of public concern. A vast literature has been developed of late years concerning the training and care of children, especially with regard to their habits. Interest in the pre-school child has reached the stage where their training has been undertaken not only by special schools devoted to this purpose, but also in certain cities by the public school system itself. Many newspapers carry daily articles concerning the correct habit training of children; many magazine articles have been written upon the same subject. The habit training of children has become a subject for discussion in the pulpit, for parent-teachers' associations, women's clubs, child guidance clinics, and school organizations of various types, all of which shows a wide-spread interest in the psychic side of a child's life. Evidently there is a great demand for information concerning the proper training of children. Where such a demand exists, it must of course be supplied.

To my mind this information should be most properly supplied by the pediatrician or family physician; however, it is evident that such information must be accurate and must be backed up with experience. Concrete suggestions must be made for the eradication of such faulty habits. It must be at least the equal of that taught by the layman. Such information has up to the present been largely given to the public by the laymen, who have sensed the demand for such knowledge, and taken advantage of their opportunity. Such sources of information are not always based upon the same experience or the same elementary knowledge as the physician trained in these matters and erroneous impressions and opinions are often expressed. It is again a striking example of the slowness with which new demands and new inquiries for knowledge by parents have been met with reluctance by the physician. It is high time that he realizes that he should be the leader in these movements, and should establish the frontiers in med-

icine himself. Habit training and parent counsel should be incorporated into and become a part of general as well as pediatric practice. The day is past when children are only brought to the physician because they are physically ill, for there are an increasing number of mothers who bring their children to a physician for advice concerning habit training only. This education of parents and demand for knowledge having been fostered by the press must be met; such advice can not be now sidestepped and if this appeal is not met, it is extremely probable that the laymen will take it into their own hands as they have done with other matters pertaining to health, and establish clinics where such information may be obtained. Such clinics of other types have become a basis for considerable discussion of their ethics, and have occasioned much concern upon the part of physicians. To avoid this mistake again, the pediatrician should undertake to fit himself to provide parents with this knowledge, and thus lead the way into a new field of practice, where he may anticipate these demands.

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CONSERVATION IN SURGERY OF BENIGN BONE TUMOR*

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The cumulative experience arising from such an institution as The Registry of Bone Sarcoma, (which originating through the independent and unselfish activity of Codman, is now carried on under the auspices of The American College of Surgeons) and the continued research and missionary activity in this subject of Bloodgood and others, are doing much to crystalize in surgical practice the principle not only of early radical action that will bring in an increasing number of cures in many types of malignant sarcoma, but also of conservative intervention in definitely benign though locally destructive lesions. In either instance there is still probably justification for stressing

these points by precept and example; and in connection with the benign lesions there have come to mind three instances in the experience of this Clinic which present good examples, of the possibilities of the surgery of conservation.

It may be proper also to emphasize what Bloodgood, Codman and others are stressing so constantly as a corollary, namely that the surgeon's clinical decisions as to radicalism or conservation cannot safely be made unless backed up by the opinion of an experienced pathologist, given by frozen section diagnosis at the time of operation. It does not help the patient much to find out a few days later that a benign looking tumor treated by conservative surgery was really an atypical malignant one and by then well on the way to metastasis, which, however, is really a more terrifying mishap than to learn some time after operation that the limb sacrificed for a supposedly malignant tumor might have been saved by local resection. In the three instances here mentioned a margin of doubt in the mind of the operator working without immediate microscopic diagnosis would have turned the scale in favor of a mutilating operation.

The first patient in mind came under the care of Dr. R. D. McClure, Surgeon in Chief, half a dozen years ago, presenting a destructive lesion of the upper end of the femur in which had occurred a pathological fracture. While the age of the patient, the location in the bone, the X-ray appearances, and even the gross appearance of the tissue at operation were all indicative of a diagnosis of giant cell tumor; yet the area of bone destruction included head, neck, trochanters and upper shaft, an unusual extent for the apparently brief duration of symptoms, and might well cause an operator to retain some question on the clinical diagnosis. This, coupled with the hopelessly crippled limb that a resection would leave, might naturally have led to a disarticulation at the hip. But the frozen sections showing typically benign histology, conservation was the procedure of election. After complete removal of the upper third of the femur, the upper one-half of the fibula was implanted into the femoral shaft and made to articulate in the acetabulum. The graft "took", and this patient, who has since been under the observation of the writer, is able to walk without cane or crutch and only a slight raise in the heel of her shoe.

The second case in mind, though of a distinctly minor character, is still to the

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point. A destructive neoplasm had involved the shaft of a metacarpal bone nearly to its base. The operation permitted confirmation by microscopic section of the clinical diagnosis of enchondroma, and of the safety of local resection. The simple removal of two-thirds of the metacarpal would reasonably be followed by a luxated, deformed and useless finger, and a complete digito-metacarpal amputation might have been the logical alternative. However, encouraged by the certainty of benignity, the metacarpal was replaced by a graft from the tibia, which not only "took" but also managed to reward the careful after treatment by an almost normally functioning metacarpophalangeal joint, and an entirely natural looking hand. It is quite apparent that the result of the decision re conservation was as gratifying to the patient as to the writer.

While not as brilliant as the case of the first patient, the third case which we are reporting in detail, equally well bears out the principles being emphasized, and in addition furnishes an example of regenerative possibilities without osteoplastic aid that quite justified the hopes of the writer at the time of operation. In brief a destructive neoplasm was found to have completely destroyed the upper extremity of the tibia, leaving only a thin bone shell, and this had suffered an incomplete fracture along the articular surface. From this shell the tumor tissue was carefully curretted and wiped out, the interior cauterized with crude carbolic, the cavity filled flush with fresh blood from a neighboring vessel and wound closed snugly in layers. A ring caliper splint protected the bone shell against further damage. Calcification in the excavated tibia had begun by X-ray in a few months and was nearly complete in a year with 100% function in the knee and not the slightest disability.

CASE REPORT

History—P. D. Case No. 70115: An Austrian born laborer of 40, was admitted on November 29, 1925 with a complaint of rheumatism in left knee. His past history contained nothing which seems to have any bearing, and he had always been strong and well. He gave about seven months as duration of complaint, consisting of soreness for about two hours in early part of the day, and in last three months nearly constant soreness while working; but no disability until three days prior to entry when his knee "gave way" with more severe pain, he was forced to quit work, and has limped since. While the patient ascribed his trouble to injury, he was unable to specify any single injury, but claimed his legs were frequently bumped, especially above the knee, during the course of his work. He had been

under treatment by various physicians on basis of rheumatism for the three months immediately prior to admission. In course of same he had had all his teeth removed.

Examination—The examination on admission showed a man in no considerable discomfort, well developed and nourished, and in excellent general condition. No important physical findings save chronic tonsillitis appeared on general examination.

The left knee seemed normal on superficial inspection but on closer scrutiny there seemed a greater prominence of superficial veins over the upper one-third of subcutaneous aspect of the tibia. There was no local heat to palpation and no periarticular or synovial thickening of the knee joint, nor was there any articular tenderness. However, over the epiphyseal and metaphyseal areas of this end of the tibia there was quite marked tenderness to firm pressure. There was no crepitation. Actively the knee could be moved to nearly normal range but when full extension or extreme flexion were forced there was apparently quite definite pain.

The patient showed a normal temperature, pulse, and respiration rate. The blood Wassermann test was negative, routine urinalysis findings were normal as were also red and white blood counts.

Diagnosis—The case was first seen by the writer in consultation from another department and a tentative diagnosis of neoplasm, probably benign, of upper tibia was made on the physical findings.

Comment: The minimal physical findings seemed to rule out an arthritic or tuberculous (joint) lesion and to place the lesion definitely in the metaphyseal region of the tibia. The dura-



Figure 1

A. P. film before operation. Diffuse rarefaction metaphyses and epiphysis. Delimitation at diaphysis not sharp. Apparent surface irregularity suggesting proliferation unusual aspects. These items not entirely characteristic. Note articular fracture near tibial spine and suggestive bulging.

tion of symptoms was against osteomyelitis, unless of the Brodie's abscess type; and this is almost never found close enough to the joint to cause pain on manipulation of same, and usually causes a little elevation in temperature when subjective symptoms are marked. Accordingly a neoplasm had to be considered. The duration of symptoms and their minor degree were entirely against malignancy and in favor of a benign tumor. Also was the location in the end of a long bone, especially when after several months duration the lesion still seemed to be a central one. The only factor against the giant cell tumor was the age of the patient, though not wholly so, but this led to an additional consideration of enchondroma. The text of the Roentgenologist's report follows: "December 1, 1925 examination



Figure 2

Lateral film before operation. Note suggestive interior trabeculation, not found at operation.

was made of the left knee. There is a lesion involving the upper portion of the tibia extending from the knee joint downward for about four inches. This has caused the destruction of the normal bone tissue. The tissues remaining show marked evidence of trabeculation most of which is rather fine in character although there are some large areas of trabeculation present. This is central in origin and shows no definite evidence of invasion. There is no evidence of breaking through of the cortex. The anterior portion of the cortex of the tibia at the knee joint is bulged upwards into the joint but is not broken through. Impression: Benign bone tumor, probably giant cell sarcoma or osteochondroma."

Our interpretation of films was in accord with the above, including the conclusions, save that some concern was given to the absence of a sharply defined border at the diaphyseal margin, suggesting a slight possibility of malignancy, and that the trabeculation probably represented peripheral rather than central residual bone architec-

ture. In addition we definitely felt that there was evidence of fracture, incomplete, in the articular plate of the tibia.

Comment: With these X-rays it was difficult to strongly consider a malignant sarcoma. The extent of the lesion in the absence of cortical destruction or extra-cortical involvement, and the slight bulging manifest, are quite typical characters of benign or giant cell tumor. The trabeculation when evidently not new bone formation but residual bone architecture was against malignancy. Enchondroma may leave this trabeculation, but centrally in the bone.

Exploration for microscopic diagnosis, with immediate further surgical intervention as indicated, was deemed the course to pursue. It was felt that the patient should be prepared for possible amputation, but efforts were unavailing to obtain this permission unless he could be positively assured that his trouble was cancerous. Accordingly exploration under spinal anesthesia was chosen.

Operation—Curettage, cauterization of tibia for giant cell tumor.

Date: December 3, 1925.

"Limb is prepared to the upper thigh and sterile tourniquet applied, close enough to the knee to allow amputation above it. A curved incision is made over the internal aspect of the upper end of the tibia starting at the mesial aspect near the joint line and curving forward and downward towards the crest. Outlined flap of skin and subcutaneous fascia turned back; more nearly longitudinal incision is made through the quadriceps fascia, latter reflected from the bone with periosteum over an area of about 2 inches and this area of bone is cut through with an osteotome; except at the bottom it is very thin, 1/16 to 1/8" in thickness.

"Pathology: The piece of bone is lifted out with practically nothing adherent to it. Its deep surface is somewhat irregular and foveated, but is not rough in the finer sense and does not present the aspect of invasion. Little or no blood or other fluid appears in the cavity below, but instead a brownish red mass of very friable tissue, which fills the cavity solidly. This broken up with the finger fails to show any fibrous stroma and no spicules of bone, with nothing to suggest either new bone formation or portions of the old bone frame work. Impression is giant cell tumor and the pathologist at once confirms this by frozen section.

"The cavity is then thoroughly cleaned out. The skin edges have been very carefully protected with towels; after curetting the entire contents of soft material, the cavity is found to occupy the entire upper end of the tibia and at the top in one place the cortex has disappeared and the deep surface of articular cartilage shows. There is a fissured fracture along the narrow wall just below the artificial opening made, but it is not certain whether this was produced by the trauma of osteotomy. The walls of the cavity are irregular but not rough with spicules. At the lower limits the marrow is reached. After thoroughly scraping with curette and further cleaning off by hard wiping of gauze stocks, the cavity is dried and its walls thoroughly swabbed with carbolic, the soft tissues around the edges of the bone being protected by alcohol gauze. Two dripping alcohol sponges are then packed into the cavity, these in turn are followed by saline, which when removed leaves the cavity empty and

to the eye obviously completely cauterized. Very little oozing occurs from the bone margins.

"All instruments are changed with the gowns and gloves. The mesial inferior geniculate vessel when unclamped bleeds quite freely and this stream is used to completely fill the cavity with fresh blood, the table being tilted so that it fills it entirely full. This vessel and one or two other small arteries are ligated with the necessary subcutaneous veins and a very careful closure in layers is made. The flap is so designed that the last two lines of suture do not overlie the incision in the deep fascia and periosteum. The leg is dressed on a full length splint."

COMMENT

Amputation could have been considered here only on basis of hopeless compromise of the joint, and even if this had been necessitated by the surgical intervention and loss of substance, a subsequent bridging by grafting would have been preferable to amputation. With the diagnosis made incontrovertible by the microscope, maximum conservation seemed the definite indication. The treatment however, was predicated on complete closure and prompt healing. Packing of the cavity or drainage and inevitable secondary infection would probably have led ultimately to amputation, and benign tumors complicated by

sue weighing 160 grams, removed from cavity in head of tibia.

Microscopic: Sections taken through tissue removed from head of tibia show the same composed of delicate fibrous stroma, round or cuboidal cells and large multinucleated cells with abundant protoplasm. Multinucleated cells are of the foreign body type. Irregular blood spaces are seen



Figure 4

Same date as figure 3. Extent of cavity well shown. Compare with Fig. 6.

and throughout the tissue a small amount of yellowish-brown blood pigment.

Diagnosis: Giant cell tumor."

Post-Operative Course—This proved a most fortunate one for the patient. It was almost entirely afebrile and comfortable. On the ninth day, the wound apparently healing per primum, a plaster dressing was applied to the entire limb and principally for economic reasons, he was discharged to his home on the 12th. Later a Thomas ring caliper brace was applied and he returned to work in one month; a sitting down job being secured.

At the end of two months X-ray showed a slight increase in density in the area of the lesion, and no further change in joint surfaces. After three months the knee permitted a range of motion of about 45° and at the end of another month 90°. Tenderness at site of operative defect in cortex was still complained of. Six months post-operative he had no symptoms referable to knee and X-ray examination showed unquestionable calcification of the blood clot though density was still less than normal. At this time against advice, the patient discarded the brace.

He was re-examined clinically and by X-ray about a year after operation, being shown before Central States Orthopaedic Society at that time. He professed himself entirely symptom



Figure 3

Six months post-operative; cortical defect made at exploration shows clearly, but elsewhere increased density is suggested.

infection have been known to become malignant. An organized blood clot seemed to be the best basis for regeneration of bone tissue, and this proved to be the case.

Pathological Report—"The specimen consists of a piece of cancellous bone and granulation tis-

free and range of motion of knee was nearly normal; except for a thin operative scar there was no external evidence of his lesion. X-ray's taken then showed nearly complete recalcification. At time of writing, 18 months post-operative, he was still at work with no complaints."



Figure 5

One year post-operative. Note extensive sclerosis and filling in.



Figure 6

Sharply defined area of decreased density represents still persisting osteotomy defect. Note degree of bone sclerosis posteriorly and near joint; latter apparently unimpaired.

UNDULANT FEVER IN MAN AND ITS RELATION TO BOVINE INFEC- TIOUS ABORTION (BANG'S ABORTION DISEASE)

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Experiment Station.

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The significance of the illuminating discovery made by Alice C. Evans (1) in 1918 that the causative agent of infectious abortion in cattle and of undulant fever in man are closely related, if not identical, is now being realized by the physician and by the public health worker. First, because many undefined forms of fever and complex symptoms are being understood, and second, because a new public health problem is recognized. Undulant or Malta fever is one of the oldest known diseases of man, having been discussed by Hippocrates in "Epidemics" 450 B. C. An accurate description of the disease, however, was not presented until the report by Marston (2) appeared in 1863. Clinically, the disease is characterized by undulations of pyrexial intensity indefinite in duration, an irregular course associated with a complexity of symptoms and low mortality.

The etiologic factor of the disease was discovered by Bruce (3) in 1887 to be a small micrococcus and named by Hughes (4) *Micrococcus melitensis*. More recent studies, (1) however, revealed it as being a small rod.

Diagnosis of the disease in man may be confirmed by means of the serum agglutination test or by blood and urine culture. The micro-organism has not been found to occur in the feces. After having isolated the causative agent, the source of infection in man remained very much of a puzzle for more than eight years, or until the British Commission (5) for the study of disease began to function. The discovery of its host, the milch goat, was then largely accidental. In its host, the goat, the micro-organism establishes itself in the udder and produces a mild mastitis. It is eliminated in the milk in large numbers, often as high as 25,000,000 per cubic centimeter. It is also eliminated in the urine and is responsible for a high rate of abortion in affected female goats.

Diagnosis of the disease in goats can only be made through serum agglutination tests or bacteriological examination of the milk or diseased organs. The ingestion of a small amount of infective goat's milk

by a susceptible individual is followed by infection in eight to fifteen days. Primary invasion of the tissues appear to take place in the mucosa of the throat.

Turning now to the abortion disease in cattle we learn from the literature that "storms" of premature expulsion of the fetus have occurred in herds of cattle in European countries for more than a century and have been a subject of no little discussion by eminent veterinarians. A searching study of the bovine abortion disease was not made until 1897 when Bang (6) revealed through his researches that it is caused by a small rod-like micro-organism designated as *Brucella (Bacillus) abortus*. He also showed that the chief anatomical change which leads to the premature expulsion is a placentitis. But it was not until 1911 that by accident the udder of the cow was found to be the chief seat of habitat of the abortion germ. This was discovered by Schroeder and Cotton (7) and Theobald Smith (8) independently, at about the same time. The abortion germ is eliminated in the milk from the infected udder, in some cases for many years, but not in what one would consider large numbers—rarely more than 10,000 per cubic centimeter.

Infection in the cow, which usually takes place by way of the digestive tract, is neither always followed by abortion nor do many infected animals abort more than once. There are no other known clinical symptoms manifested in the animal except possibly a mild mastitis. It is difficult to make a diagnosis of the abortion disease in cattle from clinical symptoms alone as abortions occasionally occur from other causes of an infectious nature. One must therefore rely on the serum agglutination test or a bacteriological examination of diseased organs in making a diagnosis of the disease. *Br. melitensis* has been shown to be pathogenic for the cow and likewise *Br. abortus* for the goat.

From the foregoing discussion it must be apparent to all that there is a close similarity in the course of the disease in the goat and in the cow. Further, since the two micro-organisms bear a close similarity according to laboratory tests, the question now arises, is *Br. abortus* also pathogenic for man, and do the clinical symptoms which follow infection differ from those following infection from *Br. melitensis*? In order clearly to answer this question it first becomes necessary to review the history of undulant fever in the United States. Its appearance may be

divided into three periods. The first period concerns the recognition and description of the first known case. This case was reported by Craig (9) in 1905. The second period concerns the identification of the disease in Southwest Texas in 1911 (10), (11). The disease appears to have been endemic in this section of the country for many years and no doubt had its origin in goats imported from Europe. The type of organism involved here is the true *Br. melitensis*. The third period is the beginning of the one which concerns us at the present time. A case of the disease reported by Keefer (12) in 1924 and occurring in Baltimore, is the first one in this country in which the individual did not have a history of drinking goats' milk or associating with goats, but did have a history of drinking raw cow's milk in large quantities. Further, the type or organism recovered from the patient was identical with *Br. abortus* as determined by differential laboratory tests. This was not, however, the first association of the disease in man with the abortion disease in the cow, as several cases had previously been reported from South Africa. (13), (14). During the past three years more than fifty cases of the disease have been diagnosed in different parts of this country, fourteen of which have occurred in Michigan. None of these cases have a history of drinking goats' milk or associating with goats, but most of them do have a history of drinking milk from or associating with cows affected with the abortion disease.

Clinically, the disease in man in Europe caused by *Br. melitensis* and in this country, where *Br. abortus* is involved, appears to be indistinguishable. There have perhaps been fewer cases of the mild type reported than are reported in Europe, but this may be due to the fact that the presence of the disease has only been recognized for a short time. The complexity of the symptoms one encounters makes the disease difficult to diagnose at the bedside, and it is not surprising to find that a presumptive diagnosis has been in error in practically all cases so far encountered as it is not readily recognized by physicians in those countries where it has been prevalent for many years.

That the similarity of the disease in the goat and in the cow had gone unnoticed until a few years ago is perhaps due to the fact that the disease was studied in the two animals from a different viewpoint, one involving the well-being of man and the other the conservation of livestock. It remained for Evans to correlate

our understanding of the two causitive micro-organisms, thus to make the disease in man and the disease in the cow a combined problem which should interest both the medical and veterinary professions.

The association of *Br. abortus* infection in man with the abortion disease in the cow has been questioned by many on the supposition that the disease has been prevalent in cattle for many years and many people have consumed raw milk from them in which the micro-organism in question was present, but not until recently has the disease in man been identified as being caused by *Br. abortus*.

The recent identification of many cases of undulant fever in man in all parts of this country and the determination of *Br. abortus* as being the etiologic factor has one of three possible explanations, namely, the disease may have been prevalent in the past, but was not recognized; it may be of recent occurrence owing to the fact that infection appears to depend upon mass dosage of the micro-organism, a state which has not existed before in the case of infective cows' milk; the origin of the disease may be from an animal or its product other than the cow with which man associates or consumes as food.

Although there is much evidence to incriminate infective raw cow's milk as being the source of the disease in man, one should not be too hasty in their conclusion until all other possible sources of infection are exhausted.

It is evident from the gradually increasing number of cases being reported that unless the sources of the infection is soon blocked, undulant fever in man may become a serious disease in this country.

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STERILITY IN THE FEMALE*

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The perpetuation of life is probably the strongest instinct of human beings, including, as it does, self-preservation and reproduction of kind. The reproductive power, therefore, as well as metabolism and motion are attributes of normal individuals, and any departure from the normal in this respect must be considered a pathological entity. The inability to reproduce is called sterility, and the problem of sterility is one of the most frequently met and least understood confronting the physician today.

Probably the outstanding fallacy in the consideration of sterility not only by the laity but also by the majority of physicians is the assumption that because a woman cannot become pregnant or cannot produce a living child, it is entirely her fault. Careful investigation reveals that a large proportion of barren marriages are due to some defect in the male generative organs. To simplify this paper, I shall ask you to take for granted that the husbands of the patients considered by me are perfectly healthy persons, having normal powers of coitus and producing normal, healthy, sperm.

CLASSIFICATION OF STERILITY

Since sterility includes not only cases incapable at any time of bearing children but also those cases where one or more conceptions have taken place and further pregnancy is impossible, it is necessary to classify the term.

We may therefore say that sterility is either

1. Absolute—where conception has never occurred,
2. Relative—where conception has occurred but a dead fetus or child has resulted, or
3. Conditional—where conception and normal child birth has occurred, but the patient is incapable of further conception.

Or we may divide sterility into

1. Primary—where the patient, while living with a fertile man during her period

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of sexual maturity has never conceived, and

2. Secondary—where the woman has produced normal children but is sterile since then.

And again we may classify sterility as

1. Congenital—where some anatomic anomaly is present.

2. Acquired—where fertility was at one time possible, but some condition has been contracted rendering the patient sterile, or

3. Apparent or temporary sterility, where the patient is potentially fertile, but due to some factor in her life has not had a proper chance to become fertile.

CAUSES OF STERILITY

Sterility is physiological during pregnancy and a short time afterwards during lactation, and after the climacterium. It is also noted that fertility chances are lowered as barren married life continues. Thus 15% of women conceive for the first time within a year after marriage, 6% between 3 and 5 years after marriage, and only 2.5% after 5 years. Also it is known that the older a woman is at the time of marriage the less chance she has of becoming pregnant. Thus, woman's fertility is greatest between the ages of 20 and 30 after which it diminishes quite rapidly.

Sterility which occurs after previous childbirth may be due to a birth injury which causes a prolapse or deep perineal laceration, or an extensive cervical laceration. The latter may produce sterility directly by offering no mucus plug for the sperm or indirectly following infection which so frequently occurs after even slight lacerations. The infection produces a chronic endocervicitis which so distorts the cervix as to render the passage of the sperm particularly arduous. Also, the infection may be transmitted directly to the tubes by way of the lymphatics which drain in that fashion, not affecting the corpus uteri at all. In this case we get salpingitis following a normal pregnancy, but producing a sterility afterwards.

An interesting case in point follows:

Mrs. D., a para iii, age 30 had been married twice. All her pregnancies resulted from the first marriage. About a year after the second marriage she complained of severe abdominal pain and leucorrhœa. She had always been regular in her menstruation, until about two months previous. Since that time there had been amenorrhœa. She ran a septic temperature and examination disclosed a bilateral pyosalpinx. A posterior colpotomy was done and the abscesses drained. She made an uneventful recovery, but the amenorrhœa continued. Three months later

there was distinct evidence of pregnancy, the fetal heart sounds being plainly heard. At seven months these disappeared and a still born fetus of seven months was delivered.

Here we see that infection occurred in the tubes during pregnancy, and it is similarly that salpingitis occurs after a normal pregnancy. It appears that the infection occurs during the pregnancy, but because of the drainage from the cervix to the tubes, the uterus itself remains undisturbed. Sterility follows because of occlusion of the tubes.

Secondary sterility may also be due to infection occurring during puerperium. The resistance of the pelvic organs is lowered at this time due to the congestion following delivery, and infection resulting from intercourse or parturition finds an easy access to the uterus and adnexa. Then we have the puerperal septicemias and sapremias, with their grave consequences affecting fertility.

Another very frequent cause for sterility in patients with normal physical findings is asthenia. This may be due to a neurotic habitus, anemia, tuberculosis, diabetes, or other chronic disease condition. These patients are the type who are underweight, always complaining of some vague pains and aches, have dysmenorrhœa, poor appetites, and sluggish bowels, and are on the whole, very unmanageable. We all see them frequently, and scrutiny shows that a considerable percentage of them are sterile.

Glandular dystrophies also produce sterility. Hypopituitary syndromes, cretinism and maldevelopment of the ovaries are associated with sterility. Certain occupational diseases as mineral poisoning and X-ray exposure very frequently produce sterility, which may be temporary or permanent, depending on the amount of exposure to the toxic substances.

We have a definite routine in the examination and management of sterility cases which, while purely arbitrary, is at least, very thorough. The patients' history is, of course, very essential.

The age and length of time of marriage is first ascertained. Their relation to sterility has been mentioned. The past history is carefully gone into. Exanthemata, particularly mumps may produce sterility. Appendicitis, peritonitis, etc., also very frequently produce a secondary occlusion of the tubes, and the history in this regard should always be investigated. Tuberculosis, diabetes, anemia, and other chronic diseases must also be excluded.

The beginning of menstruation, and

character of subsequent periods must next be ascertained. It is extremely important to ask whether there has been any change in the menstrual function after marriage. Dysmenorrhea appearing after marriage is suggestive of infection. Leucorrhoea during childhood or after marriage suggests gonorrhoeal infection. A serous discharge after menstruation has commenced but before marriage is suggestive either of a mild infection, nongonorrhoeal in type, or of an asthenic habitus. There is ordinarily a serous discharge before and after menstruation, but if leucorrhoea occurs between the periods, infection must be borne in mind. A purulent discharge should always be carefully examined for gonococcus or other organisms, such as streptococcus.

Severe pain in one ovarian region during menstruation may be due to ovarian cyst, as may scanty or irregular bleeding.

The marital history is also essential. Length of time of marriage and the husband's health must be inquired into. A history of tuberculosis or lues in the husband may point out the cause of sterility. Previous labors should also be carefully gone into. The length and difficulty of the labor and lacerations and repairs are also important.

The examination should be very thorough, and the gynecological viewpoint should always be in mind. Special points to be remembered from this standpoint are:

1. The thyroid—for signs of hyperthyroidism or cretinism.
2. The lungs—for tuberculosis.
3. The heart—for cardiac disease or aortitis.
4. The liver—Enlargement may point to lues.
5. The spleen—Enlargement may be significant of malaria or one of the anemias.
6. Tumor masses in the abdomen. These may be extragenital or may be myomata, large ovarian cysts, etc.
7. The abdomen should be carefully examined for tenderness. Right lower quadrant pain suggests adnexal or appendiceal pathology.
8. The skin and mucous membranes often hint of lues, anemia or jaundice.
9. The nervous system will disclose on examination lues of the central nervous system, pernicious anemia, etc.
10. A careful urinalysis should be done to rule out nephritis, diabetes, pyelitis, etc.
11. If indicated, a Wassermann, blood

count, sedimentation test or blood chemistry must be done.

The gynecological examination is, of course, of the utmost importance.

The external genitalia are first examined. The hair distribution, if masculine in type, suggests ovarian pathology or some other glandular disturbance with which is associated ovarian dysfunction. The distribution of fat around the hips and lower abdomen may suggest Froehlich's syndrome. The vulva may be hermaphroditic in type, or there may be signs of poor development—the so-called infantilism. Kraurosis vulvae may be present—the characteristic dried-up appearance of the genitalia. Reddening about the labia may be due to acid urine, or to pruritis, which suggests diabetes or menopausal change.

Imperforate hymen may be a cause of sterility, although numerous examples of pregnancy with imperforate hymen are on record.

The perineum will show old lacerations or fistulae, either vesico—or recto-vaginal, which naturally result in infection and may be responsible for the sterility.

Bartholin's glands may be acutely inflamed or thickened, suggesting a gonococcal infection. The vagina may be absent or there may be atresia due to old infection with scar tissue formation. Luetic or tuberculous ulcers may also be present in the vagina. The reaction of the vaginal and cervical secretions is then taken with litmus. The vagina is normally acid while the cervical secretion is alkaline. An alkaline vaginal secretion is present after alkaline douches and in some ovarian pathology. An acid cervical canal means a destruction or dysfunction of the glands of the endocervium, and since sperm are quickly killed in acid media, may be responsible for sterility.

The cervix often shows erosions or Nabothian follicles. Frequently a thick, yellowish discharge is seen emanating from the cervix, and the normal cervical plug is gone. Lacerations, often extending as far back as the fornices are also frequently seen. All these mean chronic endocervicitis, which is one of the commonest causes of sterility.

The position of the cervix in relation to the long axis of the vagina is important. A cervix pointing upward signifies a retroversion or flexion, and the sperm will be deposited in the posterior cul-de-sac. If, by chance, some of it does not reach the cervix at the time of the ejaculation, it

will lie in the acid vagina and be destroyed. The so called pin point os usually indicates infection, although a very small os in an unusually small cervix may be a sign of infantile uterus.

Bimanual examination will show the size of the uterus and any abnormalities such as bicornuate uterus. Infantilism is indicated by an extremely small size, and is a frequent cause of sterility. Malpositions are common, though only the fixed malpositions are serious. Four per cent of all retroversion cases are sterile, while 10% of all sterility cases have retroversion, and 10-20% have an antelexion.

A large boggy uterus may suggest an endometritis, although this condition per se is rare. A hard, fibrous fundus without definite myomata shows that we are dealing with the very common fibrosis uteri. Both this condition and extensive myomata cause an inelasticity of the uterine musculature which renders pregnancy difficult. Myomata, of course, can be distinctly palpated. Although these are not always a cause of sterility, myomata located in the region of the cervical neck are usually a cause of very difficult labors and, as a rule, dead babies.

The tubes, if thickened, indicate salpingitis. Frequently cysts of the tubes or broad ligaments can be mapped out.

The ovaries, if large, suggest cysts, although small, hard ovaries may be due to small cystic degeneration or fibrosis. Large, hard ovaries are often dermoids or osteomata.

The parametrium, following an extensive salpingitis, is thick and resistant even after the tubes resume their normal size, and is often the only indication of old salpingitis.

Our routine consists of a careful history and physical examination as outlined above. Smears taken from Bartholin's glands, the cervix and urethra are then examined to rule out gonococcus or streptococcus. A bubbling appearance about the cervix indicates *Trichomonas vaginalis* infection, a frequent cause of sterility, and these parasites are readily recognizable under the microscope.

If no gross pathology, absolutely indicating the cause of the sterility is found, the patient is instructed to return after having intercourse with her husband. The cervical plug is removed with a small scoop and placed on a warm slide and immediately inspected under the low power of the microscope. If present, sperm are readily recognized. If the husband is nor-

mal, they are very numerous and active.

Having ruled out pathology in the husband and finding no other pathology in the patient to explain the sterility, a pneumoperitoneum is done. Carbon dioxide gas is introduced through a canula which fits tightly against the cervix. The pressure is read on a manometer attached to the apparatus. If the tubes are patent, the manometer reading will probably not rise above 100 mm. If it goes up to 220 mm. the canula is removed and the test repeated. If only a slight obstruction is present the pressure of the gas is often sufficient to open the tube and break the adhesions. Spasm must be ruled out by the administration of atropine and the repetition of the test in a few days. If the tubes are then not patent it is safe to conclude that non-patency exists and is the cause of the sterility.

Treatment, although simple, is frequently decidedly successful. If the vaginal secretion is acid, alkaline douches are indicated. Acute inflammatory conditions must, of course, be treated locally until active infection is cleared up. Chronic endocervicitis is resistant to treatment as a rule, and a tracheloplasty is usually necessary to remove diseased tissue. Lacerations should be repaired surgically. Myomata and ovarian cysts require laparotomy for myomectomy and ovarian cystostomy. Salpingoplasty or salpingostomy should be done rather than salpingectomy. If the tube must be removed the ovary should be transplanted into the cornua to give at least a remote chance of conception. Pneumoperitoneum, however, will give the best results, and is an extremely simple procedure, and one that can be done by every practitioner with very little practice. Ovarian extract is occasionally useful in ovarian dysfunction though its action is rather doubtful.

A careful consideration of the sterile woman, rather than her cursory dismissal as an incurable, will give a great deal of satisfaction to the practitioner and a surprisingly large percentage of results for the patient.

COMPARATIVE VITAMIN CONTENT OF HUMAN AND COW'S MILK

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Experimental data collected under carefully controlled laboratory conditions dem-

onstrate that rats grow equally well when they receive $2\frac{1}{2}$ to 3 c.c. daily of either whole raw certified human or cow's milk as the only source of vitamin A in a diet complete in all other known dietary constituents. Evidence is presented which further demonstrates that growth is not the only criterion for judging good nutrition in the young individual. Mother rats on a limited vitamin A dietary regime can not lay down in the tissues of their young, during either the gestation or lactation period or during both, the normal heritage of vitamin A. This is shown by a study of the time needed to completely exhaust the vitamin A stored in the tissues of their offspring although all body weights were average at the weaning period. In less than one-third the average depletion period of 34 days the young rats showed advanced xerophthalmia, marked keratinization of epithelial tissues, generalized abscesses in the upper respiratory and digestive tracts; particularly was there a yellow pus-like material found in the tongue, soft palate and salivary glands. There appeared also a marked atrophic condition of the salivary and pancreatic tissue, the glandular tissue appearing as minute opaque white areas in a transparent mass. Mastoid involvement was a constant finding.

Xerophthalmia is the external manifestation of the advanced stages of vitamin A depletion and is indicative of far more serious internal conditions, such as the decreased or lost functional ability of the epithelial tissue of the body, especially of the respiratory and urogenital tracts with subsequent secondary infections. It would appear then, that for optimal nutrition of the young the mother must be provided with an adequate diet which will enable her to provide for the maximum storage of vitamin A in her offspring during the gestation as well as the lactation period. Furthermore, the transitional dietary of the baby must be very potent in this important food constituent and where diluted cow's milk formulas are used vitamin A carrying foods should be added regularly to the dietary.

No quantitative data are available on either the storage of the different vitamins in the body of the infant nor in the daily requirement. Since all newborn mammals are nourished with milk, and the human infant is dependent upon and sustained through the first year of life on a diet consisting in a great part of milk, it is, there-

fore, essential for optimal growth of the child to have a liberal supply of milk of adequate quality. Milk irrespective of source is not always the ideal pabulum for the well-being of the young; that it is not always complete in respect to all necessary biological properties is observed clinically upon women with beriberi and in lactating animals fed upon vitamin deficient diets. Therefore, a comparative study of feeding human and cow's milk to standard test animals in varying quantities, under controlled conditions, serves to evaluate the relative vitamin content of these infant foods in terms that are comparable with other food materials. It takes from 25 to 35 c.c. of breast milk or 20 to 25 c.c. of cow's milk daily to suffice for vitamin B in the growing rat. Even these large quantities have been found insufficient to satisfy all the vitamin B demands of a mother during the active metabolic period of lactation and the rapid growth period of her young.

Vitamin B is stored in the animal body to a very limited extent only. Available data demonstrate that the rapidly growing individual needs more of the specific vitamins than the adult and that the vitamin B requirement of the lactating rat is 3 to 5 times its growth needs. In view of the above facts, the value of maintaining a sufficient amount of vitamin B to satisfy the growing demands of the baby cannot be over-emphasized when we consider that during the first year of life the greatest relative post-natal growth of the human organism takes place.

The faulty diets of the human race are not examples of a single but of multiple dietary deficiencies; a slight insufficiency of any one of these over a long period of time may produce effects as serious as conditions resulting from a wholly inadequate diet. The underfeeding of one or all of the vitamins results in serious consequences to the organism, the advanced lesions and symptoms of which are fairly well understood, whereas the full consequences of the borderline conditions are merely conjectures. The period of growth in the human is extraordinarily long as compared with that of the young of any mammals among the lower animals. This long period of growth doubtless is a factor of safety, since the opportunity for recovery from faulty nutrition at any time during early life is relatively great, because of the long interval during which growth is possible.

SHOULD EXTRACTION OF TEETH END OUR SEARCH IN THE JAWS

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It is the common opinion among the laity and unfortunately among the medical profession that, as soon as the infected tooth or teeth are extracted, the patient should get well. Very often, there is considerable relief experienced by the individual following the extraction of the abscessed tooth. The patient, who has previously experienced relief upon extraction of the tooth, may be disappointed by a recurrence of the disturbance. This follows when the drainage has not been thorough and when the alveolus fills with granulation tissue and heals. Furthermore, the symptoms may remain latent for quite a long time, because drainage has taken place and because the worst of the infection has been removed. When symptoms reappear, a change of site or a milder type of infection may show up. After the tooth has been removed, this area in the jaw is almost always forgotten, when another examination is made.

One should consider that areas in the jaws are without external drainage (where the pus is completely bottled up with no place to drain except into the blood). This residual infection is much more dangerous than tonsils (where the crypts are patent and coughing or sneezing will drain them), or more damaging than a diseased gall bladder (which has an outlet into the intestines), or a chronic appendix draining into the cecum, or chronic sinuses draining through the nose, etc.

I am, therefore, inclined to believe that these bottled up areas in the jaws are just as, in fact, much more important for investigation by the internist than any of the aforementioned ailments. The idea that the tooth is removed and that there cannot be any more infection remaining is wrong. Bearing this in mind, I was fortunate enough to locate foci of infection which has been overlooked, or had been passed up as insignificant.

From the history, one is led to believe that the systemic trouble followed the extraction of a tooth. Very often, we find it difficult to convince the patient of this residual infection in the jaw, because they are free from pain. Occasionally they have a sensitive area and are inclined to blame the plate or bridgework. But the films and the cultures obtained are the

only means to determine the importance of these areas. The film must show details in order to bring to light these insignificant areas of residual infection. An over or under exposed or an over or under developed film, or poor illumination when inspecting films may give you gross facts like a cystic degeneration but the details are missed and so the focus of infection is overlooked. Therefore, it is very important to have proper films and good illumination for study.

In my case reports, I am giving a few recent cases to show the sudden change for the better upon removal of the focus. I wish to make this article a stimulus for search in this particular angle of foci of infection and not a report of old or recent cases. I shall not make a lengthy treatise by referring to conditions relieved upon removal of infected teeth, because I am trying to drive home the fact that: "Our Search in the Jaws Should Not End Upon Extraction of One or All of the Teeth." Diseases due to this condition are much more common than we realize.

RESUME OF CASE REPORTS

Case 1. Mrs. S. R., white, 47 years old, weight 157 pounds, married, first seen May 23, 1927: Complaining of pain in right sacroiliac joint for past six months. Had had many physicians, was in a hospital with a cast on pelvis and thigh for six weeks and pain slightly relieved but still unable to walk. Past history reveals—Tonsillitis and colds frequently, T. and A., ventral fixation and appendectomy five years ago, felt well up to one and one-half years ago, then had all upper teeth extracted because of decay. Patient claims she always had a taste of pus in her mouth upon removal of upper plate. Examination—Sclerosis of both drums, hypermetropia. Upon inspection nothing could be found in the upper jaw to suspect a sinus. Pharyngitis, sinuses cloudy, intumescent rhinitis, B. P. 126/76, anterior cervical glands palpable, icteric and petechial spots over entire body, rales throughout both lungs, systolic murmur heard best at base. Spastic condition of spinal muscle of right side low down, tenderness on pressure over right sacroiliac joint. External hemorrhoids. Slight varicosity of both legs. Blood shows Hg. 95%, polys 52, small 42, large 4, transitional 1, eosin, 1. Teeth smear shows streptococci. Urine analysis—Sp. Gr. 1.018, albumin negative, sugar negative, amorphous urates, uric acid crystals. X-ray of jaws by H. H. Jackson who gave the following report: "The upper right second molar region and the cuspid fragment also the lower right first molar region shows areas of change such as we believe should be thoroughly curetted if all possible sources of infection are to be removed."

Upon removal of the fragment and curetting both areas from which we obtained a streptococcus and a discharge of watery substance, the pain in the side subsided and under ultraviolet ray and baking treatments this patient is free from pain and able to be about and do her work for the first time in eight months and is rapidly improving.

Case 2. Mr. M. D., white, 30 years old, weight 169 pounds, married, first seen January 23, 1927. Complaining of sensitivity above the navel. Had been operated on with removal of appendix five years ago, Mayo Brothers did a gastroduodenostomy and excision of a duodenal ulcer March 13, 1926. Tonsillectomy, about six years ago, had a tooth extracted because of a toothache, never was sick prior to this tooth extraction. Examination—Few filled teeth, some tonsil tissue present, chronic pharyngitis, B. P. 100/66, heart slightly hypertrophied, no murmurs heard, spastic colitis, cryptitis. Gastrointestinal X-ray did not show any abnormality at this examination. Urine analysis—Sp. Gr. 1.022, albumin negative, sugar negative, granular casts, amorphous urates, mucus, blood Hg. 92%, polys 58, small 37, large 4, eosin 1. Red cells 6,880,000, white cells 10,200. On April 20, 1927, I was called to see the patient a second time. He was very nervous, had cramps, faintness, asthenia, and black tarry stools. Soon after my arrival he vomited a considerable amount of blood. Morphine (which caused a severe urticaria and itching the following day) was given by hypo and patient quieted down. Blood taken the following morning showed Hg. 81%, polys 79, small 12, large 7, transitional 2, red cells 5,480,000, white 15,000. April 28, 1927—Hg. 64%, polys 62, small 21, large 12, transitional 3, eosin 2, red cells 4,400,000, white cells 6,500. April 18, 1927—Patient came to the office, another gastrointestinal X-ray was taken. At this examination there was a niche at the pyloric end of stomach on the greater curvature. There was a tendency toward an hour glass type of stomach, and a spastic condition of the descending colon. X-ray gave evidence of an ulcer at the pyloric end of stomach on the lesser curvature. May 18, 1927—Hg. 44%, polys 63, small 29, large 5, eosin 1, myelocytes 2, megaloblast and normal blast 10 to every 100 white cells counted, also anisocytosis and poikilocytosis. Red cells 3,760,000, white cells 5,800. Smear from gums—streptococci, fusiform bacilli, and spirochetes. Weight at this date 159½ pounds. Patient still complains of sensitivity above navel. An X-ray of all his teeth was taken by Dr. H. H. Jackson who reported as follows. "There are areas of decreased density such as are usually associated with residual infection in the upper right first molar region and the lower left second bicuspid region." On June 13, 1927, the pus pockets were drained and a culture was made giving a growth of streptococcus viridans and staphylococci. A vaccine was made. He was receiving ultraviolet ray and was on an ulcer diet but the sensitivity did not seem to stop. Upon giving him the vaccine, the sensitivity miraculously disappeared and up to the time of this writing has not reappeared. Patient started to gain weight and is feeling better. July 14, 1927—Red cells 4,808,000, white cells 8,500 Hg. 57%, polys 49, small 45 large 6, weight 169½ pounds. Recently, the patient had a diarrhoea caused by some food, but there was no evidence of blood in the stool.

Up to the time he received the vaccine he did not seem to make any headway. He complained of this sensitivity above the navel and could not wear a belt. Soon after giving the vaccine or soon after draining the minute abscess in the jaw, he gained weight, he could wear a belt and became cheerful and elated because his sensitivity had disappeared. He is on a more liberal ulcer diet. It is too early to claim results in this case, but I have reported it not because I feel he is cured but because his sensitivity is relieved for

the first time in about five years, brought about by draining the abscess.

Case 3. Mr. A. J., 63 years old, weight 160 pounds, white, married, first seen May 9, 1927. Complaining of nervousness and weakness also rheumatic pains all over the body. I shall not give the history here because it has no bearing on the point in question, but the X-ray has and therefore here is the report of Dr. H. H. Jackson, "The upper left cuspid is unerupted. The coronal portion of this tooth shows roughening although the crypt is not enlarged. We believe this roughening is indicative of pressure and as such must be considered as a possible factor in nerve reflex disturbance. The lower first molar region shows a registration suggestive of a retained root. There is an area of decreased density beneath it suggesting an infective condition. There is a small foreign body in the lower left cuspid area with decreased density surrounding it; the same is true of the upper right first bi-cuspid region."

Here is a man with all his visible teeth extracted and never before had an X-ray of his teeth to determine any abnormality. Undoubtedly, his rheumatic condition is caused by this residue of infection but we cannot get co-operation to determine if possible the actual relation of the infection and retained unerupted tooth to his rheumatic condition and nerve reflex respectively.

Case 4. Mrs. B. F., white, 47 years old, weight 118 pounds, married, first seen February 26, 1927. Complaining of severe migraine. Examination was negative except for X-ray report by Dr. H. H. Jackson, "We note retained fragments of the upper right first molar area. The buccal fragments show changes such as usually indicate infectious conditions."

We could not get co-operation to determine the relation of the retained infection to the migraine. The migraine dates back twenty years. The extraction of these teeth date back twenty-one years.

Case 5. Mrs. L. R., white, 56 years old, weight 123 pounds, widow, first seen February 12, 1927. Complaining of hot flushes of face, headaches, dizziness. Examination—Sclerosis of both drums, chronic rhinitis and sinusitis, hypertrophied septic tonsils, pharyngitis sicca, tortuosity of blood vessels of both fundi, no teeth, anterior cervical glands palpable, icteric and petechial spots over entire body. 218/98. Cardiac apex at level of anterior axillary line, with first and second sounds equal, no murmurs heard, atrophic liver, tenderness over sigmoid area of descending colon, considerable flatus. Vaginal examination showed a second degree laceration which had not been repaired with adhesions of the posterior surface of vagina to anterior lip of cervix, uterus fixed to posterior wall. External hemorrhoids. Fluoroscopically the aorta was enlarged with the heart markedly hypertrophied, the diaphragm moves sluggishly as if adherent. Hg. 79%, polys 46, small 50, large 3, eosin 1. Urine analysis—Sp. Gr. 1.004, albumin one plus, sugar negative, pus cells, epithelium, amorphous urates, granular casts, hyaline casts. Advised X-ray of both jaws. Dr. H. H. Jackson reports as follows: "The upper right second molar and cuspid regions show changes which might be indicative of an infectious condition but they are not as well defined as customary. The upper left cuspid region shows spicular formations but we believe this is from traumatic influences. There is a fragment of the lower left first molar retained but this shows no pathological changes. The lower right shows a localized infiltration of the crest of the bridge."

The patient was put on a Mosenthal diet. April 7, 1927—Tonsillectomy was done. Tooth fragment was extracted. On April 9, 1927—B. F. 146/86, while in bed. May 17, 1927—B. F. 156/74. Weight 125¾ pounds. Feels better. June 10, 1927, Urine—Sp. Gr. 1.012, albumin trace, sugar trace, pus cells, amorphous urates, epithelium, cylindrosis. July 12, 1927—B. P. 160/86.

This case is reported because of the retained root fragment and not because of the certain amount of relief obtained by tonsillectomy and extraction of the root. (For I feel that the relief was brought about by both, not one or the other).

CONCLUSION

Let us all learn a lesson from the above to check every patient anew and not take for granted nor assume anything in our medical examinations. We may thereby lose sight of the most important clues in diagnosis.

GYNECOLOGICAL BLEEDING

B. FRIEDLAENDER, M. D.

DETROIT, MICHIGAN

The object of this paper is an effort to clear up confused conceptions, concerning gynecological bleeding, to standardize its terminology, and eventually to make uniform the treatment. I think such an effort is worthy, and should receive the sympathetic co-operation of all gynecological clinics and diagnostic pathological laboratories.

The diagnosis of pathological bleeding is not always an easy task. The alleviation or cure is not constant and permanent. However, satisfactory therapeutic results may be obtained if we avoid purely routine treatment and consider every individual case from its etiological standpoint and treat it accordingly.

The most important thing is to take an exact and painstaking history. The notation "hemorrhage" or "excessive bleeding" is not sufficient. We must designate the duration of the interval between bleedings and profuseness of the bleeding, in other words, the type of bleeding. Also knowledge of the type of normal bleeding before the pathological bleeding commenced is of value. This will help us to differentiate a pregnancy bleeding from a gynecological bleeding. The overlooking of a ruptured ectopic or a beginning neoplasm will be thus avoided.

A painstaking history will reveal three types of bleeding in women:

1. *Hypermenorrhoea*: The woman's normal type as to menstrual interval is main-

tained, but the bleeding is excessive or of longer duration.

2. *Polymenorrhoea*: The interval is shorter or not always regular.

Poly-Hypermenorrhoea: The interval is shorter and the quantity is increased.

3. *Metrorrhagia*: The type of bleeding is regular, continuous. Intermenstrual bleeding is rare and may be classified under Metrorrhagia.

The three types are distinguished by their etiology.

HYPERMENORRHEA

Its cause is to be found in the unequal distribution of the blood. *First* in the condition of *passive hyperemia*, where we find the blood vessels of the small pelvis overfilled. We find this in heart lesions, especially decompensated valvular lesions and myocarditis, in lesions of the lungs, as in emphysema, chronic induration; in kidney lesions, liver insufficiencies (especially cirrhosis), varicosities as often seen in the greatly dilated venous plexus of the small pelvis during operations, especially the varicosities of the spermatic. (Fig. 1).



Figure 1
Varicositis of blood ligaments—(spermatic and pampiniform vessels).

Second, the *active hyperemia* caused by vascular adhesions in the neighborhood of the uterus-perimetritis—as a consequence of pelveoperitonitis. (Fig. 2A and B). We find this condition following appendi-



Figure 2A
Acute purulent pelveoperitonitis



Figure 2B
Chronic pelveo peritonitis

citis, salpingitis and other inflammatory processes in the pelvis and its immediate vicinity. (Fig. 3). Endometritis very

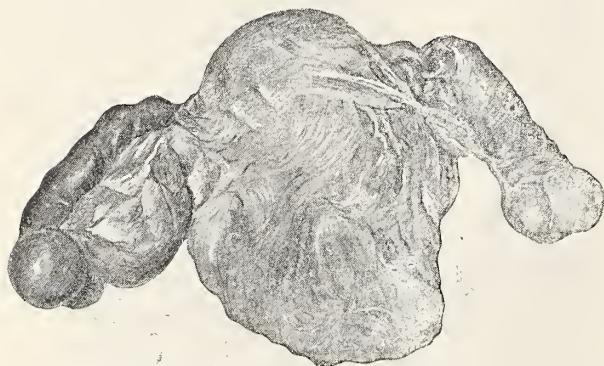


Figure 3
Double pyohydrosalpinx. Chronic Adhesive perimetritis

seldom, if at all, causes hypermenorrhea. As I have often pointed out, we do not find a chronic endometritis as a clinical entity. If we do find an endometritis, it is as a consequence of a general inflammatory

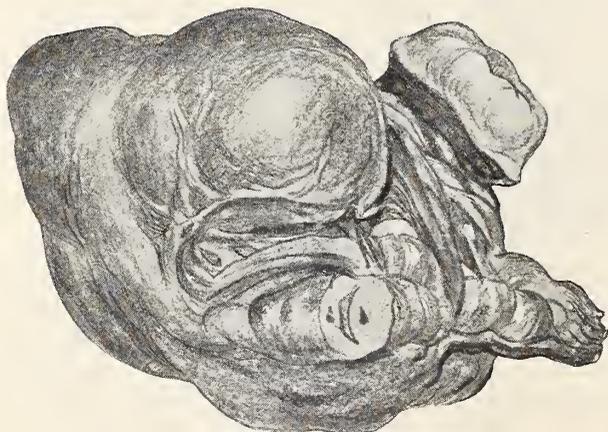


Figure 4
Chronic adhesive perimetrio-oophoro-salpingitis with myoma of uterus

process of some or all the genital organs. (Fig. 4). If this condition is present, it will cause a poly and not a hypermenorrhea. We also find an active hyperemia in parachrestic sexual life, exemplified by too frequent coitus, coitus interruptus, and masturbation. Also in plethora and essential hypertension.

Third, *Hyperfunction* of the ovaries. We have heard lately from Louis Klein, who reviewed the work of E. P. Bugbee, Charles R. Stockard, George N. Papanicolaou, L. Loeb, and the Washington University school, that the blood circulation in the genital organs depends upon the ovarian cycle. There is reason to believe that a hyperovarian function might be the cause of a uterine bleeding. As causes of a hyperfunction of the ovary might be mentioned an increased libido, inflammation causing functional disturbances, nervous and psychic factors, etc.

Another class of hypermenorrhea is due to *local causes* in the uterus. There is no question that the regeneration of the endometrium alone is not sufficient to cause hypermenorrhea, but the contractibility of the uterine muscles is essential in arresting the bleeding by contracting the open blood vessels postpartum and in a smaller degree during menstruation. Thus we see that anything which will reduce the contractibility of the uterus will increase the bleeding during menstruation. This is really the case in infantile and hypoplastic uteri where we find an inferiority of the muscle development and an increase in the connective tissues (Asthenia). Also fibrosis of the uterus caused by inflammatory processes, etc., as well as intramural myoma will cause hypermenorrhea. (Fig. 5 A, B, and C). The latter also interferes with the contractibility of the uterine muscles. Malposition of the uterus does



Figure 5A
Intermural submucous haemorrhagic myoma

not cause bleeding unless it is associated with asthenia. We know that asthenia predisposes to ptosis of all kinds, as well as to malpositions and hypotony of the venous system. In these cases, the whole supporting apparatus is inferior and a malposition will easily take place.

tion, or hypofunction, but in polymenorrhea we usually find a disturbed ovarian cycle. The cyclic changes of the ovary,

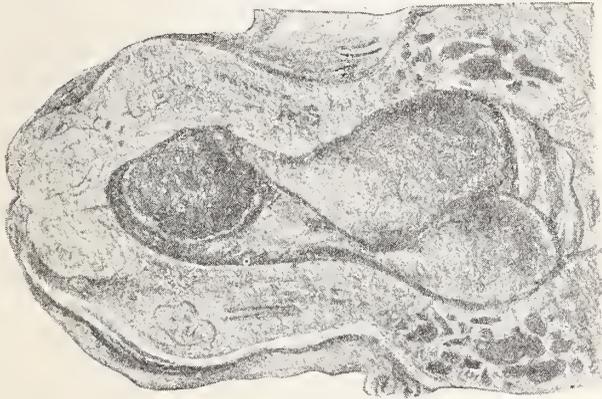


Figure 5B

Intramural-submucous and polypoid forms in Myomalosis of the uterus

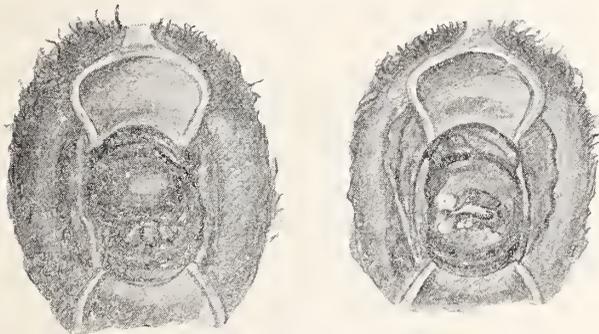


Figure 5C

Mucous polypi

Simple erosion with nabothian follicles

Pathological Anatomy: The microscopic examination of the curettings is very important, as a negative finding will exclude a local cause, while we may often detect by it a tuberculosis, an infectious endometritis, signs of an abortion or an early neoplasm. It will also disclose the stage of the cycle, either premenstrual (pre-gravid, decidua) or postmenstrual. The possibility of making a diagnosis of functional disturbances from the curetted endometrium is based upon the fact that the endometrium undergoes structural changes which depend entirely upon the cyclic ovarian changes such as ripening of the follicle and ovum, rupture of the follicle, corpora lutea formation and absorption. (Fig. 6).

POLYMENORRHEA

Ovarian etiology: Hypermenorrhea may be caused by an ovarian dysfunc-

Day	Ovary	Day	Endometrium	Ovum
1-14	Ripening of Follicle	1-3	Desquamation bleeding	
		4-7	Regeneration	
14-26	Rupture of Follicle	8-18	Proliferation	Discharge of Ovum
17-23	Development of Corpus Luteum	8-24	Secretion	Emmigration of Ovum
24-28	Corpus Luteum at Maturity	24-28	Pre-menstrual stage (phase)	28-Death of Ovum.
1	Corpus Luteum Involution. Beginning of Ripening of Graafian Follicle	1	Desquamation	

Figure 6

uterus and vagina depend upon two definite stages, namely, first, the ripening of the follicle and expulsion of the ripe ovum, second, the corpus luteum formation, maturation and degeneration. The first phase takes place, in the twenty-eight day type of menstruation, between the 1st and 14th day. (Fig. 6). From the 17th to the 23rd day we have the corpus luteum formation which reaches its height on the 28th day. After that day, the corpus luteum degenerates with the beginning of the new cycle. Depending upon the ovarian cycle, the morphological changes in the uterine mucosa are very definite. The ripening of the follicle causes a proliferation of the endometrium from the 16th to the 18th day. After this the phase of secretion takes place which ends with the premenstrual and pregravid changes expressed by a young pregnancy-decidua. The latter desquamates at the same time with the degeneration of the corpus luteum. If the ovum is not impregnated the disappointed uterus bleeds.

A shortening of the interval between two periods may be caused by an equal shortening of the two main phases of the ovarian function. This may still be considered as physiologically normal or nearly so. But, if the two cyclic phases are unequally shortened, especially the second, or secretion phase, which means a shortening of hypofunction of the cyclic life of the corpus luteum and at the same time a premature death of the ovum, then polymenorrhea is the consequence.

So we see that polymenorrhea and polyhypermenorrhea depend upon the abnor-

mal cyclic changes of the ovary. Clinically, we find these abnormal uterine bleedings during inflammatory processes of the genital organs caused by infection, especially gonorrhoeal adnexitis, oovaritis, and periovaritis, also epityphilitis, perityphilitis and appendicitis. (Fig. 7). But



Figure 7
Pelveoperitonitis perioophoritis perisalpingitis and right pyosalpinx

it is important to add that the cyclic changes of the ovarian function may be influenced to a great extent by the psychic influences caused by the perverted (parachrestic) sexual life woman is now more than ever compelled to lead. Further, how much the disturbed function of the ovary depends upon the other members of the endocrine symphony is still an open question. The thyroid gland undoubtedly has some influence upon the quantity and regularity of uterine bleeding. Although cases of amenorrhoea are known which were caused by a hyperfunction of the thyroid and cases of excessive bleeding were due to a hypofunction of the same endocrine gland, still, we very often meet cases of hyper and polymenorrhoea as complications of simple adenomatous goiter, and exophthalmic goiter.

METRRORRHAGIA

This abnormal uterine bleeding occurs at any time from the menarche to the menopause and even after that period. This bleeding always shows some anatomical pathology either in the uterus or in the ovary or both.

Anatomical Pathology of the Uterus:

Metrorrhagias of the parous woman between the age of 20 to 45 years are due to interrupted pregnancy. The usual causes are threatened and incomplete abortions, subinvolution of the decidua after birth, abortion with or without retention of chorion, extrauterine pregnancy and chorio-epithelioma. In another group of cases we detect benign or malignant

neoplasms of the cervix or fundus uteri. Among the benign tumors, we may mention polypi of the cervix or fundus, (Figs.



Figure 8
Subserous polypoid fibromyoma of the uterus

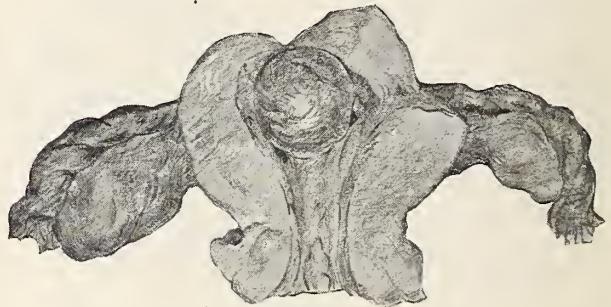


Figure 9
Multiple polypoid myomata producing uncontrollable bleeding in the climacteric uterus with chronic metritis

8 and 9) and submucous myomata. Fig. 10). The bleeding in these cases comes from the greatly dilated blood vessels in the tumor capsule. The hemorrhage is often so great that the woman shows a very severe anemia. (Fig. 11). The usual menstrual flow in metrorrhagia is usually not disturbed on account of the normal function of the ovaries. Among the malignant tumors which cause bleeding we may mention carcinoma of the cervix and fundus. The menstruation type

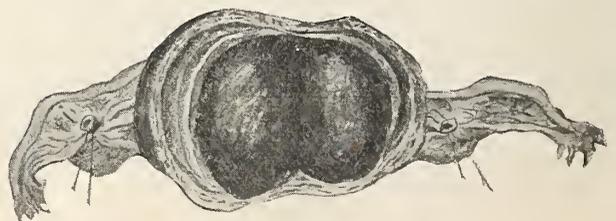


Figure 10
Submucous myoma in an amputated uterus

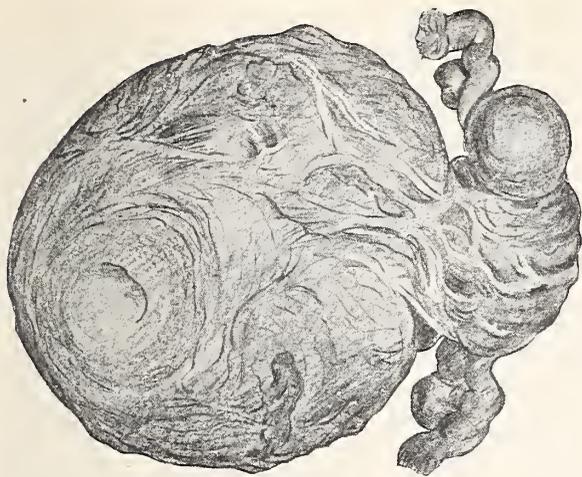


Figure 11

Myomatous uterus radically removed showing marked anemia due to hemorrhage. Note: Myomata at tubal insertion

is not lost even in women suffering from these tumors. There is always an intermenstrual fetid discharge in these cases. Bleeding is usually the first symptom of carcinoma of the cervix. The cure of a malignant neoplasm depends entirely upon its early diagnosis and treatment, therefore it is most important that a woman with a metrorrhagia should undergo a thorough, painstaking examination in which should be included a biopsy or curettage or both.

Functional Pathology in the Ovaries: In these cases neither palpation nor inspection will help us to find the cause of the metrorrhagia. The history will usually show that the patient has menstruated normally, then has had an amenorrhea of from 6-12 weeks followed by a more or less severe bleeding in the form of a metrorrhagia. The severity of the persistence of the hemorrhage will weaken the patient and cause a severe anemia. We must be very careful in these cases with our differential diagnosis, lest we confuse them with pregnancy, especially extrauterine pregnancy, and abortion, on account of the softness and enlargement of

the uterus, and the discoloration of the cervix and vaginal mucosa. We find this form of metrorrhagia in young girls from 15-20 years of age and in women shortly before the climacterium. The former is called juvenile or puberty bleeding, the latter preclimacteric or menopause bleeding. Naturally, we will exclude malignant tumors, especially in the preclimacteric hemorrhage. (Fig. 12).

Pathological Anatomy: In both forms, in the juvenile and the climacteric bleeding, we have the same pathology. In the ovary we do not find a corpus luteum. We do find many ripe follicles, which take on the character of small cystic degeneration, and which are unable to expell a normal ovum. As I mentioned in my paper on sterility, "the egg is choked in its shell." This is a functional disturbance of the ovary consisting of the inability to rupture the follicle, and therefore resulting in the nonformation of the corpus luteum which causes a persistent ripening of the new follicles. The ripening of the follicle goes hand in hand with the proliferation of the endometrium and a cystic formation of the uterine glands (glandular-cystic hyperplasia). A necrosis of the highly thickened endometrium follows, accompanied by a great dilatation of the blood vessels, which rupture and cause the bleeding. As you see, this is entirely an abnormality of the ovary, and the bleeding is therefore called ovarian, or still better, "ovariell", or functional, because the etiology of this form of bleeding is the pathologically changed uterine mucosa caused by the abnormal function of the ovary. In the juvenile bleeding the normal function has not yet been properly established, while in the climacteric bleeding the normal function has been lost. In both forms the etiology is the same. The spontaneous cessation of the bleeding in juvenile cases takes place as soon as one of the follicles rupture, a corpus luteum forms and the interrupted normal cycle is restored. The abnormal preclimacteric bleeding ceases as soon as all the primordial follicles are exhausted, and the abnormal ones are obliterated and absorbed. This causes an atrophy of the uterine mucosa which cannot bleed any more.

Treatment: With one exception, there is nothing new at the present time in the treatment of gynecological bleeding. It is either medical or surgical or both. This type of treatment is too well known to require mention here. The exception is the use of insulin in the nondiabetic patient.

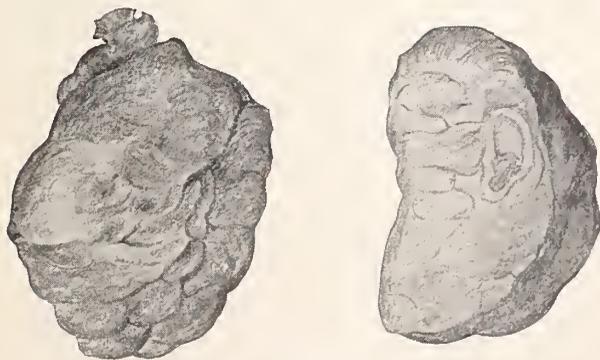


Figure 12

Sarcoma of the Ovary

It is applied very successfully in that form of bleeding called "ovariell or functional" which depends upon the hypofunction or dysfunction of the ovaries. Insulin has a monoglandular as well as a pluriglandular action. It acts mainly on the carbohydrate metabolism, but has also a great influence upon all wasting diseases, acquired and constitutional, as cancer, tuberculosis, asthenia, etc. The cancer cells are every hour transforming 12 per cent to 15 per cent of their own weight of sugar even in the absence of oxygen into lactic acid, thus depriving the body of the necessary carbohydrates. If insulin is used, there is an augmentation of the native supply of insulin in the body, and the cancer patient benefits; either because the carbohydrates are utilized for the benefit of normal metabolism and the cancer cell suffers, or the extra supply of insulin enables the body to utilize more carbohydrates than it otherwise would and therefore the carbohydrate deficiency is compensated—in other words, the relatively increased metabolism of the cancer cell does not have a chance to deprive the body of food. Whichever explanation is true, we must say that there is no growth of cancer cells without a glycolysis. The increase of lactic acid in the body in all other wasting diseases leads us to believe that the action of insulin prevents the formation of lactic acid, or oxidizes it. It utilizes the carbohydrates for the benefit of the organism and the patient gains in weight.

In refractive diabetes, we are not dealing with a diabetes at all. There is either a hyperfunction or dysfunction of the thyroid. Exophthalmic patients as well as patients who have been fed on thyroid show a hyperglycemia produced by abnormal mobilization of glycogen from the liver and other organs. The hyperglycemia cannot be reduced unless the excessive amount of thyroidin is removed from the body. If a true diabetic whose hyperglycemia has been made normal by the administration of insulin is given thyroid, the hyperglycemia will reappear and cannot be reduced until the administration of the thyroid is stopped and the excess of thyroidin is eliminated from the body or a very large dose of insulin is given to overcome the action of the thyroidin. If the administration of insulin is discontinued, the thyroidin will still act for four days from the day of its administration and sugar will reappear.

The polyvalent action of insulin is demonstrated very nicely by its application in

gynecological bleeding due to hypofunction or dysfunction of the ovaries. Twenty to thirty units of insulin administered twice a day shortly before the noon meal and evening meal for three to four days will stop the bleeding very promptly. It is administered before meals in order to prevent a hypoglycemia. The carbohydrates of the usual meal will cover any ordinary excess of the insulin given. If in an oversensitive patient a hypoglycemia should occur, manifested by weakness, nervousness, bulimia, tremor, vasomotor disturbances in the form of heat alternating with a sensation of cold, palpitation of the heart, perspiration and vomiting, then a piece of sweet chocolate, a small quantity of orange juice or any other concentrated carbohydrate given by mouth will promptly relieve the patient.

There are no contraindications for its use. We have given it to patients suffering from tuberculosis as well as to patients with vasoneurotic diatheses. It has no deleterious action on the normal menstruation.

The differential diagnostic value must not be overlooked. If the expected action does not take place, then we are sure to be dealing with a sub-mucous myoma, a uterine polyp, endometrial sarcoma or carcinoma of the fundus.

The hemostatic action of insulin in gynecological bleeding cannot be explained in terms of its chemical action. The hormonal action alone on the various endocrine glands must be considered. The vegetative nervous system, influenced by the mechanical irritation of the rhythmic menstrual uterine contractions, causes a hyperglycemia. The pancreatic hormone sensitizes the vegetative nervous system causing the uterine contractions and hyperglycemia. The internal secretory action of the ovary which influences the whole endocrine system during menstruation causing endometrial bleeding is responsible for the sensibility of the visceral nervous system. The work of Stockard, Papanicolaou and the St. Louis school as cited above shows that the ovarian hormone from the wall of the follicle gets into the blood-stream and in this way supplies the whole body. After rupture of the follicle the follicular fluid which is poured into the abdominal cavity is absorbed by the lymphatics and also carried to every part of the body. So we see that the vegetative nervous system is influenced by the uterine contractions and by the internal secretion of the ovary during menstua-

tion, causing a vagatonia. That the ovarian secretion has an influence on the whole endocrine symphony is shown by the change of the calcium content of the blood during the normal menstrual cycle as compared with the normal cycle in hypomenorrhea, oligo-, opso- and amenorrhea. The ovarian dysfunction or hypofunction causes a disturbance of the suprarenal, thyroid and pituitary glands. This again changes the normal calcium content of the blood. The normal calcium content of the blood does not depend upon the ovary alone, but upon the whole endocrine system. This can be shown in the castrated female. Soon after castration the calcium content of the blood changes, to return to normal again within one year after the castration. The chromosomes take over the ovarian function and equilibrium is again established. The insulin influences the internal secretion of the ovary during menstruation and indirectly the function of the whole endocrine system and the irritability of the vegetative nervous system. The latter depend again on the calcium content of the blood. The insulin diminishes the menstrual hyperglycemia and reduces the amount and duration of the bleeding.

The close relationship between the pancreatic and ovarian hormones is supported by the very important fact that if insulin is injected into a test animal, (rabbit or dove), it is rendered temporarily sterile. The histological examination of the ovaries after the injection of a moderately large dose shows that organ to be very poor in ripe and rupturable follicles. The pancreatic hormone arrests the follicular function and consequently acts as a contraceptive. This throws a new light on the collective action of the endocrine products, and our views on sterility from a constitutional standpoint will have to be changed.

In conclusion, I wish to express my appreciation to Mr. Zolton de Sepeshy for his colored crayon reproductions of drawings from Lehman's Atlas.

LORD LISTER'S INFLUENCE ON MODERN SURGERY

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A true conception of Lord Lister's influence on modern surgery can only be obtained by considering what surgery was

previous to the time he began his career as a surgeon. Surgery then was practically the same as it had been practiced from the beginning of history. All surgical intervention was looked upon with horror and was undertaken almost entirely as a last drastic measure for the saving of life. Surgeons were thought and spoken of as men to be dreaded and hospitals as a place to die. Admission to a hospital then meant a fight against an infective or septic disease of the wounds.

The great majority of cases developed within a few days, depending upon the treatment, nature of injury and the resistance of the individual, one of the so-called hospital diseases. These were at this time erysipelas, pyemia, septicemia, hospital gangrene or tetanus and were naturally the dread of every patient and every surgeon.

Erysipelas varied from the angry flush which spread over the face to the most extensive cellulitis which involved the subcutaneous and muscle tissues of the body requiring counter openings for drainage. This meant much suffering on the part of the patient and usually a fatal termination. Pyemia and septicemia meant a series of chills and fever with death as an end result. Hospital gangrene occurred in epidemics. It spread rapidly from the wound having a peculiar pale gray color. Tetanus was not of infrequent occurrence. There was a peculiar putrid odor throughout the surgical wards. Most of the patients were noticeably ill, having flushed faces, parched lips, delirium, writhing and moaning with pain and many of them on the verge of death.

In the operating room, sterilization was a thing unknown. Instruments were used without any special preparation. The surgeon kept an old frock coat which he used for operating. It was covered with blood and dirt and he was proud of it in that condition. He simply put on this coat, rolled up his sleeves and was ready to operate. In the wards where dressings were done the dresser went from case to case, using the same instruments for all cases. There was no isolation of the different cases, the non-affected patients being placed without discrimination among those affected with one or all of the prevalent hospital diseases. The result was that uninfected cases were almost impossible to find. Conditions became so bad at times that it was deemed necessary to close entire wards to stop the frightful mortality. It was then unknown that these diseases were caused

by living organisms and that infection was being spread on every hand.

Such was the condition of surgery when Lister began his work and it was this bad state of affairs which made from the first, a deep impression upon his clear thinking, conscientious mind. His very first case as a dresser was phagedenic gangrene, one of the most terrible of all septic diseases. He determined then, to devote his time and life to see what he could do to lessen the ravages of the septic diseases. He realized the gravity of even the simplest of operations and that before any progress in surgery could be made the great obstacle of sepsis would have to be conquered.

The prevalent idea then was that the air contained something which was the cause of it all. Lister noticed, as did other men before him that in cases of simple fracture where the skin was unbroken, it healed without sepsis and in cases of compound fracture they all became septic. Their only method of treating such cases was amputation and the mortality from amputations varied from thirty to fifty per cent, death being caused by one of the septic diseases.

While Lister was pondering over the cause of sepsis, a friend of his, Dr. Thomas Anderson, Professor of Chemistry at Edinburgh, called his attention to the work of Pasteur, which had proved that fermentation and putrefaction was caused by living organisms. He at once grasped the idea that such a thing might have an important bearing on septic wounds. Lister with these facts in mind concluded that the germs of fermentation and putrefaction must be the cause of sepsis in the wounds and the way to attack the problem would be to devise some method which would prevent the germs from entering the wounds either during or after operations. He also realized that if they had succeeded in getting into accidental wounds such as compound fractures, they must be killed before they had time to spread. His next thought was to find some method of doing this. He learned from Pasteur that heat would kill germs and that it was possible to remove them from the air by filtration, but he knew that neither of these methods could be applicable to wounds, so he turned his attention to chemicals. He chose carbolic acid because it had been used in sewage at Carlisle to prevent putrefaction with remarkable success.

His first case to be treated with carbolic acid was that of a compound fracture, a type of case which was extremely suscep-

tible to septic disease. It was a failure, however, but not to be discouraged he tried it again on a similar case. This case had a small wound which he covered with a piece of lint that had been dipped in pure carbolic acid. He put the limb in splints and on the fourth day examined it and found it free from pus, with evidences of organization, and the wound continued to heal without delay. He followed this same procedure upon a series of cases with excellent results.

His next step was to apply the principle to surgical wounds, his idea being to destroy all organisms on the patient's skin at the site of operation. His first case to apply such a principle to was that of a woman with a psoas abscess, the mortality of which, previous to this time, had been almost a hundred per cent.

A piece of lint soaked in a mixture of carbolic acid and linseed oil in the proportion of one to three was placed over the site of the operation for some time previous to the operation. His hands and the hands of his assistants, his instruments and everything to be used during the operation were coated with the mixture of carbolic acid and linseed oil and he proceeded. The edge of the lint was carefully raised and he opened the abscess. The pus was then expressed and he took a mixture of pus and carbolic acid and filled the cavity with it. The following day the wound was clean. He continued using a carbolic acid dressing and the patient eventually recovered.

With these results it proved to Lister that a victory over sepsis had been obtained. He now spent his time experimenting with different forms of chemical antiseptics and extending his operative procedures to things unheard of before. He would open joints without hesitation, rectify badly united fractures, ununited fractures and deformities of bone. He wired recent fractures, excised joints for tuberculous caries, operated for varicose veins, did radical operations for hernia and extensive operations for cancer of the breast.

The results following all his operative procedures under antiseptic methods were remarkable. The mortality had been dropped beyond his expectations, hospital gangrene had disappeared, cases of pyemia and septicemia were greatly diminished and esysipelas was only of occasional occurrence. The putrid odor which was previously so characteristic of the surgical ward was replaced by fresh air and a sense of comfort prevailed among his patients.

Younger surgeons taught by Lister himself began to spread his teachings. Men from the continent came and studied his methods and carried them back with them and they obtained results equal to those of Lister. The German surgeons were especially enthusiastic about it and they in turn influenced many of the American surgeons who were then studying under them. Thus in a remarkably short time his antiseptic principles were spread throughout the entire civilized world.

From this dates our modern surgery. Abdominal surgery as we now know it, operations on the thorax, brain, and spinal cord and the exploratory operations have all had their development since the introduction of Lister's methods.

Today antiseptics has given way to asepsis. Everything used in the operating room is sterilized. Gowns, caps, towels, sheets, packs and compresses are sterilized in high pressure steam sterilizers. Rubber gloves and instruments are sterilized by boiling. Sutures are boiled or come in sterile ampules from the supply houses. The surgeon and his assistants before going into the operating room remove their street clothes and don white duck trousers, jackets, tennis shoes, masks and caps. Their hands are carefully scrubbed and purified with alcohol and then they slip on sterile gowns and gloves and are ready to proceed. The patient is brought in and anesthetized. The site of operation which has been previously shaved is scrubbed with alcohol and iodine and the operation follows. An operating room supervisor sees that the surgical technic is not broken by any one present. Under such conditions the surgeon can operate or explore any part of the human body with absolute assurance that no sepsis will take place.

With the question of sepsis obliterated, most of the operations are now operations of choice, designed to restore movements, to rectify deformities, to relieve suffering and to prolong life, making it more comfortable and more useful. Surgical wards are now a much different picture than when Lister began his career. The old hospital odor is gone, hospital gangrene is a thing unknown, erysipelas, septicemia and pyemia are rare, and the mortality is slight. The patients are happy and contented, looking as if nothing has happened. The surgeon is thanked because of the relief he has brought them, and the hospitals are no longer feared by intelligent people.

These results have not been limited to

one nation or to one race, but have been extended to all civilization. For all of this we owe to Lord Lister a most glowing tribute for he has been of unspeakable benefit to mankind.

CASE OF DIPHTHERIA IN THE AGED

HUGO A. AACH, M. D.
KALAMAZOO, MICHIGAN

No doubt many physicians have had cases of diphtheria in the aged. However, this case is reported for that reason—the patient being eighty-two years old.

The report is as follows:

Mr. A. came to the office on June 14, 1927, with the complaint, "I have a sore throat"—this having been of two days' duration.

The patient was a stalwart gentleman—did not look sick, but acted tired out.

The throat was reddened and over the right anterior pillar and tonsil was a yellowish white membrane which was densely adherent. The temperature was 100, pulse 96 and respirations were normal. A swab was taken and a direct Loeffler's methylene blue stain made. Typical bacilli were present—being clubbed at both ends.

A swab was also sent to the city health office, where the diagnosis was confirmed by culture. Mr. White, the City Bacteriologist, did a virulence test and reported that the guinea pig died in twenty-four hours, there being necroses at the site of infection and hemorrhagic adrenals were present.

The patient was given 20,000 units of diphtheria antitoxin immediately and at night another 10,000 units—no change having been noted in the character of the membrane. However, he seemed able to swallow with less difficulty.

On the second morning, the membrane still being adherent, 10,000 units were again given into the gluteal muscle. The patient was seen the same night and the membrane was just beginning to loosen and shrink, but 10,000 units more were given and another 10,000 on the morning of the third day, making a total of 60,000 units of antitoxin.

The ordinary treatment for diphtheria was carried out and on the eleventh and twelfth days negative cultures were obtained.

This is ten weeks from date of onset and the patient is doing nicely, no complications having occurred. He is regaining his strength well.

COMMENT

Having reviewed the current text books and literature I have found no record of a case of diphtheria in a patient as old. The city hospital of Kalamazoo reviewed its records, and their oldest was an individual of sixty-seven years. Knowing that McCollum has treated as much diphtheria as anyone in the United States, a letter was written to the Boston City Hospital, where he did a large portion of his work, to learn their oldest incidence. Edwin H. Place, physician in chief, advised me that in the last twenty years he did not recall a patient of eighty-two years, but stated there had been cases around seventy in age.

SUMMARY

This case is reported because it is interesting from the standpoint of the patient's age and not because of any other unusual clinical manifestations.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

LABORATORY ACTIVITIES FOR THE YEAR

It is difficult to get a measurement of the service rendered by the Michigan Department of Health Laboratories to the individual practitioner, although it is recognized that the general service of the department is great. The figures submitted in this report will aid in showing the scope and amount of work done by the bureau during the fiscal year ended June 30, 1927.

A brief review of the work done at Houghton shows that there was a slight increase in practically all work except diphtheria and typhoid examinations, in which cases there was a decided decrease. The average number of examinations made by each of the scientific personnel for the year was 788 examinations per month.

A noteworthy addition to the laboratory service in the state was the opening on September 1, 1926 of an extension laboratory in Grand Rapids, known as the Western Michigan Division Laboratory. Exactly the same character of work is done as in the central laboratory in Lansing and its personnel is interchangeable with that at Lansing.

In deciding the location of the extension, railroad facilities were taken into account. Placed as it is, it receives specimens from most of the western part of the state without mail transfers and thus can give quick service. This great step in advance was made possible by the co-operation of the State Administrative Board and the city commissioners of Grand Rapids. The quarters furnished by the city commission are absolutely ideal. The old city hospital building was completely remodeled, giving the best possible arrangement for the installation of the scientific equipment furnished by the Michigan Department of Health. That this service has been appreciated is evidenced by the report of the Western Michigan Division Laboratory.

Much of the work done is for the city of Grand Rapids. This is especially true of the work in throat infections for the release of patients from quarantine in the contagious hospitals.

The number of milk samples examined is unusually large. Most of them come from the Grand Rapids area, but many, being examined in co-operation with the

Department of Agriculture, are brought from nearby counties by the inspectors of that department. The Grand Rapids laboratory tests milk products, the examination including plate count, Babcock test and specific gravity.

An average of 1085 examinations per month was made by each of the scientific personnel at Grand Rapids during the year.

The work in the Lansing laboratory was appreciably lightened by the installation of the Western Michigan Division Laboratory, the number of examinations made in Lansing decreasing in all of the communicable disease work. A decided increase in the number of body fluids examined is indicated by the increase in animal inoculations. This figure represents, almost entirely, animals inoculated with specimens to show the presence or absence of tubercle bacilli.

A small increase in the number of blood chemistry examinations is visible, in spite of the fact that they were practically discontinued April 1. For a year previous to April, from 500 to 800 blood chemistry examinations were made a month. This was taking much time from work which was more directly related to public health. The usefulness of the procedure had been demonstrated and it was felt that local medical organizations and private laboratories should be called upon to do the work for the practitioner. Consequently blood chemistry was discontinued as one of the free diagnostic tests run in the laboratories of the Michigan Department of Health, but was continued on a fee basis, the regular commercial laboratory fee being maintained. While blood chemistry specimens are still received, they have decreased to about 30 or 40 a month.

Water and sewage work has increased, mainly due to outside influence. The Bureau of Engineering has continued its survey of the water supplies along the main highways of the state, and instituted, but only partially completed, a survey of the water supplies of the rural schools.

The problem of stream pollution is gradually developing. In co-operation with the Department of Conservation, this department collects and analyzes samples of water and sewage. After a study of the

character of the pollution and experiments to determine the best means of waste disposal, recommendations are made to the industries based upon the findings. Up to the present time, particular study has been given to tanning factory wastes and to those from milk products. Each of the industries raised a sum of money to be used in studying their wastes in an experimental plant under the supervision of this department. Many valuable facts were discovered by the work and both the industries and state gained thereby.

One of the new practical phases of the laboratory research work is the preparation of bacteriophage in the place of autogenous vaccines as a specific therapeutic for furunculosis, acne and other skin infections. When physicians send cultures from such infections for autogenous vaccines, *Staphylococcus*, if found, is tested for susceptibility to lysis of bacteriophage and if it is found to be susceptible, it is suggested to the physician that he try the bacteriophage instead of the vaccine. Many practitioners have used the phage and have requested it for their later cases rather than a vaccine. Bacteriophage for skin infections has been tried out in the various state institutions with encouraging results. It has also been used in the institutions in cases of discharging ears with seemingly good results. The latter phase is still in its infancy in study and experiment but seems sure to lead to an interesting conclusion.

Examinations in the clinic room of the laboratory have increased. Effort is made to keep such examinations as few as possible. No interference with physicians is possible, however, as only such patients are taken as have written requests from their physicians that certain specimens be collected or certain tests be made. There were 952 persons treated in the clinic room during the past year, including 160 from the Department of Health. The latter number represented persons in laboratory work receiving toxin-antitoxin, vaccines, Dick and Schick tests for the most part. The other 792 persons were those sent by their doctors for blood counts, Kahn reactions, sensitization tests for asthma and hay-fever, Darkfield examinations, et cetera; state police for physical examinations: state employes for dressings to injuries sustained during duty.

The extension work of the laboratory has been continued. A class has been given for the nurses of the Lansing hospitals, meeting twice each week in the evening

during the winter months. The nurses learn the uses of a public health laboratory and the handling of communicable diseases from a laboratory point of view. Classes are also given for students from Michigan State College. These consist of a 4-hour period daily, 3 days a week during a term. Public health methods are given in practical work and one lecture a week. An examination on laboratory procedure must be passed at the end of the term before credit is granted. During the past year six students enrolled in the course, four of whom were seniors and two, graduates.

The laboratory is visited each year by many interested in administrative problems of public health work and in certain methods in use here. During the past year the directors of four state laboratories each spent several days in the laboratory in observation of methods. We were also visited by five doctors traveling on a Rockefeller Fellowship, two from Bulgaria, two from Ceylon and one from Jugo-Slavia. A missionary from China stopped to learn the Kahn precipitation test as did a young medical doctor, a native of China, also the port health officer of Singapore. Each remained for at least six weeks.

The 1927 legislature passed several bills which indicate a widening of scope in the work of the laboratory. One provides that all laboratories where live pathogenic germs are handled be licensed. Before any pathogenic organisms are distributed the license number of the laboratory to which they are given must be known. The act, in addition to its main purpose of supervising places where infectious organisms are handled will bring the laboratories in the state into closer touch with the laboratories of the Michigan Department of Health.

A third bill provides for the manufacture and distribution of antitoxin and other biological products for use in the control of communicable diseases by the Michigan Department of Health. This act allows the activities of the Biologic Products Division to be extended.

An important factor in the decrease of routine laboratory examinations during the past year is the increasing number of municipal and private laboratories established throughout the state. Where such laboratories exist, very little work is sent to the state laboratories except, perhaps, blood for Kahn reaction, cultures for virulence test or specimens on which special work is wished. This development is a welcome one, however, as the chief aim of

the laboratories of the Michigan Department of Health is to act as a guide in new methods and procedures in laboratory diagnosis, a clearing house for technical problems and a leader in research work.—C. C. Y.

POLIOMYELITIS

There has been an undoubted increase in the number of cases of poliomyelitis reported in the last two months and, while there appears to be no immediate cause for alarm, the fact remains that the increase has been general and marked throughout many parts of the United States. The number of cases reported so far this year in Michigan are as follows:

Month	1927	1926
January	8	1
February	1	3
March	4	3
April	0	2
May	0	4
June	3	3
July	7	2
August	31	16
September	98	27
October		34
November		7
December		5

This makes for the first nine months of 1927 a total of 152 cases as compared to 61 during the corresponding period of 1926.

There are always a few cases of sporadic poliomyelitis reported. It is unusual for a month to go by without a few cases, but the active season for the disease seems to be always in the late summer and early fall so that the increase in number of cases reported is seasonal but considerably higher than usual. If the disease follows its usual course, the number of reported cases will decrease with the onset of cold weather.—W. J. V. D.

CHILD HYGIENE

Field work for the month of September, 1927, was delayed until the week of September 12, as the workers were needed to assist at the Better Babies' Contest conducted by the Michigan Department of Health at the State Fair. Two hundred and thirteen babies were given a complete examination at this time. Literature was given to mothers, and exhibits were shown demonstrating the method of giving sun baths to babies.

The following activities have been in progress the balance of the month:—

Little Mothers' League Classes have been held in the following counties:—

Otsego, Montmorency, Ottawa, Iosco and Alcona.

Number of classes organized, 51; total attendance at classes, 3,034.

It is interesting to note in connection with Little Mothers' League Classes, that requests have been received from several schools in Iosco County for classes in child hygiene for boys, similar to Little Mothers' League classes for girls. This is the first request of its kind, and seems to be a step forward.

Women's classes have been conducted by Dr. Rhoda Grace Hendrick and Miss Charlotte Ludington in Antrim and Kalkaska Counties. The interest has been good in spite of interruptions due to county fairs, and poor weather, the attendance being 495.

The Maternal Mortality Study continues, and has been conducted in the following counties by Dr. Florence H. Knowlton:—

Wayne, Ingham, Kent, Emmet, Mackinac, Chippewa, Cheboygan, Alpena, Presque Isle.

Number of visits to doctors, 39; number of visits to hospitals, 6; miscellaneous, 2.

At the request of Dr. C. H. Peabody, President of the Ionia and Montcalm County Medical Society, a preschool clinic will be put on by the Michigan Department of Health in Ionia County, the week of October 24th. Preschool clinics have been discontinued as a regular part of the activities of the department, except when a request is made by the County Medical Society.

The Prenatal Nursing program continues in Emmet County with a total number of visits made—118.

Grand Traverse County is now having a similar service, and Miss Sylvia Krejci has been loaned to the county for a period of approximately one year. Her work began the middle of September, and she has already called on all the physicians in the county, and has made the following visits:—

Prenatal, 63; postnatal, 2; doctors, 22; infant and preschool children, 29; miscellaneous, 26.—L. R. S.

MOUTH HYGIENE

The director of the Bureau of Mouth Hygiene spent the last two weeks of September in the upper peninsula, visiting Escanaba, Iron Mountain, Powers, Marquette, Negaunee, Ishpeming, Houghton, Hancock,

Painesdale, Lake Linden, Calumet, Ironwood and Wakefield.

Talks were given before noonday clubs, parent teacher associations, high school assemblies, dental societies, and combined meetings of dentists and physicians. In a number of places demonstration dental examinations were made of selected elementary grades in the presence of the superintendent, school nurses, teachers and board members. Mouth conditions found were more or less typical of those in the average school room, with one or two exceptions. In two second grade rooms 95 per cent of the children had cavities, and eight out of nine had mouth infection from abscessed teeth.

LABORATORY NOTES

During the past year we have repeatedly had called to our attention that groups of children showed variations in the percentages that were made immune by three doses of toxin-antitoxin. Investigation of some of these reports have indicated that the failure to immunize was due to improper handling of the toxin-antitoxin mixture after it left the laboratory.

For instance, 3000 doses of lot 31A were sent to one health department. The material was divided, part of it was used by one group of nurses and physicians, part by another group. Upon re-Schicking the groups, one showed 80 per cent immunity, the other 40 per cent immunity. Inoculations, as indicated, were given from the same lot of material. A retest of our samples at the laboratory showed the material to be potent and without deterioration.

There can be only one conclusion, that through some accident, part of the lot had been heated or in some way exposed to conditions that changed its potency.

Reports coming in on the number of children immunized with scarlet fever toxin and the number Dick tested indicate that there is a waste of material in administering these tests and treatments. Scarlet fever products are enormously expensive in that the testing can only be done on volunteer human beings. Great care should be exercised by physicians to protect our production of these biologics.

The commissioner of health wishes to call attention of the medical profession to the possibility of tularemia in Michigan. Although there have been no cases re-

ported in Michigan it might easily be present in the rural districts. The work of Dr. Francis should be more widely known. Hygienic Laboratory bulletin No. 130 gives the scientific background of this new disease.—C. C. Y.

PREVALENCE OF DISEASE

	September Report			Av. 5 Years
	Cases Reported			
	August 1927	September 1927	September 1926	
Pneumonia	122	206	112	154
Tuberculosis	447	305	509	484
Typhoid Fever	88	74	129	146
Diphtheria	212	229	370	419
Whooping Cough	674	564	517	459
Scarlet Fever	298	343	321	447
Measles	103	50	78	111
Smallpox	59	55	12	38
Meningitis	3	8	6	7
Poliomyelitis	31	88	27	69
Syphilis	1,424	1,549	1,198	1,177
Gonorrhoea	940	771	987	1,085
Chancroid	13	13	11	13

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

September, 1927

	+	-	+ -	Total
Throat Swabs for Diphtheria				811
Diagnosis	21	346		
Release	59	176		
Carrier	2	201		
Virulence	4	2		
Throat Swabs for Hemolytic Streptococci				394
Diagnosis	53	173		
Carrier	8	160		
Throat Swabs for Vincent's.....	24	342		366
Syphilis				5783
Wassermann		1		
Kahn	998	4752	31	
Darkfield		1		
Examination for Gonococci.....	147	1398		1545
B. Tuberculosis				337
Sputum	68	237		
Animal Inoculations	3	29		
Typhoid				433
Feces	12	118		
Blood Cultures	5	218		
Widal	6	60		
Urine		14		
Dysentery				79
Intestinal Parasites				42
Transudates and Exudates.....				167
Blood Examinations (not classified)				132
Urine Examinations (not classified)				273
Water and Sewage Examinations				754
Milk Examinations				98
Toxicological Examinations				11
Autogenous Vaccines				
Supplementary Examinations				187
Unclassified Examinations				609
Total for the Month.....				12021
Cumulative Total (fiscal year)				37207
Decrease over this Month last year				1573
Outfits Mailed Out				15373
Media Manufactured, c.c.				342130
Antitoxin Distributed, units.....				17902000
Toxin Antitoxin Distributed, c. c.				38390
Typhoid Vaccine Distributed, c. c.				6290
Silver Nitrate Ampules Distributed				5848
Examinations Made by the Houghton Laboratory				1495
Examinations Made by Grand Rapids Laboratory				4493

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

Two Day Clinic by the Department of Post Graduate Medicine, University Medical School

University Hospital, Ann Arbor, November 18-19, 1927

The Department of Post Graduate Medicine of the University of Michigan tenders to the members of the Medical Profession of the State the following Two-Day Medical and Surgical Post Graduate Clinic. This Clinic is a contribution, by the Faculty to the Program of post graduate instruction conducted by the Michigan State Medical Society.

PROGRAM

Friday, November 18, 1927

9:00 to 9:30—

Registration at University Hospital.

SURGICAL CLINICS

9:30 to 12:00—

Dr. Hugh Cabot:

- (1) Cholecystectomy.
- (2) Nephrectomy.

Dr. Frederick Coller:

- (1) Thyroidectomy.
- (2) Gastroenterostomy or Gastrectomy.

Dr. Carl Badgley:

The Surgical Treatment of Ununited Fractures.

Dr. Carl Eberbach:

A clinic in Genito-Urinary Surgery.

Dr. John Alexander:

- (1) Phrenocostomy in Pulmonary Tuberculosis.
- (2) Thoracoplasty in the Treatment of Bronchitis.

OTOLARYNGOLOGY

Dr. R. B. Canfield—Surgical Clinic.

Dr. A. C. Furstenberg—Surgical Clinic.

OPHTHALMOLOGY

Dr. Walter Parker—Surgical Clinic.

ORAL SURGERY

Dr. C. J. Lyons—Hare Lip and Cleft Palate.

INTERNAL MEDICINE

10:30 to 12:00—

Dr. L. H. Newburgh (Metabolism Laboratory):

- (1) Demonstration of Apparatus used in the Study of Nutritional Problems.
- (2) Discussion of Treatment and Demonstration of Diets in Diabetes Mellitus and Obesity.

Dr. Frank N. Wilson (Heart Station):

- (1) The Equipment and Apparatus used in Electrocardiographic Studies.

(2) Informal discussion.

Doctors C. C. Sturgis, R. Isaacs, M. Smith (Simpson Memorial Institute):

- (1) The More Recent Methods in the Differential Diagnosis and Treatment of the Anaemias.

ROENTGENOLOGY

Dr. P. M. Hickey (X-ray Laboratory):

- (1) Demonstration of the Orthodiagraph in Cardiac Measurements.
- (2) Demonstration of Plates of Non-Tuberculous Diseases of Chest.
- (3) Demonstration of Plates of Gastric Causes.

Dr. E. A. Pohle (X-ray Laboratory):

- (1) Demonstration of Dessication and Electro-coagulation in the Treatment of Malignant Diseases.
- (2) Demonstration of the Clinical Application of Diathermy.

12:30 to 2:00—Luncheon—University Hospital.

AFTERNOON SESSION

Pathological Amphitheatre

2:00—Clinical Pathological Conference.

Doctors A. S. Warthin and C. Weller.

HOSPITAL AMPHITHEATRE

2:00—The Treatment of Hyperthyroidism.

Dr. Frederick Coller.

2:30—The Treatment of Delayed Union and Ununited Fractures. Dr. Carl Badgley.

3:00 to 5:00—The Medical, Neurological, Dermatological, Roentgenological, Pathological and Surgical Aspects of Endocrine Disease with Special Reference to Classification, Diagnosis and Treatment.

Doctors Newburgh, Camp, Wile, Hickey, Warthin and Peet.

6:30—Dinner—Michigan Union.

Address—Dr. D. C. Balfour of the Mayo Clinic, Rochester, Minn.

Following Dr. Balfour's address there will be a discussion of medical problems by members of the Faculty and officers and members of the State Medical Society.

SATURDAY MORNING

Hospital Amphitheatre

10:00—Clinic, Surgical Diseases of the Stomach.

Dr. D. C. Balfour.

AFTERNOON

Football game at Stadium—

Michigan versus Wisconsin.

MINUTES OF THE EXECUTIVE
COMMITTEE OF THE COUNCIL
SEPTEMBER 30, 1927

1. The monthly meeting of the Executive Committee of the Council was held in Grand Rapids, September 30, 1927 at 6:15 p. m.

Present—Chairman Stone, B. R. Corbus, J. D. Bruce, President H. E. Randall and the Secretary-Editor.

Guy L. Kiefer, State Commissioner of Health and G. Van Amber Brown, President of the Wayne County Medical Society were present by invitation.

2. President Brown of Wayne County presented in detail a request for financial support to secure the listing of members of the Wayne County Medical Society in the Detroit telephone directory. An extended discussion of such a project was followed by the adoption of the following motion made by Dr. Corbus and supported by Or. Bruce:

“That the amount of \$1.50 per member be appropriated to the Wayne County Medical Society for the defraying of the expense of publishing a Wayne County Medical Society membership listing in the Detroit Telephone Directory.”

3. The Secretary read a request from the Editor of the Wayne Hospital Bulletin. This was laid on the table until the January Council meeting.

4. The resignation of Dr. E. C. Taylor as a member of the Medico-Legal Committee was read and on motion of Dr. Corbus, supported by Dr. Bruce, was accepted.

5. President Randall nominated Dr. J. G. R. Manwaring of Flint as a member of the Medico-Legal Committee to succeed Dr. Taylor. On motion of Dr. Bruce, supported by Dr. Corbus the nomination was confirmed and the Secretary directed to so advise Dr. Manwaring.

6. On motion of Dr. Corbus, supported by Dr. Bruce, the Secretary was directed to subscribe for a copy of the Medical History of Illinois for the use of our History Committee.

7. The Secretary reported upon the Post Graduate Conferences that were held in September and those scheduled for October. Dr. Bruce announced the dates of November 18 and 19 for the two days University Hospital Clinic at Ann Arbor.

8. In compliance with the following action of the House of Delegates:

“To that end does the Council recommend that you authorize ap-

pointment by the President, confirmed by the Council, of a Special Legislative Commission, of five members, directed by the Secretary and advised by the Executive Committee of the Council. That this Legislative Commission be charged to conduct such an educational campaign, and prepare a suitable bill for introduction in the Legislature and that the Council be authorized to appropriate the requisite funds.”

President Randall presented a list of nominees to constitute the “Legislative Commission.” After discussion the following “Legislative Commission” was appointed on motion of Dr. Corbus, supported by Dr. Bruce:

Guy L. Kiefer, Lansing, Chairman; J. H. Sundwall, Ann Arbor; J. B. Jackson, Kalamazoo; J. E. McIntyre, Lansing; C. T. McClintic, Detroit, Secretary-Editor—Ex-Officio.

9. Adjourned at 9:30 p. m.

F. C. Warnshuis, Secretary.

WHAT CHARACTERIZES THE
TRUE PHYSICIAN?

1. The education of the true physician is attested by the degree of Doctor of Medicine from some worthy institution of learning.

2. His moral, ethical and professional standing is attested by his membership in his county, state and national medical associations.

3. His standing as a man (or woman) and as a citizen is attested by precisely the same standards applicable to others.

4. His legal standing should be attested by his license to treat the sick. Unfortunately, this license means little in many states.

5. The true physician never practices, never recognizes and never connubiates under any circumstances whatsoever with those who practice sectarian or secular medicine, fads or curealls of any sort.

6. He considers the patient rather than the disease, and he utilizes all proved knowledge and any or all proved methods in the treatment of his patients.

7. He recognizes that every patient—and every human being for that matter—needs advice calculated to avoid and prevent health dangers, to correct existing troubles and to prevent their repetition or progress.

8. He knows that the infirmities of the body, mind and soul are inseparably linked

together so as to require all that science, art and personality can bring to bear in the patient's behalf. He renders what he can of these services and he delegates the others wisely.

9. He understands that no one person can know or practice to the best advantage all phases of the great field of medicine and health; and, therefore, whenever indicated and feasible, he asks other physicians for the assistance he needs.

10. He either maintains or has contacts that insure adequate consultation, laboratory, X-ray, nursing, hospital and all other services necessary for the welfare of his patients.

11. He follows the moral code of his profession, which insures confidential, sympathetic, consecrated service to his patients in such volume and at such times and in such places as are provided.

12. Like any other servant, he is entitled to a just compensation, but again he follows that provision of his ethics that entitles his patient to service at a compensation entirely consistent with his ability to pay.

13. He neither indulges in nor permits personal puffery. When his name is seen in the public press, it is usually as the author of some dignified statement about the condition of some patient whose welfare is a matter of public concern. More rarely he may give an authorized interview or write an article for public information on some health subject. He relies for the growth of his own clientele on the influence of the ever-widening circle of those friends whom he has served.

14. If older and more experienced, he is ever extending the helping hand to the worthy younger men of his profession. If a younger man, he is upholding the prestige of those already established. He is always interested in and helpful to worthy members of the ever-enlarging groups of assistants he must utilize to render the best to his patients.

15. He will admit that the best medical education is often inadequate and he will endorse the statement of Hippocrates that experience is fallacious and judgment difficult. But he feels that physicians are the only persons even remotely prepared by education and training for leadership in matters pertaining to improvement of health, the limitation of disease and the treatment of the sick.

16. He contributes, when he can, to medical literature, attends and takes an active part in medical society meetings

and subscribes to and reads good medical journals. He thoroughly examines and carefully studies his patients, and he always makes written records of his findings. He is never boastful or inclined to discuss his patients with others. He never guesses; when in doubt, he says so, and invites consultation or assistance. He realizes his responsibilities and approaches his problems with the humility, seriousness and earnestness of purpose that ever characterizes the servant of God, of man and of science.

How does your doctor measure by this standard, and do his fellow physicians call him for illness in their families or for consultation when they are puzzled?

—William E. Musgrave in *Hygiea*,
May, 1927.

GRAPE FRUIT THERAPY

Editor of The Journal:

An article in the October Journal on the "Therapeutic Value of Hill-Grown Grape Fruit" has caused considerable comment. Many physicians throughout the state have written in, asking for a verification of statements contained in this article, in many instances saying that they have had the article brought to their attention by patients. The article may be deemed as being quite revolutionary so far as our present knowledge of diabetes goes. Certainly, such a diet used by the layman and undirected by his physician has possibilities of harm. Because of the general interest in the article, the Publication Committee has instructed me to make some comment on it.

While it is generally known that The Journal does not hold itself responsible for opinions expressed through its columns, the Publication Committee feels that there is an obligation on the part of the Editor to assemble all information possible upon subjects of unusual interest and importance. This seems especially obligatory where claims are made dealing with the use of unknown remedies in such important conditions, as, for example, those discussed in this paper. The Publication Committee has no comment to make other than to express its hope for the successful fulfillment of this enthusiastic presentation. At the same time, it is but fair to state that had the committee been consulted, it would have delayed the publication of this article until a more thorough trial had been given the remedy in question. This must not be interpreted as implying any doubt of the good faith of the authors but simply to safeguard the reputation of The Journal and in accordance with well established methods in the consideration of new procedures and remedies.

One of the most prominent workers in the field of Metabolism in this country states, "So far as I know, there is no value to grape fruit other than any other fruit

save that the percentage of carbohydrates in grape fruit is a trifle lower than in other varieties."

To clear up any possible error and in an effort to confirm the findings of Doctor Taylor and his associates, the Publication Committee has taken the liberty of asking two recognized authorities in this field to undertake to check their findings. As the doctor has drawn attention to a particular kind of grape fruit, it would seem best, if he wishes to accept this offer, that he supply his own product for the experiment. This would seem an unusual opportunity for Doctor Taylor to obtain confirmation, which I am sure he earnestly desires.

The Publication Committee feels that this subject should be thoroughly investigated and we are hoping that Doctor Taylor will see fit to avail himself of this opportunity.

The Publication Committee,
by James D. Bruce, M. D.

POST-GRADUATE CONFERENCES

During October four Post-Graduate Conferences were conducted for our members. All of them evidenced that our members welcome these educational opportunities for the interest and attendance has been very commendable. The following subjects were included in these four Conferences:

Post-Graduate Conference, 11th District
Shelby, Michigan
September 29, 1927

- 10:15 a. m.—Opening Remarks.
—George L. Le Fevre, Councilor.
- 10:30 a. m.—Some Diseases of Animals Communicable to Man.
—Professor Ward Giltner, Lansing.
- 11:00 a. m.—Urinary Hemorrhages.
—L. M. McKinlay, M. D., Grand Rapids.
- 11:30 a. m.—Diagnosis of Gall Bladder Infections.
—Burton R. Corbus, M. D., Grand Rapids.
- 12:00 m.—Luncheon—Parish House.
- 1:30 p. m.—Treatment of Anemias.
—Burton R. Corbus, M. D., Grand Rapids.
- 2:00 p. m.—Urethral Infections.
—L. M. McKinlay, M. D., Grand Rapids.
- 2:30 p. m.—The Training of Medical Biologists.
—Professor Ward Giltner, Lansing.
- 3:00 p. m.—Diabetes.
—Wm. L. Le Fevre, M. D., Muskegon.
- 3:30 p. m.—The Value of X-ray Studies in Obstetrical Cases.
—H. S. Collisi, M. D., Grand Rapids.

Post-Graduate Conference, Marquette, Michigan
Wednesday, October 12, 1927
County Court House

- 10:00 a. m.—Opening Remarks.
—Richard Burke, Councilor.
- 10:30 a. m.—Peptic Ulcer and Its Medical Treatment.
—B. R. Corbus, M. D., Grand Rapids.

- 11:00 a. m.—Arterial Hypertension and Its Management.
—M. A. Mortensen, M. D., Battle Creek.
- 11:30 a. m.—Infections of the Kidney.
—B. C. Corbus, Chicago.
- 12:00 m.—Luncheon—Informal Remarks by Dr. B. R. Corbus, Vice-Chairman of the Council.
- 1:30 p. m.—Management of Various Forms of Heart Disease.
—M. A. Mortensen, M. D., Battle Creek.
- 2:00 p. m.—Diathermy in Urology.
—B. C. Corbus, Chicago.
- 2:30 p. m.—Pernicious Anemia and Its Treatment by Liver Administration.
—B. R. Corbus, M. D., Grand Rapids.

Post-Graduate Conference, Alpena, Michigan
October 20, 1927

New Alpena Hotel

- 10:30 a. m.—Drugs Useful in Gastro Intestinal Diseases.
—W. H. Marshall, M. D., Flint.
- 11:00 a. m.—Pelvic Infections.
—G. Van Amber Brown, M. D., Detroit.
- 11:30 a. m.—Infant Feeding.
—Wm. N. Braley, M. D., Detroit.
- 12:00 m.—Luncheon will be served by the Alpena County Medical Society in the New Alpena Hotel. Remarks by State President Randall of Flint.
- 1:30 p. m.—Acute Lesions of the Abdomen.
—H. E. Randall, M. D., Flint.
- 2:30 p. m.—Fever in Children from Obscure Causes.
—Wm. N. Braley, M. D., Detroit.
- 3:00 p. m.—Heart Lesions with Focal Infections.
—Wm. H. Marshall, M. D., Flint.
- 3:30 p. m.—Fractures.
—H. E. Randall, M. D., Flint.
- 4:00 p. m.—Any member desiring to present a case or case record will be accorded the opportunity.

Eighth Councilor District

Post-Graduate Clinical Conference, Saginaw
September 29, 1927
St. Mary's Hospital

- (Eastern Standard Time)
Presiding—J. H. Powers, M. D., Councilor—8th District.
- 10:30 a. m.—Contagious Diseases.
—Guy L. Kiefer, M. D., Lansing.
- 11:00 a. m.—Treatment of Urithritis.
—R. E. Cummings, M. D., Detroit.
- 11:30 a. m.—Nasal Respiratory Infections.
—R. E. Mercer, M. D., Detroit.
- 12:00-1:30—Luncheon.
- 1:30 p. m.—Pulmonary Medialstinal Examinations.
—R. E. Mercer, M. D., Detroit.
- 2:00 p. m.—Hemorrhages from Urinary Tract.
—R. E. Cummings, M. D., Detroit.
- 2:30 p. m.—Obstetrical Problems.
—Harold Henderson, M. D., Detroit.
- 3:00 p. m.—Arterial Hypertension and Its Management.
—M. A. Mortensen, M. D., Battle Creek.
- 3:30 p. m.—Sterility in Women.
—Harold Henderson, M. D., Detroit.
- 4:00 p. m.—Management of Various Forms of Heart Disease.
—M. A. Mortensen, M. D., Battle Creek.

MEDICAL GUIDANCE

Experiences evoke study and investigations. The analysis of such studies and investigations constitute the foundation of a policy which is developed in time to an accepted procedure that is applied daily. Such a circle characterizes the development and institution of many of our established methods. If one delves into the facts it becomes apparent that the practices that we now acknowledge were initiated by inquiries, study and discussion by individuals who were concerned by reason of personal encounters.

We sense quite strongly that we are at the present time confronting the formative period of a new movement that will in the process of evolution establish an accepted policy or procedure with which physicians and medical organizations cannot help but be intimately concerned—a movement that will eventually solve a very mooted question as to how a lay person may be able to select and secure competent medical advice and attendance. How he may obtain proper medical guidance.

We have noted, over a period of time, that with increasing frequency this question is being raised and discussed in leading magazines and before district and national meetings of lay, health and medical classification. The writers and speakers have been lay as well as medical. The pertinent question stands out: "How may a lay person determine who are competent physicians and how can they obtain assurance that they will receive services reflecting present day medical knowledge." Editorial writers are raising the same query. One editor advised us that not a day passes but what his office receives several such telephone inquiries. It is a problem presenting itself most pressingly for solution. We must assume that leadership. That is the reason we are inviting the attention and consideration of our members in order that their opinions may be utilized to reach a right solution.

One suggestion is receiving considerable thought—local and district Medical Guidance Bureaus, where individuals may obtain dependable advice as to whom they can consult. This suggestion has much merit, still it is fraught with several valid objections so that the administration of such a Bureau can not now be outlined as to principles, policies or limitations. It must be experimented with and its possibilities closely and carefully investigated. We understand the Wayne County Medical Society has created some such Bureau and

the people of Detroit are accorded the opportunity of applying to this Bureau for medical guidance. We purpose keeping close touch with their experiences.

Publicity as to what constitutes the qualifications of a dependable doctor in order that the lay person may ascertain whether their medical advisor is possessed of those general or special qualifications has also been suggested. This at once raises the question as to who shall certify to a doctor's qualifications and appraise his capabilities or limitations. Mere membership in his County and State Society or affiliation with a hospital staff is at present a rather unreliable classification. To be effective it is necessary that in some manner, jealousy and personalities be submerged, and qualifications and appraisals be intrusted to a board constituted from the membership. Such a Board to be invested with quite arbitrary authority. In seeking to educate the public, medical society memberships may be well stressed as a fundamental requirement in judging a doctor's qualification and distinguishing between the fake, quack, charlatan or cult and the reputable doctor. We believe such a plan of public education is worthy, possesses merit and should be instituted. The public should be informed that the member of a County Medical Society has conformed to certain educational, legal and personal requirements and having done so he is entitled to confidence.

In order to ascertain and observe the value of such public education our State Society has joined with the Wayne County Medical Society in causing a special list of its members to be published in the next issue of the Detroit telephone directory. Such a special listing of the members of the Wayne County Medical Society will be preceded by a statement to the public that these members are possessed of certain basic qualifications that certify to their professional attainments. Such a list will enable the layman to at least discriminate between the reputable men and the quack or cult.

What the value of such a means of education will be cannot be fully stated. It has been deemed to possess sufficient merit to warrant a trial. Such a trial has been instituted in Detroit.

We are disinclined to believe that medical guidance should be delegated to civic or state health officers. We believe it to be a problem to be studied, handled and solved by our medical organizations and

that civic and state officers should not undertake its solution or execution.

The individual has a right to ascertain where and from whom he can obtain competent medical advice. Conditions of society have so changed that he can no longer depend upon the recommendation of a friend, employer, directory, lodge member or newspaper advertisement as to whom he may best consult for his particular physical condition and have the assurance that he is in safe hands. The individual consequently is seeking for reliable medical guidance. We as a profession must create and make available an avenue through which he can secure that information. We solicit your recommendations so that your officers may formulate a policy.

OSTEOPATHS AND OPIUM

Treasury Department

Bureau of Prohibition, Washington

Editor of The Journal:

Please refer to your letter of October 14, 1927, addressed to the Secretary of the Treasury, which has been referred to me for reply, concerning the matter of the registration of osteopaths in the State of Michigan under the Harrison Narcotic Law, as amended.

In accordance with your understanding, the United States District Court for the Eastern District of Michigan, Southern Division, on September 26, 1927, handed down a decision in the case of *Walter P. Bruer v. Fred L. Woodworth*, Collector of Internal Revenue, holding in effect that the Collector of Internal Revenue was compelled to grant registration under the Harrison Law to the realtor, Walter P. Bruer, described as "a duly licensed osteopath physician under the laws of Michigan." The issue in this case appeared to be whether or not the realtor, Walter P. Bruer, who had been licensed as an osteopath under the laws of Michigan was lawfully entitled to distribute, dispense, give away or administer narcotic drugs to patients upon whom he, in the course of his professional practice was in attendance, and a determination of this issue appeared to depend upon whether an osteopath under the Michigan laws was a physician within the meaning of the state statute known as Act No. 92, approved April 26, 1923, (Public Acts Michigan 1923, page 123), for it seems clear that unless an osteopath is construed to be a physician within the meaning of that statute, he may not sell, dispense, prescribe or distribute

narcotic drugs to his patients without becoming liable to the penalties provided in that act and therefore could not be considered as lawfully entitled to dispense, distribute, etc., narcotic drugs within the meaning of Section 1 of the Act of December 17, 1914, known as the Harrison Narcotic Law, as amended.

This office, in making an examination of the state licensing statutes, one of which provides for the examination, regulation, licensing and registration of "physicians and surgeons" and another provides for the examination, licensing and registration of "osteopathic practitioners," respectfully disagreed with the United States District Court in its decision. It was thought that where separate licensing acts deal in one case with "physicians and surgeons," and the other case "osteopathic practitioners," and where the state statute known as the Act of April 26, 1923, provided exceptions in favor only of a physician duly qualified to practice, that the latter act did not contemplate the use of narcotic drugs by osteopaths. This office can not, and does not attempt to, discriminate between the different schools of medicine, but it is considered that a duty is imposed upon the Collectors of Internal Revenue to determine the status of any alleged school of medicine within the state with reference to state narcotic laws before members of a particular school may be granted registration under the Harrison Narcotic Law, as amended. In this connection this office adopts the viewpoint of the Supreme Court of Idaho in a decision rendered March 31, 1923, in *State v. Sawyer*, 214 Pac. 222, wherein the court held in part

"If it be true that graduates of colleges of osteopaths possess the requisite knowledge and skill to enable them to prescribe medicine and surgery, it would suggest the propriety of bringing the facts to the attention of the legislature with a view of obtaining legislative action granting to osteopathic physicians, upon proper examination, the right to practice medicine and surgery as well as osteopathy."

Accordingly this office requested Assistant United States Attorney Aldrich of Detroit, Michigan, to obtain a stay of execution of the order in the Bruer case and to endeavor to obtain a review of this decision in the United States Circuit Court of Appeals. Pending such review, if obtainable, it was desired to withhold registration from osteopaths in Michigan until the Circuit Court of Appeals passed upon

the question. No reply has yet been received from the Assistant United States Attorney.

It is hoped that this will answer your inquiry, and upon the final determination of the question, you will be further advised if you so desire.

Respectfully,
J. M. Doran, Commissioner.

BRIEF ON THE MICHIGAN LAW REGARDING THE
PRESCRIBING OF NARCOTICS BY OSTEOPATHS

The question submitted is whether or not an osteopath duly licensed to practice osteopathy under the laws of Michigan is entitled to dispense and prescribe narcotic drugs to his patients. This question will necessarily be determined in the light of the present narcotic and osteopathic laws of Michigan.

The basic law regulating the sale and distribution of narcotics in Michigan was passed as Act No. 92 of the Public Acts of Michigan, 1923. Several sections of this act were amended by Act No. 9 of Public Acts of Michigan, 1925. These amendments are not, however, pertinent to the question here in issue. Section 1 of Act No. 92 of the Public Acts of Michigan, 1923, makes it unlawful to sell, give away, dispense or distribute any opium or coca leaves, their compounds, preparations, etc., "except as hereinafter provided." Section 4 allows the sale of narcotics "upon a written prescription or order of a *physician, veterinarian or dentist* duly qualified to practice under the laws of this state . . .". Section 5 allows the sale of narcotics "to any such manufacturer, jobber, wholesale druggist, pharmacist, druggist or to any lawfully practicing *physician, veterinarian or dentist*, but only upon a written order duly signed by such manufacturer, jobber, wholesale druggist, pharmacist, druggist, *physician, veterinarian or dentist*, . . ."

There is nothing in the above provisions which would indicate that osteopaths are licensed to prescribe narcotics. No mention is made of osteopaths whatsoever. Section 4 and section 5 of the Act goes greatly into detail in an attempt evidently to state exactly each and every person that would be included within the exception to this act.

The narcotic act is a general prohibition effective against every person, corporation, business, partnership, etc., and prohibiting such persons or organizations from dealing in any way with any of the specified narcotics. This general prohibition is then qualified by specifically exempting certain classes of persons. The exempted classes are given in great detail, so much in detail that the words "wholesale druggist", were used in addition to the words "pharmacist,, and druggist." By analogy, if the legislature had intended that any special and limited physicians should have the right to prescribe narcotics, it would have named them: if osteopathic physicians were to be included the legislature would have said physicians and osteopathic physicians. This detailing of the classes included within the exception to this general prohibition serves to show that the act received the careful and intensive detailed consideration of the legislature at the time it was being enacted into law.

Th legislature, at the time it was considering this act, was fully cognizant of the existing osteopathic act and knew the various provisions of

that act. The legislature, therefore, knew that the words "osteopathic physician" was used in that act to describe a practitioner of osteopathy. In face of this knowledge the words "osteopathic physician" were not included in section 4 and 5. It is to be assumed that the legislature, since section 4 and 5 were developed in such minute detail, would have included the words "osteopathic physician" if they intended that the osteopathic physician should have been given the right to use and prescribe narcotics in his professional practice. The fact that the words osteopathic physician, was not included in such a minutely detailed provision would serve to indicate that the legislature did not intend to confer upon the osteopathic physician the right to prescribe or dispense narcotics. The narcotic act is a statute of a penal nature, imposing either a fine or imprisonment for the violation of its terms. It is a common recognized principle of construction that penal statutes must be strictly construed and that the words used must be given their popular rather than technical meaning. This rule of construction has been upheld in:

People v. Webb, 127 Mich. 32.

Young v. Moore, 162 Mich. 63.

Deloria v. Atkins, 158 Mich. 232.

Under the rules of strict construction of penal statutes we cannot read the words "osteopathic physician" into a statute of a penal nature and, especially, where such a statute shows on its face the careful, deliberate and intensive consideration of the legislature.

Section 7 of the Narcotic Act of Michigan provides:

"Section 7.—Nothing in this act contained shall be construed to forbid or regulate the dispensing or distribution of any of the drugs mentioned in section one of this act by or under the instruction of a lawfully practicing *physician, dentist or veterinarian* in the course of his professional practice, and not for the purpose of evading the provisions of this act."

A careful consideration of this provision will serve but one interpretation. It is clear that the provision was included in the act in order to make certain that nothing within the narcotic act itself should in any way effect the status of the power of "lawfully practicing *physicians, dentists or veterinarians*" in the dispensing or prescribing of narcotics. If the word "physician" in sections 4 and 5 is construed to include "osteopathic physician" the same construction must be applied in sections 7 of the same act.

Applying this construction, section 7 would provide that the power of "physician," including "osteopathic physicians," shall not be changed by this narcotic act. In other words, in order to determine the question of the right of an osteopath to prescribe narcotics we must resort to the provisions of the osteopathy law itself and ascertain from them what is authorized as the practice of osteopathy.

The basic law governing the practice of osteopathy is found as Act 162, Laws of 1903. This original act was amended in some respects by act 305 of the laws of 1913. Section 4 of the act of 1903 as amended provides:

"Section 4.—The certificate provided for in section two of this act shall entitle the holder thereof to practice osteopathy in the state of Michigan in all its branches as taught and practiced by the recognized colleges or schools of osteopathy, but it shall not authorize him to practice medicine within the meaning of Act

237 of the Public Acts of 1899, or acts amendatory thereto; . . ."

The portion italicized was added by amendment by Act 305 of the Laws of 1913. Osteopaths were therefore authorized to engage in such practice as was taught and practiced by the recognized colleges and schools of osteopathy, at the time the amendment took effect. No other construction can be placed upon this provision.

If an attempt is made to interpret this provision as authorizing such practice at this time as is practiced and taught by *present day* schools of osteopathy the act would of necessity be unconstitutional. If such had been the intention of the legislature it would have amounted to an attempt to delegate legislative powers to private concerns and individuals existing in many instances outside of the borders of the state. No legislature has authority or power to delegate any of its legislative functions to private individuals. On the other hand if they interpret this provision as was first suggested, namely, that the provision authorizing osteopaths to indulge in such practice as was taught by the schools of osteopathy at the time the act went into effect, we would not run foul of such objections. Inasmuch as the courts are unanimous in interpreting statutes wherever they can in such a way as to give them constitutionality and validity and since the wording in this case would clearly adapt itself to such construction we are of the opinion that the only construction that can be placed upon this phrase is that the practice authorized is the practice as taught and practiced by recognized colleges or schools of osteopathy at the date that this act went into effect.

The foregoing construction was upheld by the court in the case of State vs. Bonham, 93 Wash. 489. In this case the court was called upon to construe a provision of the Washington osteopathy law which was identical in wording to the provision of the Michigan law. The Washington court held:

"But if all of the osteopathic colleges were now teaching the administration of medicines and the resort to surgery by the knife as a means of curing diseases, it would not aid the appellant. His right is to practice osteopathy as that practice was understood at the time the medical act was adopted, and this we conclude did not sanction the practice resorted to by him in the treatment of the patient mentioned in the information."

The question then arises as to whether or not the recognized schools or colleges of osteopathy taught and practiced the administration of narcotics as a part of the teaching and practice of osteopathy in 1913, the time when the amendment authorizing practice as taught and practiced in the recognized schools of osteopathy was introduced into the osteopathy law.

In studying the catalog for 1914-1915 of the Chicago College of Osteopathy no courses can be found which provide for the study of the administration and effect of drugs of any kind. Osteopathy is defined as:

"A complete system that represents an eternal principle by maintaining that the bodily forces are all sufficient, if only rightly directed; for nature alone can repair a tissue or heal a wound." (Page 11, catalog of the Chicago College of Osteopathy, 1914-1915).

On page 18, of the catalog of the College of Osteopathic Physicians and Surgeons of Los An-

geles, California for 1914-1915, the practice of osteopathy is described as follows:

"From the foregoing, it will be observed that there is a fundamental difference between Osteopathy and all other systems of healing. Osteopathy is founded on the eternal truth that each individual lives by means of his own bodily activities and will continue to live in a state of health just so long as his body is able to adapt itself to the external influence surrounding it. When adaptation fails and disease arises the Osteopathic physician appeals to no charms; does not try to drive demons out with nostrums; *knows too much about physiology to administer a cause of more disease in the form of a poison*; takes out none of the pieces of which the human body—the most wonderful of all machines—is composed; nor is he so devoid of human sympathy and common sense that he can say to himself "The suffering of others is imaginary."

In the case of Bragg vs. State, 134 Ala. 165 an osteopathic physician was prosecuted for practicing medicine without a certificate from the State Board of Medical Examiners. The case was heard upon an agreed statement of facts which contained the following recital:

"The method of treatment by the practitioners of osteopathy is a system of manipulation of the limbs and body of the patient with the hands, by kneading, rubbing, or pressing upon the parts of the body. *In the treatment, no drug, medicine, or other substance is administered or applied, either internally or externally*; nor is the knife used or any form of surgery resorted to in the treatment. The practitioner himself performs the manipulations. The teaching and theory of those skilled in osteopathy are that it is a system of treatment of disease by adjustment of all the parts of the body mechanically. It is taught that any minute or gross derangement of bony parts, contracting and hardening of muscles or other tissues, or other mechanical derangements of the anatomical parts of the body which must be in perfect order mechanically in order that it may perform its function aright, nerve centers, arteries, veins, and lymphatics, which must function properly in order that health may be maintained. It is taught that such interferences lend to congestion, obstructed circulation of blood and lymph, irritation of nerves, and abnormal state of nerve centers; that the result is disease which can be cured only by righting what is mechanically wrong. * * * The essential things taught in the schools of osteopathy are anatomy, physiology, hygiene, histology, pathology, and the treatment of diseases by manipulation. *The repudiation of drugs and medicine in the treatment of diseases is a basic principle of osteopathy, and a knowledge of drugs or medicine, their administration for the cure of diseases, the writing and giving of prescriptions, are not essential to the graduation of, and the issuance of diplomas to, students of osteopathy.*"

Webster's New International Dictionaries for 1914 and 1916 defined the practice as:

"A system of treatment based on the theory that diseases are chiefly due to deranged mechanism of the bones, nerves, blood vessels, and other tissues, and can be remedied by manipulations of these parts."

In Funk & Wagnall's New Standard Dictionary of the English language for 1916 osteopathy is defined as:

"A system of treating diseases without drugs, pronounced by Dr. A. T. Still in 1874. It is based on the belief that disease is caused by some part of the human mechanism being out of proper adjustment, as in the case of a misplaced bone, cartilage, or ligament, adhesions or contractions of muscle, etc., resulting in unnatural pressure on or obstruction to nerves, blood or lymph. Osteopathy, through the agency or use of the bones (especially the long ones which are employed as levers), seeks to adjust correctly the misplaced parts by manipulation."

In the Century Dictionary and Cyclopedia for the year 1915 and 1916 the practice of osteopathy was defined as:

"A theory of disease and a method of cure, advocated by Dr. A. T. Still, resting on the supposition that most diseases are traceable to deformation of some part of the skeleton (often due to accident), which by mechanical pressure on the adjacent nerves and vessels interferes with their action and the circulation of the blood. As a remedy a form of manipulation is used."

From the above quotations it is to be seen that osteopathy in 1913 did not consider the use of drugs as a part of their practice. It follows that the practice authorized by the osteopathy law would not include the practice of administering and prescribing drugs and narcotics. *It is clear then that the osteopathic law as it exists today does not authorize a practitioner of osteopathy to dispense or prescribe drugs or narcotics.*

MONTHLY COMMENTS

Medical—Economic—Social

Volume One, Number One of the Annals of Internal Medicine, published by the American College of Physicians under the editorship of Dr. A. S. Warthin of Ann Arbor, has been received. This new publication will be the official organ of the College of Physicians.

A handy booklet of 64 pages giving preparations of the U. S. P. and N. F. has been compiled by a joint committee of Detroit druggists and members of the Wayne County Medical Society. Doctors W. A. Donald, H. A. Luce, W. H. McCracken, J. T. Watkins, I. Werness, R. McKean and F. J. Slayden represented the doctors. The following introduction well describes the purpose of this excellent piece of educational work:

The purposes in presenting this booklet are:

1. To direct attention to the newer and more important drugs and preparations listed in the tenth revision of the United States Pharmacopoeia and the fifth edition of the National Formulary.

2. To present in an easily available form some information concerning these remedies that may be useful to the busy physician in writing prescriptions.

3. To strengthen the mutual confidence, understanding and harmony that exist between physician and pharmacist.

4. To encourage general prescribing of the U. S. P. and N. F. pharmaceuticals.

The Pharmacopoeia is produced by the joint efforts of the physicians and pharmacists of the nation. The items of the U. S. P. X., numbering about 623, were chosen for inclusion by a committee comprised of 17 physicians and 6 pharmacists.

The National Formulary is produced and published by the American Pharmaceutical Association. Many of the items included have been official in earlier revisions of the Pharmacopoeia. The other items it describes are a number of drugs and preparations which, although never official in the Pharmacopoeia, are nevertheless so frequently prescribed by physicians as to require official standards and formulas.

We urge that the physician, in formulating pre-

scriptions, give serious consideration to the U. S. P. and N. F. articles which may be suited to his purposes and that he specify them whenever they are the equal of, or are superior to, other available remedies.

In making this appeal we are prompted by the following considerations:

1. The official drugs and preparations, numbering about 1,400, are sufficiently varied in therapeutic activity to offer a remedy meeting the requirements of almost every case.

2. Seventeen of the 23 members of the committee that chose the medicinal materials to be admitted to the U. S. P. X. were physicians. Similarly, physicians have controlled admissions to the earlier revisions of the Pharmacopoeia, and, directly or indirectly, they have approved the contents of the National Formulary. In consequence of this we have every reason to believe that the official pharmaceuticals are judiciously chosen, that they possess dependable therapeutic value, that they are not fads but are rational remedies of demonstrated worth.

3. Official formulae have been established on the sole basis of medicinal merit and pharmaceutical excellence. The prescriber knows the exact composition of each preparation and therefore may exercise control over incompatibilities.

4. The official drugs and remedies are commonly available among the pharmacies. Non-official preparations are not so readily obtainable. Prescriptions for the former are, therefore, likely to be decidedly advantageous to the patient in points of convenience, time and cost.

5. The use of Pharmacopoeial and National Formulary Latin titles (or their official abbreviations) on prescriptions reduce to a minimum the likelihood of self-medication by patients.

6. The U. S. P. X and the N. F. V have been produced at very considerable expense in effort, money, thought and painstaking care. They are strictly medical and pharmaceutical in their interests. They are our books—physician's and pharmacist's. Let us make use of them to the fullest.

7. Careful diagnosis suggests the reasonableness of rational treatment. Non-secret remedies,

as none other, permit of logical choices and enable the prescriber to exercise his fund of hard-gained knowledge. We need only mention the personal satisfaction, the ethical propriety and the enhanced professional standing that are concomitants of consistent U. S. P. and N. F. specifications.

We feel that this booklet will be of material assistance to the physician in choosing remedies and suggest that it be kept about his desk for quick reference. Whereas only a selected portion of the official remedies are described at some length, the therapeutic classification (p. 46) shows in a suggestive way the usefulness of most U. S. P. and N. F. preparations.

It is hoped that these introductory comments and all contents of the booklet will be received with a sincerity, a disposition to mutual aid and a sympathetic attitude equal to those with which they are submitted.

President Randall and the Executive Committee of the Council have designated the following members to constitute our Legislative Commission:

Guy L. Kiefer, Lansing, Chairman; J. E. McIntyre, Lansing; J. B. Jackson, Kalamazoo; C. T. McClintic, Detroit; John Sundwall, Ann Arbor.

By action of the House of Delegates this Commission will study medical legislation and formulate a new medical practice act. The Commission's findings and recommendations will be imparted in *The Journal* from time to time.

It was our privilege to attend the Annual Meeting of the Indiana State Medical Association in Indianapolis on September 28th. We were impressed by the alert and manifest interest of its House of Delegates and the exemplary activity during the year of the permanent committees. Indiana's profession is accomplishing a real task in its campaign of newspaper publicity that is educating the public in regard to scientific medicine. The concerted influence of the profession also secured the passage of a new medical law last winter that bids well to limit cult activity and trespass into the fields of medicine by under-educated physicians. We have always obtained inspiration and guidance from the methods utilized by the Indiana Medical Association and are appreciative of having had the opportunity of meeting these medical leaders.

In two issues we imparted the local medical society's conclusions and recommendations following five years of contact with the Milbank Health Demonstration in Cattaraugus County, N. Y. This was a lay experiment conducted by lay persons. The profession of the county were not used even in an advisory capacity. We cited the report and commented upon a health unit or health program that did not enlist the aid and advice of doctors. We learn that in some counties our comment has caused local doctors to hold aloof and oppose the work of our State Department of Health in organizing County Health Units. Such an attitude is unwarranted in Michigan. Our State Commissioner of Health purposes to be guided by the advice of the doctors and invites them to join in the work of a County Health Unit. We commend the State Commissioner's program and policy and earnestly urge every possible co-operation on the part of local physicians.

What is your recommendation as to how best acquaint the public in regard to how they may ascertain how to secure the services of a competent medical advisor. How can we organize or establish Bureaus of Medical Guidance? How can we arouse a medical conscience that will cause individuals not to undertake to advise or treat conditions for which they have not been especially trained in supervising? These are pressing questions. We are desirous of obtaining the opinions of our members. Will you not please forward yours?

You had a physical examination one year ago. You are due to receive another one before January first. Have you arranged for it? In counties where the local society conducted these examinations we urge the officers to plan for another physical examination of their members. Your health and longevity depends upon having such an examination. Do not delay or neglect doing so.

Members are invited to send to the Secretary such suggestions and recommendations that they feel are pertinent and bearing upon how best we may amend or re-write Michigan's medical practice act. Our newly created Legislative Commission is undertaking a study of the problem of forming a new practice act that will assure to the people that all those who hold themselves out as being capable to treat the sick or give dependable health advice have had proper fundamental training. This commission is desirous of obtaining the views and opinions of our members for the furtherance of its work.

We have received several requests regarding the date for our next Annual Meeting. This is to be determined by the Council at its January meeting, consequently we are unable to impart definite information at this time. The place of meeting is in Detroit. The Wayne County Medical Society has appointed a local committee on arrangements. It is purposed to prepare a program that will exceed all previous efforts and will insure a most intensely interesting Annual Meeting.

On another page will be found the program for the two-day Clinical Conference that is being tendered to the profession of Michigan by the University Post-Graduate Department and the members of the University faculty. It is the University's additional contribution to the Post-Graduate work that the State Society is conducting for its members. It represents work and time on the part of the faculty for which we are highly appreciative. We urge our members to avail themselves of this opportunity. The program affords clinics and discussions in every branch of medicine and surgery. No one can attend and return without receiving direct, personal benefit. Note the dates on your engagement book. A notice with a reservation card will be mailed to you about November 5th. Please return the card promptly as it is very important that the University officials know the number that will attend in order to perfect their plans and arrangements. Sign and mail the card the day you receive it.

Dr. Burr, Chairman of our Historical Committee reports excellent progress in the compila-

tion of Michigan's Medical History. Dr. Burr is still "howling" for illustrative material giving actual pictures of pioneer physicians. Especially is he anxious to secure a photograph of a physician on horseback with saddle-bags and other equipment. We again urge our readers to search

through their files and to send to Dr. Burr such a picture. Surely somewhere in Michigan there must exist a picture of a pioneer physician on horseback. Dig into your closets or ask the "old timers" in your town whether they do not have such a picture in the old family album.

O U R O P E N F O R U M

Affording Opportunity for Personal Expression

MEDICO-LEGAL COMMITTEE

Editor of The Journal:

Your notification of my appointment to the Medical Legal Committee recently was received and I accept the appointment.

I do that very willingly because I understand Dr. Tibbals does all the work.

Sincerely,
J. B. Manwaring.

NEW LOCATION

Editor of The Journal:

I am moving my office and residence to Niles, Mich. Would be pleased to have you make a note of same in your next issue of The Journal, or if too late for the November issue the December issue will do.

Also please send The Journal to my Niles address after this. You certainly are getting up a wonderfully fine and up-to-date Journal. Please accept my congratulations.

With best wishes for its continued success, I remain,

Sincerely yours,
N. A. Herring.

LEGISLATIVE COMMISSION

Editor of The Journal:

In reply to yours of October fifth, I desire to say that I shall be very happy to serve on the Legislative Committee and shall do everything within my power to obtain the ends desired.

With the assurance of my continued esteem and regards, I remain,

Yours very sincerely,
C. F. McClintic.

NEW JOURNAL

Editor of The Journal:

The American College of Physicians announces changes in the administration of its official Journal. Heretofore, it was known as Annals of Clinical Medicine and was published for us by the Williams and Wilkins Company of Baltimore, Md. On July 1, 1927, The College determined to publish its Journal directly, and changed the name to ANNALS OF INTERNAL MEDICINE.

The Journal will be issued monthly, and new volumes will start each year with the July number.

Our editor has already established exchange with you, and you will receive, therefore, our

Journal, Annals of Internal Medicine, each month as published. Kindly send the copy of your Journal to our editor, Dr. Alfred Scott Warthin, University of Michigan, Ann Arbor, Michigan, U. S. A.

Due to the changes in publication, we have been delayed in getting out our new volume, which started with the July number. However, that number is now in the mail, and the August and September numbers will follow as promptly as possible. By November, our new Journal will be on schedule, and you will receive it regularly.

Very respectfully yours,
E. R. Loveland,
Executive Secretary.

LEGISLATIVE COMMISSION

Editor of The Journal:

Yours of October 5th received and in reply will state that I will be very pleased to accept President Randall's appointment on the Legislative Commission, if I can be in any way helpful in putting our ideals across. Dr. Randall talked with me about the matter after the state meeting and that was one of the reasons I spent so much time in Minnesota and Wisconsin investigating their basic science law. The more I study the problem the more I realize the difficulties of our problem. However, I do hope we may construct something really worth while.

Thanking you for your letter and with my kindest personal regards, I am

Cordially yours,
J. E. McIntyre.

LEGISLATION COMMISSION

Editor of The Journal:

In reply to your communication of November 25th permit me to state that I shall be glad to serve on the Legislative Commission of the Michigan State Medical Society. I feel that it is a real honor to serve on this Committee.

Most sincerely yours,
John Sundwall, M. D.

THE HIGHLAND PARK PHYSICIANS CLUB

Editor of The Journal:

The Highland Park Physicians Club is to give its Second Annual Clinic on December 1, 1927 at the Highland Park General Hospital. The Clinics take in the whole day starting at 9 a. m. and ending at 10:30 p. m. Luncheon will be served by the Highland Park General Hospital.

The dinner will be served from 6:30 to 8 p. m. The evening program starts promptly at 8:30 p. m. and will end promptly at 10:30 p. m.

The following men are to take part in our program:

Dr. Hugh Cabot, Ann Arbor, Dean and Professor of Surgery of the University of Michigan Medical School, will give a clinic on "Urology."

Dr. F. N. G. Starr of Toronto, Ont., Surgeon of Toronto General Hospital will give a clinic on "Cancer of the Stomach."

Dr. Kenneth G. Blackfan of Boston, Mass., Professor of Pediatrics and chief in Pediatrics at the Massachusetts General Hospital will give a clinic and medical aspect of "Poliomyelitis."

Dr. Edwin W. Ryerson of Chicago, Ill., an orthopedic surgeon will give a clinic and surgical aspect of "Poliomyelitis."

Dr. Jas. B. DeLée of Chicago, Ill., Professor of Obstetrics of the University of Illinois Medical School will give a clinic on "Obstetrics."

Dr. George Wilson of Toronto, will give a clinic on "Fractures."

Dr. Jacob J. Singer of St. Louis will give a clinic on "Tuberculosis."

Dr. Millard F. Arbuckle of St. Louis, Professor of Oto Laryngology at Washington University Medical School, will talk on the Relationship of Oto-Laryngology to General Practice.

A detailed program will be mailed each member of the Michigan State Medical Society as soon as they are completed.

Our last clinic is now history, but we still hear favorable comment. We are planning to make this one better, so mark the date on your book, and enjoy the day with us.

Chas. J. Barone, Secretary.

WAYNE COUNTY MEDICAL SOCIETY

Editor of The Journal:

On Tuesday night, November 8th at 8:15 p. m., Dr. H. B. Lewis, A. B., Ph. D., Professor of Physiological Chemistry, University of Michigan, will deliver an address in the Club Rooms, Macca-bee Bldg., 5057 Woodward avenue on "Recent Studies on the Role of Protein in Nutrition."

Academically, Dr. Lewis is exceptionally equipped. An A. B. and Ph. D. of Yale, he did graduate work in Physiological Chemistry at that University under Professors Chittenden and Mendel. He was assistant at his Alma Mater 1911 to 1913, instructor University of Pennsylvania Medical School 1913 to 1915, and from 1915 to 1922 was in turn associate-assistant professor and associated professor at the University of Illinois. Since then he has been Professor of Physiological Chemistry at the University of Michigan Medical School, where he has made an enviable reputation.

Dr. Lewis is a member of A. A. A. S., American Physiological Society, American Society of Biological Chemistry, and Experimental Society of Biological Medicine of New York. Nor is he a stranger in the literature of his specialty—he has had 60 papers, mainly on metabolism and sulphur and amino acids, published in American Journal of Biological Chemistry.

Wayne County Medical Society is fortunate in being able to have a physiologist of Dr. Lewis' caliber address its members. He has a spectacular platform manner—Billy Sunday. He speaks

entirely without notes and in a language that a freshman can thoroughly understand. The lecture will be of the greatest interest to the entire profession, and promises to be comparable to anything Wayne County Medical Society has heard in some time. A comparative stranger in local medical circles, Dr. Lewis' address will lose none of effectiveness on that account, rather should the members consider themselves fortunate in being able to make the acquaintance of an authority in such an important specialty.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

The following appointments to the State Board of Registration in Medicine were made by Governor Fred W. Green on October 8th, the term of the appointments being from September 30th, 1927, to September 30th, 1931:

Dr. Frank A. Kelly, Detroit; Dr. J. D. Brook, Grandville; Dr. S. Edwin Cruse, Iron Mountain; Dr. William H. Marshall, Flint, and Dr. A. B. Smith, Grand Rapids.

At the bi-annual meeting of the Board of Registration in Medicine, which was held at Lansing, Mich., October 12, 1927, Dr. George L. LeFevre, Muskegon, was elected President and Dr. Guy L. Connor, Detroit, was elected Secretary of the Board; terms to extend for two years from the date of the meeting.

DEATHS

DR. W. DONALDSON HART

Dr. W. Donaldson Hart of Almont died at his home, on October 9th. Dr. Hart was born in Almont, and after his graduation from a medical college took up his practice in this city.

DR. LEO H. HERBERT

Dr. Leo H. Herbert, 3964 Lafayette Blvd., Detroit, died September 24th of cerebral hemorrhages after an illness of only two days. Dr. Herbert practiced medicine for the past twenty-five years, and also was well-known as a chess player. He is survived by his widow and three children.

DR. LLOYD C. THOMAS

Dr. Lloyd C. Thomas, 644 Rivard Blvd., Grosse Pointe Village, died September 29th. He was a lifelong resident of Detroit and for twenty years a practicing physician. His death was attributed to heart disease. Dr. Thomas has been a member of the Michigan State Medical Society since 1912. He is survived by his wife, two sons and a daughter.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

KENT COUNTY

The Kent County Medical Society was especially honored by the visit of the Travel Club of the Surgical Section of the Royal Society of Medicine of the British Empire, which visited Grand Rapids on September 9 and 10. The Travel Club consisted of twenty-five distinguished surgeons, not only from England and the British Provinces, but also from Spain. The Section was touring Canada and the United States during the month of September. Their schedule consisted of Quebec, Montreal, Toronto, Chicago, Rochester, Grand Rapids, Detroit, Cleveland, Baltimore, Philadelphia and New York. The Kent County Medical Society arranged a program of entertainment and clinical demonstrations for the two days of their visit.

The following program was given:

FRIDAY, SEPTEMBER 9

Clinics at Blodgett Memorial Hospital:—

- "Demonstration of Plastic Surgery"—
Dr. F. N. Smith.
- "Thyroidectomy in Toxic Goitre"—
Dr. H. J. Vandenberg.
- "Osteomyelitis"—Dr. John T. Hodgen.
- "Operative Gynecology"—
Doctors A. M. Campbell and P. W. Willits.
- "Demonstration of Treatment of Intracapsular Fracture of Femur"—Dr. J. N. Holcomb.
- "Discussion and Demonstration of Modern Methods of Anesthesia"—Dr. Reuben Maurits.
- "Preparation of Diabetic Patients for Surgery, and After Care"—Dr. Merrill Wells.

Medical Clinic, Grand Rapids Clinic:—

- "Essential Hypertension"—Dr. William Northrup.
 - "Bronchial Asthma, Complicated by Lung Abscess"—Dr. William R. Vis.
 - "Cholecystography: Seventy Operative Cases"—
Doctors T. O. Menees, L. E. Holley and Wm. German.
 - "Cerebral Hemorrhage in the New-born"—
Dr. T. D. Gordon.
- Luncheon, Blodgett Hospital.

The following program was given in the evening, after a banquet at the Kent Country Club:

- Opening of Meeting by V. M. Moore, M. D.,
President, Kent County Medical Society.
- Address of Welcome—Hon. Edwin F. Sweet,
Formerly Assistant Secretary of Commerce.
- Response—A. H. Burgess, Esq., F. R. C. S.
- "Organized Medicine in America"—
F. C. Warnshuis, Secretary, Michigan State Medical Society.
- "Recent Advances in the Treatment of Pernicious Anemia"—Cyrus C. Sturgis, M. D.,
Simpson Memorial Institute for Medical Research, Ann Arbor, Michigan.

SATURDAY, SEPTEMBER 10

Clinic at St. Mary's Hospital:—

- "Prostatectomy Under Spinal Anesthesia"—
Dr. L. W. Faust.
 - "Thyroidectomy"—Dr. W. A. Hyland.
 - "Cholecystectomy After Drainage"—
Dr. W. H. Veenboer.
 - "Removal of Ovarian Cyst"—Dr. P. L. Thompson.
 - "Pathological Demonstrations"—Dr. G. L. Bond.
- Clinic at Butterworth Hospital:—
- "Two Cases of Haemolytic Jaundice"—
Dr. M. A. Miller.
 - "Chronic Arthritis, Amytoxyl Treatment"—
Dr. J. C. Foshee.
 - "Tumor of Brain, Operation"—Dr. A. J. Baker.
 - "Use of X-Ray in Diagnosis of Pregnancy"—
Dr. H. S. Collisi.
 - "Two Cases of Acrodynia"—Dr. F. J. Larned.

In the afternoons the members of the Travel Club and their wives were entertained with motor trips to the Getz farm and various resorts on Lake Michigan.

The Kent County Medical Society resumed their regular meetings September 28.

H. T. CLAY, Secretary.

GOGEBEC COUNTY

A paper on "Recent Developments in the Diagnosis and Treatment of Tuberculosis" was read by Dr. W. C. Reineking, Superintendent of the Gogebec County Tuberculosis Sanatorium, on September 9 in a regular meeting of the Gogebec County Medical Society. The paper was illustrated by X-ray stereopticon pictures and was probably one of the most interesting and instructive papers ever presented to this society. An invitation was submitted from the Gogebec Range Dental Association to attend a supper and lecture on "Mouth Hygiene and Preventive Dentistry," by Dr. Wm. R. Davis of the Michigan Department of Health on September 29 at the Curry Hotel in Ironwood. It was resolved to become associated with the Upper Peninsula Medical Association. President P. R. Lieberthal reported that in a meeting of the Board of Directors with representatives of the Rotary Club, the American Legion and the Iron National Bank it was decided to equip a nursery in the Grand View Hospital as a memorial to Dr. E. B. Stebbins of Ironwood, who lost his life July 15 through acute dilatation of the heart after being rescued from drowning.

Louis Dorpat, Secretary.

HOUGHTON COUNTY

I desire to submit report of regular monthly meeting of Houghton County Medical Society.

Regular monthly meeting of Houghton County Medical Society was held Tuesday evening, September 6th, at 8 p. m. at the Copper County San-

atorium, Houghton, Michigan, upon invitation from Dr. George MacL. Waldie, Physician in Charge of Sanatorium.

Dr. Alex B. McNab, of Baltic, Mich., who has been our Secretary-Treasurer since first of year, resigned, because of his leaving for a new location. His future location will be at Cassipolis, Mich., for the present.

Dr. T. P. Wickliffe of Lake Linden, Mich., was elected to succeed Dr. Alex McNab, as Secretary-Treasurer for remainder of year.

Other routine business being taken care of, the Society adjourned its business session and Dr. Waldie, presented several hundred X-ray slides of chest, demonstrating all stages of tuberculosis, and had three slides of "Carcinoma of Lung."

This scientific exhibit and talk by Dr. Waldie was enjoyed very much by all, and a vote of thanks was offered by Society for this unusual instructive lecture.

Following this exhibit and lecture, the Society was delightfully served a sumptuous lunch by the culinary department of the Sanatorium, and the opinion of every member is that if our lunch was a sample of what the patients get, all of them will soon be on the road to speedy recovery.

Next meeting will be held at Calumet, Mich.

Thanking you, I remain very truly yours,

T. P. WICKLIFFE, Secretary.

SHIAWASSEE COUNTY

The October meeting of the Shiawassee County Society was an open meeting addressed by Health Commissioner Dr. Guy L. Kiefer. The meeting was well attended by both the profession and laity, and the address was given an attentive hearing.

Dr. Kiefer took up the several departments of the State Health Commission, describing their several functions and importance. He also pointed out the many advances that had been made in the science and art of public health work. He stressed the importance of periodic health examinations, and strongly urged that they be carried out by all present, doctors as well as laymen.

Prophylactic inoculations he urged the importance of, explaining each in its order, especially stressing that pertaining to diphtheria, owing to the fact that Michigan has many more cases of this disease than some other states where toxin-antitoxin is used more generally.

At the close of the meeting an informal discussion was held among the wives of the doctors, lead by Mrs. Kiefer, as to the advisability of instituting a women's Auxiliary to the county medical society, but, notwithstanding the earnest presentation of the idea by the leader, no formal action was taken.

W. E. WARD, Secretary.

WAYNE COUNTY

Program for November, 1927

November 1

General meeting. Subject—What the General Practitioner May Expect from the Intelligent Use of Physiotherapy. Professor John S. Coulter, Northwestern Medical College, Chicago. (Representing Dr. Mock, Chairman of the Council on

Physical Therapeutics of the American Medical Association.

November 8

Medical Section. Chemistry of Digestion. Professor Howard Lewis, M. D., University of Michigan Medical School, Ann Arbor, Mich.

November 15

General Meeting. Surgical Treatment of Pulmonary Tuberculosis. (Illustrated with lantern slides). E. J. O'Brien, M. D., Detroit.

November 22

Entertainment. Annual Feather Party. Charge of Entertainment Committee.

November 29

Surgical Section. Differential Diagnosis of Common Pelvic Diseases. (Illustrated with lantern slides). C. Hollister Judd, M. D., Detroit.

EATON COUNTY

The monthly meeting of the Eaton County Medical Society will be held Thursday evening, October 27 at the Charlotte hotel. Dinner will be served at p. m., E. S. T. Dinner "Dutch".

Following this Dr. G. F. Bauch will address the Society on "Some Interesting European Clinics Observed while on his Trip Abroad."

This meeting promises to be very interesting and we will expect a good attendance. Don't fail us.

Very truly yours,

H. J. Prall, Secretary-Treasurer.

SEVENTEENTH ANNUAL CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

The Seventeenth Annual Clinical Congress of the American College of Surgeons was held in Detroit, October 3, 4, 5, 6 and 7. This is the first meeting of the college to be held in the motor city. There was a registration of over 2,600. Clinics were held daily in the following hospitals: Harper, Providence, Henry Ford, Children's, Woman's, St. Mary's Michigan Mutual, Jefferson Clinic, Grace, St. Joseph's Mercy (Ann Arbor), Detroit Receiving, University Hospital (Ann Arbor), St. Joseph's Mercy (Detroit), Evangelical Deaconess, Highland Park General.

The headquarters were at the Book-Cadillac and Statler hotels. The evening meetings and clinical demonstrations in the afternoon were held in Orchestra Hall. A large public health meeting of interest to the laymen was held in Masonic Temple on Thursday evening, October 6. The Annual Convocation was held in Orchestra Hall on Friday evening, October 7.

The following Michigan men were made Fellows:

John Alexander, Ann Arbor; Alfred L. Arnold, Jr., Owosso; Carl E. Badgerly, Ann Arbor; George J. Baker, Detroit; Robert H. Baker, Pontiac; George Van Amber Brown, Detroit; Thomas J. Carney, Alma; James D. Crane, Ishpeming; Albert S. Crawford, Detroit; George J. Curry, Flint; Hampton P. Cushman, Detroit; Edward C. Davidson, Detroit; Charles R. Davis, Detroit;

John Bosworth Dibble, Detroit; Robert Howard Ann Arbor; Isaac S. Gillert, Detroit; R. John Fraser, Battle Creek; Albert C. Furstenberg, Hardstaff, Detroit; Voss Harrell, Detroit; Wilfrid Haughey, Battle Creek.

The program for the evening meetings, held in Orchestra Hall at 8:15 p. m., was as follows:

Presidential Meeting—Monday, October 3rd

Address of Welcome—Alexander W. Blain, M. D., Chairman of Committee on Arrangements.

Address of Retiring President—Walter W. Chapman, M.D., F.R.C.S. (Edin.), Montreal.

Introduction of Foreign Guests.

Inaugural Address—George David Stewart, M.D., New York.

The John B. Murphy Oration in Surgery—Sir John Bland-Sutton, Bt., LL.D., M.D., F.R.C.S., London.

Lister Centenary—Tuesday, October 4th

Presentation of the Replica of the Lister Exhibit in the Wellcome Historical Medical Museum, London, Henry S. Wellcome, Esq., London.

Presentation of the Lister Tablet to the American College of Surgeons—Horace G. Wetherill, M. D., Monterey, California, in behalf of the Western Surgical Association.

Some Personal Recollections of Lord Lister—William Williams Keen, M. D., Ph. D., LL.D., F.R.C.S., (Eng., Edin., Ire.) Philadelphia.

Lister's Influence on Present Day Surgery—William J. Mayo, M. D., Rochester, Minnesota.

Remarks by Sir John Bland-Sutton, Bt., LL.D., M.D., F.R.C.S., London, England.

Wednesday, October 5th

Howard C. Taylor, M. D., New York—Treatment of Carcinoma of the Uterus.

Professor Gustaf E. Essen-Moller, Lund, Sweden—One Thousand Laparotomies for Myoma Uteri.

Professor S. E. Gammeltoft, Copenhagen, Denmark—Heart and Pregnancy.

John Osborn Polak, M. D., Brooklyn—Fibroids in Pregnancy and Labor.

Thursday, October 6th

C. Jeff Miller, M. D., New Orleans—Management of Chronic Endocervicitis.

Robert Gordon Craig, M.B., Ch.M., Sydney, Australia—Hydatid Disease of the Kidney.

George P. Muller, M.D., Philadelphia—Suppurative Diseases of the Chest.

Convocation—Friday, October 7th

Conferring of Honorary Fellowships.

Presentation of Candidates for Fellowship.

Presidential Address—George David Stewart, M. D., New York.

Fellowship Address.

Among the outstanding papers of interest was an address by Dr. W. W. Keen of Philadelphia, a nestor of American Surgery, one of the first on the continent to use Lord Lister's methods. Dr. Keen is now 91 years of age. His paper and wonderful voice was clearly heard by all in the Orchestra Hall.

The following Clinical Demonstrations in Surgery were presented:

Tuesday, 9:00 a. m.—Statler Hotel

David H. Ballou, M.D., C.M., Montreal—Diagnostic Value of Lipiodol in Broncho-Pulmonary and pleural Lesions.

Samuel Iglauer, M.D., Cincinnati—The Advantages of Brominized Oil in Bronchography in Tuberculous Patients.

Hubert A. Royster, M.D., Raleigh, North Carolina—Appendicitis.

2:30 p. m.—Orchestra Hall

George W. Crile, M.D., Cleveland—Cases of Gall-Bladder Disease.

Eugene H. Pool, M.D., New York—Lesions of the Large Intestine.

Hugh H. Young, M.D., Baltimore—Progress of Antisepsis in Urology.

Wednesday, 9:00 a. m.—Statler Hotel

Elmer Hess, M.D., Erie, Pennsylvania—Tuberculosis of the Kidney.

Leonard G. Rowntree, M.D., Rochester, Minnesota—Cardiovascular Complications.

Frank H. Lahey, M.D., Boston—Surgery of Gastric and Duodenal Ulcers.

2:30 p. m.—Orchestra Hall

J. M. T. Finney, M. D., Baltimore—Speaking of Operations.

Ernst A. Sommer, M. D., Portland, Oregon—Treatment of Acute Traumatic Joints.

John B. Deaver, M. D., Philadelphia—Ulcers of the Stomach.

Thursday 9 a. m.—Statler Hotel

Lilian K. P. Farrar, M. D., New York—Carcinoma of the Cervix and Applications of Radium.

Barton Cooke Hirst, M. D., Philadelphia—Different Types of Caesarean Section.

Vilary P. Blair, M. D., St. Louis—Ankylosis of the Jaw; Correction of the External Appearance, as Well as Ankylosis.

Robert S. Cathcart, M. D., Charleston, S. C.: Massive Sarcoma of the Breast.

CANCER SYMPOSIUM

Thursday 3 p. m.—Orchestra Hall

Report of Progress and of Prospect—Robert B. Greenough, M. D., Boston, Chairman of the Committee on the Treatment of Malignant Diseases with Radium and X-ray.

The Lead Treatment of Cancer—Henry J. Ullman, M. D., Santa Barbara, Cal.

Report on the Results of High Voltage X-ray Treatment in Cancer—William A. Evans, M. D., Detroit.

The Use of Radium in the Treatment of Uterine Pathology—Irvin Abell, M. D., Louisville
Histological Estimation of the Malignancy of Tumors—A. Compton Broders, M. D., Rochester, Minn.

Analysis of 1,500 Applications for the Saunders Cancer Prizes—George A. Soper, Ph. D., New York, Managing Director, American Society for the Control of Cancer.

SURGERY OF THE EYE, EAR, NOSE, THROAT
AND MOUTH

Tuesday, 9 a. m.—Statler Hotel

Don M. Campbell, M. D., Chairman

Symposium—Brain Abscess and Tumor.

Professor Dr. G. Alexander, Vienna, Austria;
Choked Labyrinth and Its Importance in
Diagnosis and Indications in Brain Tumor.

Joseph C. Beck, M. D., Chicago—Brain Abscess
and Tumor from the Standpoint of the
Otolologist and Rhinologist.

Alfred W. Adson, M. D., Rochester, Minn.—Brain
Abscess and Tumor from the Standpoint of
the Neurological Surgeon.

W. I. Little, M. D., Rochester, Minn.—Views of
Importance of Eye-Ground Examination and
Fields of Vision.

H. P. Cahill, M. D., Boston—Brain Abscess of
Otitic or Nasal Origin.

Discussion opened by J. Milton Robb, M. D., De-
troit.

Wednesday, 9 a. m.—Statler Hotel

George E. Frothingham, M. D., Chairman

Symposium—Standardization of Special Depart-
ments for Eye, Ear, Nose and Throat Pa-
tients in General Hospitals. See detailed
program under Hospital Conference.

Thursday, 9 a. m.—Statler Hotel

Burt R. Shurley, M. D., Chairman

Symposium—Plastic Surgery of the Face.

Vilray B. Blair, M. D., St. Louis—Plastic
Surgery of the Face.

Discussion by Walter R. Parker, M. D., Detroit;
Ferris Smith, M. D., Grand Rapids, and
Chalmers J. Lyons, M. D., Ann Arbor.

Edmund B. Spaeth, Philadelphia—The Use of

Fascia and Cartilage in Ophthalmic Plastic
Surgery.

Discussion by Harry Grandle, M. D., Chicago.
Ferris Smith, M. D., Grand Rapids—Plastic
Surgery of the Face.

Discussion by Robert H. Ivy, M. D., Philadelphia.
John M. Wheeler, M. D., New York—Plastic Re-
pair of Orbit and Eyelid.

Discussion by Joseph C. Beck, M. D., Chicago,
and Hermon H. Sanderson, M. D., Detroit.

C. D. Parfit, M. D., Gravenhurst, Ontario—
Tuberculosis of the Larynx.

Discussion opened by Guy H. McFall, M. D., De-
troit.

Friday, 9 a. m.—Statler Hotel

Walter R. Parker, M. D., Chairman

Symposium—Industrial Eye Surgery.

Sidney Walker, M. D., Chicago—Aftermath of
250 Intra-Ocular Steel Cases.

F. D. Gulliver, M. D., New York.

Plinn F. Morse, M. D., Detroit.

Don M. Campbell, M. D., Detroit.

Discussion opened by Howell L. Begle, M. D.,
Detroit.

The 10th Annual Hospital Standardization
Conference was also held on October 3, 4, 5 and
6, bringing a large number of superintendents
of hospitals, trustees, supervisors of nursing and
others interested in hospitals to Detroit.

Dr. Franklin H. Martin of Chicago, President-
Elect, said in a recent letter:

"The meeting has been the most success-
ful Clinical Congress of the American Col-
lege of Surgeons that we have ever had.
The meetings were handled under great
difficulty because of our widely separated
points of contact in our halls and in our
headquarters, but everything moved with per-
fect harmony."

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

A TEXT BOOK OF THERAPEUTICS, INCLUDING THE
ESSENTIALS OF PHARMACOLOGY AND MATERIA
MEDICA—Arthur A. Stevens, M. D., Professor of Applied
Therapeutics in the University of Pennsylvania. Seventh
Edition, entirely reset. Octavo of 758 pages. Cloth, \$6.50
net. W. B. Saunders Company, Philadelphia and London.

Carefully revised, rewritten in several sections,
new matter introduced and its former merit all
cause this to be a very satisfactory text and
reference work. Study and use of this book would
go far in aiding for more efficient therapy and
terminate useless prescribing of stock prepara-
tions.

AFFECTIONS OF THE STOMACH—Burrill B. Crohn, M.
D., Associate Attending Physician, to the Mt. Sinai Hos-
pital, New York City. Octavo of 902 pages with 361
illustrations, some in colors. Cloth, \$10.00 net. W. B.
Saunders Company, Philadelphia and London.

A new text dealing with a subject that has been
an ever important problem to internist and sur-
geon. Apparently this text adequately presents
the essentials requisite for a complete discussion
of stomach affections. It is well written and well

illustrated. Methods of examination and inter-
pretation of findings and symptoms are clearly im-
parted. It covers the definite affections of the
stomach quite satisfactorily.

APPLIED BIO-CHEMISTRY—Withrow Morse, Ph. D., Pro-
fessor of Physiological Chemistry and Toxicology, Jeffer-
son Medical College, Philadelphia. Second edition, revised
and reset with the co-operation of Joseph M. Looney, M.D.,
Assistant Professor of Physiological Chemistry, Jefferson
Medical College. 988 pages with 272 illustrations. Cloth,
\$7.00 net. W. B. Saunders Company, Philadelphia and
London.

Just what its title states. If one desires to un-
derstand the practical application of the facts re-
vealed this text will indicate the basic principles.

INFECTIOUS DISEASES AND ASEPTIC NURSING TECH-
NIQUE (A Hand-Book for Nurses)—Dennett L. Richard-
son, M. D., Superintendent of the Providence City Hos-
pital, Providence, R. I. 12 mo. of 182 pages, illustrated.
Cloth, \$1.50 net. W. B. Saunders Company, Philadelphia
and London.

An excellent nursing text and guide.

BRONCHOSCOPY AND ESOPHAGOSCOPY—Chevalier Jackson, M. D., Professor of Bronchoscopy and Esophagoscopy, Jefferson Medical College; Professor of Bronchoscopy and Esophagoscopy, Graduate School of Medicine, University of Pennsylvania. Second edition, reset. Octavo of 457 pages with 179 illustrations and 10 color plates. Cloth, \$8.00 net. W. B. Saunders Company, Philadelphia and London.

This second edition presents a working manual written by the pioneer and master of subjects. In a clear manner the fundamentals are imparted and procedures specifically stated.

CLINICAL DIAGNOSIS BY LABORATORY METHODS (A Working Manual of Clinical Pathology)—James Campbell Todd, Ph. B., M. D., Professor of Clinical Pathology, University of Colorado, and Arthur H. Sanford, M. D., Professor of Clinical Pathology, University of Minnesota (The Mayo Foundation); Head of Section on Clinical Laboratory, Mayo Clinic. Sixth edition, revised and reset. Octavo of 748 pages with 346 illustrations, 29 in colors. Cloth, \$6.00 net. W. B. Saunders Company, Philadelphia and London.

This can be appraised as probably the most helpful manual on laboratory methods in the diagnostic field. It is complete, explicit and thoroughly abreast of our present knowledge. We recommend it to our readers.

A TEXT-BOOK OF PHYSIOLOGY (For Medical Students and Physicians)—William H. Howell, Ph. D., M. D., Professor of Physiology in the School of Hygiene and Public Health, Johns Hopkins University, Baltimore. Tenth edition, thoroughly revised. Octavo of 1081 pages, 308 illustrations. Cloth \$6.50. W. B. Saunders Company, Philadelphia and London.

Justifying a tenth edition in itself is ample approval of this recognized text.

A TEXT BOOK OF HISTOLOGY—F. T. Lewis, Harvard, and J. L. Brewer, Harvard. Third edition, 545 pp. P. Blakiston's Son & Co., Philadelphia.

This histology text is arranged upon an embryological basis. It contains 485 illustrations with thirty-two in color. It is clear in description and covers the subject in a manner that is thorough and complete.

BLOOD PRESSURE: ITS CLINICAL APPLICATION—George W. Norris, H. C. Bazett and T. McMillan. Fourth edition, 386 pages. Lea & Febiger, Philadelphia.

A very clearly compiled discussion of this important clinical condition enabling one to arrive at safe and sound deductions as to blood pressure findings. Its value merits this fourth edition.

EMERGENCIES OF A GENERAL PRACTICE—Nathan C. Morse and A. W. Colcord. Second edition, 541 pages. Price \$10.00. C. V. Mosby Company, St. Louis, Mo.

The scope of the book is expressed in its title. The industrial surgeon will find in it much that is useful. An excellent manual for emergency operating rooms.

PHYSICAL DIAGNOSIS—Richard C. Cabot, M. D. Ninth edition, 279 illustrations, 436 pages. Price \$5.00. Wm. Wood & Co., New York City.

Revised and enlarged this ninth edition of a recognized text authority is a most valuable guide and assistant to the physician seeking to interpret physical findings. It is a text one must read and study and refer to frequently. It will not be found wanting. It will be received and appraised as a most acceptable authority.

MINOR SURGERY—A. E. Hertzler and V. E. Chesky. 438 illustrations, 565 pages. Price \$10.00. C. V. Mosby Company, St. Louis, Mo.

A quite satisfactory discussion of minor sur-

gical conditions with presentation of forms of care and treatment. It is a helpful guide to the interne and young practitioner.

CLINICAL CASE TAKING—George R. Herrinaun, Tulane University. 90 pages. Price \$1.50. C. V. Mosby Company, St. Louis, Mo.

An excellent guide that should be in every hospital library and interne's quarters. It tells how to make worth while clinical records.

PRACTICAL BACTERIOLOGY, BLOOD WORK AND ANIMAL PARASITOLOGY—A compendium for internists. By E. R. Stitt, Surgeon General, U. S. Navy. 835 pages. Price \$6.00. P. Blakiston's Son & Company, Philadelphia, Pa.

This is quite an exhaustive and complete manual quite abreast of the subject and imparting the practical and working facts. It should be of considerable value to the laboratory worker. For the physician compelled to do most of his laboratory work it will give him much assistance and indicate the steps in technic as well as interpretation of the tests.

GONOCOCCAL INFECTION IN THE MALE—A. L. Wolbarst, M. D. Cloth, 237 pages. Price \$5.50. C. V. Mosby Company, St. Louis, Mo.

A well presented discussion of the subject imparting the attitude of urologists as to modern ways of treating this venereal infection and its complications.

THE JOURNAL

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ON

MEDICAL SUBJECTS

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ORIGINAL ARTICLES

ACUTE TRAUMATIC INJURIES OF THE ABDOMEN

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BENJAMIN F. FREEMAN, M.A., M.D.

DETROIT, MICHIGAN

Traumatic surgery requires rapid, keen observation followed by definite decision. Immediately after the injury, the patient is, to a greater or lesser degree, in a state of collapse, whether this be due to abdominal contusion, hemorrhage, visceral injury, shock or fear. Astute action on the part of the surgeon may save the individual from impending death.

The treatment of the wound at this time is secondary. The vital organs must have attention, for surgical procedure in the face of systemic shock, which may be terrific, is not good surgery. This rule must also be observed in cases of hemorrhage. It is of no avail to enter the abdomen to control hemorrhage until the operator is reasonably certain that the patient's general systemic condition will warrant it.

The determination between extra and intra-abdominal damage is often extremely difficult and an analysis of such symptoms as the degree of collapse, pulse rate, absence or presence of blood in the vomitus, stool or urine, must be made. These symptoms are frequently delayed, especially if only a short time has elapsed between the injury and admission to the hospital. After emergency aid has been thoroughly applied and a cursory examination made, a rational rule to follow is to remove all patients suffering with abdominal injuries from the emergency room to a warm bed. There adequate treatment for combating shock is instituted and while this is being carried out, the surgeon

may continue his observations until a diagnosis is made or an exploratory operation decided upon.

The history, which in the non-traumatic acute abdominal conditions is of extreme importance, need not greatly concern us in traumatic cases, beyond a statement of the cause of the injury and the time elapsed since the injury. A rapid inspection will disclose an abdominal contusion, stab or bullet wound, or distended rigid abdomen. A blanched, collapsed, clammy-skinned individual in shock, or suffering from intra-abdominal hemorrhage, is better aided by immediate action. If, however, urgent attention may be delayed, then a systematic history is desirable.

An abdominal wall contusion may be localized or involve the entire belly wall. In severe cases the early symptoms of labored breathing, pallor, vomitus and pain, suggest intra-abdominal injury, but these symptoms subside with rest and treatment. Localized contusions are evidenced by discoloration of the skin or subcutaneous hematomas. If the collection of blood is extensive and fluctuating it may be drained by a puncture incision. However, if the area is small, the blood will be absorbed.

GENERAL APPEARANCE

The degree of shock and index of the severity of the intra-abdominal damage is, in the majority of cases, discernable from the individual's appearance. If the face is pale and drawn, the cheeks hollow, lips

dry, the pulse thready or weak, and beads of perspiration appear on the skin, it is evident that the injury has produced shock. This, however, does not necessarily indicate intra-abdominal trauma or hemorrhage, nor does an absence of the characteristic abdominal facies mean an absence of serious damage.

The pulse rate and character act as aids when applied to the general findings, but must not be considered of too much importance, for any experienced surgeon has encountered a rapid, full pulse in the presence of ruptured intestines. Frequent pulse reading is, however, a valuable informant. The respiration, in cases of abdominal hemorrhage, is rapid and shallow, likewise in intestinal perforation and acute distention of the abdomen.

ABDOMINAL EXAMINATION

Inspection of the abdomen will reveal any external evidence of violence and if such evidence is present, it acts as a guide to the viscera, which may be involved. Any local or general distention in the absence of external evidence demands more detailed examination. The respiratory movement of the abdominal wall must be observed. A limitation of motion may be due to intense distention caused by hemorrhage or early peritonitis caused by diaphragmatic injury or irritation. Abdominal rigidity indicates deeper injury. It is rarely due to contusion of the wall itself. The "board-like" abdomen, if general, usually suggests intestinal perforation and an accompanying early peritonitis. If the rigidity is local, as in the epigastric region or over the lower abdomen, the underlying viscus is the injured part. The site of deep tenderness in gunshot wounds of the abdomen is usually the place where damage has occurred. It is extremely essential that this be differentiated from superficial tenderness, usually located at the site of the entrance of bullet or knife wound. Free fluid or blood in the abdominal cavity does not cause the same degree of rigidity which is present in cases of viscus perforation. Clotting occurs very rapidly, intra-abdominally, and dullness which is encountered in the percussion, and which does not shift in change of position of the patient, is a very good differential sign that hemorrhage has occurred. The hemorrhage, however, should be evidenced by other symptoms than those elicited by percussion.

PAIN

This symptom is so inconstant that it often leads to considerable confusion. This is readily understood when we remember that the supply of afferent fibres to the viscera is very small in proportion to the supply to the surfaces of the body. After the abdomen has been opened, subsequent resection and suturing of the bowel may be carried on without anaesthesia. In the majority of instances, pain is general throughout the abdomen. It becomes a lead in diagnosis, only after the patient recovers from shock and has regained his mental equilibrium. Localization of pain is important and may act as a direct guide to the site of the injury.

In gunshot wounds of the abdomen pain is the very important factor. If the bullets have injured the solid organs (spleen, liver or kidney) the pain, as a rule, is very intense and at times almost unbearable. Perforations of the stomach and intestines can take place with very little or almost complete absence of pain. If, however, the stomach contents are liquid at the time of injury, one may get the same pain and general picture as that noted in ruptured gastric ulcers. Perforations of the stomach and intestines (traumatic) are quite often associated with practically no obliteration of liver dullness.

In gunshot wounds of the rectum and sigmoid, pain is referred to the pelvis and left thigh. It is not of a very excruciating character. In our experience the type of pain in injury to these portions of the bowel has no definite characterization. It has been our experience that injuries to the sigmoid and rectum are less serious than are those of the ascending, transverse, or descending colon. This is due to the fact that the pelvis can better take care of infection than the upper abdomen, and that the infection is walled off and localized in contrast to the dissemination that takes place when the other portions of the large bowel have been perforated. The intestines and omentum, as well as the pelvic organs in the female, tend to wall off the infection almost completely from the upper and middle abdomen. The type of pain as described by the patient may or may not be of any value to the surgeon. Some patients can tolerate a great deal more than others and what is pain to one is not to another. Patients have walked into our emergency room with the statement that "I have been shot", and complain of practically no pain. One in particular was shot twice through and

through the stomach and liver, and his only complaint was that the area over the steel bullets, which were subcutaneous, was very tender to touch. Other patients with only superficial injuries to the abdominal wall, are brought into the hospital with marked shock. It is often very difficult for the patient to definitely point out where the pain is located. The entrance of the bullet or stab-wound may be in one portion of the abdomen and the pain in another. The patient may move his hand about the abdomen in a very indifferent way when asked to point out the site of greatest pain. One case of a gunshot wound of the abdomen, with entrance one inch below the umbilicus in midline, complained of most severe pain in the left pelvic region and left thigh. On exploration, the bullet was found to have been deflected on entrance into the abdominal cavity and the sigmoid was the injured viscus. Pain from the small intestine is felt more frequently around the umbilicus, namely, the area supplied by the ninth, tenth, and eleventh thoracic nerves.

An almost constant finding in our cases has been a subnormal temperature at the time of admission to hospital. A great majority of the cases have come into the hospital in shock. A rise in temperature is not noted in most of the cases of ruptured viscus until peritonitis begins to develop. And, if this be a localized affair, very little absorption will be noted, with only a slight rise in temperature. *The absence of temperature is no criterion that some vital injury has not taken place.*

The greatest factors the surgeon has to deal with in determining what is to be done, as he sees the patient in marked shock, or otherwise, *is the lapse of time since the injury, the general condition of the patient, and his findings after a most thorough physical examination.* It is not unusual on auscultation of the abdomen, to find a complete absence of peristalsis, shortly after a gunshot wound. If the patient's condition warrants an operation at this time, it is highly advisable to operate at once. There is very little dissemination of the intestinal contents at this time and if an immediate and rapid operation can be performed, the life of the patient will often be saved. This absence of peristalsis is not to be confused with the similar condition resulting from a generalized peritonitis. But the latter can readily be ruled out by taking all the factors into consideration.

The question of a differential diagnosis

is of little importance in traumatic abdominal surgery. After the surgeon has convinced himself that the abdominal viscus has been injured, and the patient's condition permits operation, it should be performed without delay. Anything may be found in a gunshot wound of the abdomen. We have had many cases with penetration of the abdominal wall and no perforation of the viscus. While operating no attempt is made to locate or remove the bullets, unless they are found during the operation. Our object is to repair the damage done and "get out" as quickly as possible.

Injuries to the diaphragm will quite often cause considerable doubt as to whether or not an intra-abdominal injury has resulted. Retarded, labored, short, shallow respirations and rigidity of the abdominal wall with severe pain is frequently noted. An important physical sign is described by Vale, that aids in the differentiation of abdominal and chest injuries. He called our attention to the fact that "when the lesion is intra-thoracic, the rigidity of the abdominal muscles momentarily relaxes at the end of expiration. This is typical and is not present regularly at any other period of the respiratory excursion. When the lesion is intra-peritoneal, the rigidity is usually constant; but, if intermittent, it is not regularly so, as in the chest condition. When the signs are marked, there is also a pause often prolonged before the end of inspiration and the beginning of expiration, with a rapid excursion. This is best demonstrated in traumatic chest conditions. Here it is often greatly exaggerated and cannot be mistaken. The abdominal rigidity may resemble the characteristic board-like rigidity of perforated ulcer and at first one feels sure that serious intra-abdominal injury has occurred." In our experience, this sign has been an almost constant finding.

TRAUMATIC APPENDICITIS

This has not been recorded in our series of cases. Warbosse has contributed a few cases to the literature, but in none of our cases have we noticed this condition. It must be extremely rare, if it does exist, since more than 75 per cent of the cases admitted to the Receiving Hospital are traumatic in origin. Kelly-Noble state "that it has not been proved that trauma ever causes inflammation in a previous normal appendix." DaCosta states that "in most cases in which appendicitis seems to be produced by a blow the injury, at

most, simply 'awakened a sleeping dog', and stirred into acute inflammation an appendix already diseased. It is well to be skeptical as to external force causing appendicitis." Sprengel says that "there is no case in literature in which abdominal trauma is alleged as the cause that has been confirmed by scientific evidence."

Fluoroscopic examination is a routine procedure for every patient who has received a gunshot wound of the abdomen. This has often saved patients from being explored when, even though abdominal symptoms were present, the bullet was located extra-peritoneal.

PENETRATING WOUNDS

The most common symptom in the presence of an external wound is shock, and this presupposes internal hemorrhage to greater or lesser degree. If the wound is caused by a stab, the organs injured are directly under the wound and in contradistinction to a bullet wound. The fact to be determined is whether or not the underlying viscus has been reached or whether the wound extends only through the abdominal wall. In many cases, the omentum protrudes through the opening, in others there is excessive bleeding. Definite muscular rigidity is common with visceral injury.

A bullet wound presents greater problems and the amount of damage done depends on the position of the victim at the time of the shooting, whether the bullet was lead or steel, the angle from which the firing took place, and the proximity of the patient to the person shooting, etc., etc. The bullet may enter above the diaphragm and, striking a rib, may have been deflected and be lodged in the chest wall; it may have fractured the rib, and entered the lung, or, depending on the position of the victim or assailant, may have perforated the diaphragm, stomach, pancreas, etc. The degree of damage to the intestines is so variable that one may find a single perforation or many and, in addition, laceration of blood vessels, ureters, and what not. And when confronted with an exploratory laparotomy for a gunshot wound of the abdomen, the surgeon should be ready for almost any known surgical procedure. All operative interference depends on the reaction from the initial shock. *The site of the incision in stab wounds is usually near the perforation, while the incision in gunshot wounds should be made over the area of most intense rigidity and tenderness.* The hem-

orrhage may be active or the field of vision obscured by free and clotted blood. This must be sponged out rapidly and the course of it located, paying no attention to non-bleeding injured parts. Very frequently, the viscus, oddly enough, escapes injury and the missile has curiously searched out a large vessel beyond it, and this vessel may be the only part injured. When found, the open vessel is ligated or the area, if inaccessible, packed. This done, attention is directed to the perforation or lacerations of the viscus. An invaluable aid during the operation is the intravenous infusion of saline to maintain the blood pressure, the amount depending upon the quality of the pulse. Preparation for its use should be made before the operation is begun, attention being given to the apparatus, the position of the arm, and the temperature of the solution. Nothing is more distressing to the operator than the confusion caused by inadequate precautions regarding details. Direct transfusion of blood may be given at the conclusion of the operation and is indispensable in all cases of massive hemorrhage. It is much more advisable to give the intravenous therapy pre-operative than to give it at the time of operation if there are any dangers of bumping against the arm or of contamination of the sterile field. These dangers are great at the time of operation.

Intestinal perforation may be single or multiple, the bowel may be completely severed or there may be longitudinal rents. The small perforations are closed by a simple circular or overlapping fine catgut suture. If the perforations are grouped in an area or the bowel severed or irregularly lacerated, time can be gained by a resection of the area and closure by an end to end or lateral anastomosis. If the perforations are widely separated, the bowels must be systematically examined from beginning to the end.

Wounds of the stomach are treated in a similar manner. A perforation of the anterior wall suggests the presence of another in the posterior wall, with probable damage and hemorrhage of the pancreas. The posterior area is most rapidly reached through the anterior route. If an extensive gastric area is involved in the suturing, a gastro-enterostomy should be done, if the patient's condition permits.

Liver lacerations are found as frequent due to gunshot wounds as they are to stab wounds. The control of liver hemorrhage is often very difficult. The tissue is fri-

able and not amenable to ordinary suturing. The wide mattress suture approximates the edges more readily than other sutures, but must be tied with care. If this fails, then one must resort to packs, firmly and carefully placed.

Steel bullet wounds through the liver do not usually require suturing or packing. After the entrance of the missile, the wall collapses or the tract fills with blood which soon clots. Lead bullets will destroy the liver tissue very badly, and the hemorrhage encountered from this type of bullet is very profuse.

NON-PENETRATING TRAUMATIC INJURIES OF THE ABDOMEN

Without the guide of a perforating wound, the degree and extent of the hidden injury is often extremely difficult. These injuries are most frequently due to a blow, fall, crushing or jamming under the wheels of a vehicle.

The extent of the damage depends on the preparedness of the victim to receive the injury, as in the case of a prize fighter, whose muscles are at all times ready to receive a blow, the muscular development of the individual and on the severity of the impact.

Shock is evidenced by collapse, feeble pulse, shallow respiration and cold skin surfaces. Injuries to the upper abdomen cause more prolonged shock than injuries to the hypogastric area. Vomiting is frequent and if vomitus is stained or bloody, is suggestive of gastric injury. Rigidity is a most valuable aid and if progressive, a direct index to the degree of trauma.

The symptoms are most frequently due to hemorrhage and are most profound if the liver, stomach, or spleen are ruptured. In lesser degrees of injury, the shock is latent or secondary, as in mesenteric bleeding, or visceral injury. Here, the guiding light is increased by restlessness, thirst, rising pulse rate, increased pallor and pain.

If it has been definitely established that hemorrhage or peritonitis exist, laparotomy is imperative.

The kidney may be ruptured or contused. Blood in the urine, with pain and rigidity over the abdominal surface of the organ, are sufficient to call for interference.

Bladder contusion is frequent and requires rest and ice packs, but bladder laceration is not uncommon and demands early surgery. If the diagnosis is not certain, the bladder should be catheterized. Clear urine does not indicate that there is

no injury. Sterile boric solution may be instilled and the amount withdrawn measured. If this fails to assist, then the cystoscope should be employed. The urine may escape into the peritoneal cavity or into the surrounding extra peritoneal tissues.

ILLUSTRATIVE CASE

The history is that of abdominal pain below the umbilicus, no external evidence of violence nor memory of violence, but the patient describes attending a "drinking party" the preceding night. There is no rigidity and the catheterized specimen of urine is clear. Failure to void, occasioned another catheterization and again a clear specimen of urine. No shock or rigidity, but constant pain. Twenty-four hours later, a diagnosis of appendicitis and subsequent operation revealed a normal appendix and a two-inch laceration of the fundus of the bladder with no bleeding. It is a fair supposition that the young man had an injury during the "drinking party" probably when his bladder was distended.

PRE AND POSTOPERATIVE TREATMENT

Our pre-operative treatment has been to replenish the lost blood volume by intravenous injection of normal saline solution and glucose (5 per cent). From 1,500 to 3,000 c.c. of these solutions are given, and if the patients are in shock we give 25 units of Insulin for 1,000 c.c. of glucose (5 per cent) intravenously, thereby aiding the metabolism of the carbohydrate (glucose). Warm blankets and hot water bottles are used to maintain body heat. The foot of the bed is elevated about 12 inches. Morphine sulphate grains $\frac{1}{4}$ to $\frac{1}{2}$ are given, when the patients are restless or show evidence of shock or hemorrhage. Digalen N.L.X. is given as an initial dose if the patient's pulse is above 120. Smaller initial doses are given if the patients weigh less than 150 pounds. In these cases, we give M.H. for initial dose. An ampule of caffeine sodium benzoate and camphor-in-oil is given on admission if patients are in shock, and repeated if necessary.

Patients are covered with warm blankets at the time of operation and everything is in readiness before patient is taken to the operating room in order that no time will be lost while patients are being anaesthetized. These precautions are vital to the patient.

The operation is performed as quickly and carefully as possible. As the bowels are withdrawn for examination they are covered with warm sterile pads. These pads are replaced with others as they become cool. Immediately after the perforations have been sutured, the bowels are

reintroduced into the abdominal cavity to be kept warm by body temperature.

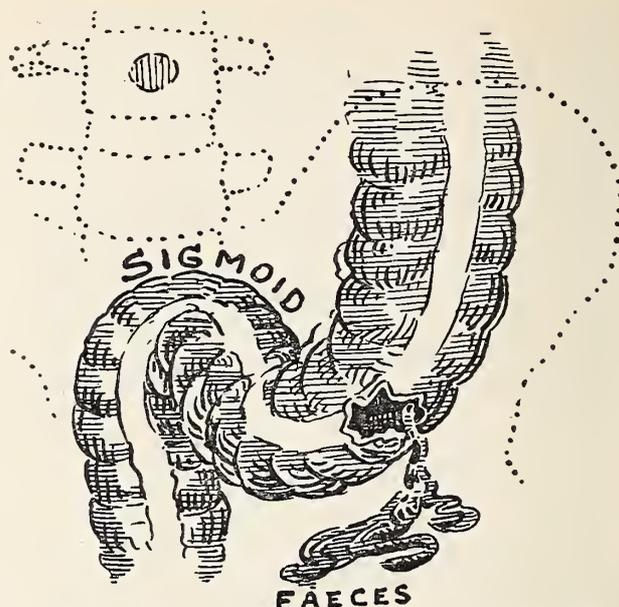
Injuries to the small bowel are closed with No. 000 Chromic single, and overlapped by a second layer of similar suture material. *Drainage is not instituted in small bowel perforation.* Our experience has taught us that the low grade bacterial infection of the small bowel can be readily taken care of by the peritoneum without fatal results. The opposite, however, is true of large bowel perforations. *Drainage is always instituted through the lower angle of the incision.* In urinary bladder injuries, it is our policy not to drain unless evidence of infection be present.

After return of patients to their wards, they are given normal Saline and Glucose (5 per cent) intravenously, the amount depending upon the extent of the hemorrhage encountered during the operation. If necessary, this treatment is repeated every six hours, the average patient receiving about 3,000 c.c. of fluids per day. A continuation of digalen, caffeine sodium benzoate and camphor-in-oil is continued as patients' condition demands. Morphine sulphate grains $\frac{1}{4}$ every four hours for the first day and then as often as is necessary. If a small bowel injury exists, the foot of the bed is elevated. If it is a large bowel injury, the head of the bed is elevated or the patient placed in a semi-Fowler's position, as soon after reaction as possible. Hot turpentine stupes are applied to the abdomen at the earliest possible moment. We attempt to treat the impending peritonitis "even before it begins". Food is withheld for at least six days, except liquids, no enemas or cathartics are given for at least a week post-operative. Rectal tubes are used if necessary. Frequent gastric lavages, using warm sodium bicarbonate solution, is instituted if patient vomits frequently. Marked relief and possible prevention of gastric dilatation is obtained by this procedure.

ILLUSTRATIVE CASES

I. Ruptured Sigmoid.

Male, 45, white, admitted two days after injury. He was riding in back seat of an automobile when it came to a very sudden stop. Patient was thrown violently against back of front seat. Three hours later he began to have terrific pain in pelvis and left thigh. Attributed pain to an old left inguinal hernia. On admission to hospital blood picture showed leucocytes 19,500, Polymorphnuclear Neutrophils, 85 per cent. Terrific pain over the left lower quadrant of abdomen. Passed blood from rectum shortly after admission. Operated through lower left rectus incision, a perforation of sigmoid about $\frac{1}{2}$ inch

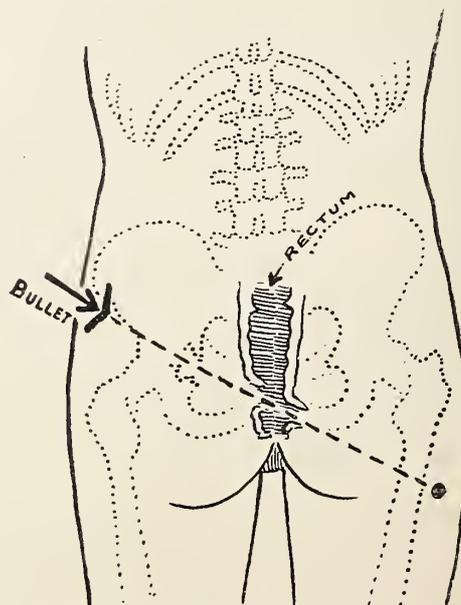


To illustrate Case No. 1—One-half inch rent in sigmoid—with no abdominal wound—caused merely by sudden jerk of automobile.

in diameter. Left pelvis filled with feces well walled off. Closure performed by using two layers 000 single chromic, and overlapping with a third layer of similar suture material. Drainage through lower angle of the wound. Recovery.

II. Perforation of the Rectum.

Male, 19, white, shot by a policeman, 32-calibre steel bullet. Entering left buttock, fracturing left ileum, perforating rectum twice, bullet finally lodged in lower third of the right thigh. Patient passed blood per rectum. Operated through left lower rectus incision 12 hours later. Two perforations about $\frac{3}{16}$ inch in diameter closed with much difficulty, using 000 chromic single. Two rows for each perforation. Drainage from lower angle of wound. Rectal tube inserted immediately, post-operative. Left in place three days. Complication Ischio-rectal abscesses. Patient re-

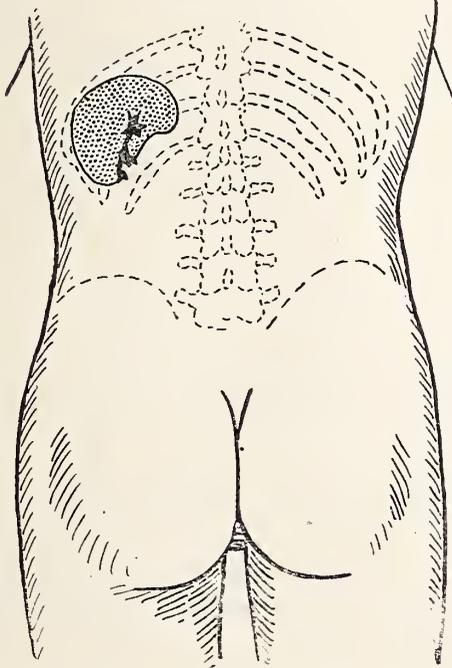


To illustrate Case No. 2—Bullet entering left buttock, fracturing left ileum, perforating rectum and lodging in right thigh.

mained in hospital 53 days. Discharged, recovered.

III. *Ruptured Spleen—Traumatic.*

Female, 25, white, hit by an automobile while crossing the street. Thrown against curb, landing on left side of chest and abdomen. On admission, complained of pain over left lower ribs. X-ray revealed fracture of the seventh, eighth and ninth ribs, anterior axillary line. Chest



To illustrate Case No. 3—Ruptured spleen with no external wound. Patient thrown out of automobile and landed against curb.

strapped, but little relief. Twenty-four hours later the upper left quadrant of abdomen became very tender, rigid and painful. Blood picture normal at the time of admission. Twenty-four hours later showed leucocytes 17,000, P.M. 88 per cent, R.B.C., 3,400,000, H.B. 45 per cent. Pre-operative diagnosis—ruptured spleen. Operated and spleen found to be badly lacerated beyond the hope of conservation. Splenectomy. Recovered.

III-B. *Ruptured Spleen—Traumatic.*

Male, 24, white, fell into open manhole, striking the upper left quadrant of abdomen against iron side of wall. Terrific pain, tenderness and rigidity in upper left quadrant of abdomen on admission. X-ray examination of ribs negative. Leucocytes 18,000, P.M.N. 86 per cent, H.B. 50 per cent, R.B.C. 2,950,000. Pre-operative diagnosis—ruptured spleen, traumatic. Operated. Spleen shattered. Splenectomy. Recovered.

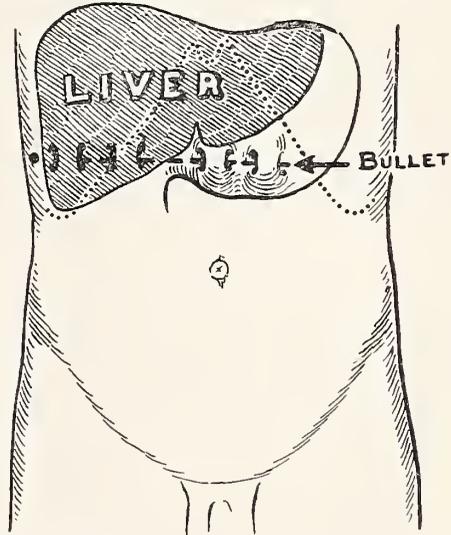
IV. *Ruptured Spleen—Gunshot Wound.*

Male, 33, white, shot by bandits. Patient coming up from basement, bandits at head of steps. Shot twice, in the left thigh, patient then turned and started running down steps and was shot a second time, entrance left lower chest back, bullet stopping in midline in front. X-ray negative for any chest pathology. Terrific pain in upper left quadrant of abdomen. Rigidity, tenderness, marked spasticity of muscles, leucocytes 19,800, P.M.N. 80 per cent, H.B. 65 per cent, R.B.C. 3,800,000. Pre-operative diagnosis—g u n s h o t

wound of spleen and transverse colon. Operated. Spleen torn in two places, transverse colon intact. Spleen packed and abdomen closed. Drain removed at the end of eight days. No complications. Recovery 15 days.

V. *Gunshot Wound of the Stomach and Liver.*

Male, 27, black. Shot twice, bullet entering upper left quadrant of abdomen, taking a course perpendicular to the long axis of the body. Bullets palpable, subcutaneous in mid-axillary line

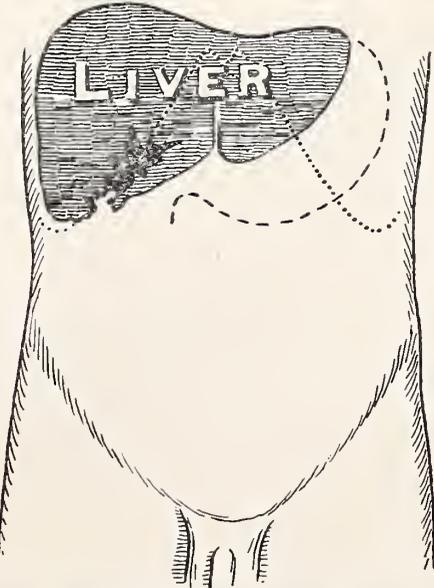


To illustrate Case No. 5—Gun-shot wound left upper quadrant of abdomen. Bullet palpable midaxillary line right side. Four perforations of the stomach and four of the liver. Liver perforated, but not lacerated.

right side. Patient walked into hospital saying he "had been shot". No symptoms. Operated. Found to have four perforations of stomach and four of the liver. Stomach perforations closed with 000 chromic single, overlapped with another layer of similar suture material. No hemorrhage from liver (steel bullets). Abdomen closed. Recovery 14 days.

VI. *Traumatic Rupture of Liver.*

Male, 29, white, truck loader. Standing with back to truck facing loading platform. Driver

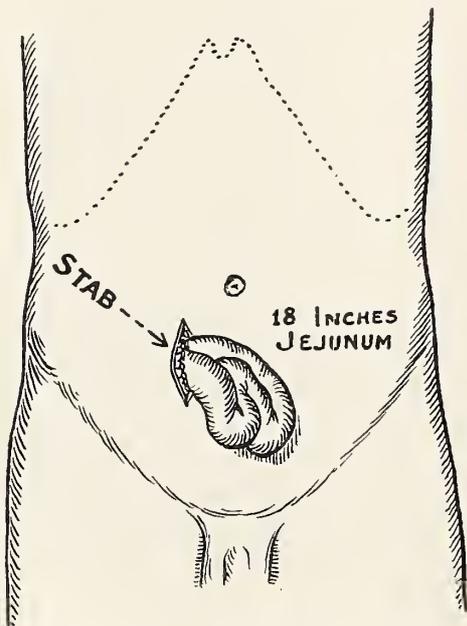


To illustrate Case No. 6—Patient crushed against platform. Liver badly lacerated.

backed truck up against platform, crushing patient. Admitted in marked shock. Abdomen "board-like in rigidity. Patient complained of excruciating pain over entire abdomen. Leucocytes 16,000, H.B. 30 per cent, R.B.C. 2,700,000, P.M.N. 88 per cent. Temperature 97.2 per rectum. Treated for shock. Transfused with 500 c.c. of whole blood, very little effect on blood picture. Operated eight hours after admission, abdomen filled with blood clots, liver very badly lacerated. Attempt made to suture, unsuccessful, packed. Patient died four hours later.

VII. *Stab Wound of Abdomen—Herniation of Small Bowel.*

Male, 33, negro, laborer. Stabbed in lower right quadrant of abdomen. Herniation 12 feet of small bowel. After being stabbed, patient walked one block, hailed a taxi, admitted to hospital in shock. Herniated bowel supported by



To illustrate Case No. 7—Stabbed in the lower right quadrant, eighteen inches of small bowel protruding, no perforation or laceration of viscera.

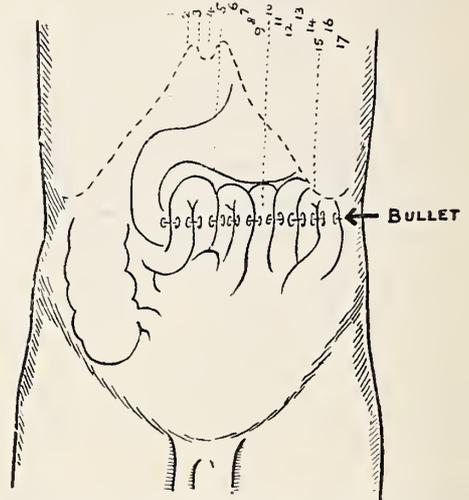
soiled hands and clothing. Given 2,000 c.c. of normal saline and glucose (5 per cent) with 25 units of Insulin. Two hours later taken to operating room, gas anaesthesia, bowels thoroughly washed with warm saline and no perforations noted. Reintroduced into abdominal cavity and abdomen closed tight. Complication—infected skin wound—discharge. Recovered 18 days.

VIII. *Stab Wound of Jejunum and Mesenteric Vessels.*

Male, 31, white, found in ditch by police. On admission pulseless, cold, clammy, deep shock. Given 2,000 c.c. normal saline and glucose (5 per cent) with 35 units of Insulin intravenously. Pulse reacted nicely. Eighteen inches of Jejunum herniated through stab-wound in abdomen. Four perforations of bowel, two of mesenteric, with severance of large mesenteric artery and vein. Perforations of bowel closed with purse-string sutures No. 2, using 000 chromic single suture material. Vessels sutured No. 2 p.c.g. Intestines thoroughly washed with warm saline and reintroduced into abdominal cavity and abdomen closed tight. No infection. Recovery.

IX. *Gunshot Wound of Ileum and Jejunum.*

Male, 39, colored, laborer, shot by a policeman. Steel bullet entered upper left quadrant of abdomen. Patient in marked shock on admission. Given 2,500 c.c. of normal saline and glucose (5 per cent) with 35 units of Insulin intravenously. Operated two hours later, 17 perforations of jejunum and ileum closed with 000 chromic suture



To illustrate Case No. 9—Gun-shot wound of left upper quadrant of abdomen, seventeen perforations of the jejunum and ileum.

material. Moderate amount of intestinal contents spilled in the peritoneal cavity. Abdomen closed tight, no complication. Discharged recovered 15 days.

X. *Traumatic Rupture of Duodenum.*

Male, 10, white, school boy. Was watching his father repair a Ford automobile. Body of car had been raised from chassis and while child was under, the chain slipped, crushing him between body of car and chassis. On admission, abdomen "board-like" in character, extremely tender on deep palpation in the upper right quadrant. Excruciating pain, temperature subnormal (97.8), Leucocytes 12,000, P.M.N. 82 per cent, H.B. 80 per cent, R.B.C. 3,700,000. Operated. Rupture of duodenum at head of pancreas $\frac{1}{4}$ inch in diameter. Rupture of omental vessel. Duodenum closed with 000 chromic single two layers, purse-string sutures. Abdomen closed without drainage. Recovery 13 days.

XI. *Omental Cysts and Liver Injury.*

Female, 8, colored. Struck by an automobile while crossing the street. Marked shock on admission, temperature 98 per rectum. Blood picture was normal. Severe tenderness in upper abdomen, no fluid wave, temperature rose to 103 two days later. Temperature was of a hectic character, fluctuating from 99 degrees to 104.6 degrees. Abdomen markedly distended and after enemas and hot packs, would become normal in size. Chest negative for T.B.C. Operated. Pre-operative diagnosis: Tuberculous peritonitis. Two large omental cysts, containing about four quarts of old bloody material was found. There was an opening between the greater and lesser omental sacs, the rising and lowering of abdominal distention due, no doubt, to the accumulation of bloody fluid and as pressure became high enough, the fluid was forced from the greater to the lesser cavity. Omentum densely adherent to liver which had been ruptured at the time of injury.

Rubber tube drains inserted into each cavity. Both cysts were lined with thin granulations, stomach formed anterior right wall, lower surface of the liver the upper wall. Bile discharge 16 days post-operative. Sinus finally closed, patient discharged—recovered 39 days.

For the past 18 months, we have had 280 cases of acute traumatic injuries to the abdomen. Of this number 84 were not operated upon. Forty-eight of these were injuries to the abdominal wall, and 40 were cases admitted either in severe shock or those who died shortly after admission. Of the 40 admitted and not operated upon, 10 lived and 30 died. The percentage of living totals 25.

Forty-eight cases of injuries to the abdominal wall were admitted, four of which were operated, and all lived, making a total of 100 per cent.

Thirty-one cases of stomach injuries admitted, 31 operated upon, and 15 lived, and 16 died, making a total of 47 per cent living.

Of injuries to the small bowel, ileum and jejunum, 68 cases were admitted, and 63 were operated upon. Thirty-one lived, making a total of 46 per cent. Liver injuries were 41 in number, 38 were operated upon, 18 lived and 23 died, making a total of 47.6 per cent. Spleen injuries numbered 7, all of which were operated, 5 living and 2 having died, making a total of 71 per cent. Of injuries to the large bowel, i. e., sigmoid, ascending transverse, and descending colon, 26 cases, all of which were operated and all of which lived, making a total of 18.5 per cent. Of the injuries to the sigmoid and rectum, 8 of the former and 2 of the latter, all of which were operated, 6 lived and 4 died, totalling 33.3 per cent living. The omentum was injured in 17 cases, all of which were operated upon, 10 lived and 7 died, making a total of 58.8 per cent. The mesenteric vessels were injured in 26 cases, 9 lived, and 17 died, making a total of 34.6 per cent. The kidney was injured in 3 cases, all of which were operated upon; 2 lived and 1 died, making a total of 66.6 per cent.

There was 1 case of bladder injury, resulting in death. In the 27 cases of no pathology, perforations, etc., all of which were operated on, 24 lived and 3 died. In these cases nothing was found in the peritoneal cavity in any case.

The percentage of "living", post-operative, is low, but it must be remembered that these cases were not complicated. Of the total of 280 cases, 268 were complicated, that is, more than one viscus being injured.

There were only 12 cases that were free of complications.

SUMMARY OF CASES IN THE PAST 18 MONTHS RECEIVING HOSPITAL

	Number of Cases	Operated	Lived	Died	Percentage Lived
Abdominal Wall	48	4	48	0	100
Stomach	31	31	15	16	47
Ileum	35	30	16	19	46
Jejunum	33	33	15	18	46
Liver	41	38	18	23	47.6
Spleen	7	7	5	2	71
Caecum	4	4	1	3	25
Ascending Colon	6	6	1	5	16½
Transverse Colon	10	10	2	8	20
Descending Colon	6	6	1	5	16½
Sigmoid	8	8	4	4	50
Rectum	2	2	2	0	100
Urinary Bladder	8	6	2	4	33⅓
Omentum	17	17	10	7	58.8
Mesenteric Vessels	26	26	9	17	34.6
Kidney	3	3	2	1	66⅔
Gall Bladder	1	1	0	1	0
No Pathology, Perforations, etc.	27	27	24	3	88½
Patients not operated	40	0	10	30	25
Number of Cases	280				
Number of Operations	353	i. e. more than one injury to abdominal viscera.			

EVALUATION OF INTELLIGENCE TESTS

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There has been much criticism of the so-called "intelligence tests" in recent years. This was perhaps to be expected. Like many innovations in medicine, the intelligence test filled a long-felt need; was enthusiastically adopted and used by many people without proper training. Beginning with the original Binet-Simon test, psychologists proceeded to flood the literature with a great number of tests, at first designed to be given to individuals, later developing into group tests. These were tried out on large numbers of subjects, often by poorly-skilled examiners. As a result, much unscientific work has gone into medical records, at times working an injustice to the subjects examined.

Eventually the lay press began to appreciate that there were often marked differences between an individual's intelligence rating and his actual ability. Perhaps nothing has drawn so much unfavorable criticism as the results of the tests on our soldiers during the World War. Psychologists had originally set the average adult

intelligence level at sixteen years; it was something of a shock to our national pride when the rank and file of Army recruits were found to have an intelligence level of fourteen years. Newspaper writers asserted, on the strength of these tests, that most of our soldiers were morons. Indeed, this was the conclusion reached by some psychologists and psychiatrists. There was no doubt of the scientific standing of the psychologists who originated the Army Alpha Tests, and the subjects tested came from all classes of society. Larger groups were tested than had ever been tested before. But these subjects, both as citizens and soldiers, showed a marked ability to "carry on" and there seemed to be no practical evidence of the two years difference between their fourteen-year old mental level, and the theoretical sixteen-year level of the psychologists "average adult."

And this is true in every-day life, as it was during the days of war, when every citizen's adaptive and adjustive abilities were tested to the limit. In practice we often see a rather striking difference between a man's intelligence quotient and his ability as a wage earner and citizen. There are thousands of morons in our population who are good citizens, and who never attract attention to themselves in any way. Many authorities have said that the hard labor of the world is mostly performed by individuals whose intelligence level is below twelve years. Yet the newspapers would have us believe that all morons are criminals or social liabilities.

How, then, do we explain the difference between the psychologist's estimate of an individual's mental age, and his real ability to adjust to society. The deficiency lies not in the test, but in the failure of the examiner to take into account the numerous factors which influence the subject's work in a given test; and still more important, the examiner's failure to study the subject's ability to adjust socially and economically.

Among the factors which influence any subject's rating in any mental test are; chronological age; race; grade reached in school; knowledge of English language; previous domestic and social environment; emotional and mental state during the examination; subject's personal intellectual interests; attitude and personality of examiner; care with which the technique of the examination is carried out; and lastly, examiner's personal equation in scoring the test.

I would not have the reader gain the

opinion that the fault lies entirely with the psychologists. Psychiatrists are often prone to accept at face value the results of these formal tests. Most of these tests are verbal based upon the subject's vocabulary and formal education, with moderate emphasis upon practical judgement, reasoning powers, and the other factors which combine to make up that indefinite entity known as "intelligence."

Realizing the limitations of language tests, the so-called performance tests have been devised. They are based upon the subject's ability to solve concrete problems with puzzles and construction work. Estimates of mental age obtained from such tests are of doubtful value. It is generally agreed that success in performance tests depends upon a special mechanical aptitude, and that the results do not represent the individual's general ability. Performance tests do have a distinct place in testing illiterate and non-English speaking patients, and in determining special abilities, but that is all one can say for them. I have seen subjects with a superior intelligence rating fail miserably on performance tests, and I have seen imbeciles with a mechanical bent score superior records on form-board tests.

To take up in detail the influence of various factors on the interpretation of test results, let us begin with:

CHRONOLOGICAL AGE OF SUBJECT

Most intelligence tests are devised for school children or adolescents. A few of them are adapted especially for adults. As a rule it may be said that the average vocabulary test is best adapted to children and young adults. Of course, the personal equation of the subject enters largely into the matter. It is my personal experience, in testing something like two thousand subjects, aged from five to sixty, that the subject who is more than thirty-five years old does not do well in formal tests. There are exceptions, of course; as in the case of alert, well-educated subjects who are constantly doing mental work. The only perfect score obtained in a new series of tests which I have been using recently, was made by a physician of fifty. But in the long run, few people over forty can do well in these tests, and I consider useless all tests made in subjects over that age.

RACE

This involves also the subject's knowledge of English, his environment, training and social conditions. It would seem per-

fectly obvious that an alien with a limited knowledge of English has little chance of making an average score in tests depending upon vocabulary and formal education, plus an ability to grasp the meaning of the question. But altogether too many examiners overlook this very important factor. I once examined fifty children in a Massachusetts mill town, who were several grades behind their fellow students of the same chronological age. All these children were Polish or Lithuanian, from non-English speaking homes. No effort had been made to give them an English vocabulary before they tried to master the intricacies of arithmetic and grammar. Naturally my advice was "teach them English and give them another chance before you pronounce them feeble-minded."

We read much of the influence of environment upon the development of character and morals. We hear little of its part in intellectual growth. A Lincoln may become an educated man, starting from a log cabin environment, but few of us are given either the intellectual endowment or ambition of a Lincoln. Only the really gifted man rises above the level of his early surroundings, unless someone provides a stimulus in the form of a push from the rear. Given two individuals of the same intellectual endowments, but starting one from a hovel, the other in a middle-class worker's home, at the end of a few years we will have a marked difference in the two, not only in character and morals, but also in the realm of intellectual attainment. One will have remained where he started, in at least ninety-five per cent of cases. The other will have improved his mind by reading after leaving school; he will know something of local politics, something of wage-scales, and other practical matters. The individual from the hovel will often know very little as to such matters. In the intellectual sphere, the difference in these two individuals will be especially marked in the acquirement of a vocabulary, which has much to do with failure or success in most of these formal tests. We must make allowance for the great differences in custom and culture among the many races contained in the American melting-pot. As an example, take the Negro. A large percentage of colored subjects have never completed public schools. Especially is this true of the Southern Negro. We are often called upon to test migrated Negro laborers, and rarely does one of them reach anything like

a sixteen year intelligence rating. Some years ago, Dr. John E. Lind made a comparative study of the mental powers of the white and colored races, and concluded that in the main, the colored race is at a lower cultural and intellectual level than the white race, that the rate of racial advancement is slower, and that the colored races will never attain such an amazing development as characterized our white American forbears. This conclusion will undoubtedly draw some challenges, by those who point out such colored geniuses as Booker T. Washington, but the existence of a few exceptions does not invalidate a rule. The point I wish to make is this; if a colored person with poor schooling can attain a formal test rating of twelve or thirteen years, he or she is not to be considered feeble-minded. And of course, it is a matter of common knowledge that from the stand-point of emotions, the Negro is essentially a child, with the volatile mood fluctuation of the child.

Other races show other factors to be reckoned with; in such matters as ethical discrimination we can no more compare an Italian with an Englishman than we can compare a monkey with a hen. The Italian with his quickly flaring passions, his "dagger sitting loosely in its scabbard" is totally unlike the phlegmatic Englishman who ponders before acting. And the child of a thieving gypsy is certainly not to be compared with the scion of an average family of settled habits, when it comes to such moral concepts as the right to keep what you find.

EXAMINER'S ATTITUDE AND PERSONALITY

These play an extremely important part in the subject's ability to do the test. In children, before starting tests, it is very necessary to establish rapport with the subject. The same is true of the nervous subject, or any patient to whom the atmosphere of the clinic is new. Above all we must not permit the subject to know the purpose of the tests. I will wager that the majority of my readers would do poor work in some tests if they realized that the results would be utilized to gauge their intellectual ability. The examiner must be firm but gentle. Some subjects think the tests are foolish. Tact is necessary to make them do their best work, and when the subject's co-operation is not of the best, we must make due allowance for this in computing the score. Some subjects are so eager to make a perfect score that they fail by reason of their nervous tension, as a golfer is apt to make a poor shot

when he knows that a par score depends upon that one shot. Few examiners realize the result that a brusque word or unpleasant word can have upon the patient's score. The examiner must not permit the examination to become a matter of mere routine, else he will become careless in his technique, inaccurate in his observations.

SUBJECT'S MENTAL STATE DURING EXAMINATION

As hinted above, it is necessary that the subject be quite at his ease. Often we are called upon to test a subject who is acutely psychotic, depressed, anxious, confused, excited, paranoid. All these conditions render a test invalid but this fact is often overlooked by the psychiatrist, especially those who have psychometric tests carried out as a part of clinic routine. All psychotic cases should have psychometric tests postponed until the patient reaches a more stable state. Among the non-psychotic are many who are unsuitable for intelligence tests, and psychiatrist should select the cases to be tested, rather than waste the psychologist's time with unsuitable cases. On the other hand, we sometimes give these tests to ascertain the degree of confusion, deterioration, or retardation present, and in such cases one should plainly state in the records that the examination was not made to determine mental age.

As an example of the futility of testing psychotic subjects, I cite the case of a prisoner, tested soon after arrest for a sex crime. The examiner was an alienist of repute, and he diagnosed the man as an imbecile. One week later, when the man had been removed from jail to hospital, I tested this man, no longer confused, and he easily scored an average adult rating. And this is a sample of what I have seen not occasionally, but with great regularity in certain clinics.

EXAMINER'S PERSONAL EQUATION IN SCORING TEST

In the vocabulary tests of the Binet-Simon examination, certain rules are laid down as to what sort of definition shall be accepted for a credit. But anyone who has ever used this test knows in poorly-read subjects, we often get definitions which are impossible to score accurately. The subject may give a definition which is essentially correct, but which does not conform strictly to the rules. In such a case, one examiner may give a credit, while another scores a failure. Such difference of opinion may be quite justified, but it may change the rating by as much as two or

three years. Personally, if a poorly-educated subject can use a test-word correctly in a sentence, I give him credit for a definition.

There are many other factors which influence a test score. They need not be considered here. I have mentioned only a few of the important factors, in order to make clear the purpose of this article. Not every subject can be accurately rated, even if he co-operates perfectly, and many expert psychometrists will frequently report that they can make only a rough estimation of a subject's intelligence rating.

Having made due allowance for the factors enumerated above, and having arrived at a score, it would seem that we are ready to diagnose the subject as being of average intelligence, dull normal, border-line, feeble-minded, imbecile, or idiot. Most examiners proceed to do this very thing. If the subject grades at ten years, they label him a moron; if he grades twelve to fourteen years, they call him dull normal or border-line. This is where examiners have failed to impress the public with the accuracy of their observations. They neglect to consider the personal of the subject; in particular, his economic and social adaptability. Dr. Walter A. Fernald, in discussing this point, was wont to use the following illustration. If an aboriginal Indian was brought into a city, we would not consider him feeble-minded if he did not know what a golf stick was, or how to run an automobile. We would say that he lacked the necessary experience and training. But if this same Indian had never learned to paddle a canoe or trail game, we would have good reason to suspect mental weakness. In other words, we take note of the individual's ability to adapt himself to the social environment in which he was raised. We do not expect a country boy to thread his way through city traffic. We do not expect the city boy to know how to hoe corn. The city boy appears comparatively worldly-wise in his knowledge of prize-fights, baseball scores, and the like; the country boy may not know these things, but he can distinguish corn from weeds, and milk a cow. A given intelligence test would perhaps favor the city boy, but the scores would not bear comparison. What we can compare in the two is the ability to adjust to his environment, and his judgment in practical matters.

When the Wassermann test first came into use, many physicians were prone to let the diagnosis of syphilis test entirely

upon laboratory examination, and to neglect the clinical examination of the patient. We now know that the Wassermann reaction is not infallible; this fact does not influence its sphere of usefulness. In psychiatry, the psychometric test should occupy exactly the same place that the Wassermann test does in internal medicine. Dr. Fernald had this idea in mind in his examination of the feeble-minded. Called upon by the State of Massachusetts to devise a form of examination for backward school-children, he devised the "ten point scale" which consisted of ten separate fields of inquiry into the subject. They included: family history; school progress; tests of actual ability in school work; practical judgment; economic efficiency; social and moral adjustment; and lastly, ability in the Binet and kindred tests.

In making a diagnosis of mental deficiency, Dr. Fernald desired a longitudinal section of the individual's history. To him, the fact that a subject had an unusual number of stigmata of degeneration was just as important as the fact that he had an intelligence quotient of fifty. Dr. Fernald's practical knowledge test is especially useful. A boy may have no opportunity to learn the date of the Civil War, but if he does not know where the ball park is, or the names of the main streets of his town, there is a deficiency somewhere.

Dr. Fernald used to lay great stress upon the subject's economic, social, and moral adjustments. He found that the feeble-minded showed a greater percentage of economic failures, and greater difficulty in social adjustment than the average person. Of course, individuals of average intelligence do have economic failure, and do have periods of social maladjustment; but not to the degree, or with the frequency that they are found in the mentally deficient. As an illustration of this argument, I wish to describe two recently-examined cases of men with the same mental age. One was diagnosed as feeble-minded, the other as psychopathic personality.

1. An American of forty-one, farmer and laborer. Barely attained fifth grade at age of fifteen years. Worked steadily, earned good wages, but his marital disasters have kept him poverty-stricken. He is rather over-sexed. He has had three wives in three short and stormy married careers. Each wife divorced him, taking whatever property he had. As an index of his judgment, we find that even after he was divorced from these women, he took up with them for brief periods to satisfy his sexual cravings. When his last wife left him, he owed her father

one hundred dollars. He was afraid that his wages would be garnished by his father-in-law, who was also in debt. The father-in-law made this proposition to the patient: "I am in debt. My barns are fully insured. A fire in one of them would get me out of debt. If you can take a hint, I will cancel that debt you owe me."

The patient took the hint and set the fire. On the same night he committed the act, he had an engagement with one of his former wives. He told her what he had done. Some months later she desired revenge upon him, and told the authorities what she knew. A large number of incendiary fires had occurred in the vicinity. The patient was arrested, confessed firing his father-in-law's barn, and was given a sentence of twenty to forty years. The prison environment produced a brief prison psychosis, which promptly cleared up when he was sent to the Ionia State Hospital.

In a long series of intelligence tests he was found to have a mental age between twelve and fourteen years. In performance tests he consistently obtained superior scores. However, his personality is childish. He weeps easily, and has no appreciation of the seriousness of his crime. He thinks only of the severe punishment, which he believes he does not deserve. He tells a long story of troubles, which shows that he has always adjusted inadequately. Whenever confronted by trouble, he takes the easiest way out, regardless of consequences. Despite his border-line score in formal tests, he is a child in moral judgment, planning ability, and social adjustment. The test scores mean very little in this case; merely that he has a fairly retentive memory. I diagnosed him as a middle-grade moron, because all his adjustments seem to take place at this level.

2. James K. is Scotch-Irish, aged thirty-five. His ancestry is unknown and his early history is clouded. He has led a wandering existence as a laborer, machine hand, hospital attendant. He married about five years ago, and year ago brought his wife to a large Michigan city. Because of his pathological lying, we do not know exactly what occurred after this. His married life has been peculiar in this respect; he claims to love his wife dearly, but states that there have been no marital relations during the past two years. He gives as a reason his religious belief that sexual intercourse should occur only for the purpose of procreation. This statement is incongruous in the face of his personal make-up. He is rough-and-ready, illiterate, with total lack of the finer moral qualities, and probably has no religious convictions of any kind.

A few months ago his wife deserted him, and he asserts that this caused a mental upset. He set a large number of fires in two cities, including a large hospital, doing thousands of dollars worth of damage, and endangering the lives of hundreds of patients. During these fires he was conspicuous rescuer of the people whom he had endangered. He was arrested some months later, and made a full confession, pleading mental irresponsibility at the time of his crimes. He was taken at his word, and sent to the Ionia State Hospital.

At once he began a weird series of stories, contradicting himself frequently, and showing the picture of the pathological liar.

In a series of intelligence tests he rated from twelve to fourteen years. He did well in performance tests. His attitude contrasts markedly with the first case. He alternately cringes and makes threats. He tells a different story every day, evidently hoping to find one that we will be-

lieve. He is not a suave Ananias; his lying is not consistent; his stories do not dovetail. When he does admit his crimes, he adduces revenge as a reason, claiming to have been wronged by owners of the buildings he fired. My diagnosis in his case is psychopathic personality, pathological liar, with strong paranoid trends. This latter part of this diagnosis is based upon reactions observed here. His methods of adjustment are markedly different from Case 1.

The first patient set fire because it was suggested to him by a stronger personality, and because of the press of circumstances which he has not the stamina to face. All his life he has allowed his impulses to lead him; he is controlled by his primitive desires in a perfectly childish fashion.

Case 2, while never a social asset, showed his maladjustment in a different way. His past history is that of a man totally selfish, abusive to his wife, neglecting his child, and discharged from nearly every job he ever had, not because of incompetence, but because he refused to obey rules or take orders. After arrest, Case 1 meekly confessed and went to prison. The second man proceeded to utilize his past experience as attendant in insane hospitals in an attempt to procure a light sentence. Finding himself in an insane hospital, he uses a pathological active imagination in trying to confuse the physicians with conflicting stories. He has also developed a paranoid trend which gives him the comfort of self-justification for his acts, giving him a mental comfort which is denied to the first man.

Therefore, while these two men have almost exactly the same mental age, I think the first man is feeble-minded and the second man is not. If space permitted, I could give further details of their personal lives to illustrate my point.

The sum and substance of this paper is contained in the statement that many factors influence the subject's ability to pass formal mental tests, and that the interpretation of test scores must not be too literal; that it depends upon many conditions, including the subject's ability to adjust economically, socially, and morally to the environment in which he lives. Examples are given which show that a given mental age may indicate mental deficiency in one patient, while in another it may mean only mental instability.

A plea is made to consider intelligence tests as laboratory examinations, and to evaluate them as any other laboratory measure.

DACRYOCYSTITIS

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In the great scheme of nature to protect a more delicate organ from a less tender one, or in its provision to prevent troublesome inflammation of one part extending to another part of finer texture and service, we have not considered the part the lachrymal sac may play as a barrier between the coarse grained nose and the finer grained eye. Between the more often infected nasal chamber, and the less often infected conjunctival chamber. Between the heavyweight germ laden secretions of the nasal mucosa and the lighter secretions of a tear washed conjunctiva. Between a greater abuse resisting organ, and one whose power of resistance is less. Between two organs that are wisely connected but of a totally different physiology.

In the normal lachrymal passages there are always some secretions in transit, tears being the large part of these secretions. The sac, it seems to me may act as a reservoir for these secretions, and in turn these secretions in the sac can act as a barrier to the upward passage of air or bacteria, or stop an inflammation that is ascending these passages by continuity of tissue.

If this assumption is true, and I see no reason why it is not a fact, it seems very obvious that any treatment of any pathology of this part must wisely be a treatment that will retain this physiology.

While it may be possible that tears may enter the puncta, especially the lower, and flow down through the passage by their own weight, it is more probable that all of the fluid passing through the channel does so in an exclusive fashion directed by the musculature and elasticity of the parts.

In the act of winking the palpebral fibers of the orbicularis arising from the internal palpebral ligament puts that ligament on the stretch, pulling it's outer end and the subjacent sac away from their attachments to the lachrymal bone, thus causing a tendency to a vacuum in the sac. Shortening the distance from the puncta to the sac, or from the lacus lacrymalis to the sacus lacrymalis, and squeezing the sac is accomplished by the Tensor tarsi (Horner's muscle). We have therefore a propelling as well as a suction force that guides the tears into the sac. In the sac the flow of tears becomes more passive and probably depends upon the elasticity of the sac to further their passage through

the narrow duct, or it may be that the elasticity of the sac may be a means to accomodate a spasmodic inflow of tears to a steady and continuous outflow.

If this assumption is true, and most of our writers agree that it is, then we can realize the importance of retaining the anatomical integrity of the canaliculi and their physiology.

Dacryocystitis is a local name given to an inflammation localized along the lacrymal passages. It is the succession of changes that occur in the living tissues of these parts in response to an irritant and whether we find it as a so called chronic catarrhal inflammation, or an acute phlegmon or abscess, depends upon the stage which this succession of changes has reached, modified by the resistance of the individual structures and the virulency of the irritant.

While some writers speak of this inflammation being different from other inflammations in that an acute Dacryocystitis always follows a chronic dacryocystitis rather than the chronic following the acute as in most inflammations, the changes occurring in the tissues must be the same as the changes occurring in any tissue of like anatomy in their response to an irritant.

Inflammations never come to any tissue until the normal physiology of that tissue has been overcome or overwhelmed by the irritating or destroying influence.

The influence in the very large majority of cases of dacryocystitis is an extension of a rhinitis through the nasal duct which either obliterates the canal or closes it sufficiently to overwhelm the power of the sac to properly empty itself. If the dam is complete the sac then becomes a septic tank into which pour the conjunctival washings of tears, bacteria, mucus, foreign bodies, etc., to undergo putrefaction with its consequent abscess formation and other changes, depending upon the nature of the pathological contents. In one case granulation tissue with deposits, another with stricture, another with purulency alone, and another with all the results of inflammatory change.

A trachomatous inflammation or a tubercular inflammation of the conjunctiva may extend to the sac. A foreign body may also cause an inflammatory action with calcerous deposits. Ball in his latest work states, "The lodgement of cilia and other foreign bodies is probably more common than has been supposed." But, other than Trachoma, the sac might be

immune to these descending insults if the nasal ducts were perfectly normal. In other words ascending inflammations and irritations may alone cause a dacryocystitis, while descending inflammations and irritations may not be so insulting to the sac unless accompanied by some nasal duct pathology.

This paper is not intended to take up the subject of Traumatic insults or anatomical anomalies.

Dr. Campbell, of Detroit, has shown by X-ray plates that there are many anomalies, the chief one being that the duct comes off the side of the sac instead of at its lowest point.

No one curative process may then be successful in all cases, but as in all inflammations everywhere, prevention, rest and drainage are the factors of most importance.

Considering then the etiology of dacryocystitis from its various angles, it would seem that we should place the chief indictment at the door of the nasal duct and hold it responsible for the trouble, and direct our curative efforts toward relieving this part of the lacrymal apparatus of its pathology.

I know that as Thompson says, "Many of the contributions to the treatment of this disease in the late past have shown that the workers along this line have directed their energies to sac destruction, or removal, or horizontal drainage into the middle fossae of the nose rather than to the restoration of the normal function of the canaliculi sac and duct." Thompson also expresses the opinion that all methods of treating dacryocystitis that were dependent for their success on the complete destruction of the sac and duct are more or less faulty.

Zeigler has very frankly stated that dacryocystorhinostomy by any method whatsoever has by no means solved the problem, and that extirpation of the sac while giving relief has too many failures and too many complications to be the remedy of choice. He puts to us this pertinent question, "Why seek a lateral drain when nature has provided a vertical drain which simply needs enlargement by dilation?"

After a great many years of experience Zeigler continued to have faith in his method of rapid dilation as being the most plausible remedy and the one to give the greatest success.

The thing to be accomplished by any operation, anywhere, it seems to me, is to

arrest the progress of the disease and restore the part to its normal physiological activity.

In looking over the entire display of operative procedures for the relief of dacryocystitis we find but two that approach our ideal of overcoming the trouble and maintaining the physiology of the parts. Both of these have their faults. The operation as devised by Thompson slits the canaliculus, cures the granulation tissue but does not dilate the duct to its fullest extent to provide for the immediate increased amount of drainage. The Zeigler method overstretches the canaliculi but does not curette the granulation tissue or pyogenic membrane of a purulent sac.

It seemed to me that a combination of these two operations ought to give us good results. Thus about eight years ago I began dilating the canal to its maximum, using a Theobald number 14 or 16 or 4 to 4:5 m.m. at the same time curetting the sac and duct if need be with dental burrs, to the very happy satisfaction of the patient and myself, except that slitting the canaliculi in order to introduce the large probes did not fulfill our ideal of preserving the function of the part.

About two and a half years ago I went into the dead room and found that I could make a counter puncture into the dome of the sac and introduce the probes through this opening, anticipating that the opening would heal in vivo and leave the entire apparatus in its normal physiology. My expectations have proven true in the several cases that I have done. My cases have all been chronic purulent cases through which a number 4 Bowman probe could be passed to the floor of the nose.

Malformed cases where the duct comes off the side of the sac may not be applicable to this method. I believe that a larger probe than Bowman's number 4 ought not to be passed through the canaliculi. Even a number 4 may tear the mucus membrane and produce scar tissue. I have seen a number 5 Bowman stretch a canal beyond its power of resiliency.

Having ascertained that the canal is patulous to a number 4 Bowman I pass a number 3 or 4 probe, or other instrument, through the lower canaliculus and have it held by an assistant in the horizontal plane. I then pass a double edged curved knife into the dome of the sac from a point, a wrinkle in the skin, about 8 m.m. above the upper border of the tendon oculi, pushing it down behind this tendon until it touches the probe held as a guide and

which we know is in the sac. When we feel or hear the two instruments together, we know that the knife and consequently the opening that we are making are in the sac. I then withdraw the knife and insert a probe through the knife wound, beginning generally with one of the smaller Theobald and going up to number 16 unless I find a smaller one fracturing the canal wall. I then gently curette the sac, if it has contained pus, also the canal if I find granulation tissue or calcareous deposits. I then apply iodine to the entire field.

I have found it useful to mark the forehead with a pencil along the line of the upper part of Bowman probe that has been inserted through the duct, thus giving exact direction to the large probes and curettes. There was considerable hemorrhage on the introduction of the knife in three cases only. In the others the hemorrhage was negligible.

In this operation we avoid important anatomical structures. The skin above the ocular tendon is very thin and there is very little fat or fascia beneath it.

The corugator supercillia has its attachments above. The levator labii superioris alaeque nasi and pyramidalis nasi are internal to the incision.

The pulley of the superior oblique is far above and behind our field, and the fibers of the Tensor tarsi (Horner's muscle) are forward and outward from the sac and hug closely to the lacrymal canals.

The reflected aponeurosis of the tendon oculi does not extend above the tendon. Its direction is downward from the tendon and backward toward the ridge of the lacrymal bone, from which point the tensor tarsi muscle begins.

Most of the vessels and nerves are avoided but the branches of the angular artery and vein that go to the sac may be injured. There may also be a plexus of veins around the upper part of the sac which may be injured.

The incision is made in a wrinkle of the skin and parallel to the fibers of the Orbicularis and is best made 5 to 8 m.m. above the upper border of the tendon.

In most of the cases I use a simple dressing of sterile vaseline and suture the wound with one strand of horsehair. In all cases however no visible scar is left after two or three weeks time.

The point I want to stress is that this procedure retains the normal physiology. The success of the operation in relieving trouble lies I believe in the maximum dila-

tion, the curettage of calcerous deposits if any, and of the granulation tissue and pyogenic membrane, and for the time being, the sterilization of the parts with iodine.

It must be remembered, however, that no surgery of the lacrymal apparatus should be advised until paliative measures such as the passing of small probes, the instillation of suitable remedies and the gentle syringing of the passages with mild anti-septic solutions over a reasonable length of time has failed to give results.

If my experience of maximum dilation of the duct in the manner described is justified by the same experience in your hands, then I am frank to believe, that any surgery that disturbs or destroys the natural physiology of the parts or the continuous or intermittent probing for this trouble over a period of years is quite unjustifiable in the large majority of cases.

TUBERCULOUS LARYNGITIS—ITS TREATMENT WITH CHAUL- MOOGRA OIL

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Probably no condition in the field of otolaryngology has been more neglected in the past than that of the tuberculous larynx. While the laryngologist is to blame to a great extent for this state of affairs, he is not wholly responsible, for these cases are almost always under the care of the internist or general practitioner, and any throat involvement is often considered simply a part of the general condition and nothing special is done about it. It is astonishing how frequently these laryngeal cases are disregarded even in many of the sanatoriums throughout the country. Existing conditions on this point were brought to light by Mullin¹ in 1920, who sent a questionnaire to all the tuberculous sanatoriums listed in the directory published by the National Association for the Study and Prevention of Tuberculosis. To the question, "Do you accept cases, if known, of laryngeal tuberculosis at your institution?" twenty-one per cent answered "No." To the question, "Do you have a trained laryngologist in attendance?" sixty-one per cent answered in the negative. To the third question, "Are all your cases given a systematic routine examination of the ear, nose and larynx on admission and at certain stated intervals during their residence?" thirty-five per

cent replied that they did not, and some volunteered the information that they had this examination made only when symptoms demand it. To the last question, "Is this examination made by a laryngologist, or by the regular chest man in attendance?" twenty-six per cent answered that they were made by a laryngologist and seventy four per cent that they were made by the chest man. Some even answered that they could see no reason why a trained laryngologist should be in a tuberculosis sanatorium, stating that the attending physician gets an immense amount of experience covering this kind of work and is as well fitted to treat these cases as a laryngologist.

This is a deplorable state of affairs and as Mullin¹ states in his deductions it simply prevents the making of an early diagnosis, and it drives more and more patients, who should be in bed carrying out the rest cure, to the private office of the physician or to the dispensaries. Mullin¹ concludes that the one thing lacking among laryngologists is the lack of interest which they display toward this disease. Some laryngologists state that they see very little tuberculous laryngitis in their part of the country which only means that they are not making the diagnosis. Some are afraid of becoming infected themselves while examining or treating the condition, while others say they do not care to treat this disease, preferring to send all such patients to a sanatorium.

Larue² stresses this phase of the situation by stating that there are three conditions which may be listed as a cause for this lack of interest. They are: inadequacy of early diagnosis, incurability, and indifference of laryngologists. Little need be said regarding the importance of an early diagnosis, for, in laryngeal tuberculosis, as in everything else, the end result depends upon starting treatment early in the course of the disease. That so many of these cases are neglected early and are usually seen by the laryngologist only after they reach the last stages is one of the reasons for the existing lack of interest in such cases. In order to detect laryngeal involvement at the proper time it is highly important that a careful examination be made by a laryngologist in all patients with pulmonary tuberculosis as soon as they come into the hands of the internist or general practitioner and again routinely at regularly stated intervals. That the internist should be familiar with the early signs of throat involvement is

extremely important and he should be constantly on the watch for these signs, but for him to assume all responsibility for making an early diagnosis of extension into the larynx is demanding far too much from one who is already overburdened in these days of modern medicine.

Another factor which has hindered progress in the treatment of these patients is the general feeling that they are incurable. This, as mentioned above, has been mainly due to the failure to diagnose these cases early. Most of the cases treated have been far advanced and the varied and time-honored methods of treatment have been of little or no avail in many instances. The cause for this general opinion lies to a great extent in the fact that in many of the great teaching centers tuberculosis of the larynx is given but little attention. It is true that many of these centers are located in regions where the disease is not very prevalent but this should be no excuse for not stressing the importance of so serious an affliction. Medical students are frequently led to believe that the treatment is merely general and that a pad and pencil is all that is needed so far as the throat is concerned. The little or no attention given the condition by some of the recent text books on otolaryngology is amazing.

Larue² also cites as a retarding factor in the progress the notion held that tuberculous persons are regarded as undesirable patients on account of the danger of infecting the physician. Proper care and gentleness in administering local treatment will do much to prevent coughing. A plate glass shield suspended between the face of the examiner and the mouth of the patient is an excellent method of protection and is widely used. It has been used by the writer in sanatorium work with great satisfaction. In treating bed patients or patients in the homes one should use gauze masks for protection.

As regards the treatment, it is not the intention to discuss or even enumerate all the various methods used. That there are so many in number would, in itself, indicate that none were entirely satisfactory. First in importance is the general care and hygiene which is so essential in the management of pulmonary cases. Since the laryngeal lesions are always secondary to lung involvement it is readily seen that no case should be handled by the laryngologist alone, but always in conjunction with the internist. It cannot be doubted that rest is the most valuable therapeutic measure and some really wonderful re-

sults have occurred by the use of silence alone. The pad and pencil method as employed in various institutions is exceedingly important, but should be supplemented in many instances with some local medication. There should be a uniform rule in all cases that complete silence must be practiced at all times, regardless of the other method used. Heliotherapy has given excellent results in the hands of some workers and the electric cauterly is very valuable in certain cases.

The successful use of chaulmoogra oil in leprosy led various investigators to test out its value in experimental tuberculosis. Among the first to do this were Voegtlin³, Smith³ and Johnson³, who gave as their reasons the fact that the leprosy and tubercle bacillus belong to the same group of acid fast bacteria; and that the work of Walker⁴ and Sweeney⁴ seemed to indicate that chaulmoogric acid, the specific acid contained in chaulmoogra oil, exerts a powerful action on all acid-fast bacteria, but is inert toward nonacid-fast organisms. These authors present figures to show that chaulmoogric acid is 100 times more bactericidal than phenol for acid-fast bacteria, including the tubercle bacillus. The oil contains a large amount of this chaulmoogric acid and also hydnocarpic acid, which may be readily converted into the ethyl esters. These ethyl esters were claimed by earlier workers to possess certain therapeutic advantages over chaulmoogra oil but this is not confirmed in more recent reports. The experimental work, however, of Voegtlin³, Smith³ and Johnson³ with chaulmoogra oil in inoculated guinea pigs was negative. It was used intraperitoneally and intravenously without resulting in any improvement.

One of the earliest reports of the clinical use of the oil in the tuberculous larynx was by Lukens⁵ in 1921, who had used it in some sixty cases over a period of eight months. The oil was dropped by means of a laryngeal syringe into the larynx and trachea; about 1 c.c. of a 10 or 20 per cent solution in olive oil being used. His results were extremely gratifying and are listed by him as follows: (1) "The chief value of chaulmoogra oil is in the relief of pain and dysphagia. (2) The relief is continuous in contradistinction to that produced by cocain. (3) The treatment is not unpleasant or distressing, is without untoward reactions in the larynx, and can be used without previous cocainization. (4) Improvement, while not all that could

be desired, seems better than that obtained with other drugs."

Peers⁶ and Shipman⁶ reported in 1922 a series of seven far advanced lung and laryngeal cases which they treated with the oil with rather unsatisfactory results. Relief of dysphagia was found to result in but one of the seven cases. In the same year Alloway⁷ and Lebensohn⁷ reported forty cases in various stages of involvement which they treated with the oil after the technic of Lukens⁵, except that they were treated daily instead of every other day, and their cases were divided into three groups for purposes of study. They concluded that this form of treatment should have a definite place in the treatment of laryngeal tuberculosis, being very useful in the majority of cases, but not wholly replacing all other forms of medication. They state that "some may be skeptical of the value of chaulmoogra oil as employed in these cases because the mechanism of its action is not clear;" and adding, "it may be true that the oil has no specific effect, but its beneficial action can perhaps be adequately explained by its detergent, anesthetic and counter-irritant properties."

Larue² reports a series of twenty-five cases treated in this manner with very satisfactory results.

The use of chaulmoogra oil has proved very successful in the hands of the writer who has now used it in twenty-five cases. A 20 per cent solution in olive oil has been used in practically all instances and the method of application has been that described by Lukens.⁵ This consists in drawing 1 c.c. of the solution into a laryngeal syringe and by the aid of a laryngeal mirror, with the patient holding his own tongue, the oil is injected on and into the larynx. If the epiglottis is involved some of the solution is dropped on it as well as on the arytenoids and posterior wall. Then by having the patient phonate the remainder is dropped on the vocal cords. Not all patients are able to control their throat reflexes well enough to allow one to drop the oil on slowly, but one can always get the syringe directed properly and with the aid of the mirror, see that it is applied in the proper place even though the patient gags and the procedure must be done quite quickly. However, it is surprising how perfectly these patients control their throats for these treatments, especially after a little practice. No effort is made to inject any of this oil directly down the trachea, the intention being to confine it

to the larynx, but naturally a certain amount of it must enter the trachea and bronchi in some instances. No deleterious effects have resulted in any of our cases so far as the internist or ourselves could determine. Cooper⁸ and Freed⁸ have shown experimentally the injurious effects of chaulmoogra oil and various other preparations when injected into the lungs of animals. The extensive use recently of lipiodol in the lungs without deleterious effects would tend to dispel any fear of a limited and well guarded intratracheal medication. The treatments are given three times a week, but later may be reduced to twice or even once a week.

The most marked results have been in the relief of dysphagia which has been controlled in practically every instance by the use of the oil. Patients who have been unable to eat on account of pain are often completely relieved, sometimes only one or two treatments being required to give this relief. Treatments must be kept up, however, for a considerable period of time in these ulcerated cases in order to make the relief permanent. The patients with ulcerated lesions are extremely grateful, for they have suffered severely and the relief is marked. It is in this group of cases that the chaulmoogra oil treatment is the most effective. Infiltrations without ulceration also respond, but to a less degree. In some of the early cases, however, with congestion and slight infiltration, recovery has been practically complete. Hoarseness, when present, is much slower to improve. The unhealthy appearance of the ulcerations and the accumulation of tuberculous secretions over the posterior wall are quite readily removed in the majority of cases and the patients volunteer the information that their throats feel much more comfortable, being less dry and less irritated. They frequently speak of the sensation of well-being in their throats immediately following the injections. The granulations become much healthier and cleaner in appearance and definite healing is quite often seen. Not all of the patients in this series have been cured. In fact, a cure has been experienced in only a comparatively small number, but relief from pain has occurred in practically all of them and definite improvement has resulted in the majority of those treated. Several of the cases were far advanced when first seen by the writer and died after a longer or shorter time, but were made much more comfortable

by the treatments, the important factor being relief from their dysphagia.

The cases in this series were grouped for observation according to those reported by Larue², namely, early, middle and advanced. Of the twenty-five cases studied six were in an early stage of involvement, having no, or very slight, induration of the posterior wall of the larynx, some vascular changes in the mucosa, and frequently quite a definite, but slight, sensation of an irritation in the throat subjectively. These were all institutional cases except one and responded exceedingly well to the treatment, all being apparently cured. The length of time they were treated was, on the average, about two months. The one patient outside the sanatorium had a recurrence of rather indefinite subjective symptoms and required a short repetition of the treatments at two different times at varying intervals. She has now been well so far as her throat is concerned for over a year and is much improved generally.

Seven patients are included in the middle group. There was some infiltration and edema, and the cords were often thickened and roughened at the posterior ends, resulting in hoarseness. Pain was present at times. The epiglottis in one case was edematous. The majority of those in this group were also institutional patients. A distinct improvement was noted in most of them, being more noticeable subjectively, however, than objectively. One patient had an edema of the posterior wall of the larynx which was very persistent but she stated repeatedly that her throat felt greatly improved. Another, with considerable infiltration and congestion with hoarseness showed no definite improvement. The case with the involvement of the epiglottis responded very favorably, the redness and edema being much reduced in two months' time. The majority of the patients in this group are still under observation.

The third group were all advanced cases with much infiltration and necrosis with extensive pulmonary involvement. The greater number of these were patients who were seen and treated in the homes. With the exception of three or four who were almost in extremis when first seen, pronounced relief of the subjective symptoms was obtained. Several had used various preparations previously without relief. After a few instillations they were quite free from pain and the dysphagia, which had prevented them from eating, was

greatly, and in some cases entirely, relieved. The majority of the patients in this group have since succumbed to the pulmonary tuberculosis.

CONCLUSIONS

(1) Chaulmoogra oil should have a distinct place in the treatment of laryngeal tuberculosis. It is not a specific and should not replace all other methods or forms of medication, such as the electric cautery or heliotherapy.

(2) Its greatest value is in the relief of pain and dysphagia.

(3) The results in this series simply confirm those of other writers on the subject.

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THE PRECONVULSIVE STAGE OF EPILEPSY

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The tendency is strong, in practically all treatises on the subject of epilepsy, to make the convulsion the outstanding feature of the manifestations of the disease. In those cases not showing physical convulsions, the acute psychic disturbance, recognized as the seizure, is considered the characteristic phenomenon. This is so commonly true that the layman, and many physicians, consider the disease simply a matter of "fits."

A careful study of many cases of epilepsy in institutions and in extensive private practice, by our most competent neurologists and psychiatrists, has made clear the existence of other factors just as essential to a diagnosis as the occurrence of

* Abstract of paper read at National Association for Study of Epilepsy, Cincinnati, Ohio, May 31, 1927.

physical convulsions, loss of consciousness, or psychic disturbance.

We have come to recognize a characteristic personality make-up, a type of behavior, an emotional constitution, which we say is common to the epileptic, and upon the determination of which we are quite inclined to indicate a diagnosis of epilepsy without giving much consideration to the so-called seizure.

These "personality qualities" are so frequently described in the literature, as not to need being repeated here. It is enough to list the following terms as commonly appearing in the paragraphs setting forth this phase of the picture: irritability, maliciousness, obstinacy, morbid egotism, impulsiveness, deficient judgment, perverted moral sentiments, revengefulness, cruelty, etc. It appears to be the opinion of most authors that these qualities occur in the course of the disease, largely due to central nervous system trauma incident to the convulsion, and that as the progress of the disease goes on these elements become more and more pronounced. They hold that gradually the threshold of restraint against such properties is reduced, and their existence thereby becomes proportionally more marked.

The writer agrees with the few who state that oftentimes these personality properties are recognized to have existed prior to the onset of seizures, as such. In a recent number of "Mental Hygiene," Dr. L. Pierce Clark states: "We know now that the personality antedates the seizure epoch, although it often exhibits itself in an exaggerated form after the onset of seizures"; and we have all noted its persistence, even several years after the subsidence of seizures by the use of sedatives.

All of us, in taking the history of epileptic children, have been able to bring out strongly that the epileptic child of a family was different from the other children of the family and neighborhood, even before the appearance of seizures. Their reactions to the customary events of childhood; in the home; in school, and on the playground, were not those of the average child.

It is oftentimes next to impossible to get this information from the mother, who is quite inclined to declare that the child was normal in every way until the sudden onset of the spells. In fact, most mothers are loath to assign such attributes to their children even after they are so well developed as to be easily recognized by the teachers, neighbors, nurses, etc.

For some time, in acquiring the histories of epileptic children, particularly, we have given much attention to the preconvulsive period, and are quite convinced that the same behavior problems; the same peculiar temperament or personality, exist in the child prior to the onset of convulsions as we are accustomed to recognize in the definitely established case. It seems to be not so much a matter of their existence, as of their proportions. This has been brought out in several cases of twin children, one of whom is epileptic. The strength of the study in cases of twin children is important, because both are reared under as nearly similar conditions as it is possible for two children to experience. We have gone into the preconvulsive history of seven such cases and have quite readily brought out the difference in personality of the two (the epileptic and the non-epileptic one) in each pair. We have rejected a few cases in which one had suffered physical injury or had endured sickness to a greater extent than the other, so much as to make it unfair to state that they had run a parallel course. We have not found that either could be said to have been more backward in learning. They kept even in school work, and, in cases of noted difference, the one later to be epileptic had given an impression of being more capable in school until the time of seizures. In each case, however, the later epileptic twin had been recognized as more difficult to control, or less apt to comply willingly with rules of home, school, and playground; not given to ready adjustment of minor misunderstandings with playmates; had manifested, in a child's way, an outstanding egotism, a disproportion of self-importance, an over-estimation of capability, and a noted lack of appreciation of failure to accomplish. These consistent, and persistent, failures to adapt to child society were brought out beyond question, and were not attributable to lack of intelligence, or to feeble-mindedness.

Among this group, and many other children studied in the preconvulsive period, were found also such traits as holding the breath; striking the head against the wall; night terrors, bed wetting, screaming, and fits of anger out of all proportion to the cause.

It seems to me that in these disqualifications for child society we have the conceded personality of epilepsy reduced to childhood proportions, but in recognizable form.

There is another very important factor

essential to the study of these cases, namely, the factor of heredity. Several studies of this subject have been made, leading to a uniform conclusion that *heredity* is an important, frequent, if not a common factor in epilepsy. I very much appreciate the work of Dr. Weeks on this subject. His studies were carefully made and his conclusions justified. Others have definitely verified his findings. The following quotations from his report of twelve years ago have been found sound and incontrovertible:

"All available facts point towards the conclusion that the various common types of epileptics seen in institutions lack some element necessary for complete mental development, which is also true of the feeble-minded."

"That there are more than five times as many epileptics as feeble-minded persons in those fraternities coming from matings where neither parent can be classed as normal, or called mentally defective, seems to indicate that the neurotic, or otherwise tainted, conditions are more closely related to epilepsy than to feeble-mindedness.

"It will be seen from the present evidence that epilepsy cannot be considered as a Mendelian factor when considered by itself, but that epilepsy and feeble-mindedness are Mendelian factors of the recessive type, in that their germ cells lack the determiner for normality, or are nulliplex in character, while the tainted individuals, such as neurotics, criminals, sex offenders, etc., are simplex, and the normals duplex or simplex in character."

It has been declared that five times as many epileptics as feeble-minded are due from matings marked by neurotic traits; that one migrainous parent produces epileptics as certainly as one epileptic parent, and is much more likely to produce epileptic than feeble-minded children.

It is readily conceded that not all persons from neurotic ancestry are, or become, epileptics. It is, too, readily conceded that not all children whom the neighbors, or the school teacher, style "bad" are, or become, epileptics. Neither are all who possess one, or even more, of the unsocial traits mentioned above destined to a convulsion career.

However I am of the opinion that those children whose genetic backgrounds are mottled by neurotic expressions, and who present the personality outlined, are at least potential epileptics, needing only an acute illness, a physical trauma, or perhaps a psychic shock to initiate the convulsive or seizure stage. I doubt that acute fevers, injuries to the head, or psychic shocks are etiological factors of epilepsy, except as they occur to individuals typed above.

The author has in his notes three cases

of children whom he had classified as from ancestry heavy in neurotic factors, with some showing of feeble-mindedness and epilepsy and who showed in general the childhood personality described above and whom he has later, three to seven years, had the opportunity to see in typical epileptic seizures, with a clearly defined epileptic make-up. One of these cases had the first convulsion late in a severe attack of whooping cough; another a week after receiving a severe beating in a school ground fight, in which there were present both physical and psychic shocks. For the other there was no apparent outstanding ascribable phenomenon.

Some time ago I addressed to several of our leading pediatricians, who have had much experience with epilepsy in children, an inquiry as to whether or not they had come to recognize any physical or mental condition of childhood as a forerunner, so to speak, of epilepsy. Each said that he had not. In some of the elaborations there were mentioned rickets, malnutrition, hydrocephalus, and quite a variety of conditions which might possibly have a relation. One added that, as a fact, however, he had observed a great many more cases of rickets, malnutrition, and other constitutional diseases, who did not later become epileptics, than who did. He did not, therefore, consider these or any other physical condition as indication of epilepsy potentiality. This assertion of the pediatricians is not unexpected nor illogical, because they, as a rule, limit their observations to the physical condition of the children and seldom have the occasion or the interest to secure a comprehension of the child's emotional traits or even its hereditary background.

Interviews with school teachers, school nurses, and playground directors have furnished a disclosure of a considerable number of cases that were suggestive enough to warrant further study.

We have, though, no established agency in connection with our school system, qualified and designed to bring to light these cases. The school nurse and school physician are, as a rule, keen regarding the physical make-up of the child, and especially watchful for possibilities of contagious disease. They are not analyzing the child's emotional reactions; studying his behavior problems, particularly if he is apt in class and physically fit. Then comes a day when the entirely unexpected seizure occurs with all its disturbing elements.

I believe that many of these cases could have been anticipated had more care been taken in the study of the child.

I am not unmindful of the fact that, in some more highly organized public school systems, a limited amount of child mind study and of behavior problems investigation obtains. This is as a rule, though, limited to mental tests and to intelligence quotient determinations. There have been a few very good studies made of groups of children, analyzing their traits and emotional qualities, but these are all too few as yet.

Now if these premises are true, and I firmly believe they are, we should develop, particularly in connection with our schools, much more of the psychiatric social service than we now have. Our teachers might better be giving earnest attention to the study of the child mind than to the acquiring of concrete information on the subjects taught and on teaching methods. The school nurses and school physicians should be better trained in that line. Routine examination of teeth and tonsils is not to be despised, but routine examination of mental and emotional reactions, and of behavior attitudes, is much to be desired.

The qualified workers can find these children long before their affliction is recognized by parent or physician. When found, then what? Briefly, I will say that I believe that a careful study of that child, physically and mentally, is next in order. A careful study of his home conditions should follow. Competent persons, trained in child mental hygiene, should be given opportunity to direct the child's activities; in the school, through the teacher, and in the home, through the parent. He should be gradually taught (trained) so as to eliminate from his personality the recognized asocial traits. This can be done in many cases, I believe, so as to arrest the affliction before the convulsive period becomes established.

SUMMARY

1. The conception of epilepsy should not be too closely restricted to the convulsive features, nor to the factor of disturbance of consciousness.
2. Essential characteristics of epilepsy exist prior to the onset of convulsions.
3. Importance of recognizing the pre-convulsive characteristics.
4. Importance of careful study of school children in both physical and mental relations.
5. Possibility of suitable treatment

(training) to the end of arresting the affliction before the convulsive period becomes established.

HYPNOTISM AND BRAIN PHYSIOLOGY

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"For the human mind, if it acts upon matter, and contemplates the nature of things and the works of God, operates according to the stuff and is limited thereby, but if it works upon itself, as the spider does, then it has no end, but produces cobwebs of learning, admirable indeed for the fineness of the thread, but of no substance or profit."

Francis Bacon.

In dealing with the workings of the "mind" one encounters difficulties. The reason is that there is a limited amount of objective data through which the function of the brain can be studied. The ignorance and prejudice which surrounds hypnotism is namely a result of the lack of our knowledge of the function of the brain, viz., cerebral hemispheres. It also explains, to a certain degree, why, in spite of gigantic advances in the chemical, physical and biological sciences, our knowledge of one phase of physiology, viz., hypnotism has not been enriched in any appreciable measure by the addition of new, objectively determined facts — experimental data such as has been responsible for the advancement made in the other fields. This is made strikingly apparent in the matter of fact attitude taken by the man in the street towards such almost mystifying advancement as radio, aviation, synthetic chemistry, etc., contrasted with the attitude of many really educated persons towards hypnotic phenomena.

However, historically, it is explicable. It was the sixteenth century that hypnotism appeared on the horizon. While physics and chemistry grew out of the medium of alchemy, astronomy from astrology, and biology had been studied even before the days of Aristotle, hypnotism had no such tradition. Although it attracted the attention of the scientist, at a time when positive sciences, thanks to Copernicus, Galileo, Bruno, Harvey, et al., just started their triumphant advance, and although the explorations of Columbus, Vasco Da Gama, Magellan, and the rest, threatened to dissolve and destroy all the rest of the old superstition, hypnotism was lagging behind. In short, this new branch of science found itself, at the beginning

of the sixteenth century, in the same position as did the other sciences a thousand years earlier. The facts were being discovered, explanation was lacking, or when attempted, was riddled with absurdities. It is not surprising then, that in this field, where the reagents could not be handled and manipulated as in chemistry and physics, interpretation of these facts should be directed into superstitious, religious or supernatural channels.

The interpretation of the hypnotic phenomenon beginning with James Braid and up to the present time, is a continuous display of theories. For an objective student there is really no chance to build anything on these theories. With the exception of the works of the Pavlov and Bechterew schools in Russia, and the behavioristic school in our country, all other writings have not contributed a jot to the explanation of the riddle of hypnotism. We shall therefore pass over all the theories in our subsequent discussion. Our aim is to interpret certain hypnotic phenomena from the facts gained in the study of modern brain physiology, viz., conditioned reflexes.

We shall therefore begin with a brief summary of the conditioned reflexes, (of first, second, etc., order) then include the phenomenon of irradiation with subsequent concentration, inhibition and the special mechanism of release, and the law of dominance.

The basis of nervous activity, according to Pavlov, is formed by reflexes or instincts. The instincts are also reflexes but more complex ones. The instincts—inborn associations with definite stimulators—correspond to the activities of the organism. If the action of any indifferent agent coincides in time with the action of any instinct, and if the action of the agent is repeated many times, then this agent, formerly indifferent, begins to stimulate the instinct. For example: Food stimulates the food reaction which consists of certain movements of the animal and secretion. If some indifferent agent, which previously had nothing in common with the feeding, is repeated many times with the feeding, it will shortly stimulate the food reaction when used alone. If we produce some distinct musical sound at a given rate of vibration at a time of feeding, after a while, the repetition of the sound when used alone will produce the same food reaction as the food itself. Such stimulators may be formed from any agent of the outer world and with any instinct. Thus,

besides the reflexes or instincts which are inborn, there are some reflexes acquired during the life of the individual. The first are inborn or *unconditioned reflexes*. The second are acquired or *conditioned reflexes*. It is evident that the conditioned reflexes must play a very important part in our behavior as they are being perpetually acquired during the life of the individual. Thus we see that a conditioned reflex is a sort of a *cerebral unit* whose own existence rests on the basis of an instinct or unconditioned reflex. Left dependent on instinct alone, in a world which presents ever changing problems and demands, and even new dangers to his very existence, a man and the higher animals are needful of a more sentient mechanism to assure their survival. The conditioned reflex is a part of this mechanism, for it eliminates the loss which would be entailed by the development of a new instinct—since the formation of an instinct requires the passage of thousands of years. *Since it can be formed quickly, the conditioned reflex affords a similar and as effective a mechanism to the individual as the instinct does to the species.* And since conditioned reflexes can also be 'disestablished', they present to the individual a means of acquiring new experiences without overtaxing the cerebral hemispheres, for when no longer active they retreat and are placed in the background. It is reasonable, then, to assume, that where such an enormous number of conditioned reflexes are in play, opposing tendencies among them may arise.

IRRADIATION AND CONCENTRATION

"Any exciting or inhibiting process started at some point in the cerebral hemispheres by virtue of definite peripheral stimuli, is subject to certain types of movements along the surface of the hemispheres, the rate of which can be measured not only by seconds but also by minutes. These movements are in two directions: (1) spreading (irradiation), (2) return to original point (concentration).

Inhibition and the mechanism of release of inhibition (disinhibition): Inhibition, a well known physiological mechanism, means the successful obstruction of an external indifferent stimulus carried to the field of activity of a reflex in action. Thus the flow of saliva caused by the sound of a bell, conditioned by its coincidence with the administration of some type of food, will cease or will be materially diminished

if the sound of a top trumpet happens to be brought into play.”

LAW OF DOMINANTE

This law, first elucidated by Prof. Uchomsky of Russia and further elaborated by Bechterew, is based on the fact that when any one brain center is stimulated, the other centers of the brain are inhibited. This dominance is not exactly the result of passivity of the other centers, for the stimulated center is reinforced by accessory stimulation from the centers, whose own activities are in abeyance.

The above physiological concepts being kept clearly in mind, their application to the phenomena of hypnotism may now be considered. And since consideration of hypnotism involves also a detailed consideration of the phenomenon of sleep, which the former resembles so closely, we shall dwell for a while on the latter.

Sleep is a state of inhibition of the brain. It is reached by an isolated and continuous stimulation of a definite point in the cerebral hemispheres which leads to sleepiness and sleep. J. P. Pavlov and his school, after much experimental work and observation in their laboratories, came to the conclusion that natural sleep is to be regarded as a process of *internal inhibition*. Some internal causes are instrumental for the diminishing of functions of definite precincts of the brain—resp. conditioned reflexes. This diminution of functions is for the benefit of saving energy necessary for the unlimited functional adaptation of the higher departments of the central nervous system. Thus, according to their school, sleep is an inhibition which spreads from one point to the entire territory of the cerebral hemispheres and reaches even into midbrain.

The inhibition starts in one point and spreads (according to the law of irradiation) all over the hemispheres, causing an inactive state of large and small groups of cells, and their precincts. The same inhibition can be caused also by *external* factors. An isolated, weak, continuous stimulation of one of the analyzers (organ of sense) as for instance: ear, (ticking of a watch, metronome, etc.,) or skin (slight rubbing, etc.,) causes the corresponding receptive precinct of the brain to become exhausted and leads to a state of inertness or sleepiness, which finally turns into sleep.

One of the main purposes of sleep is evidently self-preservation. There are examples in the life of the animal kingdom

where sleep openly suggests this end of protection and preservation. Reference is made to the phenomenon of hibernation and aestivation. That hibernation and sleep are fundamentally similar conditions is clear; the main difference probably lying in the variation in the duration periodicity, influence of temperature, etc. Sleep, a prerequisite for the reinvigoration of activity, also plays an important part as an adjuster of the acquired (conditioned) reflexes to the inborn (i.e., instincts). As mentioned above, the conditioned reflexes are the temporary links in the relationship between the individual and the surrounding world. During sleep, that is when the cerebral hemispheres are in a state of inhibition, the conditioned reflexes (whose activities are centered in the cerebral hemispheres) are also inactive.

“Conflicts” which tend to exist during the wakeful state, thus disappear during sleep. No matter how strong the “social” authority of the conditioned reflexes during the *wakeful* state, is, they are colorless and valueless during sleep. The instinct (inborn reflex), which we must assume is never dormant, then comes to the foreground and thus a reinvigoration of the instinct occurs. Sleep is thus responsible for the continuous reinforcement of some instincts whose activities are restricted during the wakeful state. All this is very important to bear in mind as the same course takes place during hypnotic sleep, the only difference being that hypnotic sleep is a more “condensed” type of sleep. That the latter is true is seen from numerous experiences gained in the practice of hypnosis. The patient usually wakes up very much refreshed after a few minutes spent in a hypnotic sleep, as though he had been resting hours.

Birman in Pavlov’s laboratory, points out that the difference of hypnosis from sleep lies in certain limitations in the process of spreading of the inhibition. Thus, fundamentally, sleep and hypnosis are similar processes. A “rapport” which is established in the hypnotic state is also a biologic occurrence of normal sleep. If sleep is able temporarily to stop the work of opposite tendencies in the realm of conditioned reflexes, hypnosis is even more able to do so. Similar to sleep, *hypnosis is also able to bring them into harmony with the instincts and this without violence to either*. During hypnotic sleep it is easier for the operator to direct the actions of the subject in any desired channels because of the general indifference

and quiescence of the conditioned reflexes.

Hypnosis as known, is induced in the same manner as is natural sleep. In falling asleep, an artificial set of conditions is usually produced i.e., *we prepare for sleep* (an expression in current usage). We mean by that expression the production of certain fixed conditions. We assume a reclining posture, we put out all lights and make the room as dark as possible, we shut our eyes as much as to say to ourselves, "Now, I am going to sleep." We thus command the conditioned reflexes on sleep. In falling asleep, ordinarily we undergo a process of self-hypnosis. The same procedure, viz., *suggestion* is employed in inducing hypnosis.

Man and animals are remarkably susceptible to suggestion. Since we know the work of conditioned reflexes, we may understand better how suggestion is accomplished. The words and actions brought in the operation of suggestion are nothing else but symbols which correspond to certain conditioned reflexes.

The structure of the receiving organs or organs of sense are adapted to the work of suggestion. It is mainly by means of these organs that conditioned reflexes are established. The power of suggestion of man as well as his development through the influence of art, religion, literature, music, etc.,—series of conditioned reflexes—is too well known to need much elaboration.

Suggestibility is a faculty found in normal as well as in hysterical individuals. The controversy between those who thought that only healthy individuals are suggestible and those who maintained that hysterical are suggestible, was evidently unproductive. The reason, why the hysterical person is apparently more susceptible to hypnosis is due to the fact that a hysterical individual probably establishes and "disestablishes" conditioned reflexes more rapidly than a healthy one. Also children are known to be more easily suggestible, the reason lying in the flexibility to establish and "disestablish" conditional reflexes. It is also true that suggestibility is greater in the same person when there is more wear and tear of the nervous system, as it is in the case during emotional perturbation, ill health, etc. This must be due to the fact that the brain cell being in a partial state of inhibition as a result of exhaustion, is more easily suggestible. The irritability of the brain cell during such emotional states is due to its fatigue.

Let us briefly examine the mechanism of normal sleep. It has been mentioned above that in normal sleep, the brain cell is in a state of inhibition. But not all cells reach this state of inhibition at once. The process of falling asleep, as the word indicates, is rather a gradual one. (radiation). (The same thing is true in the process of awakening). As known, inhibition or sleep from one point of the hemisphere spreads all over the entire hemispheres, involving even the midbrain.

The physiological process known as dominante is an important factor in the normal as well as in hypnotic sleep. We shall on this place follow up the role of the dominante only in hypnotic sleep. We know that when the hypnotized (object) is ordered to watch a shiny object, he is bringing instantly his attention to this object. While doing it the rest of the brain centers become inhibited and lose their local activities. (Uchtomsky). This process cannot but facilitate sleep. As known, sleep is a state of inhibition of the brain. In establishing a dominante a great territory of the brain enters a state of artificial inhibition, which inhibition in itself is already the beginning of sleep. Later on it spreads all over the hemisphere.

The dominante and conditioned reflexes are instrumental in causing sleep. In watching a shiny object a series of conditioned reflexes is called upon and produce hypnotic sleep. The dominante facilitates this event by initiating the inhibition of the rest of the brain centers, while the conditioned reflexes generate sleep. The conditioned reflex—in chief, (timbre of voice, its character, etc., of the operator) remains the only key by means of which the operator can still communicate with the subject. He—the conditioned reflex-in-chief—rouses certain conditioned reflexes, makes them function while the rest of conditioned reflexes remain inactive. How can we explain the rest of conditioned reflexes remaining dormant? The answer is: The operator in establishing a reflex on hypnotic sleep works by means of this reflex, while the rest, unless called out, are indifferent to the established stimulus. When the time comes that the rest of the conditioned reflexes are also able to be stimulated, it means that the object is awake.

As to the so-called post hypnotic transference, the following explanation can be advanced: From experimental work of Pavlov and Bechterew it is known that the differentiation of space, the external lin-

ing, form, localization of an object in the surroundings, is a function of the cerebral hemispheres. Perception of time is also a result of the function of the cerebral hemisphere. (Animals in whom the cerebral hemispheres have been removed do not perceive combined action, space, differentiated external impressions, no emotions, do not retain former experiences, and are deprived of the ability to establish combinations between external events in time; they can not concentrate; they are also passive, reminding one of sleeping animals). As the cerebral hemisphere is also the place where conditioned reflexes have their seat, the action of the latter can be evidently set to a definite time.

In the wakeful state, response to verbal orders is an easily understood example of a conditioned reflex. There is as Verworn rightly remarks, "Fundamentally nothing different in hypnosis than in life." It can, then, be clearly understood, how the operator during hypnosis can rouse certain conditioned reflexes or groups of conditioned reflexes to activity, or conversely to make them passive. Whereas in the wakeful state any single or group of conditioned reflexes has to contend with the rest of the numerous and more active conditioned reflexes, *in hypnosis any conditioned reflex can be shifted about without interference from the others.* The hypnotizer as mentioned, operates with the established reflex on sleep.

In the light of facts, it appears to be evident that hypnotic sleep is connected with the work of conditioned reflexes. Being so, it is not reasonable then, to assume, as some writers insist, that hypnosis is inherently harmful—resulting in mental dissociation or in other undesirable states. *Since the formation and "disestablishment" of conditioned reflexes is an every day occurrence during the wakeful state, it seems unlikely that the same process only because it occurs during hypnotic sleep, should be harmful.* In proper hands it is not only harmless but can be made useful. Certain reflexes which are undesirable can be disestablished, while others reinforced or directed into beneficial channels.

Summarizing our investigations, one fact remains established: That conditioned reflexes which play such an important role in the wakeful state of the individual, play the same role in hypnosis. In the same manner as any mental process is inconceivable without a brain cell, every brain action is impossible without

its unit, the conditioned reflex, no matter whether it happens in a wakeful state or in a state of sleep.

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THE MANAGEMENT OF STRABISMUS PATIENTS

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This paper concerns the management of the concomitant strabismic patient; in it topics bearing on the subject are taken up in the following order: definition, varieties, etiology, methods of diagnosis and measurement and treatment.

DEFINITION

While the deformity present in this condition is only a sign, we have largely adopted it in practice as the thing itself. In concomitant strabismus the primary and secondary deviations are equal; the eyes maintain the same relative position in all fields as though joined to each other. Paralytic lesions show increased error in the fields of the affected muscle. Each fovea in the strabismic receives images from different objects.

VARIETIES

Deformity classifies these patients into three main types, namely, convergent, divergent, or vertical. The muscle action displayed may be spoken of as an excess or an insufficiency, as a spasm or a weakness. And these muscle manifestations may be periodic or constant, fixed or variable, unilateral or alternating, and so on, dependent upon the factors of varying deformity and how the eyes fix. At this point we may mention two conditions not strabismic but appearing so. The first is apparent strabismus, wherein the angle gamma is high, that is the angle between the visual and optic axes, as in hyperopia; inspection shows a seeming divergence. In

high myopia with angle gamma minus, there is an apparent convergence. Cover-testing shows no strabismus in either variety, and any measurable tendency towards strabismus is the opposite of the apparent strabismus. The other, an illegitimate kind of strabismus, is found in patients with a divergence neither concomitant nor paralytic; one eye is used to fix and the other assumes a position of rest, diverging. These patients have high myopia or high difference of refraction between the two eyes. Latent strabismus or heterophoria is a condition we all constantly meet in refraction and may be mentioned as leading to a consideration of the etiology of strabismus.

ETIOLOGY

The basic cause of concomitant squint is not known. Donders in the early sixties linked hyperopia and accommodative effort with the production of excessive convergence and strabismus. He explained that hyperopes have to accommodate in order to see in the distance and excessively so for near; this strong accommodative effort is associated with strong convergence. When squint is manifested the excessive convergence has carried one eye past the point of fixation and diplopia develops; the discomfort of double vision is avoided by psychic suppression of one image. There is much to support this conception. For instance, convergent strabismus is seldom found without hyperopia or astigmatism; it usually appears in the period of early near-fixation and accommodation, at an average age of three and a half years; the squint is periodic at first, and is exaggerated with use of accommodation; finally convergent strabismus is relatively infrequent in adults compared with children. Additional evidence is presented in the convergence-excess found in patients using their eyes too soon with subnormal accommodative power, as after severe debilitating diseases, such as measles and scarlet fever. As Duane pointed out a similar accommodative excess-convergence is produced when an effort is made to use the eyes for near when the effects of a cyclopegic are incomplete; accommodation is not able to respond, but convergence is, and the result is temporary marked excess-convergence. The effort to see clearly in conditions of difficult vision may produce the same result; such conditions as substantial opacities of the media, low astigmatism, and sometimes even low amounts of myopia.

Duane logically outlines the steps in the development of strabismus from the heterophorias. In convergent strabismus the child with considerable hyperopia or hyperopic astigmatism begins to use the eyes for near work and as a result of undue accommodation develops a varying spasmodic esophoria, marked only for near. Binocular fixation is present usually, and there may be only momentary spasmodic squint. The second step is loss of binocular fixation for near, and the periodic esophoria for distance. Careful tests show the squint to be associated with diplopia. Thirdly, after the above has lasted some time (occasionally years) the patient gives up binocular fixation for both distance and near. He is apt to show diplopia on testing. Fourthly, the amount of squint for distance approaches that for near, and both increase, the latter due to the addition of divergence-insufficiency. Muscle rotation is still unaffected. Suppression of the image from one eye has usually taken place. Fifthly, secondary muscular changes occur, contracture of the internus and weakening of the externus in the squinting eye.

Patients may develop divergent strabismus from convergence-insufficiency through a similar series of steps. In earlier stages these patients, unlike the convergent-excess group show more esophoria for distance than for near. According to Duane, the accommodative type of convergence-insufficiency arises from those patients not required to use their accommodation in the normal way, and the disuse of accommodation likewise affects the intimately related convergence. Divergence-excess may similarly be the motive power behind divergent squint.

The development of a strabismus from a phoria is hastened by high refractive error or marked differences in the error between the two eyes, also optical defects in the transparent media, and pathology within the globe in general.

Particularly important are disturbances in or absence of fusion power. In fact disturbed fusion power or the psychic blending of visual impulses from each retina is looked upon by many as the essential cause of squint. We know that it is common in our patients to have monocular vision from a suppressed image in the other eye, the latter usually amblyopic; and alternating squint is an interesting form of voluntary fixation with either eye and accompanying suppression of the dev-

iating image. Restoration of fusion power cures the patient.

Muscular anomalies of size and attachment produce in some patients many of the signs of strabismus, but usually can be differentiated by tests of the excursions.

Heredity is an important factor in the general consideration of the etiology of strabismus, and is mentioned by Worth as present in 50 per cent of his cases, and this figure is substantiated by de Schweinitz.

DIAGNOSIS AND MEASUREMENTS

The diagnosis of strabismus is largely made from signs. It calls for unrestricted movements in all fields, due consideration had for the late secondary muscular contractures and for the element of spasm. Mentioned below are some of the more important methods, not all used upon a single patient, but apt to be all used in a group of patients. A careful history is taken including family history. Muscle movement testing in all fields for both far and near is of primary importance. This is done by having the patient fix upon a distant object with the head in different positions with and without one eye; and for near-testing following a finger at about a meter. The amount of error is estimated by corneal light reflexes, and is measured upon the perimeter or better with Priestley Smith's tangential scale. The use of the phorometer and Maddox rod with prisms especially for the phorias is practical in many cases. Near point measurements and convergence power in prism angles is recorded if feasible. The field of fixation, or the amount of movement for each eye separately, is valuable when possible to record; the perimeter arc or a tropometer may be used for this. The action of combinations of muscles is usually estimated. Where practicable a diplopia chart is made. For testing binocular vision the bar-reading test is useful as are the red and green glasses. In some of the hyperotropias it is said to be helpful in determining the full amount of error to patch one eye and to measure after some days.

Of fundamental importance are the recording of vision if possible and a careful refraction and fundus examination when under complete cyclopegia. About three quarters of the cases are in children, and a large majority of these are of the convergent type with hyperopia.

The favored cyclopegic is one per cent atropin sulphate instilled three times a day for four days, and the child is examined on the third and fourth days. One-half per

cent scopolamine or duboisin sulphate have been found satisfactory in patients sensitized to the former drug.

The shadow test or skiascopy, occasionally checked for axis by the ophthalmometer has proved of indispensable value in measuring the amount and character of the refractive error. Accurate note taking is only secondary in importance to accurate methods, and it has been found invaluable to record any findings on the spot.

TREATMENT

The treatment of strabismus patients is conveniently discussed under two headings: non-surgical and surgical. Non-surgical treatment is utilized in practically all patients, and may in those older be combined with surgery.

When should treatment begin in the strabismic child? Since hereditary factors may be found in 50 per cent of all squinting children, the ideal and probably long sought after goal will be careful ocular examination of those young children and infants having parents or grand parents with marked anisometropia or actual squint. This would be in the nature of preventive treatment, and may well be borne in mind when treating adults having the condition or in noting the histories of infants and children. The physiological age limit for unequally disposed and poorly tracking eyes is supposed to be about three months. In some cases it may be six months. Consequently, six months is a fair arbitrary age to begin treatment in the squinting infant. Ophthalmoscopic examination and the classifying as far as possible of the squint (whether or not paralytic) of course may well be done earlier.

After six months the squinting infant may regularly be trained to look towards objects held in the avoided muscular field; it may be so placed in bed and so held that the eye moves in the faulting field. Some report successful gains following out this procedure.

Refraction under full atropin cyclopegic followed when indicated by the prescription of suitable glasses is often done as early as the thirteenth month. The use of proper glasses may be said to be basic in the treatment of strabismus. It is convenient and probably helpful to use a cyclopegic in the fixing eye for a time, especially prior to the use of glasses. Patching the fixing eye seems to be successful inversely proportional to the discrepancy in vision between the two eyes. Gains in vision are made in the deviating eye, how-

ever, beyond question, after the use of the patch from an hour to four hours daily.

What shall be prescribed? In low errors we throw off less, and the older the patient the less thrown off. The ideal is to give as near full correction as will be worn with rational comfort. In young children under three with comparatively high error, in example, plus 9 or 10 diopters of hyperopia, we sometimes throw off 2 or 3 diopters, frequently we subtract only 0.5 D. in errors somewhat less. Any astigmatism is fully isolated and classified as to axis, and the full correction is given unless the error be fairly high, say, over 3 D. where we may subtract a .25 D., never less.

Glasses are prescribed as young as 13 months; the lower age limit if parental sentiment is controlled and if co-operation be had during the examination. If it is not practical to prescribe glasses the effects of accommodation can be discounted with daily use of one per cent atropin solution or ointment. After the glasses have been worn constantly for about six weeks the patient's angle of squint is measured and any change recorded. After another six weeks or two months the existing situation is again recorded. Our ideal is to prevent amblyopia or to improve vision in the squinting eye. With these ends in view the treatment is to exercise the deviating eye by patching the fixing eye for a half to an hour three times a day; atrophinising the fixing eye serves in some patients. When practicable orthoptic treatment may be given with prisms, the stereoscope, or Worth's amblyoscope. Duane and Worth recommend fusion training. It requires a high degree of co-operation.

The wearing of prisms in horizontal errors has not proved satisfactory. Exercising with prisms in well selected cases has merit. Vertical displacements are frequently relieved with prisms to an amount of about 7 degrees; the full prism correction is not given, usually a degree or two in each eye is uncorrected. Occasionally a patient will wear in comfort a vertical prism correction as high as 12 degrees. Tenotomy is usually better treatment for displacement beyond 7 degrees.

Two principal goals exist in treatment of strabismus—the improvement of vision and the elimination of deformity. Our hopes have long centered in the restoration of vision to the faulting eye, practically our results have been cosmetic. To realize our hopes in general it will be necessary to have earlier treatment, and we are con-

fining to somewhat the same methods outlined above, at least methods apart from surgery.

While this paper may be said to be a plea for the early treatment of strabismics, it also pleads for conservative surgical treatment.

Successful surgery in younger patients cannot be mechanical because of non-measurable variables, particularly the element of spasm. It is common in lower age scales, varies with the emotional field, usually affects adductors or elevators, and may rarely account for the entire error.

Besides the surgical uncertainty from the presence or element of spasm the operation is best done under local anaesthetic, difficult in the young child. Other factors are: binocular vision is usually soon lost beyond recovery, except in the few patients seen shortly after squinting begins; self-consciousness from the deformity is usually a rather late development, and the maximum gain from glasses often comes after some years use. Operative treatment would seem to be indicated early to quickly establish mechanical aid for fusion. Practically at present this is rarely true. Operative measures at present are not commonly used for our practice before the age of 10 years.

In the selection of operative procedure the one most familiar and controllable should be used. There are a number of good advancement operative methods.

Convergent errors of low degree may be tenotomized, a gain of about 10 degrees may be expected, more is too radical or the extra gain has resulted from the presence of spasm. Divergent eyes show about half the gain expected from tenotomy in convergence. In general, over-correct divergence, and under-correct convergence; insufficiencies should be over-advanced.

It is sometimes necessary to do a double advancement or to combine advancement with tenotomy. Tucking operations in the hands of many do well in the smaller deformities. The patient with an occasional diplopia is especially difficult to treat surgically for with the shrinkage between the false and true images there is a geometrical increase in discomfort.

Vertical errors may often be very successfully corrected surgically if 5 degrees or more in amount and when the use of prisms has proved unsatisfactory. Before tenotomizing a vertically acting muscle it is convenient to place a suture in the muscle and insert it in the sclera as if

about to do an advancement. Then measure the error after tenotomy and if over-corrected the sutures may be adjusted accordingly on the spot. Before correcting vertical errors in general it has proved best to correct any lateral displacement.

Surgical correction of strabismic high myopic patients is not satisfactory due to the uneven muscle purchases and large globe.

TUBERCULOSIS IN CHILDHOOD

B. H. DOUGLAS, M. D.
NORTHVILLE, MICHIGAN

Tuberculosis in childhood presents many phases which are difficult to explain. Certain facts have long been known relative to the type and severity of tuberculosis in the child, but satisfactory explanations have been slow to come and even yet are in the realm of theory.

For instance, it is commonly observed that there is a high mortality among infants under two years, but that following this period the death rate drops to a low point and remains so until the teen age is reached, when it rises again quite markedly.

Many explanations have been offered for this strange fact which, no doubt, if we could thoroughly understand, it would shed much light on more effective protection and treatment for both the child and the adult.

Von Behring, it will be recalled, propounded the theory that all tuberculosis as seen in the child and the adult was the result of childhood infection which lay dormant, and later broke out in adult disease, not because of reinfection either exogenous or endogenous, but because of intercurrent disease, over-fatigue and environmental factors which result in reactivation of the old quiet lesion. There must be certain elements of truth in this explanation, but now the pendulum is swinging to the other extreme, and there are those who believe that exogenous reinfection is responsible for the disease of older children and adults almost to the exclusion of endogenous infection.

Ranke brought out some time ago an explanation of the course of infection for tuberculosis which, further elaborated by Aschoff's studies in the histo-pathology of the disease, seems to give us a basis for a better understanding of the course of events from infection to the development of actual disease.

The tubercle bacillus, as Aschoff points out, may have gained access to the body by one of several routes, but having lodged in any tissue and multiplied there, it may provoke two types of reaction to its presence; namely, an exudative response or a productive response. Often, of course, both types may occur in the same individual, but usually they represent first one and then the other as regards initial sequence, rather than both types of process beginning and proceeding together. By these terms it is meant that in an exudative type the tubercle bacilli are surrounded by the more or less usual cells of inflammation; whereas, the productive type provokes a more chronic type of defense with the proliferation, either rapidly or slowly, of connective tissue in an attempt to wall off the infection.

Ranke first points out the development of the "primary complex" which is the first stage.

The "primary complex" develops, for example, in the lung by the production first of a "primary focus", usually subpleural, but in the parenchyma of the lung well out from the hilum. The course of infection from this point goes along the lymphatic drainage to the nearest lymph nodes which lie in the hilum. There is then a reaction there and the primary focus, with the involved regional lymphatics, make up the "primary complex".

The secondary stage, or stage of generalization, proceeding from this point, two types may follow: first, by perifocal reaction about the primary complex with hematogenous spread; or, secondly, by a more severe process manifested by perifocal inflammation about the primary complex, also general inflammation throughout the lung, with direct extension and hematogenous and bronchogenic spread in one or both lungs. Generalized tuberculosis may result in this stage, as every route of spread of the disease is available. During this stage the individual is hypersensitive and has very little immunity.

In some cases it is reasonable to suppose that reinfection may account for the manifestation of both the secondary and tertiary stages. More particularly, however, the tertiary stage represents the local reaction in one organ, usually the lung, to the reinfection of a previously infected individual. The spread in this stage is intracanalicular, that is, bronchogenic. It seems reasonable to think that this difference of response on the part of the uninfected individual; namely, the infant, and

of the infected individual represents the difference between the manifestations of tuberculosis in the child and the adult.

Krause, while he does not accept entirely Ranke's view, has attempted to explain on a somewhat similar basis this difference. It is pointed out that there are two defenses employed by the human body; first, allergic defense or immune reactions; second, the lymphatics which act to collect and phagocytize or otherwise prevent the spread of infecting organisms.

In the child the lymphatic defense is poor, as it is not entirely developed and has not become a close compact network as it does later in life after the lymphatics have encountered many infections.

On the other hand, the allergic defense is strong soon after infection with an organism, but this defense becomes less effective unless kept up by continued infection. In short, the young child has at first little or no defense and general miliary tuberculosis and the other acute forms of the first two years of life may supervene. He has no allergic response of an immune type and his lymphatics are wide open.

Next, if first infection is survived, there is a strong immune reaction built up, though the lymphatics may still be a rather poor defense. As adult life is reached the allergic defense is weak or lost, and the lymphatics become the strong defense and tend to keep the developing trouble purely local and of a chronic fibrous nature.

Such, then, may be the reason for the high mortality of infants, the lowered mortality of childhood and the higher mortality again in adult life.

Opie and McPhedran have pointed out what they term latent tuberculosis in the period of childhood. They point to the involvement of tracheo-bronchial glands or even the lung itself in the apical portion, as being very benign and showing few, if any, symptoms. Even though latent, however, it is not devoid of danger and such lesions should be sought for particularly in children who are exposed to a positive sputum case in their own family.

The recognition of these cases of latent tuberculosis is important from the standpoint of preventive measures. If the child has developed what we have learned is a "primary complex" and infection stops there, he may have latent tuberculosis, and his resistance by means of allergy may be good. However, if such a child is continu-

ally exposed to massive reinfection, secondary or tertiary manifestations may arise and active disease supervene.

In detecting these cases the chief points to bear in mind are:

(a) History of immediate exposure with some knowledge of how severe and how prolonged this exposure has been, together with careful history of symptoms.

(b) Tuberculin test done intra-cutaneously with proper dosage.

(c) X-ray studies carefully done and where child is known to be in continual contact, repeated X-ray studies at frequent intervals should be made.

(d) Physical examination with frequent re-examination with careful note as to general condition of the child, as well as local signs of pulmonary or glandular involvement.

A brief discussion of each of the above factors may not be amiss. The history of contact with a case of human tuberculosis is very important. Bovine infection takes place, but is becoming more and more rare. Opie, for instance, found three bovine infections out of forty-three positive cultures from focal lesions in children and only one bovine type out of thirty-three latent lesions.

The symptoms to be sought for are fatigue, lassitude or nervous irritability, frequent colds, occasionally cough. Fever may or may not be present, and weight is not a very reliable criterion.

The Tuberculin Test is of value in showing whether the child is infected. Such a test should be made very carefully, starting with a 1-10,000 dilution of old tuberculin, using one-tenth of a c.c. intracutaneously. Failing to get a reaction, 1-1,000 may be used, or still failing, 1-100. In children with swollen glands or other active extra pulmonary lesions, 1-100,000 should be used, as sometimes these cases give a very severe reaction. The above scheme is that appearing in the Diagnostic Standards of the National Tuberculosis Association, sixth edition, 1926, and has been found to be very safe in our work. The Von Pirquet test may be used, but it is not as delicate nor as accurate.

Much has been learned recently concerning the tuberculin reaction, as, for instance, we have known that a positive tuberculin test before two years of age is very grave, but Asserson and others have come forward with reports showing that many do survive. Four hundred sixty posi-

tive reactions before two years of age were followed until five years old when it was found 209, or 45 per cent were dead; 196, or 43 per cent were living, and 55, or 12 per cent could not be located.

Another interesting observation is that a tuberculin reaction, once positive, may become negative due to the dying out of the infection. Austrian and Krause have followed several cases carefully, which show this to be true.

The Tuberculin test is then valuable in showing whether the individual is infected at the time tested.

Elaboration of the X-ray studies is a lengthy subject in itself, but suffice it to say that the X-ray has not been used enough. There is much information to be had by means of the X-ray relative to latent lesions of small or greater extent. A child with negative physical findings, who is known to be badly exposed, should be X-rayed, not once, but frequently.

Physical examination is difficult and oftentimes reveals nothing as far as local signs are concerned. Nevertheless, a careful examination of the chest should be made as well as a careful inspection of the general condition of the child. Such observations should be repeated frequently in the exposed child.

The measures for treatment and prevention then must be directed toward the exposed child to prevent further infection, and in throwing about him the aid of the open air schools and the preventorium, or if active disease has developed, the more intensive care of sanatorium or hospital.

There is little doubt that attention given to these children who have latent or smoldering lesions will prevent much of the serious tertiary form of the disease in later life. Such attention must include careful study of the family to eliminate any source of infection with tuberculosis and so prevent repeated reinfection. The casually infected child who does not receive repeated reinfections is not in nearly the danger, generally speaking, as is the definitely exposed child whose source of exposure is known. For instance, Asserson, in 154 infants with positive tuberculin reaction, before two years of age, and a definite history of exposure, showed a 44 per cent mortality within five years, while 187 positive reactors, whose source of contact could not be found, showed only a 12 per cent mortality.

The conceptions, therefore, of the course of events from infection to actual disease in tuberculosis indicate the place of the "primary complex", the secondary stage of generalization most frequently seen in children; while the tertiary form is more often that of the adult. Further, it has been noted the effect of the two defenses; namely, those of allergical reactions and the lymphatics, as they influence the manifestations of the disease in children and adults.

With this conception we see again that treatment in the child must rest in detecting his infection, preventing further massive infection and building up defenses to cope with that which he may already have encountered.

There is, therefore, nothing very new as to method, but here is added evidence and incentive to intensify our efforts in protecting the child from tuberculosis.

THE JOURNAL
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IT FOR THE
EXPRESSION OF
YOUR VIEWS
ON
MEDICAL SUBJECTS

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

COUNTY HEALTH UNITS

During the past month and especially during the period from October 10 to 25, the State Department of Health has been busy trying to induce boards of supervisors to establish county health units. I have made several trips to Kent, Saginaw, Hillsdale and Washtenaw counties, with the view of bringing about this result. Other members of the staff visited Marquette, Clinton, Saginaw and Washtenaw counties.

The particular reason for this activity is the new law giving county boards of supervisors the right to establish county health units. This is known as Act 306, Public Acts 1927. It is a simple, short law providing for the establishment of county health units in separate counties and also providing that several counties may unite and organize a district health department. The plan of organization is to be approved by the State Health Commissioner, and the health officer to be selected by the board of supervisors.

It is the desire of the Michigan Department of Health to see to it that such county health departments are established by and with the consent of the County Medical Societies and that the work done by the county health departments is done in co-operation with the local physicians. In each instance where we have made a special endeavor to have a county unit established the County Medical Society has either passed resolutions endorsing the project or individual members, including the officers, of the local medical society have appeared before the board of supervisors in its favor.

Up to the present time, but one board of supervisors has taken definite action to establish a county health unit. This is in Saginaw county. Oakland county has a very strongly organized county health unit which, although it was started before the enactment of the law referred to, has since been put under Act 306, Public Acts 1927. In Kent and Hillsdale counties the matter is under consideration, having been referred to the health committee in each case. In both of these counties the medical profession is strongly back of the movement.

The State Department of Health is anxious to do anything that it can between now and the next meetings of the boards of supervisors, especially in the two counties above mentioned, to induce the boards to vote in favor of a county health unit. We will appreciate the co-operation of the profession and will be glad to receive suggestions as to what can be done to promote sentiment in favor of this very necessary public health advancement.

In Washtenaw county the County Medical Society and the medical profession connected with the university are working in co-operation with the State Department of Health to bring about the establishment of a unit as referred to and we are all confident that there will be a favorable outcome to our efforts at the January meeting of the board of supervisors.

There are many counties which have not been approached on this subject and this is an appeal to the County Medical Societies of those counties to look into the matter and let the State Department of Health know what the feeling is and whether it would be possible to induce the boards of supervisors of their respective counties to establish units.

We appreciate the comment in the Journal of November, 1927, in which the Editor compares the work that it is proposed to have done by county health units in Michigan with that done under the Millbank Health Demonstration in Cattaraugus county, New York. We are sure that the work done in Michigan will meet with the approval of the profession because it will be started with its consent and largely under its guidance.

Guy L. Kiefer, M. D.

ACTIVITIES IN THE BUREAU OF ENGINEERING

Of direct bearing on the health of the state are the sanitary advances recorded in the annual report of the Bureau of Engineering. We quote significant paragraphs:

"The number of filter plants has increased from 21 in 1926 to 23 in 1927. These plants serve 32 municipalities having a population of 46.3 per cent of the state's population.

"Fifty-one chlorination plants serve 54

municipalities having a population of 12.8 per cent of the state's population. Fifty-one per cent of the population of the state is supplied with water which receives treatment either by filtration and chlorination or by chlorination alone.

MUNICIPAL WATER AND SEWER SYSTEM PLANS

"A complete inventory of the files of the municipal water and sewerage system plans was made. Based on these findings a campaign was started through correspondence and visits calling attention of the city and village authorities to their duty of filing true and correct plans of their municipal water and sewerage systems with this department. It is pleasing to report that more than twice the number of sewerage and water plans were received this year than the previous year.

"A total of 146 sewerage system or extension plans were received. Of the sewerage plans received, 110 sets were approved or accepted for filing, 16 sets were returned for corrections, and 20 sets were held for further information.

"Of the water plans received, 60 sets were held for further information, 60 sets were approved or accepted for filing, and 5 sets were returned for correction.

RAILROAD WATER SUPPLIES

"Inspection of water supplies used on the railroads of the state was continued during the year in the same manner as in the past. Samples for bacteriological analyses were collected and sanitary inspections at the train source made. Numerous bad sources were corrected by altering local conditions with the result that favorable certificates were issued for all sources used in the state.

"The railroads in Michigan required 159 certificates for water obtained in 89 cities. This necessitated the collection of 330 samples of water. These supplies are classified as 67 municipally owned, 6 privately owned, and 20 owned by the railroads.

"Inspections were also made and samples collected in 13 cities where the municipal water supplies are used by steamship companies. On the basis of these inspections 28 certificates were issued to various water transportation companies.

ROADSIDE WATER SUPPLIES

"During the summer of 1926 the roadside water survey was carried on along lines similar to those employed in 1925.

The work extended from July 6th to September 20th and occupied 57 working days. In this time we were able to take samples from a little over three times as many sources as we did in 42 days in 1925.

"A total of 5,479 miles of state trunk lines was covered. Thirty-two trunk lines were completely covered, and 15 others nearly covered. Eight hundred and eight samples were analyzed, taken from 805 sources of supply. Of these sources, 76.3 per cent were safe, and 23.7 per cent unsafe. In 1925, only 63.7 per cent were safe.

"Evidence of the educational value of the previous year's work was found in many places. This was shown by the familiarity of the owners with our survey, and by the comparison of results of the analyses for the two years from the same source. Of the sources found unsafe in 1925, 60 per cent were found safe in 1926, while of the sources found safe in 1925, only 11 per cent were found unsafe in 1926.

"Particular care was taken to collect samples from all school wells along the routes traveled. This was done to protect the health of the pupils and also because school yards are favorite stopping places for tourists. A total of 209 school samples was collected. Of these, 80 per cent were found safe.

"This is a higher percentage than the average safety of all samples analyzed. It is believed that it is due in part at least to the fact that the schools were not in use during the time when the samples were collected. Many of them had conditions surrounding them which did not seem particularly favorable to their safety and it is our opinion that if samples were collected from these wells when they were in use the results of the tests would show a lower percentage of safe supplies. Filth tracked onto the platform is more likely to find its way into the well while school is in session and the children are using the well.

"A total of 144 municipal supplies was tested. Of these, 115, or 79.7 per cent, were found to be safe. In addition to the municipal supplies tested and found safe there were 52 others along the line of travel which were known to be safe by reason of previous tests. A total of 167 municipal supplies was therefore certified as safe.

STREAM POLLUTION CONTROL

"Early in July, 1926, a representative of the Conservation Department, an Assistant Attorney General, and the sanitary

chemist and assistant sanitary engineer of the Department of Health, went to the Upper Peninsula where a very careful and detailed inspection was made of all the paper mills, gas plants, chemical plants and many of the milk handling plants. Conferences were held at Newberry, Marquette, Houghton, and Crystal Falls, similar to the ones held at Lansing in the early part of the year. At these conferences 26 incorporated municipalities and 21 townships were requested to have representatives present. To them the problems of stream pollution were presented and orders similar to the ones issued at the Lansing conference were later issued to 16 of the municipalities.

"At Newberry six chemical plants and eight dairy plants were represented, at Marquette four gas plants, at Houghton four dairy plants, and at Crystal Falls 14 dairy plants. With each of these industrial groups the pollution created by their wastes was discussed and the measures necessary to relieve the pollution, outlined.

"The six-month period allowed the municipalities at the Lansing conference, having now expired, a check was made to see what progress had been made. It was found that of the 77 municipalities receiving orders, 23 had submitted reports, 17 had employed engineers, 5 required no reports, and 32 had taken no action.

"Letters were therefore addressed to 47 municipalities in November asking for a progress report. Similar letters were later sent to the industries. The results of the conference have been most gratifying to the departments interested in this control work. There are but very few of the municipalities that have indicated that they do not intend to take any steps toward relieving conditions created by their sewage, and on these it is planned to institute court proceedings at an early date.

"The experimental treatment plants operated by the tanning and canning industries were very successful and sufficient information obtained to warrant their continuance through the second year.

"At the present time records in the Department show that municipalities ordered to start work on sewage disposal systems have responded in the following manner:

Reports submitted	35 or 45.4%
No report necessary.....	6 or 7.8%
Engineers employed	14 or 18.2%
Working locally on plan.....	9 or 11.7%
No action taken.....	13 or 16.9%

SWIMMING POOLS

"For a number of years this bureau has taken but slight action in swimming pool operation in the state, due to the few pools in use, to a lack of staff personnel, and because the health problems involved were not fully appreciated and taken seriously. Inspections were made only at those pools where assistance was asked. The rapid rise of swimming pool popularity has changed most of these factors so that at present it is our desire to assume supervision of all pools operating in the state.

"Our first problem was to obtain accurate knowledge regarding the number of pools and their locations. This was obtained through correspondence with the superintendents of public schools in all towns having a population of 3,000 and over. A 90 per cent response was received to this circular letter, resulting in the information being obtained from 121 public or semi-public swimming pools. Thirty-five of this number are located in Detroit and the remaining 86 are scattered throughout the state.

"A swimming pool questionnaire was prepared to be filled out by the engineer on the first inspection of the pool and to be filed in our office as a record of the physical features of the pool. Seven of these questionnaires have now been completed. We hope to have a daily operator's report filed monthly with this department from each pool so that a closer relationship may be built up between the pool operators and the Health Department. Our inspectors thus far have clearly shown the need of state supervision of pool operation. A lack of knowledge on the part of the operators concerning the use of available equipment is general. Repeated bacteriological water tests bear us out in this statement. In two cases it has been necessary for the department to order the pools closed until equipment suitable to treat the water is procured. Our work of keeping swimming pool waters up to the rigid bacteriological standard is merely started. By another year we hope to make a good advance toward this end.

—E. D. R.

LABORATORY NOTES

Dogs' heads for the diagnosis of rabies should be sent to the Pasteur Institute at Ann Arbor, *not* to the Michigan Department of Health Laboratory.

Biologic products distributed free by the Michigan Department of Health have

a real value. The plant that manufactures these biologic products operates on a budget. One of the largest items of expense of this plant is the exchanges of unused products. Physicians should not order more than they expect to use of any of the products. A consideration of this problem by physicians will assist the management of the plant to extend the service to other products.

The Division of Biologic Distribution maintains 24 hour service. Telegrams to that division will be handled immediately upon receipt. It is not necessary to telephone your order. More prompt service will be obtained by sending a telegram, as the telephone central cannot always locate the shipping clerk. We have arrangements with the Western Union whereby the shipping clerk checks up every few hours day and night to see if any orders have been received at their office.

During the past month we have had two important additions to the staff. Dr. Grace Lubin, who was formerly assistant in plant physiology at Johns Hopkins university, has taken a position as colloid chemist in the laboratory. Dr. Roy Pryor, formerly director of the Detroit City Laboratories, is now connected with the State laboratories as research bacteriologist.

OCTOBER'S RECORD

As a whole the month of October showed a lowered incidence of communicable disease. This was particularly true in typhoid fever with a report of 78 cases as compared to 95 cases for October, 1926, a decrease of 17 cases equivalent to about 18 per cent.

The most satisfactory showing was in diphtheria, which dropped from 792 cases in October, 1926, to 403 cases in October, 1927, a decrease of 389 cases equivalent to about 49 per cent.

Scarlet fever, which has been so continuously high for many months, showed a decrease from 665 cases in October, 1926, to 489 in 1927, equivalent to about 26 per cent.

But slight difference is shown in the numbers of other diseases.

All of the venereal diseases showed a slight decrease. This was to be expected on account of the change in the regulations regarding the reporting of the same.

The most significant change probably is to be found in poliomyelitis, (infantile paralysis), of which there were reported

91 cases in October as compared with 37 cases a year ago and an average for the past five years of 42. This was a continuation of the September rise when there were 88 cases reported.

PREVALENCE OF DISEASE

	October Report			Av. 5 Years
	September 1927	October 1927	October 1926	
Pneumonia	206	239	239	278
Tuberculosis	305	523	554	415
Typhoid Fever	74	78	95	146
Diphtheria	229	403	792	778
Whooping Cough	564	442	431	389
Scarlet Fever	343	489	665	844
Measles	50	140	112	278
Smallpox	55	38	34	65
Meningitis	8	9	6	10
Poliomyelitis	88	91	37	42
Syphilis	1,549	1,367	1,473	1,138
Gonorrhoea	771	1,057	1,187	1,038
Chaneroid	13	9	20	14

CONDENSED MONTHLY REPORTS

Lansing Laboratory, Michigan Department of Health

October, 1927

	+	-	+ -	Total
Throat Swabs for Diphtheria				970
Diagnosis	32	406		
Release	54	158		
Carrier	1	307		
Virulence	10	2		
Throat Swabs for Hemolytic Streptococci				640
Diagnosis	129	203		
Carrier	13	295		
Throat Swabs for Vincent's	39	397		436
Syphilis				5949
Wassermann			1	
Kahn	924	4980	40	
Darkfield	2	2		
Examination for Gonococci	218	979		1197
B. Tuberculosis				353
Sputum	70	252		
Animal Inoculations	4	27		
Typhoid				234
Feces	13	64		
Blood Culture	5	39		
Widal	21	75		
Urine		17		
Dysentery				61
Intestinal Parasites				25
Transudates and Exudates				165
Blood Examinations (not classified)				120
Urine Examinations (not classified)				276
Water and Sewage Examinations				742
Milk Examinations				76
Toxicological Examinations				8
Autogenous Vaccines				3
Supplementary Examinations				488
Unclassified Examinations				200
Total for the Month				11943
Cumulative Total (fiscal year)				49150
Decrease over this month last year				1296
Outfits Mailed Out				17450
Media Manufactured, c. c.				475275
Antitoxin Distributed, units				37374000
Toxin Antitoxin Distributed, c. c.				165670
Typhoid Vaccine Distributed, c. c.				2065
Silver Nitrate Ampules Distributed				6800
Examinations made by Houghton Laboratory				1629
Examinations made by Grand Rapids Laboratory				5507

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

SEASON'S GREETINGS

Your Secretary-Editor would be very remiss indeed did he fail to extend to the officers, members, readers and advertisers his personal greetings of the season. Every so often we find ourself in a position wherein words fail to convey the thoughts and sentiments that exist within us—we are confronted with that situation at the present moment.

Privileged as we have been to serve our Society and its membership over a period of some seventeen years, we have been the recipient of innumerable courtesies. We have not been unmindful of the trust reposed in us; we have striven to acquit ourselves of that trust and to justify that confidence. The friendships formed fill us with pride for they are ever a source of inspiration and a solace when clouds hang low. Enemies inadvertently and advertently have also been created, to our deep regret, but our hope has always been that eventually they would perceive the basic facts that created differences and that then the ill feelings would vanish, a new understanding would ensue and so heal the breach. We are ever ready to proffer apology when we are wrong and impart reasons when our position is questioned. Our ideal, our purpose is ever to serve, not to rule or dictate.

We cannot record the pleasure or pride that is engendered as we note the splendid progress that is recorded at the end of each society year. Credit belongs to no one individual; it is the achievement of the whole—officers, committees and members working in unison, with harmony, toward definite ends. It is because of that manifest activity that our Society is what it is today—an active, achieving, potential organization concerned with all that pertains to our profession, our public relations and having ideals of service that will enhance human interests and welfare. We are discharging our responsibilities.

And so at this Christmas Holiday season, as we reflect in serious meditation, a horde of memories and incidents pass before us engendering a spirit of good-will,

appreciation and gratefulness. It is in that spirit, that we do sincerely tender our greetings and wishes for a most Merry Christmas and a New Year that will not alone be happy, but also filled with contentment, health and prosperity. May every joy and gladness be yours. May the opportunity present wherein we can serve you to a fuller degree than we have been privileged to in the past.

MINUTES OF EXECUTIVE COMMITTEE OF THE COUNCIL

The Executive Committee of the Council met in Ann Arbor on November 18, 1927. Present: Chairman Stone, LeFevre, Bruce, Corbus, President Randall and Secretary-Editor.

1. On motion of Corbus-LeFevre, January 11th, 1928 was selected as the date for holding the Annual Meeting of the Council in Detroit.

2. On motion of Bruce-Corbus the Secretary-Editor was instructed to cause each issue of The Journal to be copyrighted.

3. Secretary-Editor was instructed to secure the services of Ernst and Ernst to make the annual audit of the Society's books.

Adjourned.

F. C. Warnshuis.

MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION—ANN ARBOR, NOVEMBER 21, 1927

1. The following persons were present: Doctors Little, Huber, Davis, Lyons, Cabot, Biddle, Landers, Stapleton, Randall, Haynes, Sundwall, Bruce, MacCracken, Sinai and Henderson. There were present also Mr. A. W. Thompson, representing the Department of Uublic Instruction, an dthe Misses Cordelia Kemper and Sena Anderson, representing the American Red Cross.

2. Reading of the minutes of the last meeting by Mr. Henderson.

3. The report of the Committee on Publicity. Dr. Jackson made a report on The

Detroit News health column program, calling attention to certain recommendations with reference to the question box department of the News health column. Following Dr. Jackson's report, Dr. M. B. Landers of the Wayne County Medical Society made a statement as to the position taken by his Society with reference to the News program. He stated that he favored the plan as a whole but emphasized the fact that great caution should be exercised in answering the questions submitted, so as not to mislead the public or to give faulty advice.

Dr. Bruce, who has had direction of the work here on the Campus during the latter part of the year, called attention to the difficulties involved in taking care of the large number of calls which are coming in. He stated that he was very much impressed with the importance of publicity of this sort but felt that steps should be taken by the Publicity Committee to provide adequate help in order to do the work in a satisfactory manner.

Mr. Henderson called attention to a communication from The Michigan Business Farmer, asking for the organization of an exclusive service similar to that carried by The Detroit News. This raised at once the question as to methods of financing such a program. After some discussion the whole matter was referred to the Publicity Committee with instructions to submit a report of a plan looking toward the establishment of a state-wide health education publicity program and also suggesting methods of financing the same. The Publicity Committee was empowered to add to its membership, if necessary.

4. Report of the Committee on Sex Hygiene Lectures by Doctors Sundwall and Biddle. The report is as follows:

"Your committee concerned with the problem of public instruction relative to venereal diseases, recommends the following:

"That, for the present, no attempts be made by the Joint Committee to present to the public the subject of venereal disease—etiology, pathology, prophylaxis, social effects, through the medium of the press or other printed articles.

"The Committee will consider this subject from the standpoint of public lectures and anticipates making a report thereunto at the next regular meeting of the Joint Committee."

5. Report of Dr. Sinai as to the program for the coming year. Dr. Sinai called attention to the fact that practically every

school where lectures were given last year had asked for a continuance of the program this year. He also reported a favorable attitude on the part of physicians in these counties where lectures were given last year.

The following lecture outlines were ap-

6. Report of lecture outlines for 1927-28. approved: "The Control of Diphtheria," "The Common Cold," "Air and Ventilation," and "The Mouth and Its Message." The outline on Sunlight and Health was referred back to the Committee for revision, especially with reference to the paragraphs which referred to ultra-violet rays and their use in medical practice. The matter was referred to a special committee, consisting of Doctors Sundwall, Kiefer, MacCracken, Jackson and Cabot. This committee met immediately after the adjournment of the Joint Committee and made the necessary corrections in the outline, after which the same was approved.

7. The Joint Committee approved of the list of speakers and subjects as submitted.

8. Time and place of the next meeting. It was voted to hold the next meeting in conjunction with the Medical Council which is to meet at the Book-Cadillac Hotel, Detroit, on January 11, at noon.

9. The meeting adjourned.

W. W. Henderson, Secretary.

THE UNIVERSITY CLINIC

Some three hundred members registered at the Clinic that was tendered to our members by the Faculty of the Post Graduate Department in Medicine of the University, in Ann Arbor on November 18 and 19. Some two hundred members attended the dinner at the Michigan Union on the evening of the 18th.

This Clinic was attested by all to have been instructive, interesting and practical and gave to the attendant much that well repaid for the time spent.

In our January issue we purpose giving an extended, detailed report of this Clinic which it is purposed to repeat as part of our Post Graduate education activities.

THE COST OF THE BIRTH OF A CHILD

From time to time some feature reporter for a newspaper will spill a sob story on the "cost of being born." Few real facts ever appear in such outbursts. Recently, however, apparently reliable facts have been made by the Heller Committee for Research in Social Economics of the Uni-

versity of California. The one estimate of 430.24 is what the average cost should be. The second total of \$888.26 is not an average figure but rather that of an isolated case—a former university student who kept an accurate record of all expenditures.

We do not purpose analysis or comment upon these cost prices. We simply submit them inviting our obstetricians to send in their comments.

HELLER COMMITTEE ON RESEARCH IN SOCIAL ECONOMICS

ESTIMATED COST OF BEING BORN

1. Medical and Hospital

1. Doctor's fee—			
Includes pre-natal care, confinement and post-natal care by physician (not specialist)			\$ 50.00
2. Hospital—			
Private room for 10 days @ \$6.58	\$65.80		
Delivery room	11.67		
Dressings	2.08		
Total Hospital		79.55	
3. Possible additional necessary or desirable items—			
Anaesthesia*	5.00		
Operation boy baby**	5.00		
Doctor's fee for operation boy baby	10.00		
Total possible necessary items		20.00	
If specialist is engaged instead of general practitioner, there will be an additional expense of at least			50.00
Final estimate medical and hospital			\$199.55

* If there is but a small amount of anaesthesia given, there is no charge. Three hospitals did not even estimate this item. One hospital makes a charge for this item.
 ** All but one hospital charges \$5.00 for this item for the operating room. This amount was therefore included instead of an average.

2. Layette*

	Quantity	Unit Price	Total Cost
Shirts (cotton, silk and wool or silk)	4	\$ 1.51	\$ 6.04
Knitted bands (to pin diapers to—should have straps over shoulder)	3	.60	1.80
Gertrude slips (wool or wool and cotton)	4	3.48	13.92
Nightgowns (flannelette or outing flannel)	4	.88	3.52
White slips—nainsook	6	2.46	14.76
Diapers—			
Cheesecloth or Domet (16 yds.)	24	.30 yd.	4.80
Birds-eye—24" single (8 yds.)	12	.38 yd.	3.04
24" double (16 yds.)	12	.38 yd.	6.08
Coat	1	8.14	8.14
Cap	1	2.90	2.90
Eiderdown squares	2	1.50 yd.	3.00
Afghans	2	6.47	12.94
Total layette			\$80.94

3. Clothing for Mother

Maternity gown	1	\$40.00	\$40.00
Maternity corset	1	5.00	5.00
Total clothing for mother			\$45.00

4. Furniture

Crib	1	\$ 8.16	\$ 8.16
Buggy	1	29.87	29.87
Bed clothing—			
Sheets	8	1.14	9.12
Comforts	1	3.48	3.48
Rubber Sheeting	1	1.75	1.75
Pads	3	.79	2.37
Total furniture			\$54.75

* Items and quantities of the layette were estimated by Dr. Adelaide Brown of San Francisco. Prices collected by Heller Committee are based on ready-made garments.

5. Summary

1. Doctor's fee	\$ 50.00
2. Hospital expense	79.55
3. Layette	80.94
4. Mother's clothing	45.00
5. Furniture	54.75
First estimate	\$310.24
Possible additional necessary or desirable expense	70.00
Domestic service for two weeks at home	50.00
Final estimate	\$430.24

I. Pre-Natal Expenditure

A. Layette—	Unit No.	Cost	Extension	Total	Total
(a) clothing—					
1. shirts (silk and wool)	4	\$1.15	\$ 4.60		
2. bands	3	1.00	3.00		
3. gowns	4	.85	3.40		
4. diapers 4 dz.	2.90	11.60			
5. hose (silk and wool) 4 pr.	.85	3.40			
6. kimonos, mat for woolen	2		5.66		
cotton	2		1.00		
7. gertrudes, mat for nainsook	6		6.49		
silk and wool	4		14.17		
8. dresses, mat for nainsook	4		4.33		
9. dresses, nainsook	1		1.95		
10. sweater	1		1.95		
11. jacket, booties, bibs, dresses, bonnets etc., as gifts.					
Total				\$ 60.60	
(b) bedding—					
1. wrapping blankets	3	.85	2.55		
2. rubber sheeting			1.75		
3. mat to bind small blankets made from large old ones			1.07		
4. mat for lamb's wool comfort	1		4.67		
5. pillow cases	4	.40	1.60		
6. pillow cases, fancy	1		1.15		
7. sheets	8	.60	4.80		
8. pads	3	.79	2.37		
9. mat for hair pillow	1		1.01		
10. spreads	3	1.00	3.00		
11. material for curtain around crib			4.88		
12. afghan material	1		4.50		
Total bedding				33.85	
(c) bath material—					
1. turkish towels	2	1.50	3.00		
2. other towels and wash cloths made from old linen damask			0.00		
3. mat for toilet basket	1	1.67	1.67		
4. bath thermometer	1		1.00		
5. soap			.50		
6. powder			.50		
7. safety pins			.25		
8. toilet articles: cotton olive oil	1.16		.95		
			.50		
9. drugs			1.00		
Total bath material				9.87	
(d) Large equipment—					
1. washing machine	1		145.00		
2. carriage			50.00		
3. crib with mattress	1		22.50		
4. bath table	1		5.00		
5. bath tub	1		4.50		
6. sanitary pail for diapers	1		3.95		
7. room thermometer	1		1.00		
8. wool underwear stretchers	4	.25	1.00		
Total equipment				232.45	

GREETINGS, REFLECTIONS AND SENTIMENTS

We take exceptional pleasure in transmitting to our readers the following group of communication at this season of the year. These letters afford much for thought and are timely expressions as we end the year and set out upon a new year.

Detroit, Mich., November 3rd, 1927.

I am grateful for the opportunity which you gave me to preach a short sermon. From my oldtimer's viewpoint, the young physician should have three aims:

1. To give competent service to the public.
2. To meet all his co-workers "On the level and part on the square."
3. To work hard enough and be thrifty enough to provide for the future of his family and himself.

There is nothing inconsistent in these ideals. In this commercial age, the young doctor needs wise guidance along these lines and should get it before he graduates. Every medical school should teach its senior students the ethics of medical practice. To illustrate the far-reaching influence of such teaching, I have a summer home in a lakeside community of several hundred people. During a two weeks' motor trip which I took last summer, a dear old lady, whom I had seen occasionally, was taken ill and a physician called from a nearby city. Shortly after my return, he telephoned me that he had been caring for my patient and now turned her over to me. When I thanked him for his professional courtesy, he said, "You taught me that in 1915 and, moreover, your talks changed the viewpoint of every man in the class and all of us have so practiced ever since, with the result that in many communities the profession are working harmoniously together." "Medical Ethics" is nothing but the constant application of the Golden Rule, "Do unto others as you would that they do unto you." The universal application of it will prevent practically all malpractice suits.

Couple with this courteous treatment of your co-workers, a broad view of your duty as a public servant and your third aim will realize itself. As I grow older, the thing which gives me the most satisfaction is that I have been given the opportunity to render some service to both the public and my beloved profession.

Many of the younger chaps call me "Pop" Tibbals and I like it.

Very sincerely,

F. B. Tibbals.

Port Huron, Mich., November 3rd, 1927.

With the Thanksgiving season approaching, I feel that I have much to be thankful for in my twenty-seven years' membership in the Michigan State Medical Society.

Looking back to years past, I can see the gradual development of good will and companionship amongst the medical men, as against the old spirit of rivalry that did exist in those ancient days. There is a pleasure in our work nowadays as compared to the early years of the century.

I feel that the rapid development of our State Society in all its branches has done much to break down the old barriers and show the way for a united profession. Our problems have been many,

	No.	Unit Cost	Extension	Total	Total
(e) Reference books—					
1. gov't. bulletins	4				
2. others	2		3.25		
Total books				3.25	
Total Layette					\$339.02
B. Mother's Expenses—					
(a) Medical—					
1. Hypodermics			7.00		
2. other medicines			2.50		
Total medicine				9.50	
(b) Clothing—					
1. maternity corset	1	7.50	7.50		
2. robe	1	10.00	10.00		
3. bed jacket	1		4.00		
4. slippers	1		2.00		
5. gowns	4	2.00	8.00		
Total clothing				31.50	
(c) Taxi—					
to doctor and hospital			24.75	24.75	
(d) Domestic service—					
8 weeks	8	2.12	16.96	16.96	
Total expenses of mother					82.71
Total Pre-natal expenses					421.73

II. Post-Natal Expenditures

A. Medical—					
(a) Doctor's fees (specialist)—					
1. care of mother			150.00		
2. operation on boy baby			25.00		
3. anaesthesia, administration			10.00		
Total doctor				185.00	
B. Hospital—					
(a) delivery service and dressings			10.00		
(b) gas anaesthesia			2.50		
(c) room for operation on baby			10.00		
(d) care of mother and baby 14 days		7.00	98.00		
Total hospital				120.00	
C. Service—					
(a) practical nurse, 3½ weeks		25.00	87.50		
(b) board and laundry for nurse			20.00		
(c) other help, weeks, 8		2.12	16.96		
Total service				124.46	
D. Miscellaneous—					
1. announcement cards and postage, doz., 8			4.32		
2. announcement telegrams			3.75		
3. flowers, fruit, etc.			10.00		
4. guest trays at hospital	2	1.00	2.00		
5. stationery to acknowledge gifts and flowers			3.00		
6. corset			7.50		
7. brassieres	4	1.50	6.00		
Total Miscellaneous				36.57	
Total Post-Natal					466.53
Grand Total, All Costs					\$888.26

SUMMARY

I. Pre-Natal Expenditures

A. Layette—					
1. clothing		\$ 60.60			
2. bedding		33.36			
3. bath material		9.37			
4. large equipment		232.45			
5. reference books		3.25			
Total Layette			\$339.02		
B. Mother's expense		82.71			
Total Pre-Natal Expenditures				\$421.75	

II. Post-Natal Expenditures

A. Medical		\$185.00			
B. Hospital		120.50			
C. Service		124.46			
D. Miscellaneous		36.57			
Total Post-Natal				\$466.53	
Grand Total					\$888.26

and could never have been solved independently nor by small groups. A membership in the State Society is something to be proud of. It should be something to work for so that on attaining it, one would be more than willing to do his bit for its future development.

I know of no state that publishes a better or more instructive journal. I know of no state that is doing a more constructive work in scientific medicine. I know of no state that has better annual meetings—from the standpoint of business accomplished—scientific sections—nor good fellowship.

At this time I can only wish for our society a membership of every qualified practitioner. Not because we need them, but because they need us.

Very sincerely yours,
T. F. Heavenrich.

Petoskey, Mich., November 3, 1927.

Your letter of November 2 at hand regarding conditions in my district.

In contrast to the County Society activities of other districts our record does not look so bright, but when I look over the record of previous years I am encouraged. My district has always been one of the less active districts to the intrinsic and extrinsic causes with which you as Secretary are already familiar.

We have had more medical meetings, more graduate conferences than ever before, and I can see a gradual awakening of interest among our members. We still have a few indifferent members who think that by paying the annual dues they have fulfilled all their obligations to the Society, but all in all the thirteenth district is looking up.

The Society at Alpena is as alive an organization as any in the state and interest in the post graduate clinic is very keen. The meetings have been well attended and worth while.

A part time field secretary might have increased our membership by calling upon the men who have not yet joined us.

Am looking forward to the January council meeting.

Yours truly,
B. H. Van Leuven, M. D.

Flint, Mich., November 4th, 1927.

Judging from the complexion (mental) of its officers and personnel, and observing the activities of the Genesee County Society, the medical organization with which I am closely in touch, I am bound to believe that the profession is approaching an era of understanding, of tolerance, of co-operation and mutual good will, such as has not been in existence during my lifetime. It augurs well for success and for overcoming little by little the results of prejudice and ignorance, not to say stupidity, on the part of a public largely addicted in the past to using its so-called common sense only at rare intervals.

At times of pestilence, floods, tornadoes, accidents and disasters, with which to cope successfully, the services of physicians are indispensable, the public, as one, motivated by fright, surrenders its egotism and flees to the profession for succor. It knows the trail to take when in distress, but when the weather is good, sailing smooth, and prosperity to outward seeming evident, a considerable portion of the population, credited with ordinarily good judgment and what passes for intelligence, is as dense as clay and displays but

embryonic discrimination when it comes to appraising the physician's ministrations.

It is the latter class, potentially able, perhaps, to use unexercised brain matter, to which I refer as vulnerable to the influence of a united high-minded and dignified profession.

A most interesting feature of recent reading in preparation for the Medical History of Michigan pertains to controversies. These may from this audience in time be contemplated with serenity or amusement. The phrase "Doctors will disagree" was current—indeed a household word—long after I came upon the medical stage. Squabbles among the old-timers are now as funny as they were then ferocious; and they were as discreditable then as they are now unnecessary. Whimsies, arrogance and lofty self-assertion are being relegated to the discard and a better spirit is appearing. Compromise is the frequent result of sincere questioning and discussion, but disputatiousness is subversive thereof. Solidarity in the profession will be salutary to its membership and impressive with the public.

Study of medical history reveals the importance of "get together." The old is available and indicates what it is expedient to avoid as well as that which it is desirable to emulate. New history is now in the making and the present profession its builders.

In passing—have you anything under your hat which will tend to make the forthcoming compilation more readable and interesting? The Committee murmurs—or rather says aloud—"We thank you."

C. B. Burr.

Cadillac, Mich., November 7, 1927.

We are nearing the end of 1927 in Medical history in Michigan and it gives us an excuse to stop and reflect. I look upon the past year as an epoch-making year in our society, more real progress has come forth, and I can only see for Michigan State Medical Society a rapid growth along lines in which we are all interested.

I want to congratulate you as Secretary-Editor for your untiring efforts in helping the Council, House of Delegates and Members, in doing something every month to help the progress of medicine in Michigan. We are thankful for our Councilor Clinics, Clinics at University Hospital, the hearty co-operation with the State Board of Health, and the last real effort for the protection of the public and the physician—the committee appointed to study the Medical Practice Act.

I wish at this time through The Journal to thank the Members of the Ninth Councilor District for their confidence, having re-elected me as Councilor. I will endeavor to do all in my power to help the Societies and Members, and if I can be of any service to any Society or member, I would be only too glad.

Again congratulating you and your staff.

Very respectfully,
Otto L. Ricker, M. D.
Councilor Ninth District.

Detroit, Mich., November 8th, 1927.

It has been customary for the last few years for some of us to write you as the year closes in on us in commemoration of your work as Editor of our Journal and to comment briefly upon current medical events; so I am taking this occasion to express my reaction to the passing show.

Nothing startling either in the medical or surg-

ical or pathological world has thrown itself upon the screen; yet many things have transpired and are transpiring to show the trend of medical affairs and medical thought and to warn us that the price of medical freedom as of any other freedom is eternal vigilance.

As I see it, the largest struggle is to find out for ourselves without sacrificing professional dignity—and the profession alone can and must be the sole judge as to what constitutes dignified ethical conduct—just how far we may go into bringing ourselves, collectively and individually, into the spotlight of publicity; just how far we may go in our earnestness to place before the public the knowledge which is the profession's, that it, the lay public, may be enlightened in matters of public and personal health;—and I think the profession, in collaboration with others interested in the public weal, is earnestly striving to place in an understandable and readable way the known facts upon which the science and the art of medicine rest.

The second great struggle is to give the health authorities of the state and the several communities such assistance as is helpful in their endeavor to maintain public health at the highest level consistent with present day knowledge and efficiency, minimizing the inroads of communicable diseases and raising the general standard of health, without sacrificing the stimulus of private initiative and the beneficence of the personal contact and without destroying the close relationship which does exist and which should always exist between the patient and his physician. In this struggle might well be included the constant one of the hospital to maintain superiority in the number of its indoor and its out-department patients with the danger of excessive charging of the patient on the one hand and with the added danger of pauperizing those well able to pay on the other. It is a well recognized fact that the cost to the patient for his care in the hospital is too heavy or not sufficient.

A third and not the least is the ever present struggle how best to maintain the standards of education within our own body, to keep abreast of the times and to sustain and to pass on untarnished the high ideals inherited from generations of physicians in an age which seems to permit, yea even to encourage, a loosening of the bonds of medical conduct, without lessening the love and respect the profession has always enjoyed, a love and respect so precious to us and so necessary to the intimate relationship of the physician and his patient. In this state, as in many of the others, the post-graduate clinical conferences, which you have done so much to foster, is one of the answers; the other is the Department of Post-Graduate Medicine, accepted in principle by the Regents of our University and soon to be put into operation, in which I hope the large clinical facilities now provided for in the Detroit hospitals will be fully utilized both in the material and in the personel of Detroit's able practitioners and teachers.

Again, I hope you will accept my hearty appreciation of the work of yourself and of the Council, who have been so self-sacrificing and helpful in safeguarding our interest and in promoting public welfare.

With best wishes for the continued success of The Journal I am

Sincerely yours,

Andrew P. Biddle.

THE DOCTOR'S TRUST

Bay City, Mich.

When one of my friends is feeling funny and, as he expresses it, "wants to get my goat," he starts to razz me about "the doctor's trust."

It has set me thinking of what "trust" means in the doctor's life and the many sides he is touched by it.

My friend's idea is the too common one, in the minds of the laity, that the doctors are in what the dictionary defines as a "gigantic combination for the purpose of controlling production, prices, etc."

I willingly concede that the profession is in a combination and I wish every educated and reputable physician was a member of it, and that there was some sign, trademark or other distinguishing characteristic by which the public could discriminate its members from the raft of cultists, charlatans, paths and practs who are daily swindling the confiding people out of their hard earned cash.

I have practiced medicine from the days when, in Michigan, there was no legalized standard for the right to hang out a shingle inscribed "Doctor," and I well remember how hard it was to get the legislature, untrained in medical thinking, to pass any kind of a law which would define the practice of medicine or prescribe the qualifications by which a man could legally call himself doctor.

The law of 1883 had hard sledding to get past and was a miserable compromise under which any man who could swear to having peddled medicine from door to door for the previous two years could register and be legally the equal of the man who graduated from Michigan or Harvard.

One of these fellows testified before a coroner's jury, in a septic abortion case, that he had listened to medical lectures but could not tell where or how many; that he had a medical library and when pressed for the number and name of authors confessed the library consisted of just one volume and that was Dr. Chase's receipt book!

We fought the quacks as best we could with that law, which was a spear with a broken shaft, and later were able to have the present amended law put in force, with vastly better results in the control of chalatanism, but it is far from adequate for the fight that confronts us today.

We stumbled along as best we could, fighting individually the irregulars, until the present splendid organization, the American Medical Association, was formed in 1902, with its constituent state and county units.

Previous to its organization most medical practitioners were fighting a lone hand against the men in their localities, with as much love for each other as the young bucks at the Donnybrook Fair. County societies were few and far between, state societies were political bull rings where the noisiest and wettest captured all the honors and where a truly scientific paper was nearly as scarce as a brontosaurus egg.

The State Society pushed the organization of County Societies, and both fostered scientific and social meetings until, as men rubbed elbows around the banquet tables and swapped stories and experiences of practice, they earned a new meaning of "trust" and applied it to their fellows. Where before, every man's knife was in a handy bootleg ready for instant use, the new trust bred a respect and tolerance new in the world and each learned the other was "a man for a' that."

The public has learned to trust also and whereas in those early days nothing but grim necessity and the fear of impending death would

drive a patient into the hospital, now it is often difficult to keep them out.

The people trust the doctor and the doctor trusts the public, alas! sometimes to the detriment of his pocketbook.

The fence erected about the doctor herd was a low one, at first, and all sorts of hybrid cattle jumped into the Trust pasture.

Later on the bars were raised and the only gateway was jealously guarded by the State Board of Registration, who without fear, favor or pay watched the mavericks and admitted none that did not wear their brand.

The pastures took on a new green and the more remote they were and the higher the fence the more lucious they looked. The stock within grew fat, sleek and lazy and the hungry herd without started breeches which have grown into threatening magnitude. Every biennial session of the Legislature sees new, stronger and more determined and vicious attacks made on the fence, and, unless we build the fence stronger and higher it is doomed to follow the fate of the Great Wall of China and become a useless curiosity of medical history.

We and the public stand to lose all the benefits of the Trust unless we present a united front against unprincipled aggression and use the political power which six thousand of the brainiest citizens of the state possess if they will use it. We need to work for a legal standard of qualifications to practice the healing art which every man and woman offering to cure disease must accept and measure up to.

The fundamentals of anatomy, physiology, pathology, chemistry, hygiene, bacteriology, diagnosis and preventive medicine must be required knowledge, to be proven before competent examiners, and the punishment needs to be sure and adequate for the person who trifles with human life, by attempting any system of healing without being first grounded in these fundamentals.

We must bend our efforts to securing such legislation or stand idly by and see our chosen field invaded by the cults, our fences scorned and ourselves driven to economic slaughter and deserved disgrace and disrepute.

The Medical Trust is and has been a good thing for the profession both financially and scientifically, but more so to the public who has been the recipients of the greater skill and devotion to service fostered by the trust.

It is an axiom that if a man is well grounded in medical knowledge he has the right to apply that knowledge in any way his judgment dictates.

Our efforts against the cults and isms are fruitless so long as we attack them because they are a departure from what we consider orthodox practice.

The public always sympathizes with the cult attacked on these grounds and flocks to its support, but if our efforts in securing legislation that will compel every one practicing healing to be prepared up to the standard set in the fundamentals, there can be no just quarrel with our attitude, and we can safely leave the application of the knowledge to the choice of the individual; he will be a far safer man to be at large than at present.

To secure such legislation, we must not ask for it because we need it to smother competition, but because it will assure the layman protection from ignorant quackery and enable him to choose a physician with a reasonable chance of getting skilled service.

Trust means "confidence in;" it means faith; it means reliance on others; it means a charge or responsibility accepted. Let us make our Medical Trust mean all these things both to ourselves and to others. Let us be trustworthy!

C. H. Baker.

Grandville, Mich., November 12, 1927.

I have read with a great deal of interest the article on the Detroit News' Public Health column by Allen Shoenfield in the October Bulletin of the A. M. A.

It seems to me to be a step in the right direction inasmuch as I believe all public health columns should be sponsored by organized medicine.

I can best voice my sentiments in regard to the subject by quoting from my address before the Kent County Medical Society as its retiring president in December, 1916, as follows:

"In politics and business, yes and in all lines of endeavor the newspaper is the most powerful in every community. The weekly and monthly magazines of the country have published many commendable articles, and a great many people think that what they read in the magazine or newspaper is gospel. Sometimes it is if it comes from the right source. This method of publicity is our strongest fort. The Kent County Medical Society through its Public Health Committee with the aid of the newspaper can be a powerful factor in this vicinity in the work of spreading the gospel of good health. If there was published in the daily paper in the same space each day a short terse statement bringing out strongly a good health truth with the endorsement of this society, it would at least bring before the reader some information in concrete form which he would not otherwise get, and many people interested in the subject would eagerly watch for the next day's topic."

I don't know how the column would work out in a county unit but it seems it could be done in the larger counties by spreading the burden of contributing articles among its membership. Certainly if it did nothing else it would do our literary ability no damage.

The above is only a suggestion and I fully realize that considerable thought and effort are necessary before it can be made even a feasible proposition.

Secondly: I believe in advertising, for without it no business is supremely successful, and the practice of medicine is not all science—a goodly part is business. Of course I do not sanction individual paid for advertising, but state and national paid for medical advertising emanating from state and national headquarters, either through the press or through the air or both, is due the regular profession of the country. Such advertising would not only counteract the large amount of cult and faddist propaganda, but it would also offset a lot of the trash and pseudo medical information found in various publications.

In some manner the subject should be brought to the attention of our national offices, and I am quite confident that if it was properly presented it would receive favorable consideration.

Thanking you for the opportunity of expressing myself on the above subject, I am

Cordially yours,

J. D. Brook.

Detroit, Mich.

To the Members of Wayne, Oakland and Macomb County Medical Societies, comprising the

First Councilor District of the Michigan State Medical Society:—Greetings.

This month ending our official year, I wish to thank all of the members of my district for their hearty co-operation and support. I trust that I have merited the confidence you imposed when electing me as your Councilor and trust that the happy relations will long continue.

I wish to thank all of the members of the State Society who responded to the invitation to participate in the programs of our post-graduate conferences. These conferences have been exceptionally well attended and the benefit derived therefrom will be far-reaching.

The three County Societies comprising my district, numbering 1900 members, are all showing an increase in new members and a marked enthusiasm in organizational and scientific work.

Especially do I wish to congratulate the President of the Wayne County Medical Society and his enthusiastic membership committee for the wonderful showing of less than twenty-five members delinquent, of one thousand three hundred sixty. This is a remarkable showing for so large a society as Wayne County Big things are expected from a big society and our expectations are being fulfilled to the limit in Wayne . . .

Oakland County as usual is showing a healthy gain in membership and greater enthusiasm in scientific and social activities. Our recent post-graduate conference held November first was exceptionally well attended, and all papers read by visitors were fully discussed, and a great interest was shown in the efforts of the Michigan State Medical Society in putting on these conferences.

Macomb County, while the smallest in membership, shows a healthy growth and activity, many of its members availing themselves of the opportunity of attending the regular meetings of the Wayne County Medical Society every Tuesday evening.

I wish to take this opportunity to extend an invitation to the members of the Michigan State Medical Society when in Detroit, to visit the beautiful club rooms of the Wayne County Medical Society in the Maccabee Building, to lunch there if they wish and to attend the regular Tuesday night meetings, where they will always find an interesting scientific program. Daily bulletins of the medical and surgical activities of the different hospitals of the city can be obtained from the House Secretary who will gladly give any other information desired.

I also wish to thank our genial and capable secretary of the State Society, F. C. Warnshuis, M. D., for his hearty support and advice which made possible the excellent showing of my district.

Again thanking you and extending the Greetings of the Season, I am,

Yours sincerely,

J. Hamilton Charters,
Councilor First District,

Bay City, Mich., November 14, 1927.

Having been just elected to the office of Councilor in June and as I have had nothing of importance come up in this district because I find everybody prosperous and happy, I wish all the doctors in the state were in the same position as those of the 10th District.

Wishing you all many good cheers for Christmas and New Years,

Yours very truly,

P. R. Urmston, M. D.
Councilor of 10th District.

Hillsdale, Mich.

The purposes and ideals of the State Medical Society are: To raise the standards of the medical profession, bringing to it the advancements in the science and the art of medicine, and encouraging the progress of its members; to use the organization for the welfare of the profession and of the public; to educate the laity to the rational attitude toward medicine and give to it an understanding of the society's aims and accomplishments, and to teach the benefits and use of prophylactic agencies, thereby enlisting support for its various activities.

There is an increasing efficiency and all the factors and instrumentalities are being utilized in a most satisfactory way. The composite standard of the profession is higher, its relation with the public is better, and there is a more intelligent and helpful co-operation, due in large measure to effective organization.

The Journal of the Society is well edited and worthy of the body which it represents. It is liberally and tactfully conducted and dissension and strife do not interfere with its contribution to a great cause. Its influence is beneficent and growing and the relationship with the State Health Department is close and important.

The County Societies are increasingly interested and active and the post-graduate district meetings are being resorted to, and are more and more valued and appreciated.

The whole retrospect and prospect are of progress and an inspiration. Looking back over an experience and observation of nearly forty years, one cannot but be enthusiastic as to the future.

W. H. Sawyer.

November 11, 1927.

It gives me great pleasure to greet the membership of the Michigan State Medical Society at this season of "Peace on Earth and Good Will to All."

The last few years in the history of our State Society have exemplified the fact that more progress can be made by united effort and harmony than by strife.

We have been singularly and fortunately free from disturbing and disrupting factional disputes and misunderstandings. Our efforts for the betterment of a sympathetic understanding our profession and the public have been bearing fruit. The lay press is showing evidence of a comprehension of the attitude of the medical mind to the public weal.

The advantages of preventative medicine are being brought to the very doors of our citizens. The altruistic efforts of the medical profession in the interests of public health and welfare has inured to the advantage of all.

The harmonious co-operation of our State Society with the medical teaching institutions of the State in the hygienic extension work among the laity and post-graduate conferences for the profession, has proved that these various organizations have been rivals only in the accomplishment of good.

Good will and harmony always make for peace and can never work harm. Let us all individually

and collectively so continue to comport ourselves that when the day comes when we shall cease our labors and enter into our long rest, those with whom we have come in contact may well and truly say, "Well done, good and faithful servant."

Very truly yours,

Louis J. Hirschman, M. D.

Kalamazoo, Mich.

There is one ideal which should be the aim and objective of organized medicine. That ideal is the improvement of the standard of medical practice. The function of our profession is the service of humanity. As we learn more about the human body and more about the nature of disease processes, we are in a better position to serve mankind by the prevention and healing of organic and functional ailments, and by the alleviation of suffering. Each year the profession as a whole has marked an advance in its conquest of disease. It is only by adding to our knowledge and skill that we may hope to do our full duty in the service of humanity. I repeat that the highest ideal of organized medicine is to improve the standards of medical practice.

John B. Jackson.

Ann Arbor, Mich.

With the advance of civilization, the relations of the so-called professions to the community is a constantly changing one. The great professions of the past in engineering and in law have been progressively absorbed into the industrial life of the community until today the professional aspects of these fields are rapidly disappearing. The independent consulting engineer is becoming a rarity since the engineer is today generally a member of the engineering department of some great corporation. A precisely similar development is taking place in the law though it has not as yet advanced nearly so far. Under these circumstances, it behooves the members of the medical profession to consider whether or not similar forces are operating to alter the situation of their professional life and if such be the case, whether there are any steps which can be taken to avoid such a development.

Admittedly the relation of the medical profession to the public is quite different from that of the other two groups. The essentially personal character of the service and its long standing traditions of service will clearly alter any tendencies in this regard. On the other hand, there is some evidence that changes such as have affected the other professions are in fact taking place. The maintenance of the professional relation of the past has depended upon two factors: first, that the physician is in the largest sense the servant of the community, and, second, that he has been properly regarded as being intimately in sympathy with individual problems. It thus follows that the maintenance of an attitude of the utmost confidence on the part of the community is essential to future developments.

The medical profession as a whole and particularly through its organization, must at all times be sympathetic with the social and economic conditions of the day. There is some evidence to show that the public is somewhat less sure of the sympathetic attitude of the medical profession than used to be the case and this is obviously a development to be avoided. There is in some quarters a suspicion that organized medicine has concerned itself considerably with the personal

problems of its members and been somewhat unmindful of economic and social changes. It has been suggested in some quarters that organized medicine at times showed some of the tendencies of the trade union which, though untrue, might arouse suspicion. It seems, therefore, important that medical organization should make it perfectly clear that they are sympathetic with and vitally concerned in the economic problems of the community; that the increasing cost of illness is receiving their most careful attention and that they are prepared at all times to be helpful in keeping down the cost by strict attention to their own organizations. It has at times been charged that the medical profession was inclined to say "hands off" to any study of their economic and social activities and no grounds should be given for such an accusation. We are, and must remain, partners in efforts at progress and must be willing to so organize our work that it will continue to be the greatest example of public service which the community can see.

Hugh Cabot.

November 16, 1927.

In behalf of the Wayne County Medical Society, I wish to extend, through the December issue of the Journal, Season's Greetings to the members of the Michigan State Medical Society.

The work being done by our State Society is of such splendid character that it should stir the pride of every one of its members. What a boon it would be to the welfare of both the profession and the lay public of our great commonwealth if every member would give his full support to the excellent and active program that is already under way.

A few of the activities I have in mind are:

The Public Health Movement,
Mouth Hygiene,
Child Hygiene,
Maternal Welfare,
The History of Medicine in Michigan,
(now being written),
Better Legislation in Medicine,
Medical Guidance Bureaus,
Post-Graduate Conferences.

In carrying forth our program may we be embued by the leaven of science; guided with the spirit of "Unity, Peace and Concord"; treating one another with respect and affection; "Revealing Achievement and Recording Service"; giving honor to the best of those who have served the longest.

By taking advantage of our opportunities the future will place our Society in the position that it properly belongs. In our aggressiveness may we however, never forget that the old fundamental phases of the principles of ethics still hold good.

I do wish your officers and council to know what a special privilege the members of the Wayne County Medical Society feel is theirs to be a part of this great State organization.

It would be a pity if, with the opportunities that are ours, members of the State Society should hold back.

Fraternally,

G. Van Amber Brown,
WAYNE COUNTY MEDICAL SOCIETY,
President.

November 16, 1927.

The Councilor of District No. 2 takes pleasure in sending his personal greeting and best wishes for 1928 to all officers and members of the Mich-

igan State Medical Society. Especially does he wish to testify to the splendid spirit of co-operation and scientific advancement that has characterized the County Medical Societies of his district. He feels that the closing year has been one of solid achievement in medical and surgical practice.

The time has come when it should be and is considered an honor to be enrolled as a member of the Michigan State Medical Society. The qualification and character of prospective members should be unquestioned. No medical mountebank or quack should be allowed to parade as a member. It demands constant vigilance to prevent this and the officers of County Societies cannot exercise too great care in keeping their lists free from suspicion.

Wishing Michigan State Medical Society a most prosperous New Year, I am

Most sincerely,
Burt F. Green.

November 22, 1927.

I thank you for your courteous request that I share with many others, interested in medical

progress and organization, in a review of the work of the year.

Realizing the increasing interest of our profession in the many activities of the State Society I am sure there is nothing I can say that will not be better said by someone else. However, I do wish to say that I am more than happy to have had the privilege of meeting frequently and intimately with those who have helped shape the policies of our organization through this important period. While broader in their scope than ever before, the policies of the State Society seem sane and sensible and altogether practicable and the welfare of our citizens, so far as our profession is responsible, seems adequately and considerately provided for.

Finally, I wish not only to congratulate the Society on the efficiency with which your dual office has been conducted but also to acknowledge my personal obligation for your continued co-operation and helpfulness.

With best wishes, I am

Cordially yours,

James D. Bruce, M. D.

MONTHLY COMMENTS

Medical—Economic—Social

Merry Christmas! That is the Michigan profession's wish to the doctors of our entire country and in particular to the members of our sister state organizations. Coupled to that group are the editors of state and national medical journals to whom ye Editor does particularly tender this Christmas greeting.

Attention is directed to the new department commencing in this issue and devoted to the purposes and activities of the Woman's Auxiliary. The request is also tendered that you draw the attention of your wife to this Auxiliary and urge that she become affiliated. We are quite certain that we shall all profit by reason of the achievements that the Auxiliary will record.

TEN MAXIMS FOR PHYSICIANS ASPIRING TO FINANCIAL INDEPENDENCE

1. Formulate a financial program and stick to it.
2. Do not restrict your savings to what happens to be left over after expenses have been met. Take your investment fund from your gross income first and spend what is left over.
3. Get the maximum benefits from your purchasing power by wise spending in accordance with a budget.
4. Count on the workings of the compound interest table rather than on the uncertain principle of the lottery for the building up of your estate.
5. Do not let death, illness or accident interfere with the attainment of your financial objectives; insurance will take care of these hazards.
6. Be master of your finances rather than a slave to money.
7. Allocate part of your income for unselfish purposes.

8. Do not confuse thrift with niggardliness. Education and culture for yourself and your family are good investments.

9. Buy securities only from houses whose integrity you have checked through independent sources. When in doubt, deal directly through a bank. You should have an account in a savings bank before you begin to buy stocks and bonds. Remember that real bargains in securities are virtually never peddled by stock salesmen.

10. Either avoid speculation entirely or limit your commitments to what you can afford to lose.

Journal A. M. A.

Annual meetings of County Societies are being held and new officers are being elected. We concede that any member elected to office is accorded honor by his fellow members and is justly entitled to entertain a degree of pride by reason thereof. However, it is not an idle honor. Certain definite responsibilities are implied and assumed when the officer is inducted into office. Unless he is in earnest and determined to acquit himself of those responsibilities he should not accept office. There is no place in organized medicine for office holding members who are content to idly rest upon their laurels. County Societies will not progress or achieve when headed by officers who singly exemplify themselves as mere figure heads.

The President and Secretary are the leaders and directors of organizational work. To lead, to direct entails thought and work, not for the few hours while a meeting is being held but every day of the society year. Officers should plan, think, eat and sleep with their organizational plans and problems continuously. In no other way can accomplishments be recorded. Officers should formulate definite plans as to their year of work and then obtaining the aid of com-

mittees and members they should expend every effort to carry out the adopted plans in fullest degree. Thus and thus only will you justify the honor that your members have conferred upon you.

Judging from the cards received from members imparting that they would be unable to attend the University Clinic there must have been a goodly attack made upon Michigan's deer. "Going Deer Hunting" was the reason given by some seventy members. Good. We are glad to learn that the "call of the wild" was heard and answered. Such outings keep one fit physically. We urge that at the very next clinic you embrace the opportunity for professional advancement and fitness. Incidentally, why not send us a report of your outing?

There seem to be a few New York City doctors who write an article, prepare an abstract and send the abstract to medical publications. The presumption is that the medical journals will fall and accord such free publicity. Fact is that we have never seen such an article or abstract that had any merit to justify publication. We wish such attempts would cease. They clutter our mail and go into the same waste basket as does all the other junk that is so promiscuously given to Uncle Sam for delivery. We wish Uncle Sam would devise an envelope for first class, real mail, placing a penalty when used for advertising purposes. It would enable everyone to be rid of the nuisance of opening advertising letters as well as save valuable time. Here is a chance for the postal officials to furnish a useful service to everyone.

O U R O P E N F O R U M

Affording Opportunity for Personal Expression

DISTRICT CONFERENCES

Editor of The Journal:

The councilor district conference held in Pontiac November 1, was attended by about forty physicians.

The papers were timely and interesting. The physicians were loud in their praises of the program. We of Pontiac are enthusiastic for a return next year.

Yours very truly,
Frederick A. Baker, M. D., Secretary.

LOCATION

Editor of The Journal:

Thinking that you might have an occasional inquiry concerning medical openings in Michigan I am taking this opportunity to inform you of a good general practice and property for sale at Britton. It is a general unopposed practice in the center of a rich community.

Should you have any inquiry I should be glad if you would steer them my way.

Thanking you in advance I am
Fraternally,
S. J. Rubley, M. D.

ADVICE WANTED

Editor of The Journal:

It has been customary in this department, as you know, to make examinations of blood as a test for syphilis, free of charge. When the test is completed, a report is sent to the doctor and at the same time a slip is sent to the patient telling him that the examination has been made free of charge and that he can get the report from his doctor. We are receiving complaints from time to time from physicians who send in bloods to the effect that these so-called patients' slips are apt to cause family troubles.

I have taken this matter under consideration very carefully and I find that frequently the addresses of the patients as given to us are incorrect; in fact, this is so in about 15 per cent of the cases. About 8 per cent give the physi-

cian's address or general delivery and 7 per cent give absolutely false addresses. This, of course, interferes with the object of the notification sent to the patient. Again I find that the work and the expense connected with this part of the program, namely, the sending out of slips to the patients, is considerable. It costs us for blanks, clerks' time, envelopes, at least \$66 per month or about \$800 per year.

I have been wondering whether you could get for me an expression representing the profession of Michigan on this matter. I have made the statement to the State Medical Society assembled in the meeting at Mackinac Island and have made it repeatedly to the Council that my policy is to co-operate as much as possible with the medical profession.

Kindly take this matter up with the Council and if they find, after careful and fair consideration, that it would be wise to discontinue the practice of sending the patient's slip, it would seem to me that that would be the policy for me to adopt. I would be glad to discuss this with the Council if you see fit.

Let me know what you think about it.

Very sincerely yours,
Guy L. Kiefer, M. D., Commissioner.

ANNUAL MEETING

Editor of The Journal:

At a meeting of the Committee on Arrangements for the coming meeting of the Michigan State Medical Society, it was decided that the week of September 10, 1928, would probably be the best. Our reasons are as follows:

The first week in September is the week of Labor Day following which most people are returning from their summer holidays and the first part of October having been set, at least tentatively, for the meeting of the American College of Surgeons in Boston. We do not know of any other meetings that will be held during the month of September.

Complying with your recent request, we submit herewith the personnel of our local committee:

E. C. Baumgarten, Chairman; F. C. Witter,

C. C. Birkelo, Frank A. Kelly, and L. W. Hull.
 If you have any suggestions or changes to offer,
 let us hear from you.

Yours sincerely,
 E. C. Baumgarten, M. D., Chairman.

WAYNE COUNTY MEDICAL SOCIETY

Editor of The Journal:

The program of the Wayne County Medical Society for December, 1927, is as follows:

December 6—General Meeting. Legal Requirements for Dispensing Alcoholic Liquors in Medical Practice. Hon. C. F. Meyer, Legal Advisor for Prohibition Administration in Detroit.

December 13—Medical Section. Pernicious Anemia. Dr. Cyrus C. Sturgis, University of Michigan, Ann Arbor, Mich.

December 20—Modern Surgical Treatment of Goitre Associated with Hyperthyroidism. Discussants, Dr. Max Ballin, Dr. Richard McKean, Dr. Robert Novy, Dr. H. K. Shawan.

December 27—No meeting.

Very truly yours,
 F. M. Meader, M. D.,
 Chairman, Program Committee.

HISTORY COMMITTEE

Editor of The Journal:

I have just written Dr. Burr, Chairman of the History Committee of the State Society of my inability to further function as one of its members.

This action is not because I am not interested, but simply because I haven't the time to properly hold up my end of the job, and as such I feel it is not fair to either the committee or the work to continue my membership.

I am therefore tendering to you hereby my resignation on the History Committee to take immediate effect.

Although this is a committee of the House of Delegates and should properly, I believe, have been appointed by the Speaker, I am sending this to you inasmuch as Dr. Jackson, the then President, appointed the committee.

With kind personal regards, I am
 Sincerely yours,
 J. D. Brook, M. D.

DISTRICT CONFERENCES

Editor of The Journal:

As Editor of our State Journal I thought perhaps you would be interested to know that at a District Medical Conference held at Pontiac on November 1 we had a most inspiring and delightful session. Our only drawback was lack of time. All the speakers were so interesting that discussion could not be held down, with the result that we were late getting through.

I think it would be a good thing to have more of these practical conferences throughout the state.

W. A. DeFoe, M. D., Secretary.

TAGGING NURSES

Editor of The Journal:

We are trying an innovation at the Woman's hospital in Saginaw, which works out so very satisfactory, that I thought you might be interested in learning of it.

Each girl in training is provided with a bar pin with her name on same, this pin being used to hold the kerchief.

Our reasons for trying this were that on investigation we found only five per cent of the

nurses were being called by name, either by patient or by doctors. Since using these pins we have found both patients and doctors called the nurses by their names and because of this the nurses feel that they have an individuality which makes for better work. In all hospitals, internes are labeled. Why shouldn't nurses receive that recognition?

It is satisfactory with us and we feel we can recommend a trial in any institution.

Yours very truly,
 Dr. J. H. Powers.

CONGRESS

Editor of The Journal:

The New England Anti-Vivisection Society has sent out a form letter announcing its plan to "introduce into the House of Representatives, at Washington, during the coming session, a bill for the exemption of dogs from vivisection." The letter requests the addressee to circulate an accompanying petition in support of the bill and to ask his representative in Congress to vote for it. The Society alleges that the "International Conference for the Investigation of Vivisection, which now includes 86 anti-vivisection and humane societies," is sponsor for the bill.

Congress cannot directly restrict scientific research in any state. What Congress does, however, will be an important factor in determining action by state legislatures. The anti-vivisectionists are alive to this fact. They therefore seek legislation by Congress, for the District of Columbia and other places under exclusive federal jurisdiction, in order to establish a legislative pattern that the states may be induced to follow. Moreover, it has been frankly confessed on behalf of anti-vivisection interests that if a bill to prevent scientific research involving the use of dogs is enacted they will probably promote legislation to prevent the use of other animals for such research.

To prevent the enactment of legislation that will hinder scientific research in the District of Columbia and other places under federal control and that will be urged as a pattern for the enactment of similar legislation in your own state, it is important that you file with your senators and representatives immediately protests against the enactment by Congress of the bill now proposed by the New England Anti-Vivisection Society.

Yours truly,
 Wm. C. Woodward, Executive Secretary,
 Bureau of Legal Medicine and Legislation.

DEATHS

DR. JOSEPH A. HEASLEY

Dr. Joseph A. Heasley died November 1, 1927. Dr. Heasley was born at Salem, Allegan County, 60 years ago and graduated from the Detroit College of Medicine in 1893. He practiced at Martin for seven years and in 1900 moved to Grand Rapids where he has since specialized in diseases of the eye, ear, nose and throat.

DR. A. B. GRANT

Dr. A. B. Grant, died suddenly October 25 at his summer home at Lewiston. Dr. Grant was a well known physician of Albion but during re-

cent years has been dividing his time between Albion, Jackson and Lewiston. He was at one time city physician at Albion and always took an active part in civic and social affairs. Dr. Grant was 78 years old and is survived by his widow and two sons.

DR. WILLIAM FULLER

Dr. Wm Fuller, a resident of Grand Rapids since 1878 died November 1. Dr. Fuller was 85 years old. He had a world-wide reputation as a brain specialist, and is said to have conducted the first successful operation for idiocy, and to have conducted an autopsy which resulted in the identification and naming of appendicitis. He was elected as Honorary Member of the Michigan State Medical Society in 1920.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

The Clinton Memorial Hospital at St. Johns was dedicated on November 11. Dr. Guy L. Kiefer was the principal speaker.

Under the auspices of the Wayne County Medical Society a health talk will be broadcasted from station W. G. H. P., Detroit. Our members are invited to listen in on these weekly talks.

WOMANS AUXILIARY, MICH. STATE MEDICAL SOCIETY

MRS. GUY L. KEIFER, *President*
Lansing, Mich.

MRS. J. EARL McINTYRE, *Secretary*
Lansing, Mich.

WELCOME

The Journal tenders a cordial welcome to the Women's Auxiliary of our State Society. We are very happy indeed to place space in The Journal at its disposal and trust that as its activities expand and its influences become evidenced that our members will recognize the great value of this adjunct to organized medicine.

We urge that every member will call the attention of his wife to the Auxiliary and cause her to file her application for membership. In counties where Auxiliaries have not been organized it is again recommended that County Officers take the necessary steps to do so.—Editor.

At the annual meeting of the Michigan State Medical Society, held at Mackinac Island in June, 1927, the Woman's Auxiliary to the Michigan State Medical Society was organized. Mrs. Guy L. Kiefer of Detroit and Lansing, was unanimously elected our first president, with the privilege of naming her officers for the ensuing year. Her choice was as follows:

Mrs. W. K. West, Painesdale, vice president.

Mr. J. Earl McIntyre, Lansing, secretary-treasurer.

Nothing in the way of constructive work was done during the summer months, but after vacations were over, the various County Societies were communicated with, and we are pleased to state that twenty-one auxiliaries to date have been organized, with the prospect of more.

Our annual report to the Woman's Auxiliary to the American Medical Association, together with check for dues, was forwarded in October, and we have been advised by the president, Mrs. John O. McReynolds, that we will be recognized as being part of the National Auxiliary.

The Woman's Auxiliary of the Ingham County Medical Association entertained at a very delightful luncheon in October, having as the guests for the day, Mrs. Guy L. Kiefer, state president, and Mrs. J. Earl McIntyre, state secretary-treasurer. Twenty-six members were present and it was a very enthusiastic meeting.

Wayne county is organizing a Woman's Aux-

iliary and the first meeting was called for November 16, 1927, at 12:30 p. m., at which time Mrs. Guy L. Kiefer, the president of the Woman's Auxiliary of the state society, will be one of the speakers. At this time the subject of organization, choosing of objectives and election of officers will take place.

We are very anxious to receive any items of personal interest to auxiliary members and would appreciate them sent to the State Secretary, Mrs. J. Earl McIntyre, 600 South Grand avenue, Lansing, on or before the 15th of each month. We wish to take advantage of the kind offer of a page each month in the State Journal, but cannot do so without the co-operation of the various auxiliaries.

Dr. Harriet Bartlett Crane has been an indefatigable worker for our cause and has earned the sincere gratitude of the State Auxiliary.

A joint meeting of the Shiawassee County Medical Society and the wives was held at Owosso, at which time Dr. Guy L. Kiefer, State Health Commissioner, was the speaker, and Mrs. Kiefer met with the ladies regarding the organization of a County Auxiliary.

Mrs. R. B. Harkness of Houghton, Michigan, has accepted the appointment of vice president of the Woman's Auxiliary to the Michigan State Medical Society, to fill the vacancy caused by the death of Mrs. West.

Reasons why the wife of every physician should become a member of her County Auxiliary:

"I believe that my husband's profession is one of the finest in the world; almost the greatest work a man can do. His profession not only uses all of its knowledge and power to cure disease, but goes farther and does what no other profession will do, that is, work against its own interests in order to help humanity. By that I mean preventive medicine.

"I also belong to many other organizations, but I believe that first I should center my interests and energies on the work which is nearest my home and my heart, because my position as a doctor's wife surrounds me with opportunities for investigation of the health question and an understanding of that problem which perhaps others may not have. I have discovered through the Auxiliary I may become the friend of any doctor's wife, not only of my state, but of my country, and thus enrich my life."

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

POST-GRADUATE CLINICAL CONFERENCE

First Councilor District

Pontiac, November 1, 1927

Fast Time PROGRAM

Presiding: J. Hamilton Charters, Councilor.

- 10:30 a. m.—Contagious Diseases,
Guy L. Kiefer, M. D., Lansing.
- 11:00 a. m.—Treatment of Urethritis,
R. E. Cumming, M. D., Detroit.
- 11:30 a. m.—Asthma,
R. E. Mercer, M. D., Detroit.
- 12:00-1:30—Luncheon.
- 1:30 p. m.—Some Points in Chest Diagnosis,
R. E. Mercer, M. D., Detroit.
- 2:00 p. m.—Hemorrhages from Urinary Tract.
R. E. Cumming, M. D., Detroit.
- 2:30 p. m.—Obstetrical Problems,
Harold Henderson, M. D., Detroit.
- 3:00 p. m.—Arterial Hypertension and Its Management,
M. A. Mortensen, M. D., Battle Creek.
- 3:30 p. m.—Sterility in Women,
Harold Henderson, M. D., Detroit.
- 4:00 p. m.—Management of Various Forms of Heart Disease,
M. A. Mortensen, M. D., Battle Creek.

BAY COUNTY

The Bay County Society resumed its meetings September 26 with a moving picture, "The Making of Biologicals," presented by Dr. J. A. Boersig, Parke-Davis & Co., Detroit.

October 7 the Society was host to the Alpena County Society, which presented the following program:

Dr. C. M. Williams, "Light Therapy."

Dr. N. B. Newton, "Common Ocular Diseases."

Friday evening October 21, Dr. L. C. Grosh, Toledo, gave a most interesting talk on the "Chronic Patient." The talk was a psychological analysis of the so-called chronic patient and was truly a masterpiece.

October 31, Dr. E. C. Davidson, Detroit; gave a scholarly talk on "Tamic Acid Treatment of Burns."

The Second Ladies Night of the year was held Wednesday, November 9, at the Bay City Country Club in the form of a dinner-dance. The forty couples present enjoyed cards and dancing after a delightful banquet.

The society concludes its year's activities with a talk by Dr. Guy L. Kiefer, State Commissioner of Health, Monday evening, November 14 at Mercy Hospital, Bay City, and its Annual Meeting, December 5.

L. Fernald Foster, Secretary.

KALAMAZOO COUNTY

The October meeting of the Academy of Medicine was called to order by the president, Dr. Bartholomew, in the chapel of the Kalamazoo State Hospital at 2 p. m. Tuesday, the 18th, 1927.

Dr. Ostrander gave a brief welcome after which

the meeting was turned over to the Clinical Program committee, Dr. Morter officiating. An interesting and instructive afternoon was spent following the program printed in the last bulletin.

At 6 p. m. the meeting was adjourned to the main building where a sumptuous repast waited our arrival.

After the dinner the meeting was again called to order. The minutes of the September meeting were approved as printed in the bulletin.

Dr. Louis L. Gerstner's name, having been read at the last meeting and approved by the board of censors was voted on for active membership in the society; the result being unanimous.

The names of Dr. Joseph S. McCarty and Dr. Paul L. Schrier came up for first reading for membership in the society.

As there was no further business to come before the society the scientific program was carried out as printed in the bulletin.

SAINT CLAIR COUNTY

A regular meeting of the Saint Clair County Medical Society was held November 3, 1927, at the Hotel Harrington, Port Huron, Mich.

The usual supper and social hour preceded the scientific program. The meeting was called to order by President W. W. Ryerson at 8 p. m. with the following members and visitors present: Ryerson, Waltz of Capac, Heavenrich, McColl, H. O. Brush, B. E. Brush, Burley, Vroman, Waters, Wheeler, Wellman, Callery, Clancy, Platt, Patterson, Smith, Thomas, MacKenzie, Fraser, Windham, DeGurse, Cooper and Kestl, members of the Society and Doctors Webster of Marlette, Martin of Imlay City, Thompson of Detroit, Chester of Detroit, Sadlier of Sarnia, Ontario, Sites, Gaddis, Meredith and Lane of Port Huron, visitors.

Upon motion, reading of the minutes of preceding meetings, was dispensed with. The Secretary read a letter of thanks from Mrs. C. C. Clancy, thanking the Society for a floral sent her while ill; a letter from Wayne County Society inviting the members of Saint Clair County Society to attend any of their programs; a letter from the Highland Park Physicians' Club inviting the Society to attend the second annual clinic at the Highland Park General Hospital on December 1, 1927 and a letter from Dr. N. Sinai, in charge of Health Lectures, University Extension Division of the Joint Committee on Public Health Education, requesting the appointment of four speakers for subjects to be given during the coming year.

Dr. B. E. Brush made an application for membership in Saint Clair County Society for Doctors McLean of Capac and Sites and Meredith of Port Huron. The Secretary was directed to furnish application blanks to Dr. Brush in order that formal applications might be submitted in the regular order and the President appointed a Committee of Doctors Vroman, Heavenrich and Callery to act upon same when received with suggestion that the Committee report, if possible, at the next meeting, November 17, 1927.

The President announced that Dr. Wollenburg

of Detroit would address the Society on November 17, the subject being eczema and suggested that as many patients be submitted as possible for demonstration by Dr. Wollenburg. Any case of skin disease may be presented during the evening.

Dr. John L. Chester of Detroit addressed the Society on "The Chirography of the Heart in Health and Disease." The address was illustrated with slides and diagrams, and the variations in heart action as exemplified by electrocardiograms, were described and interpreted. Ranging from the normal to arrhythmias, auricular fibrillation, auricular flutter, extrasystoles and the various heart blocks. The particular curves and waves were traced back to the affected heart muscles. Avoiding technicalities, Dr. Chester, in succinct and telling language brought to his auditors the advances made in the study of heart disease by the electro-cardiograph and stressed the desirability of the general practitioner acquiring at least a working knowledge of the technic and interpretation of the graphic charts.

"Not an obscure and forbidding language, is the handwriting of the human heart," he said, "but an easy universal key, at once understandable by the physician with a broad knowledge of internal medicine, who reads and is willing to learn the significance."

Dr. Chester is no stranger to Saint Clair County. He practised here for many years and is a Past-President of the Saint Clair County Medical Society. In recent years he has addressed the Society on several occasions and his paper was exceptionally well received by the members of the profession present. Since leaving this county Dr. Chester has practised internal medicine in Detroit. A Fellow of the American College of Surgeons, attending physician at Providence and Eloise Hospitals, he has made great strides in his specialty—cardiology—and his address on this occasion was an outgrowth of studies made in his own clinic.

At the conclusion of the paper, the discussion was opened by Dr. Meredith of Port Huron, followed by Doctors MacKenzie, Sadlier, Thompson, Kunin and Lane. Dr. Chester closed the discussion in the usual manner. The Society accorded Dr. Chester a rising vote of thanks. Meeting adjourned at 9:35 p. m.

George M. Kesl, Secretary-Treasurer.

A regular meeting of Saint Clair County Medical Society was held at the Hotel Harrington, Port Huron, Mich., Thursday, November 17, 1927.

Following supper and the usual social hour the meeting was called to order by President Ryerson at 7:45 p. m. Members present: Ryerson, Thomas, Grice, Smith, Patterson, Callery, Vroman, Clancy, Heavenrich, Mackenzie, Wellman, McCue, Treadgold, LaRue, Windham, Bovee, Wheeler, Fraser and Kesl. Visitors: Dr. Robert A. Wollenberg of Detroit, Dr. J. F. Sadlier and Dr. J. A. Bell of Sarnia, Ontario, Dr. W. D. Lane and E. C. Sites of Port Huron. Five graduates and five student nurses from Port Huron and Port Huron Hospital were also present as guests of the Society.

Dr. Ryerson introduced the guest of the evening, Dr. Robert A. Wollenberg who read a very masterly paper on the subject of eczema. Dr. Wollenberg covered the subject in a thorough manner, beginning with history of the condition as far back as the golden age of Greece and up until the present day. The speaker covered many of the early theories regarding both etiology and

pathology of eczema and quoted many of the most modern authorities on the subject. The controversy whether the condition should be classed as a dermatitis rather than as eczema was fully covered. Dr. Wollenberg then discussed the etiology and the three general factors needed to produce eczema: (1) metabolic disease or disturbance, (2) local conditions favoring skin pathology and (3) irritants, either external or internal or both. In passing the speaker touched upon the theories advanced from time to time regarding causative factors of the condition known broadly as eczema and endeavored to prove that no single factor produced the disease in general, that is, while one group of cases were caused by a certain factor another group would be caused by a wholly different etiology. A number of case histories, with comment by Dr. Wollenberg, were read. These cases were selected by the doctor from his own clinics. In each history the Speaker pointed out the etiologic factor active in the production of the eczema.

The following were shown to be causative agents or factors: tobacco dust (aggravated by warm weather), rouge, sunburn (aggravated by application of irritant ointments), salivary secretions, purulent secretions, tools of employment, soaps, fur dye, fungoid infection, milk, menstruation, diabetes, poor circulation in extremities. Dr. Wollenberg stressed the point that it was necessary, in most instances, for an underlying irritability of the skin to be present before the active etiologic factor could incite the skin pathology. "It is very important," said Dr. Wollenberg, "to make a thorough physical examination in order to discover a possible causative factor, in cases of eczema." Careful history taking is also important, according to the Speaker. At the conclusion of the paper seven patients with skin conditions were examined by Dr. Wollenberg. Some interesting pathology was demonstrated, among the cases presented were: eczema due to cold weather, oil tumors due to injections of camphorated oil, soap powder dermatitis, erythrodermia probably due to some endocrine disturbance, squamous eczema, varicose eczema and an oil workers dermatitis associated with possible metabolic disturbance. Dr. Wollenberg commented upon these cases and suggested treatment. He dwelt at some length upon the case presenting granulomata from oil injections and said that this means of therapy should be given up because of the danger of production of pathology such as the present case demonstrated. He also cautioned his listeners not to use X-ray over too long a period in the treatment of skin diseases. The meeting ended after several members of the Society asked the Speaker pertinent questions on the subject of the evening. Dr. Syerson thanked Dr. Wollenberg in the name of the Society for his splendid paper.

The scientific program was followed by a short business session. Dr. Vroman reported for the membership committee recommending that Doctors D. C. McLean of Capac and E. C. Sites and W. Meredith of Port Huron be admitted to membership in the Society. These associates were thereupon elected to membership. The application of Dr. W. D. Lane of Port Huron for membership by transfer from the Huron County Medical Society was received and referred to Dr. Theo. Heavenrich, Councillor of the Seventh District, for proper recommendation. It was moved, supported and carried that the Annual Meeting and Election of Officers be held in Sarnia, Ontario, December 15, 1927 and the Chair appointed

Doctors Heavenrich and MacKenzie to act as a committee for this event. Meeting adjourned at 9:30 p. m.

Respectfully,
George M. Kesl, Secretary-Treasurer.

CLINTON COUNTY

The first meeting of the Clinton County Medical Society for the year 1927-28 was held at the Steel Hotel, St. Johns, Mich., on the evening of October 13, 1927 at 6 p. m.

The meeting was called to order by the President, Dr. Eugene Hart, who requested the reading of the minutes of the previous meeting by the Secretary, Dr. T. Y. Ho of St. Johns, Mich. The minutes were approved as read. Dr. Wm. H. Gale of St. Johns, a Jefferson graduate of 1901 tendered his application for membership in the Clinton County Medical Society. Dr. Gale's application was met with the unanimous vote for acceptance into membership in the Clinton County Medical Society.

The election of officers for the coming year was in order, and the following officers were elected: President, Dr. R. D. Boss of Wacousta; Vice-president, Dr. H. D. Squair, St. Johns; Secretary-treasurer, Dr. T. Y. Ho, St. Johns, (re-elected); Delegate to the State Convention, Dr. V. C. Abbott, St. Johns; Alternate, Dr. W. B. McWilliams, Maple Rapids, Mich.

There being no further business to come before the Society, a very fine dinner was served to the members and our guests from the nearby counties. The speakers for the evening were Dr. Max Bunnell, who talked on "Vomiting of Pregnancy" and Dr. Geo. Curry, whose paper was "Management of Fractures" and "Glimpses of Clinics on the Continent." Both speakers presented their papers in a very practical manner and discussion was participated by all members present. Dr. Henry Cook, our District Councillor made a few remarks on importance of the concerted co-operation of the county societies with the State Society.

Two records were made by the Clinton County Medical Society at this meeting, namely, there was a record attendance of 88 per cent and next was a record on punctuality. The meeting was called to order at 6 p. m. and dinner was served at 6:30 p. m. as stated in the announcements. Now that we have established these records it is the sincere desire and hope of the officers of the Society to maintain them.

Yours respectfully,
Thos. Ho, M. D., Secretary-Treasurer.

LENAWEE COUNTY

I am sending a report of County Society meetings held in Lenawee for August, September, and October.

The Annual Picnic of the Lenawee County Medical Society was held at the cottage of Dr. and Mrs. L. J. Stafford at Sand Lake. The doctors and their wives arrived early in the afternoon of August 18, 1927.

No shop talk was allowed, nor was anyone called doctor. The ladies played Bridge, while the men exercised their minds and muscles at various athletic events. Archery contests, horse-shoe pitching, and a hotly contested 22 rifle target match occupied most of the afternoon before a picnic dinner was served in the open air. Dr. A. W. Chase and Dr. H. H. Hammel were high scorers in the rifle match and each took his turn

to decide the championship. When the final score was added up it was found that the shoot ended in a tie with a score of 97 out of a possible 100.

After the dinner was eaten the men had a very funny if not professional game of baseball. The general result of the game as reported next day was that all went to the picnic with an automobile, and came home with one, but in the morning found they had a Charley Horse and few sets of muscles supposed to exist only in a text book of anatomy.

The September meeting was held in the Adrian Public Library. The speaker was Dr. M. K. Amdur of the Toledo State Hospital. The subject was "The Malarial Treatment of Tertiary Syphilis." Dr. Amdur gave a very excellent talk on the history of this method of treatment and the result being obtained on cases of General Paresis at the Toledo State Hospital. He was deserving of a much better attendance than he had. Dr. Amdur has promised to come again next year when an invitation will be sent out to all the adjoining County Societies to come and hear him.

The October meeting was held at the Hotel Reckner at Tecumseh. The meeting was started with a chicken dinner at 7 p. m. This meeting was much better attended than the previous one, there being 21 present.

The speaker of the evening was Dr. Frank S. Perkin of Detroit. He was accompanied by Dr. George Van Amber Brown, President of the Wayne County Medical Society. Dr. Perkin spoke on "The Diagnosis and Medical Treatment of Thyrotoxicosis." His paper was very well given.

He emphasized the importance of differentiating the type of thyroid conditions found in young people before and after the age of 20 years. He also stated that in the light of present day knowledge the treatment was medical to the extent that it was preparatory to surgery, which in turn should be followed by careful medical observation, to bring about the best results.

It was the unanimous feeling of everyone present that Dr. Perkin's paper was the best and most practical one given before our Society this year.

Dr. Brown gave an excellent discussion of the subject from a surgeon's standpoint, giving a brief but comprehensive review of the anatomy of the Thyroid gland and the most general method of surgical treatment. He also talked for a few minutes on some problems of the County Societies of the State and the way they are attempting to work them out in Wayne County, and some of his ideas of how those methods can be applied to the smaller Societies.

The meeting was opened to an informal discussion and a number of Lenawee men expressed themselves on the subject of the evening.

A rising vote of thanks was given to Dr. Perkin for his effort in coming out to speak before our Society.

R. G. B. Marsh, Secretary.

BERRIEN COUNTY

The Berrien County Society met in Benton Harbor at the Hotel Vincent for their October meeting on the 23rd.

Dinner was served to about 30 members and following this excellent papers were given by two men from the University of Michigan Staff.

Dr. John Alexander from the department of Surgery of the University Hospital gave a paper

on the "Surgical Treatment of Bronchiectasis, Lung Abscess and Pulmonary Tuberculosis."

Dr. Frederick A. Collier followed this with a paper on "Empyema and Its Treatment."

The two men covered the field of Pulmonary Surgery in a very complete manner. The papers were well illustrated by slides, were practical and very much appreciated. The Society are much indebted to these men for their trip.

NEWS NOTES

Dr. N. A. Herring of Benton Harbor has moved to Niles to practice. He has practiced for a considerable time in Benton Harbor and the territory east of there and feels that Niles offers a broader field for his speciality of Eye, Ear Nose and Throat.

Dr. O. A. Peer of Watervliet is seriously ill in the University Hospital at Ann Arbor. He was taken there following severe gastric hemorrhages. He has practiced in Berrien County for many years and has a host of friends and patients.

W. C. Ellet, Secretary.

IONIA-MONTCALM COUNTY

The October meeting was held at Greenville, Thursday evening, October 20. The meeting was preceded by a banquet at the Winter Inn.

Dr. L. M. McKinley, Grand Rapids, gave an illustrated paper entitled "The More Common Infections of the Kidneys."

He presented some theories and facts which do not harmonize with the older and commonly accepted beliefs, e. g., there is no such condition as pyelitis alone because in every case of infection of the pelvis of the kidney there is always some involvement of the kidney substance and hence a pyelo-nephritis; that the pain in nephrolithiasis and allied conditions is not due to mechanical trauma, but is due to distension and pressure in the pelvis of the kidney.

Among accessory factors in the etiology of an infection of the kidney is anything which will interfere with free passage of urine thereby producing a congestion of the mucosa with a lowered resistance.

The medical treatment consists of free flushing or antiseptics. In giving antiseptics the fluid intake should be limited and large doses of the antiseptic given to derive any benefit. Start with ten to fifteen grains of Hexamethylenamin three times a day and increase to thirty grains three times a day.

The function of a badly damaged kidney will return to a surprising extent, hence conservatism in surgical treatment is advisable.

This paper was well received and freely discussed.

H. M. Maynard, Secretary.

WAYNE COUNTY

The Detroit Oto-Laryngological Society are holding their regular meetings on the evening of the third Wednesday of each month, in the rooms of the Wayne County Medical Society in the Maccabees building.

Dr. Ray Connor is the presiding officer of the Society for this year.

The scientific session of the meeting on Wednesday evening, November 16, will be devoted to the study of Angina Agranulocytotica. Dr. Plinn

Morse will be the essayist and Dr. J. M. Robb the discussant.

The December meeting will be devoted to the study of Surgical Diathermy of the treatment of malignancy in the head and neck. Dr. Joseph Beck of Chicago is the essayist.

For the January meeting the Society is planning a trip to the Mayo Clinic.

The February meeting will be addressed by Dr. Perry G. Goldsmith of Toronto, Ontario on "The Diagnosis of Chronic Accessory Sinus Diseases."

Wm. Fowler, Secretary-Treasurer.

GOGEBIC COUNTY

Dr. C. W. Hopkins, Chicago surgeon, addressed a meeting of the Gogebic County Medical Society at the Grand View Hospital, Ironwood, on November 11 on the subject "Head Injuries—Diagnosis and Treatment." The address was illustrated by X-ray stereopticon pictures and was full of valuable practical information. Doctors Smiles and Young of Ashland, Wis., were visitors at the meeting. Doctors Thomas R. Rees and M. A. Gertz were elected to membership in the society. The next meeting will be the annual banquet to be held December 9, at which time officers will be elected for the year 1928.

Louis Dorpat, Secretary.

TUSCOLA COUNTY

At the last meeting of the Tuscola County Medical Society the following officers were elected for 1928:

President, Dr. J. G. Maurer, Reece.

Vice-President, Dr. M. M. Merriman, Deford.

Secretary-Treasurer, Dr. W. A. Crooks, Wahjemega.

Delegate to State, Dr. U. G. Spohn, Fairgrove.

Alternate, Dr. R. L. Dixon, Wahjemega.

Yours fraternally,

C. W. Clark, Ex-Secretary-Treasurer.

MENOMINEE COUNTY

At a meeting of the Menominee County Medical Society held last evening the following officers were elected. President, Dr. John T. Kaye, and Secretary, C. R. Elwood.

Very truly yours,

Calvin R. Elwood, Secretary.

STUDIES IN ETIOLOGY OF BRONCHIAL ASTHMA

John Eiman, Philadelphia (Journal A. M. A., September 17, 1927), asserts that essential asthma is associated with chronic bronchitis or sinusitis or both. Seventy-seven per cent of the patients tested intradermally gave positive allergic reactions with Berkefeld filtrates of their bronchial or sinus secretions. Twenty-eight out of fifty-six cases were relieved when treated with Berkefeld filtrates of bronchial or sinus secretion eighteen were improved, and ten remained unimproved. About 50 per cent of the patients with essential bronchial asthma have become sensitized to their own bronchial secretion proteins. In order to interpret correctly intradermal reactions with "secretion filtrates," bacterins or soluble bacterial toxins, control tests should be made on normal persons.

SUPPLEMENT TO
THE JOURNAL
OF THE
Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XXVI

JULY, 1927

No. 7

SURVEY
of
HOSPITAL CHARITY IN MICHIGAN

PART I. COMMUNITY HOSPITALS
PART II: UNIVERSITY HOSPITAL

—**—

PRELIMINARY REPORT OF THE COMMITTEE APPOINTED TO INVESTIGATE THE CHARITY WORK OF OUR MICHIGAN HOSPITALS

MICHIGAN STATE MEDICAL SOCIETY

CREATION OF COMMITTEE

At last year's annual meeting of the Michigan State Medical Society in Lansing, upon motion of Dr. W. J. Cassidy of Wayne, the President of our Society was directed to appoint a committee to investigate charity hospital service at the University and other hospitals of our State and to report at the next annual meeting of the House of Delegates. (See Jour., M. S. M. S., Oct., 1926, p. 514).

In compliance with the resolution, President Jackson appointed the following committee to serve in this capacity:

Dr. Richard R. Smith, Grand Rapids, Chairman; Dr. W. H. Marshall, Flint, Secretary; Dr. J. Walter Vaughan, Detroit.

At the meeting of the Executive Committee of the Council, held in November, 1926, this motion was interpreted and the following instructions were given:

"That the committee be charged with the responsibility of establishing a definition of the word 'charity' as applied to medical and surgical service, and also to survey the hospitals of this state in regard to the development of charity work, or what is interpreted as charity work, and to report to the House of Delegates a general plan that may be recommended to hospitals to govern them in the admission and care of people who are entitled to free medical service."

Since its appointment, your Committee has been in correspondence and has held two meetings, one at the University Hospital, the other in Lansing. It has sent out a questionnaire to certain hospitals of the state and has received replies from twenty-four. It has also held personal conversations with several members of the faculty of the University Medical School, and with a number of the medical profession of the state that it thought were especially interested. This number has necessarily been small, because of lack of time. Your Committee has placed a liberal interpretation upon the instructions given it, but has, at the same time, tried to limit the scope of its investigations, as far as possible, to the matter in hand. It has divided its report into two parts; one dealing with the hospitals of the state other than the University Hospital, and second, the University Hospital itself.

PART ONE

The questionnaire was sent to the following 71 hospitals of the state:

*University Hospital, Ann Arbor.
St. Joseph's Mercy Hospital, Ann Arbor.
Emma L. Bixby Hospital, Adrian.

James W. Sheldon Memorial Hospital, Albion.
 *Donald McRae Hospital, Alpena.
 Nichols Memorial Hospital, Battle Creek.
 General Hospital, Bay City.
 *Mercy Hospital, Bay City.
 Doucette Hospital, Big Rapids.
 Mercy Hospital, Cadillac.
 *Calumet and Hecla Hospital, Calumet.
 Charlevoix Hospital, Charlevoix.
 Cayley Hospital, Cheboygan.
 Branch County Infirmary and Hospital, Coldwater.
 *Wade Memorial Hospital, Coldwater.
 *Children's Hospital of Michigan, Detroit.
 *The Grace Hospital, Detroit.
 *Harper Hospital, Detroit.
 Providence Hospital, Detroit.
 St. Mary's Hospital, Detroit.
 *Women's Hospital and Infants' Home, Detroit.
 *Hurley Hospital, Flint.
 Womens Hospital, Flint .
 *St. Joseph's Hospital, Flint.
 Goodrich General Hospital, Goodrich.
 *Blodgett Memorial Hospital, Grand Rapids.
 *Butterworth Hospital, Grand Rapids.
 St. Mary's Hospital, Grand Rapids.
 Mercy Hospital, Grayling.
 *St. Joseph's Hospital, Hancock.
 *Highland Park General Hospital, Highland Park.
 Iron Mountain General Hospital, Iron Mountain.
 Twin City Hospital, Ironwood.
 *Ishpeming Hospital, Ishpeming.
 *W. A. Foote Memorial Hospital, Jackson.
 Mercy Hospital, Jackson.
 *Borgess Hospital, Kalamazoo.
 Bronson Methodist Hospital, Kalamazoo.
 Lake Superior General Hospital, Linden Lake.
 *Edward W. Sparrow Hospital, Lansing.
 Lansing City Hospital, Lansing.
 St. Lawrence Hospital, Lansing.
 Calumet Memorial Hospital, Laurium.
 *Paulina Stearns Hospital, Ludington.
 Mercy Hospital and Sanatorium, Manistee.
 St. Luke's Hospital, Marquette.
 St. Mary's Hospital, Marquette.
 *St. Joseph's Hospital, Menominee.
 St. Joseph's Sanatorium, Mt. Clemens.
 Munissing Hospital, Munissing.
 Hackley Hospital, Muskegon.
 Mercy Hospital, Muskegon.
 Negaunee Hospital, Negaunee.
 Perry Spinks Hospital, Newberry.
 Penn Hospital, Norway.
 *Memorial Hospital, Owosso.
 Lockwood Hospital and Deaconess Home, Petoskey.
 Petoskey Hospital, Petoskey.
 Pontiac City Hospital, Pontiac.
 Delta Menominee County Sanatorium, Powers.
 Emergency Hospital, Port Huron.

Port Huron Hospital, Port Huron.
 *Saginaw General Hospital, Saginaw.
 St. Mary's Hospital, Saginaw.
 Woman's Hospital, Saginaw.
 *St. Clair Hospital, St. Clair.
 St. Joseph Sanatorium Company, St. Joseph.
 St. Johns Hospital and Training School, St. Johns.
 Three Rivers Hospital, Inc., Three Rivers.
 Copper Range Hospital, Trimountain.
 Beyer Memorial Hospital, Ypsilanti.

**NOTE: Those marked with an asterisk replied. It would have been desirable to have had more, but your Committee believes this list a fairly representative one.*

In view of the purpose of this investigation and because of the limited time allowed, all state institutions, with the exception of the State University Hospital, were excluded; all special and private institutions, those that your Committee believed did not receive charity patients, and many of the smaller hospitals. However, your Committee believes that the smaller hospitals may well adopt certain principles in operating their institutions and in governing the admission of charity patients insofar as it is practical to do so, and a copy of this report, as adopted, should be sent them.

QUESTIONNAIRE

1. Number of patients admitted to hospital during a year?
2. Number of hospital bed-days?
3. Number of charity patients?
4. Number of hospital bed-days given to same?
5. Number of patients and bed-days to patients who pay less than regular rates?
6. How do you decide as to whether a patient can pay for hospital care in part or all?
7. Is the attending physician consulted as to the ability of a patient to pay when the hospital cares for him at less than regular rates, or nothing?
8. Is the attending physician expected to make a charge for his services in such cases?
9. Do patients sent in by industrial corporations pay regular rates? If not, what do they pay?
10. Do patients cared for by organized charity pay regular rates? If not, what do they pay?
11. Do patients cared for by city, county or state pay regular rates? If not, what do they pay?
12. How is the cost of hospital maintenance met:
 - (a) Patients in hospital?
 - (b) Endowment?
 - (c) Subscription?
 - (d) Other sources?

13. What are your regular ward rates? Does this rate include extras? If not, what extras are charged for?
14. What percentage of bills rendered prove to be bad debts?

OUT PATIENT DEPARTMENT

1. Do you maintain such?
2. How many patients are cared for in the course of a year? Total visits?
3. Do such patients pay any fees? If so, what do they pay and for what?
4. Does the out-patient department maintain itself? If not, how is the deficit met?
5. What means have you of estimating the ability of a patient to pay, and is the attending physician paid for his services?
6. From what sources do you obtain out patients?

Twenty-four hospitals (including the University Hospital), as stated above, responded to this questionnaire. The investigation of the latter, forming, as it does, the second part of this report, was excluded from your Committee's statistics and comment in the first part of the report. This leaves twenty-three.

Most of the hospitals investigated are community hospitals in that they are designed to care for patients from every station in life. The original cost of building and equipment and major improvements are not customarily charged to patients, and the institutions are free of taxation. In one sense, then, every patient entering such a hospital is a recipient of charity, since he receives certain valuable considerations without cost. Your Committee believed that you would be particularly interested in this group of Michigan hospitals, and has addressed its investigation to them.

Hospital care is necessarily costly, and places a heavy and often unanticipated burden on patients. Such hospitals are designed to care not merely for the poor, but for people in every station of life. Your Committee believes that it is the duty of governing bodies to relieve patients of every unnecessary expense, and that it is unjust to a citizen of a community, when he is admitted, to pay for more than his share of the upkeep. It believes that hospital rates should (as far as it is possible to do so) be adjusted in such a manner that patients with the more expensive accommodations should not pay the way of those in the wards or cheaper accommodations. The relative proportion of wards and rooms is rarely adjusted to meet the pocketbook, and patients are frequently

forced into rooms that are beyond their means. Again, patients are ordinarily charged fixed rates, and not according to their ability to pay, and it thus happens that fairly well-to-do patients, to save expense, elect to go into a ward, and are carried at less than cost. Your Committee believes that were the principles stated above followed, these irregularities would be at least partially reduced and result in greater fairness to all. It recognizes that expediency may at present render necessary the following of a more or less contrary policy.

Your Committee does not care to comment on charges made for extras, such as laboratory and X-ray fees, operating rooms, drugs, etc., more than to say that it believes that no undue burden should be placed on the laboratories, since it discourages their use.

The cost of maintaining a training school for nurses and for special nurses is a heavy one. It believes that a training school should supply as much as possible of the nursing to be done in a hospital, to save special nurse charges, and that at least a part of the expense of maintaining the training school should fall upon other shoulders than those of the patient. Except for the immediate service rendered, its objects bring no direct good to patients in the hospital who are now obliged to pay for the maintenance of the training school. As an example, some of our training schools are preparing nurses for social welfare work, a burden which plainly should be placed upon the community rather than upon patients.

The cost to patients for the uncollected bills of these hospitals vary in their reports from 2 per cent to 45 per cent. This must mean either higher hospital rates or less real service. We believe that with proper business administration, this item may be kept to less than 5 per cent.

The cost of maintaining an out-patient department is commonly greater than any charges, with extras, made to patients. It is a burden that should be placed upon other shoulders than those of the patient in the hospital. This is now done in some.

In many of our community hospitals, the charge made to corporations is no more than that made to other patients admitted to the same accommodations. Your Committee believes that this is wrong in principle, and that the actual cost, as near as can be computed, should be charged.

The same principle applies to organized charity organizations, those doing social

welfare work, and city and county charges.

In many of our hospitals, deficits and part of the cost of maintaining charity work are now placed upon other shoulders than those of the pay patients. Your Committee believes this principle should be furthered.

CHARITY

Our community hospitals are endeavoring to meet the constantly increasing demands of the public and physicians for better (and necessarily more costly) service. They are almost without exception struggling to meet their expenses. As such hospitals should, they desire to provide service to patients from every station in life, and since they are furnishing us with a workshop, and our interests are to a great extent the same, they expect from us, and with right, that we be in hearty accord with these objects, and that we do not make matters too difficult for them. In their zeal for rendering service to the needy, the way into the charity service of the hospital is often made too easy, and we are asked to contribute our skill and efforts to those who might well pay us a small or moderate fee. The means that our hospitals employ to safeguard their own interests and those of the physician are often inadequate, though we must acknowledge a decided improvement in this regard. There are undoubtedly many unable to pay their way, and this expense, your Committee believes, should be borne by others, rather than by those patients paying for their care. This is already being done in some instances, but not in all. As to the employment of the medical profession in such cases—as generous as the physician ordinarily is in the matter, he must, in order not to suffer too severely in

income, at times question the hospital's stand, and the means employed to determine the financial status of charity patients. The viewpoint of hospital and physician will probably never be quite the same, but sympathy with each other's position should lead to a better understanding and benefit to both.

To guard against possible inefficiency in investigation, your Committee believes that in our Michigan hospitals no physician should be obliged to donate his services to those who, in his own judgment, might pay his fees in part or all, and that in every instance he should have the full privilege of refusing service to such patients. It believes also that both the hospital and physician should regard this as the latter's right, and the former should endeavor to see that no unwarranted burden is placed upon him from this source.

Your Committee realizes that it is oftentimes very difficult to agree as to what patients can and cannot pay for medical services, and it believes that the physician should always maintain a kindly, generous, but just attitude in this matter. It believes that it is better to be over-generous in the donation of services than to be harsh and uncompromising to those struggling for an existence and in distress.

TABULATION

In the following table is an analysis of the hospitals investigated, to which is added a summary, and the Harper Hospital Social Service Bureau report, which shows a commendable effort to be thorough.

The figures obtained in our investigation are too small to serve as statistics, but the answers are instructive, nevertheless.

	ISHPEMING HOSPITAL, ISHPEMING	BUTTERWORTH HOSPITAL, GRAND RAPIDS	ST. JOSEPH'S HOSPITAL, FLINT	BORGESS HOSPITAL, KALAMAZOO
Total Annual Admissions.	677	5,690	1,668	2,732
Total Annual Hospital Bed-Days.	7,785	59,438	10,590	30,907
Annual Number Charity Patients.	None.	864	370	161
Annual Number Bed-Days to Charity Patients.	None.	9,642	2,631	4,475
Number of Patients Given Reduced Rates.	No reduced rates given.	4,260	If unable to pay, no charge made.	No reduced rates—Operating room, drugs, anesthetics, dressings donated.
Number of Bed-Days at Reduced Rates.	None.	41,918	.....	.....
Method of Determining Patient's Ability to Pay.	Referred to County Poor Board if unable to pay.	By investigation.	Monthly payments if unable to pay when discharged.	Investigation and consultation with physician.
Consultation with Attending Physician About Same.	Usually.	Yes.	Not answered.	Yes.
Attending Physician's Services.	Charge made	No charge.	No charge.	No charge.
Rate to Industrial Corporation Patients.	Regular rates.	Less than regular rate \$4.50 per day.	Regular ward rates.	Regular rates.
Rate to Patients Sent by Organized Charities.	Not answered directly.	Per diem cost.	Regular ward rates.	Ward rates for ward or private room.
Rate to City, County and State Patients.	Rate allowed by County Poor Commission.	\$4.50 per day.	Regular ward rates.	Regular rates.
Method of Hospital Maintenance.	Deficit met by industrial corps, maintaining hospital.	Patients in hospital, Subscription.	Patients in hospital, Community Fund.	Patients in hospital.
Regular Ward Rates.	\$14.00 per week, plus operating room, anesthetic and quartz light.	\$3.00 per day plus operating room, delivery room, laboratory, X-ray, exp. drugs.	\$2.50 per day plus drugs, dressings and laundry.	\$2.50 per day plus drugs, dressings and laundry.
Percentage of Bad Debts.	5%	3%	23%	30%

OUT PATIENT DEPARTMENT

Annual Number of Out Patients.		1,500	350 free meals given and 75 minor accident cases treated free during past year but no Out-Patient Department maintained.	No Out Patient Department.
Annual Number of Visits.	38,619	2,800		
Charges Made:	Employes pay \$1.10 per month. Companies 40 cents per man per month.	Medicine and administration fee if able.		
Method of Maintenance.	Corporations meet deficit. (See above).	Deficit met by Community Chest Fund.		
Means of Determining Patient's Ability to Pay.		By investigation.		
Attending Physician's Services.	Receive a salary.	No charge.		
Sources of Out Patients.	Employes and families and private patients	Charitable organizations, physicians. Direct applications.		

	PAULINA STEARNS HOSPITAL, LUDINGTON	W. A. FOOTE MEMORIAL HOSPITAL, JACKSON	MEMORIAL HOSPITAL, OWOSSO	EDWARD W. SPARROW HOSPITAL, LANSING
Total Annual Admissions.	523	3,113	1,809	2,145
Total Annual Hospital Bed-Days.	25	28,021	23,509	20,355
Annual Number Charity Patients.	About 10	285	None.	93
Annual Number Bed-Days to Charity Patients.	10	-----	-----	Not recorded.
Number of Patients Given Re- duced Rates.	None.	None.	Not answered.	All beds being op- erated at reduced rates.
Number of Bed-Days at Reduced Rates.	None.	None.	Not answered.	20,355
Method of Determining Patient's Ability to Pay.	Physician decides.	Personal questioning.	Not answered.	Inquiry and question- ing.
Consultation with Attending Physician About Same.	Yes.	No.	Not answered.	No.
Attending Physician's Services.	No charge.	No charge.	Not answered.	Arranged between doctor and patient.
Rate to Industrial Corporation Patients.	Regular rate.	Regular rate.	Regular ward rates.	Regular ward rates.
Rate to Patients Sent by Organ- ized Charities.	None sent.	Regular rate.	Ward rates.	None sent.
Rate to City, County and State Patients.	Regular rate.	Regular rate.	Ward rates.	\$3.50 per Patient.
Method of Hospital Maintenance.	Patients in hospital, Subscription aver- age \$1,000 annually.	Patients in hospital, County and City Private subscription.	Patients in hospital.	Patients in hospital. Community Chest Fund.
Regular Ward Rates.	\$3.00 per day plus drugs and dressings.	\$3.00 per day plus drugs and special nurse.	\$3.00 per day plus Operating room, Laboratory, X-ray and dressings.	\$3.00 per day plus laboratory, medicine, X-ray and diather- my.
Percentage of Bad Debts.	3%	-----	2%	45%

OUT PATIENT DEPARTMENT

Annual Number of Out Patients.	No Department.	3,115	1,161	824
Annual Number of Visits.	-----	-----	3,483	143 (½ time)
Charges Made:	-----	Under control of Pub- lic Health Depart- ment.	Examination \$2.00, regular rates for laboratory, X-ray, light and dressings.	50 cents for examina- tion if able to pay that amount.
Method of Maintenance.	-----	-----	Department of hos- pital self-supporting as a whole.	Clinic guild.
Means of Determining Patient's Ability to Pay.	-----	-----	-----	S. Service investiga- tion.
Attending Physician's Services.	-----	-----	Free to County patients.	No charge.
Sources of Out Patients.	-----	-----	County.	S. S. Bureau Health Center Doctors. Red Cross. Children's Aid. Metropolitan Nurse.

	ST. JOSEPH'S HOSPITAL, HANCOCK	GRACE HOSPITAL, DETROIT	HIGHLAND PARK GENERAL HOSPITAL	SAGINAW GENERAL HOSPITAL
Total Annual Admissions.	1,100	11,018	4,173	2,973
Total Annual Hospital Bed-Days.	15,079	111,806	37,769	35,495
Annual Number Charity Patients.	68 in. 32 out-X-ray	1,674	260	208
Annual Number Bed-Days to Charity Patients.	1,637	12,275	2,816	2,387
Number of Patients Given Reduced Rates.	Not answered.	6,809 (61.8%)	110	47
Number of Bed-Days at Reduced Rates.	Not answered.	69,096	1,345	836
Method of Determining Patient's Ability to Pay.	By investigation.	Investigation of economic status.	Social worker's report. Patient pays all or none.	Formal questionnaire.
Consultation with Attending Physician About Same.	When necessary.	Yes.	Yes.	Yes.
Attending Physician's Services.	No charge.	Usually no charge.	No charge in charity cases.	No charge for free cases. May charge part free cases.
Rate to Industrial Corporation Patients.	Regular rates.	Cost, (\$4.00 per day) plus extras.	Regular rates.	*Regular rates.
Rate to Patients Sent by Organized Charities.	Regular ward rates.	Per diem rate (1-3 to 2-3 cost).	Regular rates	*Regular rates.
Rate to City, County and State Patients.	Regular ward rates.	About 2-3 cost.	H. P. \$3.00 per day plus 1/2 operating room and ambulance. Detroit and County \$3.50 flat.	*Regular rates.
Method of Hospital Maintenance.	Patients in hospital. Donations.	Patients in hospital. Endowments. Other sources.	Patients in hospital. City.	Patients in hospital. †Endowment. §Deficit paid by Saginaw Welfare League.
Regular Ward Rates.	\$2.00 per day plus extras charged according to patients financial ability.	\$3.00 per day plus extras except insurance and compensation cases.	\$3.50 per day plus special medicine, X-ray, laboratory and operating room.	\$3.00 per day plus drugs, dressings, laboratory and operating room.
Percentage of Bad Debts.	Not answered.	About 2%	About 5%	5%

OUT PATIENT DEPARTMENT

Annual Number of Out Patients.	No Department.	26,562	Not answered.	No Department.
Annual Number of Visits.		.....	Not answered.	893 cases were given free X-ray work during past year. 33 of these cases were charged to Free Bed.
Charges Made.		Registration fee 25-50 cents if able—small charge for special medicine and X-ray.	10 cents for card and cost of medicine if able.	
Method of Maintenance.		Deficit met by Detroit Community Union.	Deficit met by City.	
Means of Determining Patient's Ability to Pay.		S. Service investigation.	S. Service investigation.	
Attending Physician's Services.		Dentists paid. Physicians—not.	Free.	
Sources of Out Patients.		City and Suburb.	Poor of H. P.	

NOTE: *It is stated that regular rates are below cost.

†Interest on \$321,068.85.

§1926 deficit was \$23,572.93.

	CHILDREN'S HOSPITAL OF MICHIGAN	BLODGETT MEMORIAL HOSPITAL	HARPER HOSPITAL	CALUMET HOSPITAL
Total Annual Admissions.	Hospital 4,147 C. Home 383	4,252	17,169	600—700
Total Annual Hospital Bed-Days.	Hospital 68,048 C. Home 53,699	42,285	155,847	Not computed.
Annual Number Charity Patients.	Not recorded.	279	Not recorded.	None.
Annual Number Bed-Days to Charity Patients.	Not recorded.	3,372	28,006	None.
Number of Patients Given Re- duced Rates.	Not recorded.	Approximately 2,700.	No record.	None.
Number of Bed-Days at Reduced Rates.	Not recorded.	27,040	No record.	None
Method of Determining Patient's Ability to Pay.	Family income. Size of family—Social Service investigation.	Hospital Council until February 1, 1927. S. S. Department investigates.	Personal questions and investigation.	Guaranteed by Corporations and other organizations.
Consultation with Attending Physician About Same.	When it is necessary.	Usually.	Yes.	No.
Attending Physician's Services.	No charge.	No charge.	Staff cases—free— private cases charged.	.....
Rate to Industrial Corporation Patients.	Same as other patients.	\$1.50 per day above regular ward rate.	\$4.00 per day plus O. R. and laboratory fees.	Regular.
Rate to Patients Sent by Organ- ized Charities.	No charge.	Partial payment monthly. Cost adjusted annually.	Regular rates.	Regular.
Rate to City, County and State Patients.	City pays \$1 per day.	Same rates as corporations.	\$3.50 per day.	Regular.
Method of Hospital Maintenance.	Partly by patients in hospital. Endowment. Detroit Community Union, County and City appropriations.	Patients in hospital. Endowment. Welfare Union. Private donations.	Patients in hospital. Endowment.	Partly by patients in hospital. Employee's subscription. Deficit met by corporation.
Regular Ward Rates.	\$3.50-\$5.00 per day— Operating room and X-ray extra.	\$3.00 per day plus operating room, X-ray, laboratory, delivery room, unusual drugs.	\$3.50 per day, plus operating room, laboratory fees.	\$13.00 per week plus operating room.
Percentage of Bad Debts.	Not obtained.	3 1-6%	About 2%	None.

OUT PATIENT DEPARTMENT

Annual Number of Out Patients.	44,600	1,331—10 months.	10,804	72,000
Annual Number of Visits.	.....	10,732—10 months.	71,394	26,750
Charges Made:	Admission. Registration. X-ray. Medicine.	Admission 3 months— 25 cents. Medicine cost, X-ray.	Registration. Lab- oratory fees. Dental work. Physiotherapy. X-ray.—No charge if unable to pay.	\$1.50 per month per employee.
Method of Maintenance.	Patients in hospital. Detroit Community Union, City and County appropria- tion.	By hospital. Deficit met by Welfare Union.	35% Clinic fees— deficit met by hospital and Detroit Community Fund.	Out Patient Depart- ment maintained as unit with hospital.
Means of Determining Patient's Ability to Pay.	History by S. Service.		Size of family— amount of income— responsibility.	Maintained as an in- dustrial hospital by corporation and employees.
Attending Physician's Services.	Free.		Dentists and attend- ing physician at night clinic paid.	.....
Sources of Out Patients.	Other agencies. Doctors. Direct application.	Direct Physicians Welfare Union.	Community and social agencies.	Corporation employes.

	HURLEY HOSPITAL, FLINT	WOMENS' AND INFANTS' HOME, DETROIT	ST. JOSEPH'S HOSPITAL, MENOMINEE	WADE MEMORIAL HOSPITAL, COLDWATER
Total Annual Admissions.	Approximately 4,300	3,629	1,574	415
Total Annual Hospital Bed-Days.	Approximately 35,850	108	26,731	3,944
Annual Number Charity Patients.	None.	941	110	28
Annual Number Bed-Days to Charity Patients.	None.	17,937	2,315	463
Number of Patients Given Reduced Rates.	None.	Not answered.	Not answered.	None.
Number of Bed-Days at Reduced Rates.	None.	Not answered.	Not answered.	None.
Method of Determining Patient's Ability to Pay.	By investigation.	By investigation.	No method.	Investigation by County Poor Commission
Consultation with Attending Physician About Same.	No.	No.	Yes.	Yes.
Attending Physician's Services.	No charge.	No charge.	Charge made.	Usually no charge. County pays part of surgical fee.
Rate to Industrial Corporation Patients.	Regular rates.	Not taken.	Regular ward rate.	Regular rate.
Rate to Patients Sent by Organized Charities.	Regular Rates.	Not charged.	Reduced ward rate.	About 2-3.
Rate to City, County and State Patients.	Regular Rates.	Regular rate.	\$10.00 per week.	Ward rate for ward or private room.
Method of Hospital Maintenance.	Patients in hospital. Deficit met by tax levy.	Patients in hospital. Endowment. Community Union.	Patients in hospital.	Patients in hospital. Deficit met by owner. (Private Hospital)
Regular Ward Rates.	\$3.00 per day plus drugs and dressings.	Not answered.	\$14-16 per week.	\$4 per day plus drugs and dressings.
Percentage of Bad Debts.	15+ %			

OUT PATIENT DEPARTMENT

Annual Number of Out Patients.	No Department	*6,594	No Department.	No Department.
Annual Number of Visits.		*14,868		
Charges Made:		10 cents admittance, 35 cents each visit, \$35-55 confinement. \$25 per week, Surgical, \$5 to \$15 for tonsils.		
Method of Maintenance.		Deficit met by Community Union.		
Means of Determining Patient's Ability to Pay.		Investigation.		
Attending Physician's Services.		Not paid.		
Sources of Out Patients.		Physicians. Public organizations. Other Patients.		

*NOTE: In addition, 776 patients were given 5,635 hospital bed days.

	WOMAN'S HOSPITAL ASSOCIATION, SAGINAW	MERCY HOSPITAL, BAY CITY	DONALD McRAE HOSPITAL, ALPENA
Total Annual Admissions.	872	2,506	360
Total Annual Hospital Bed-Days.	8,833½	22,709	3,621
Annual Number Charity Patients.	74	307	6
Annual Number Bed-Days to Charity Patients.	380½	Not answered.	84
Number of Patients Given Re- duced Rates.	10	Not answered.	None.
Number of Bed-Days at Reduced Rates.	Not answered.	Not answered.	None.
Method of Determining Patient's Ability to Pay.	Referred to Associated Charities.	Ask friends and physician.	County and physician.
Consultation with Attending Physician About Same.	Yes.	Yes.	Yes.
Attending Physician's Services.	No charge.	Charge.	County physician attends.
Rate to Industrial Corporation Patients.	Regular rate.	Regular rate.	Regular rate.
Rate to Patients Sent by Organ- ized Charities.	Regular rate.	Regular rate.	Regular rate.
Rate to City, County and State Patients.	Regular rate.	Regular rate.	Regular rate.
Method of Hospital Maintenance.	Patients in hospital. Endowment. Membership dues. Welfare League.	Patients in hospital. Subscription.	Patients in hospital.
Regular Ward Rates.	\$2.75 and \$3.00 per day plus drugs and dressings.	\$3.00 per day plus X-ray, laboratory and dressings.	\$17.50 per week plus dressings.
Percentage of Bad Debts.	About 15%.	Not answered.	About 5%

NO OUT PATIENT DEPARTMENTS MAINTAINED

SUMMARY OF REPORTS FROM 23 HOSPITALS

Based Upon One Year's Work.

ANNUAL ADMISSIONS

From 360 to 11,018 patients.

CHARITY PATIENTS

None	4
No record	2
From 6 to 1,674	17

PATIENTS GIVEN REDUCED RATES

None	9
No record	2
Did not answer	5
All rates reduced	1
From 10 to 6,809 patients	6

ATTENDING PHYSICIAN'S CHARGE TO PATIENTS GIVEN REDUCED RATES

No charge	12
Charge made	3
Usually no charge	3
Did not answer	2
Arranged between physician and patient	1
Cared for by County Physician	1
Staff cases free	
Private cases charged	1

METHODS OF DETERMINING PATIENT'S ABILITY TO PAY

By investigation of economic status	10
By Social Service investigation	3
Investigation by County Poor Board	3
By formal questionnaire	1
Physician decides	1
Referred to Association Charities	1
Arrange for monthly payments after discharge	1
No method	1
Corporation Hospital	1
Did not answer question	1

PHYSICIANS CONSULTED ABOUT RATES

Consulted	13
Not consulted	4
Usually consulted	2
Consulted when necessary	2
Did not answer question	2

RATE CHARGED PATIENTS SENT BY INDUSTRIAL CORPORATIONS

Regular rates	18
\$1.50 per day above regular ward rate	2
50 cents per day above regular ward rate	1
Cost plus extras	1
Not accepted	1

RATE CHARGED PATIENTS SENT BY ORGANIZED CHARITIES

Regular ward rates	13
Reduced ward rates	1
No charge	2
Per diem cost	2
Based upon cost—(monthly payments)	1
About 2/3	1
None sent	2
Did not answer question	1

RATE CHARGED PATIENTS SENT BY CITY, COUNTY AND STATE

Regular ward rates	14
About 2/3 cost	1
Rate allowed by County Poor Commission	1
\$3.50 per day	2
\$10.00 per week	1
\$1.50 per day above regular ward rates	2
\$1.00 per day	1
City—\$3.00 per day plus 1/2 operating room and 1/2 ambulance	1
Outside of city—\$3.50 per day	1

REGULAR WARD RATES

\$2.00 per day plus extras	1
\$2.50 per day plus extras	2
\$2.75 and \$3.00 per day plus extras	1
\$3.00 per day plus extras	10
\$3.50 per day plus extras	2
\$3.50 to \$5.00 per day plus extras	1
\$4.00 per day plus extras	1
\$13.00 per week plus operating room	1
\$14.00 per week plus extras	1
\$14.00 to \$16.00 per week	1
\$17.50 per week plus dressings	1
Did not answer question	1

METHODS OF HOSPITAL MAINTENANCE

Patients in hospital	4
Industrial corporations	1
Patients in hospital and subscription	4
Patients in hospital and Community Fund	2
Patients in hospital, subscriptions, County and City	1
Patients in hospital, endowment, subscription, Welfare League	2
Patients in hospital and city tax levy	2
Patients in hospital, endowment and Community Union	1
Patients in hospital, endowment, Community Union, City and County	1
Patients in hospital and endowment	3
Patients in hospital, employes and corporation	1
Patients in hospital, deficit met by owner	1

PERCENTAGE OF BAD DEBTS

2%	1
About 2%	2
3%	2
3 1-6%	1
5%	2
About 5%	2
About 15%	1
15% plus	1
23%	1
30%	1
45%	1
None—(Corporation Hospital)	1
Did not answer question	7

REPORT OF OUT-PATIENT DEPARTMENTS

Out-patient departments maintained	11
No out-patient department	9
No department but do some free out-patient work	2
Under control of Public Health (no report)	1

FEES CHARGED

Employes \$1.10 and corporation 40 cents per capita per month (Industrial)	1
\$1.50 per month per employe (Industrial)	1
Medicines and administration fee if able	1
Examination \$2.00, regular rates for laboratory, X-ray, etc.	1
50 cents for examination if able to pay it	1
Admittance, visit, confinement and surgical	1
Admission, registration, X-ray and medicine	2
Registration, laboratory, dental, physio-therapy if able	1
Registration and small charge for special medicine if able	2

METHOD OF DETERMINING PATIENT'S ABILITY TO PAY

History by Social Service	4
Investigation of economic status	3
Industrial hospital	2
Question not answered	2

MEANS OF MAINTENANCE

Patients in hospital, Detroit Com. Uunion City and County.....	1
Patients in hospital, deficit by Welfare Union 35% by clinic fees, patients in hospital, Detroit Community Union.....	1
Maintained as unit of hospital, (Industrial).....	1
Deficit met by Detroit Community Union.....	2
Deficit met by city.....	2
Unit of hospital which is self-supporting as whole	1
Maintained by clinic guild.....	1
By hospital and community chest fund.....	1

ATTENDING PHYSICIAN'S CHARGE

Receives a salary, (Corporation).....	2
No charge for services.....	6
No charge to county patients.....	1
Charge only for dentists and night attending.....	1
Question not answered.....	1

SOURCES FROM WHICH OUT-PATIENTS ARE OBTAINED

Stated in Order of Frequency.

1. CHARITABLE ORGANIZATIONS.
 - Social Service Bureau.
 - Welfare Union.
 - Health Center.
 - Red Cross.
 - Children's Aid.
 - Metropolitan Nurse.
2. PHYSICIANS.
3. DIRECT APPLICATION.
4. COUNTY.
5. OTHER CLINIC PATIENTS.
6. POOR OF CITY AND SUBURBS.

PROPOSED REVISION OF FEES—OUT-PATIENT DEPARTMENT,

HARPER HOSPITAL

Classification by clinic executive of all patients in four main groups according to amount of income and responsibility, the card of each patient to be stamped—I, II, III, IV, according to classification (stamping of cards is less confusing than various colored cards):

Class I to include:

- (a) All single individuals with incomes of \$20 week or about.
- (b) Man and wife with no children with income of \$30 week or about.
- (c) Family group with two children and income of \$35 week or about.

Class II to include:

- (a) All single individuals with incomes of \$18 week or about.
- (b) Man and wife with no children with incomes of \$25 week or about.
- (c) Family group with three children with income of \$35 week or about.

Class III to include:

- (a) All single individuals with incomes of \$10-\$15 week.
- (b) Man and wife with income of \$22 week or about.
- (c) Family group with more than three children with income of \$35 week or about.

Class IV to include:

All beneficiaries of relief giving agencies, such as Mother's Pension, C. A. S., D. P. W., etc.

The purpose of fees in a dispensary is two-fold:

to make the institution self-supporting in so far as possible and to develop a sense of responsibility and co-operation in the patient toward his care by having him share in the cost of labor, material and over-head through the payment of small fees.

The only logical and just method to pursue in the charging of fees is to grade according to amount of income and responsibility. The blanket fee works injustice and is too often empirical. Those with four or five children on a given income are compelled to pay the same as those with two or three children on the same amount of income.

The proposed classification into four classes attempts to distribute charges where they can best be met. The majority of patients will fall into Class II and III. (One-third of our patients are beneficiaries of other relief giving agencies). Class II includes those individuals with incomes sufficient to cover the minimum budget; Class III is slightly below the budget; while Class I is very slightly above the minimum budget. The allowance in Class I above the minimum budget, however, is not sufficient to permit care through the services of a private physician.

The fees in Class III are so nominal as to merely take care of the charge for the bottle given out for laboratory work, etc.

It will be argued that clinic attendance may be reduced by the adoption of a more comprehensive fee schedule. All fees whether blanket or graded must be administered in the light of sociological factors or they defeat their own purpose. It is understood that inability to pay even a small fee is never a reason to debar any patient from treatment. All sociological factors of unemployment, sickness, old age, low wages, delinquency, disability, death, desertion and improvidence must be taken into account in classifying patients.

The experience of Boston Dispensary, Boston, Mass., in adopting a comprehensive fee schedule is of great value. Quoting from the 125th report of the Boston Dispensary:

"At the end of six months, Miss Janet Thornton, of the Social Service Staff, submitted a report based on evidence afforded by statistics of attendance, of income from admission fees and impressions and reactions of patients to the fee increase. It appeared to Miss Thornton that patients did not find the higher cost of treatment a hardship and that attendance increased in spite of the increase in fees, although a comparison of incomes reported by them with a fair standard of living showed that relatively few have means to purchase such treatment without some lowering of their standards of living."

MINIMUM FAMILY BUDGET FOR MONTH

	2	3	4	5
	Man and Woman	Man, Woman, Child 3	Man, Woman, Girl 5, Boy 3	Man, Woman, Girl 12, Girl 5, Boy 3
Food	\$20.10	\$34.40	\$ 40.16	\$ 48.58
Clothing	12.15	15.43	18.71	24.30
Rent	25.00	25.00	30.00	40.00
Household Furnishings	6.25	7.18	8.11	9.04
Fuel and Light	9.63	9.63	11.98	12.73
Extras	5.57	6.24	6.91	7.58
Total	\$87.70	\$97.88	\$115.87	\$142.23

January 1, 1926.

VISITING HOUSEKEEPER ASSOCIATION, Detroit.

SCHEDULE OF FEES

Service	Fee According to Class			
	Class I	Class II	Class III	Class IV
Registration	\$1.00	\$.50	\$.25	N. C.
Subsequent Visit	.50	.25	.15	N. C.
Lost Card	.25	.25	.25	.25
Medicine	.75	.50	.30	N. C.
Refraction	1.00	.50	.25	N. C.
Blood Examination	1.00	.50	.25	N. C.
Urinalysis	.50	.25	.10	N. C.
Smear	.50	.25	.10	N. C.
Blood Chemistry	1.00	.50	.25	N. C.
Vanden Bergh	1.00	.50	.25	N. C.
Basal Metabolism	1.00	.50	.25	N. C.
Throat Culture	.50	.25	.10	N. C.
Cystoscopic	1.00	.50	.25	N. C.
Salvarsan	2.50	1.00	.50	N. C.
Filling out benefit certificate	1.00	.75	.50	N. C.
Vaccines	1.00	.50	.25	N. C.
Serums	1.00	.50	.25	N. C.
Hypo (I. R. S. and Corpus Luteum)	1.00	.50	.25	N. C.
Von Pirquet	2.00	1.00	.50	N. C.
Sensitization	5.00	1.00	.50	N. C.
Casts	5.00	3.00	1.00	N. C.
Dressings:				
(1) Minor	.50	.25	.10	N. C.
(2) Extensive	1.50	.50	.25	N. C.
Glass	8.00	6.00	5.00	N. C.
Minor Surgery	5.00	3.00	1.00	N. C.

Other special services not designated, to be referred to Clinic executive for fee.

*N. C.—No charge.

Fees for dental work are as follows: (Each patient being classified before he goes to Dental Clinic).

- Class 4 Plates \$10.00 each.
Local extractions free.
Fillings except gold, free.
- Class 3 Plates \$12.50 each.
Local extractions \$.10 each.
Fillings except gold \$.25 each.
- Class 2 Plates \$15.00 each.
Local extractions \$.25 each.
Fillings except gold \$.50 each.
- Class 1 Plates \$17.50 each.
Local extractions \$.50 each.
Fillings except gold \$.75 to \$1.00.

Gold fillings, at option of dentist only, classes 1 to 4, \$1.50 to \$4.00. Gas anaesthesia—\$1.00 to \$5.00.

SCHEDULE OF CHARGES—DEPARTMENT OF PHYSIOTHERAPY

Types of Treatment	Classification of Patients				Special Rates
	1	2	3	4	
1. Thermotherapy or baking					Sing. 10 for \$ 8
Single	\$1.00	\$.50	\$.25	N. C.	Comb. 10 for 6
Combined	.75	.25	.25	N. C.	Sing. 20 for 15
					Comb. 20 for 12
2. Massage					Sing. 10 for 16
Single	2.00	1.00	.50	N. C.	
Combined	1.50	.75	.25	N. C.	Comb. 10 for 12
3. Exercises					Sing. 20 for 30
a. Developing					Comb. 20 for 24
b. Corrective					Sing. 10 for 8
Single	1.00	.50	.25	N. C.	Comb. 10 for 6
Combined	.75	.25	.25	N. C.	Sing. 20 for 15
4. Electricity					Comb. 20 for 12
a. Galvanism					
b. Interrupted Galvanism					Sing. 10 for 11
c. Faradism					Comb. 10 for 8
Single	1.50	.75	.25	N. C.	Sing. 20 for 21
d. Sinusoidal					
Combined	1.00	.50	.25	N. C.	Comb. 20 for 16
					Sing. 10 for 16
5. Actinic Ray Quartz					
Single	2.00	1.00	.50	N. C.	Comb. 10 for 12
					Sing. 20 for 30
Combined	1.50	.75	.25	N. C.	Comb. 20 for 24

X-RAY CHARGES

Area	Class I	Class II	Class III	Class IV
Gastro Intestinal	\$5.00-\$10	\$5.00	\$2.00	None
Colon only (by Barium Enema)	5.00	3.00	2.00	None
Oesophagus only	3.00	2.00	1.00	None
Chest, ribs	5.00	2.50	1.00	None
Heart	3.00	2.00	1.00	None
Fluoroscopic examination for localization where films are not to be taken	2.00	1.00	.50	None
Skull—sella turcica	2.00	2.00	1.00	None
Sinuses	3.00	2.00	1.00	None
Jaw—Mastoids	5.00	2.00	1.00	None
Spine—entire	6.00	3.00	2.00	None
Spine—two sections	4.00	2.50	1.50	None
Spine—one section, sacroiliac section	3.00	2.00	1.00	None
Gall Bladder	5.00	3.00	2.00	None
G. U. Tract	4.00	2.00	1.00	None
Abdomen	5.00- 10	3.00	2.00	None
One ankle, foot, wrist, hand or finger	2.00	1.00	.50	None
Both ankles, feet, wrists or hands	3.00	2.00	1.00	None
One long bone (lower leg, femur, humerus, forearm)	3.00	1.50	.50	None
Two long bones	5.00	3.00	2.00	None
Knees, pelvis, hips, shoulders, clavicle, scapula	3.00	2.00	1.00	None
Skeleton for metastatic carcinoma	5.00- 10	5.00	2.00	None
Dental (each film)	1.50 for 1st, \$1.00 each additional.	1.00	.50	None

PART TWO

UNIVERSITY OF MICHIGAN HOSPITAL

The second part of this report has to do with the University Hospital. Your Committee has devoted a large part of its efforts to this portion of the investigation, because of its great importance to the medical profession of the state.

We are proud of our University, of its Medical Department, and are cognizant of the important part that the University Hospital is taking in educating students for the practice of medicine and of the help that it affords to the poor of the state and to the profession. We would not wittingly do aught to injure its welfare. At the same time, the medical profession of the state cannot regard with indifference the growth of this great institution, the part it is playing in the care of the sick and its important influence upon medical practice. The questions involved are complex and call for much consideration and the exercise of the most careful judgment. After months of study, your Committee feels obliged, therefore, to offer this as a preliminary report, and not at this time to submit definite recommendations, but merely to give you certain facts bearing upon the questions involved, for your study and consideration during the coming year.

In this investigation, your Committee naturally turned to Dr. Harley A. Haynes, Superintendent of the University Hospital, and to some of the members of the faculty,

for information. It was met with the most cordial reception, and the facts have been placed before your Committee with great frankness. It has been evident that the Hospital has been most desirous of bringing about a better understanding with the profession of the state.

The same questionnaire (see page 5), was sent to the University Hospital as to other hospitals, and Dr. Marshall, as Secretary of your Committee, received from Dr. Haynes answers and a further detailed report, all of which is presented to you, together with such comments as might enlighten you. Your Committee has every reason to believe that the facts presented are trustworthy and, so far as they go, may form a proper basis for judgment.

UNIVERSITY OF MICHIGAN,

Ann Arbor

University Hospital,
Harley A. Haynes, M. D.,
Director.

March 11, 1927.

W. H. Marshall, M. D.,
Industrial Bank Building,
Flint, Michigan.

Dear Sir:

We are very glad to be able at this time to comply with your request of February 12th, and we are enclosing herewith first, a series of answers to your questionnaire, and, second, a more detailed study of admissions to the University Hospital, along the lines discussed during your recent visit to the Hospital.

We wish to call your special attention to the fact that the study covers a period of nine months immediately preceding February 1st of this year. This is representative of the character of our admissions and will form a sound basis for a study of the charitable work of such institutions as the University Hospital. May we say further that this study is based upon actual figures rather than averages, and that our records are open for further study of any particular phase of the problem that your committee feels should be made.

You will notice that the report is in two parts. The first part deals with the whole admission problem, grouping the patients under these six classifications specified by the University Hospital, and adding a classification for the Hospital staff and a further classification for emergencies, which as you know, any hospital is bound to accept. In this last group we have also included the guests of patients who are accommodated, (usually a mother whose infant child is a patient.) In order to have complete control over this group, they are admitted on the same basis as the patient. They therefore appear in our admission records; we have included them in the survey in order that our totals may agree exactly with the figures in our Admitting department.

Part 2 of the report deals entirely with those patients who pay their own expenses. We have excluded from this all so-called private guaranties, such as Rotary Club, Industrial Corporations, etc. We have also excluded the Hospital Staff. This does not imply, however, that the Staff is treated without charge. Hospitalization

of employes varies as to length and character of services rendered. We have also excluded guests. These exclusions, together with the first three groups named by the University Hospital, total 8,001, for the period of nine months, leaving a balance of 5,305. We have analyzed this balance, first, as to the method of admission, and second, as to financial rating. At this point we have set forth the standards by which we classify financial rating.

Section 3 of Part 2 is an analysis of this particular group as to sex. Section 4 analyzes the same group as to domicile. We have listed every county in the state and also the patients who were admitted from out of state. The last analysis of this group is as to age. Appended to this study are several graphs which help to visualize the relationship of the various elements in this study. In comparing these graphs, it is well to note carefully the distinction between the graph of all admissions and the graphs pertaining only to the 5,305 so-called "pay" patients.

We will be very glad indeed to amplify or explain any particular part of this study, or if we have failed to reveal particular situations in which you are interested, we will do our best to carry the study further.

Yours very truly,

(Signed) H. A. HAYNES,

Director.

ANSWERS TO QUESTIONNAIRE

QUESTION NO. 1

Number of patients admitted to the Hospital during the year.

Seventeen thousand, five hundred thirty-two patients were admitted to the University Hospital between January 1, 1926, and December 31, 1926.

Note: It is necessary to distinguish between the words "Registered" and "Admitted". Every patient is *registered* when he first enters the University Hospital. This entitles him to a preliminary examination. A patient is not *admitted* until assigned to a bed in the Hospital. The above figure represents those patients assigned beds during the period indicated.

QUESTION NO. 2

Number of Hospital bed days.

Three hundred forty-one thousand, nine hundred eighty were reported for the period from January 1, through December 31, 1926.

QUESTION NO. 3

Number of charity patients.

For actual figures, it is necessary to revert to the nine-months' period covered in the accompanying report. During the nine-months' period beginning May 1, 1926, 4,537 patients were admitted under Act 267, 1915, and 2,486 under Act 274, 1913. This makes a total of 7,023, referred to on page 16. Under the Charity Group would also be included Group 2 and private guar-

antees. This makes a total of 7,339 charity patients for the period of nine months, or 9,780 for the period of 12 months at this same rate—about 55½%.

(See page 24 for copy of these Acts).

QUESTION NO. 4

Number of Hospital bed days given same.

We are very sorry we haven't the actual figures in this case. It would involve a study of every one of the 17,532 in order to arrive at this figure. In all probability, 70% of the total number of bed-days would give a figure that would answer for the purpose of comparison.

QUESTION NO. 5

The number of patients and bed-days to patients who pay less than Hospital rates.

Strictly speaking, we have no patients in this class. Every patient is charged according to our regular rates, which are just sufficient to cover the cost involved. This is the standard for all so-called minimum rates applied to all charity cases, also Group 3, the hospital staff, and to all Class "A" patients. (See page 18 for definition of Class "A"). The "B", "C", and "D" patients, provided for in Group 6 of the Hospital Classifications, and also any out-state patients (see page 16 in the report) pay proportionately higher rates. The University Hospital has no means for providing service to any patients at less than minimum rates, inasmuch as it has no income outside that derived from service to patients.

QUESTION NO. 6

How do you decide as to whether patient can pay for hospital care in full or in part?

The University Hospital does not enter into the assignment of patients to Group 1, 2 and 3, nor the private guarantees. We refer you again to page 18, on which appears a table of standards by which we classify our patients into Classes "A", "B", "C", and "D". The out-state patients are charged an additional fee besides the rating they would otherwise have if they were residents of Michigan.

QUESTION NO. 7

Is the attending physician consulted as to the ability of patient to pay the less-than-regular rates, or nothing?

Our answers to questions 5 and 6 indicate that the answer to this question should be in the negative, inasmuch as the Hospital does not enter directly into the admission of charity patients.

QUESTION NO. 8

Is the attending physician expected to make any charge for services in such cases?

No. We refer you to the provisions of Acts 267 and 274 and various county regulations.

QUESTION NO. 9

Do patients sent in by industrial corporations pay regular rates?

Yes. As explained in answers to Questions 5 and 6, patients guaranteed by industrial corporations are classified as "A" patients and charged the minimum rates.

QUESTION NO. 10

Do patients cared for by organized charity pay regular rates?

Yes. As explained in our answer to Questions 5 and 6, these patients pay our minimum rates.

QUESTION NO. 11

Do patients cared for by city, county or state pay regular rates?

Yes. We charge our minimum rates, which just cover the cost of service rendered.

QUESTION NO. 12

How is the cost of Hospital maintenance met?

The cost of maintenance to the University Hospital is met entirely from service rendered patients in the hospital. There are one or two very small endowments with a net income of less than \$1,000 a year. We make no subscriptions and have no income from any other source.

QUESTION NO. 13

What are the regular ward rates?

The following is a list of rates at the University Hospital:

	Residents of State	Non Residents
Registration Fee	\$2.00	\$3.00
Subsequent Visits .....	.50	.75
Ward Beds, New Building	3.50	4.00
Ward Beds, Convalescent Bldg.	3.25	4.00
Convalescent Private Rooms	4.00	4.50
Two-Bed Wards	4.50	5.50
Private Rooms (Isolation)	5.00	6.00
Private Rooms	6.00	7.00
Private Rooms with Bath	10.00	11.00
Contagious Ward	3.50	4.00
Contagious Nursing	2.00	2.00
Nursery Charge for Infants, per day.....	1.00	

QUESTION NO. 13—(Continued)

Does this include extras?

Extra charge will be made for use of operating room service, delivery room service, anaesthetics, radiographs, X-ray treatments, physio-therapy treatments, special medicines, oxygen, sera, vaccines and extras not included in the regular

menu diets. Whenever it is necessary to employ graduate special nurses, the cost of their services is charged to the patients served.

QUESTION NO. 14

What percentage of bills prove to be bad debts?

Of the total amount charged to 5,305 so-called "Pay" patients, we estimate that under normal conditions our loss due to bad debts would be 6 or 8 per cent. Under present conditions, due to the strict control of our Credit Department of this class, our losses are chiefly from emergency cases and from those few cases where unexpected developments or abnormal expenses are not anticipated by either the patient or our Credit Department.

OUT-PATIENT DEPARTMENT

QUESTION NO. 1

Do you maintain such?

The University Hospital does not maintain a regular Out-Patient Department distinct from the rest of the Hospital. Every patient registers before the preliminary examination by the Clinic and is considered an out-patient until given a bed-slip and admitted to the Hospital.

QUESTION NO. 2

How many patients are cared for in the course of the year and the total number of visits?

During the calendar year 1926, 30,380 patients were registered in the Hospital. All of these patients were seen in the Out-Patient Clinics; 17,532 were subsequently given bed-slips and admitted to the hospital. (See Committee Comment).

QUESTION NO. 3

Do such patients pay any fee? If so, what do they pay and for what?

Every patient entering the University Hospital pays a registration fee of \$2.00 for residents of the state, and \$3.00 for non-residents. This covers the cost of the preliminary examination, Wassermann

test, etc. This preliminary examination includes examination by the various clinics to which the patient may be referred by the House Physician. After the examination has been completed and the patient is not admitted to the Hospital, but returns for further consultation, he is charged 50 cents for residents, and 75 cents for non-residents, for each so-called subsequent visit.

QUESTION NO. 4

Does the Out-Patient Department maintain itself? If not, how is the deficit met?

I think it would be evident from our answer to Questions 1 and 2 that the Out-Patient Department is not so separated from the rest of the Hospital as to allow a positive statement on this point. The charges made are designed to cover direct outlay involved in this service.

QUESTION NO. 5

What means have you to estimate the ability of the patient to pay, and is the attending physician paid for his service?

Inasmuch as there is no real distinction between out-patients and in-patients, as far as qualifications for admission are concerned, we feel that this question is answered fully in Questions 6, 7 and 8 above.

QUESTION NO. 6

From what sources do you obtain out-patients?

We have no separate sources for our so-called out-patients. The table of Domicile, page 18 in section 4, is a very good index as to sources of our clinical material. While this table refers only to the so-called "Pay" group admitted to the Hospital, in comparison with similar studies made of patients who register, indicate substantially the same proportion.

The above is simply the answers to the Questionnaire sent to all hospitals. Dr. Haynes' report continues (see Committee Comment).

(Dr. Haynes' Report—continued).

UNIVERSITY HOSPITAL ANALYSIS OF ADMISSION—
MAY 1, 1926, TO FEBRUARY 1, 1927.

PART I

General Analysis as to Class of Patient

GROUP 1

"State Patients: Those patients hospitalized by the Probate Courts under Public Acts 267 of 1915 or 274 of 1913."

1926	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1927	Jan.	Total
267	421	471	433	536	537	571	497	469		602	4587
274	240	228	226	308	290	288	282	320		304	2486
	661	699	659	844	827	859	779	789		906	7023

(See comment of Committee, page 21).

GROUP 2

"County Patients: Those patients who are sent by the Superintendent of the Poor and whose hospital expenses are guaranteed by the county in which the patient resides."

1926	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1927	Jan.	Total
	14	20	20	8	21	10	13	16		10	132

(See comment of Committee, page 21).
(See page 24 and 25 for these Acts).

GROUP 3

"Students in attendance of the University of Michigan or the Michigan State Normal College of Ypsilanti."

1926	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1927	Jan.	Total
	3	0	3	0	1	1	2	7		6	23

(See comment of Committee, page 21).

GROUP 4

"Persons bringing letters from their regular Medical Attendants, recommending their admission." (Patients in Group 6 not included).

1926	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1927	Jan.	Total
With letter	137	74	138	98	90	91	89	64		92	873*
With doctor	15	61	39	48	24	29	26	13		31	286*
Verbal refer	75	47	10	23	11	7	16	12		102	303*
	227	182	187	169	125	127	131	89		225	1462

(See comment of Committee, page 21).

GROUP 5

"Persons who can truthfully sign an affidavit that they are unable to pay the usual minimum fee charged by the Medical Profession outside the hospital."

1926	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1927	Jan.	Total
Individuals	190	370	393	394	325	311	309	182		132	2607*
Guarantees	18	18	20	22	20	31	19	19		17	184**
	208	388	413	416	346	342	328	201		149	2791

"Individuals" indicate patients paying their own way.

"Guarantee" indicates patients guaranteed by other than Public Institutions as provided in Group 1, 2, or 3.

(See comment of Committee, page 21).

GROUP 6

"Persons who are able to pay in addition to their hospital charges, fees for Professional Services, may be admitted to the Services of Medicine, Surgery or X-ray."

1926	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1927	Jan.	Total
"B"	68	57	114	125	86	49	27	24		34	584*
"C"	5	3	8	8	3	3	5	3		3	41*
"D"	0	4	2	0	1	0	0	0		0	7*
	73	64	124	133	90	52	32	27		37	632

"B"—Able to pay a small professional fee.

"C"—Moderately wealthy.

"D"—Wealthy.

(See comment of Committee, page 22).

GROUP 7

1926	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1927	Jan.	Total
Doctors and											
Drs. family	14	6	8	25	5	4	12	6		10	90*
Nurses	22	14	4	12	8	12	11	13		21	117
Student											
Nurses	34	43	28	23	16	31	39	28		40	292
Employees	8	19	18	15	8	9	12	7		15	102
	78	73	58	75	37	56	74	64		86	601

(See comment of Committee, page 22).

GROUP 8

1926	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1927	Jan.	Total
Emergency	82	41	79	89	50	52	44	30		137	604*
Guests	2	0	10	4	3	3	7	5		4	38*
	84	41	89	93	53	55	51	35		141	642

"Guests" indicate relatives of patients admitted with patient and charged according to service rendered—i.e., room and meals, etc.

(See comment of Committee, page 22).

RECAPITULATION

Group	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1927	Jan.	Total
1	661	699	659	844	827	859	779	789		906	7023
2	14	20	20	8	21	10	13	16		10	132
3	3	0	3	0	1	1	2	7		6	23
4	227	182	187	169	125	127	131	89		225	1462
5	208	388	413	416	346	342	328	201		149	2791
6	73	64	124	133	90	52	32	27		37	632
7	78	73	58	75	37	56	74	64		86	601
8	84	41	89	93	53	55	51	35		141	642
	1348	1467	1553	1738	1500	1502	1410	1228		1560	13306

Average admittance per day for 9 months, 48.21.

NOTE: Totals marked * indicate groups paying their own hospital expenses.

Totals marked ** indicate groups whose expenses are paid by other than public institutions.

PART II
(of Dr. Haynes' Report)

ANALYSIS OF PATIENTS ADMITTED WHO PAY FOR THEIR HOSPITAL EXPENSES

May 1, 1926, to February 1, 1927

Total number of patients admitted (all classes)	13,306
Deduct Group 1	7,023
Group 2	132
Group 3	23
Private Guarantees	184
Hospital Staff	601
Guests	38
	8,001
Patients paying their own expenses.....	5,305

Section 1

Analysis as to Method of Admission

1926	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1927	Jan.	Total
Affidavit	190	370	393	394	326	311	309	182		132	2607
Emergency	82	41	79	89	50	52	44	30		137	604
By Doctor	15	61	39	48	24	29	26	13		31	286
By letter	137	74	138	98	90	91	89	64		92	873
Verbal Refer	75	47	10	23	11	7	16	12		102	303
Group 6, page 17.....	73	64	124	133	90	52	32	27		37	632
Totals	572	657	783	785	591	542	516	328		531	5305

Section 2

Financial Rating of "Pay Patients"

1926	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1927	Jan.	Total
Class A	499	593	659	652	501	490	484	301		494	4673
Class B	68	57	114	125	86	49	27	24		34	584
Class C	5	3	8	8	3	3	5	3		3	41
Class D	0	4	2	0	1	0	0	0		0	7
Totals	572	657	783	785	591	542	516	328		531	5305

(See comment of Committee, page 22).

STANDARDS

"A"	Yearly income from	0	to \$1,800	for	single persons
"B"	Yearly income from	\$1,800	to 3,000	for	single persons
"C"	Yearly income from	3,000	to 5,000	for	single persons
"D"	Yearly income from	5,000	and over	for	single persons
"A"	Yearly income from	0	to \$ 2,500	for	married persons
"B"	Yearly income from	\$ 2,500	to 5,000	for	married persons
"C"	Yearly income from	5,000	to 10,000	for	married persons
"D"	Yearly income from	10,000	and over	for	married persons

Section 3

Analysis of "Pay" Patients as to Sex

1926	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1927	Jan.	Total
Male	296	417	462	472	307	289	284	169		299	2995
Female	276	240	321	313	284	253	232	159		232	2310
Totals	572	657	783	785	591	542	516	328		531	5305

Section 4

ANALYSIS OF "PAY" PATIENTS AS TO DOMICILE

1926	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1927	Jan.	Total
Alcona					1						1
Alger	1	1				1	1				4
Allegan	6		8	8	2	4	1	1		3	33
Alpena		5	2	4		5	1				17
Antrim			2		1						3
Arenac						1				1	2
Baraga											
Barry	3		2	2	5	1	1	1		1	16
Bay	8	6	8	4	3	4	4	1		4	42
Benzie	4	3	2	3	2	2	4			1	21
Berrien	4	5	8	5	2	4	3	6		7	44
Branch	4	3	2	7	2	1	3			1	23
Calhoun	11	6	11	8	13	8	8	4		6	75
Cass	1		2		2	1	2			4	12
Charlevoix	4		5	4	3		1				17
Cheboygan	4	4	8	6	1	1	1	1		2	28
Chippewa	7	6	10	3	3	5	2	4		2	42
Clare	3	2		3	2	1	3			2	16
Clinton	4		8	7	3	2		1		3	28
Crawford	1						1	1			3
Delta	3		2	2		1					8
Dickinson			4	3	1	1	1			1	11
Eaton	3	6	8	8	5	2	1	2		4	39

1926	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1927	Jan.	Total
Emmet	1	4	.....	3	1	.....	1	1	.....	3	14
Genessee	16	18	24	21	20	15	11	13	.....	17	155
Gladwin	2	.....	4	2	.....	.....	.....	.....	.....	.....	8
Gogebic	.....	.....	4	4	.....	.....	1	1	.....	.....	10
Grand Traverse	2	2	3	2	3	9	.....	1	.....	.....	22
Gratiot	7	5	6	9	4	5	7	4	.....	2	49
Hillsdale	10	12	10	5	6	3	7	8	.....	4	65
Houghton	1	2	6	5	2	1	.....	1	.....	.....	18
Huron	5	2	10	4	2	2	2	3	.....	1	31
Ingham	15	13	20	15	12	5	10	4	.....	8	102
Ionia	3	5	8	4	7	2	1	4	.....	1	35
Iosco	2	.....	4	3	.....	1	1	1	.....	.....	12
Iron	.....	.....	.....	.....	.....	.....	1	.....	.....	1	2
Isabella	5	6	8	4	1	2	4	3	.....	3	36
Jackson	10	23	30	27	11	15	19	5	.....	11	151
Kalamazoo	5	5	4	2	2	1	5	.....	.....	3	27
Kalkaska	.....	1	.....	.....	1	.....	.....	.....	.....	1	2
Kent	9	10	20	18	10	5	8	4	.....	4	88
Lake	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lapeer	4	5	2	4	4	1	8	.....	.....	5	33
Leelan	4	4	2	4	.....	2	4	6	.....	3	29
Lenawee	14	25	25	25	10	6	17	2	.....	4	128
Keenaenaw	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Livingston	.....	.....	.....	.....	6	12	4	.....	.....	2	24
Luce	1	2	.....	.....	1	1	1	.....	.....	1	7
Mackinac	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Macomb	6	4	8	7	3	5	2	5	.....	5	45
Manistee	4	6	.....	5	2	1	.....	.....	.....	.....	18
Marquette	.....	.....	5	4	.....	.....	.....	.....	.....	2	11
Mason	2	.....	1	2	.....	2	1	.....	.....	2	10
Mecosta	.....	2	1	.....	1	5	.....	.....	.....	4	13
Menominee	3	.....	.....	5	.....	.....	.....	.....	.....	.....	8
Midland	.....	4	4	7	1	2	2	.....	.....	2	22
Missaukee	8	4	.....	5	1	1	.....	1	.....	2	22
Monroe	10	10	10	15	10	15	11	4	.....	3	88
Montcalm	5	5	2	5	3	2	2	1	.....	.....	25
Montgomery	2	.....	1	.....	.....	.....	1	.....	.....	.....	4
Muskegon	4	4	1	4	2	5	2	.....	.....	.....	22
Newaygo	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2
Oakland	35	36	46	45	45	42	32	18	.....	21	320
Oceana	.....	.....	.....	.....	1	.....	1	1	.....	.....	3
Ogemaw	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ontonagow	4	.....	1	4	.....	1	1	.....	.....	.....	11
Osceola	.....	1	.....	1	.....	.....	.....	2	.....	.....	4
Oscoda	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Otsego	4	1	1	.....	.....	.....	.....	1	.....	.....	7
Ottawa	2	3	1	4	.....	1	1	1	.....	1	14
Presque Isle	4	2	2	1	1	.....	.....	.....	.....	.....	10
Roscommon	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	3
Saginaw	10	11	10	10	3	12	9	9	.....	6	80
Sanilac	.....	3	2	5	1	1	3	2	.....	4	21
Schoolcraft	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Shiawassee	4	4	2	6	4	2	2	1	.....	2	27
St. Clair	4	4	9	16	13	3	3	2	.....	1	55
St. Joseph	3	2	1	4	.....	3	1	1	.....	2	17
Tuscola	3	3	4	4	10	8	4	2	.....	1	39
Van Buren	2	4	1	4	2	4	4	3	.....	4	28
Washtenaw	92	129	130	146	112	95	94	66	.....	135	999
Wayne	135	201	229	209	203	175	151	105	.....	186	1594
Wexford	3	3	1	3	3	1	2	5	.....	1	22
Totals of Counties	537	639	755	759	575	519	480	318	.....	499	5081

1926	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1927	Jan.	Total
Out of State	35	18	28	26	16	23	36	10	.....	32	224
Counties	537	639	755	759	575	519	480	318	.....	499	5081
Grand Total	572	657	783	785	591	542	516	328	.....	531	5305

(See comment of Committee, page 22).

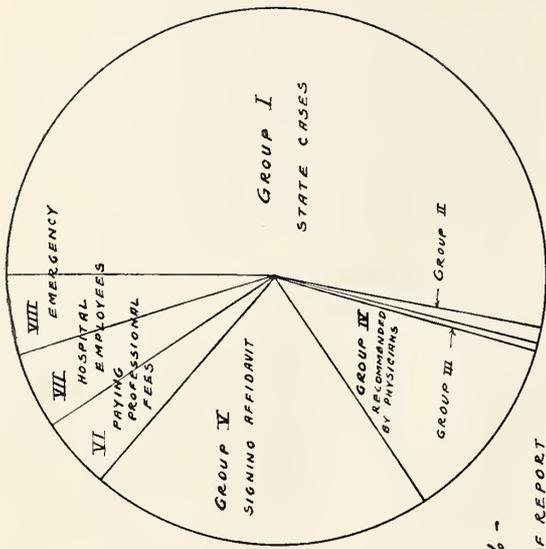
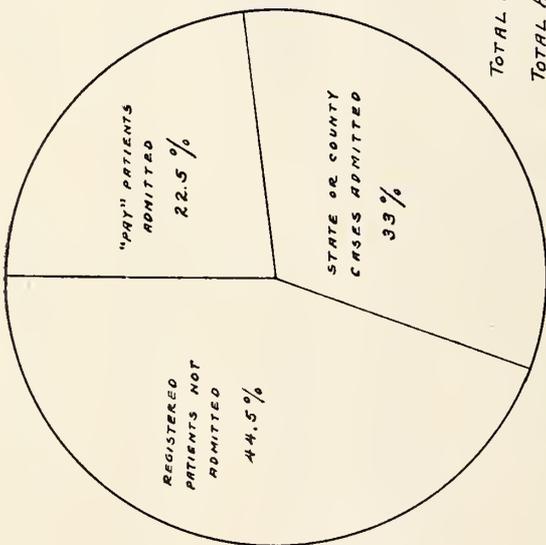
Section 5

ANALYSIS OF "PAY" PATIENTS AS TO AGE

1926	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1927	Jan.	Total
0-4	32	32	68	63	41	33	34	16	.....	26	345
5-9	19	32	43	61	46	37	42	9	.....	40	329
10-14	15	25	36	45	34	28	30	6	.....	55	274
15-19	25	42	52	69	44	39	50	30	.....	44	396
20-24	67	73	77	66	64	54	56	35	.....	46	538
25-29	76	93	95	97	82	70	64	30	.....	53	660
30-34	66	73	77	74	66	61	41	48	.....	31	537
35-39	46	55	71	74	51	56	35	30	.....	66	484
40-44	54	52	58	58	29	30	28	27	.....	29	365
45-49	44	39	45	30	23	35	30	27	.....	38	311
50-54	36	33	57	52	37	25	22	15	.....	26	303
55-59	32	34	22	25	24	29	23	16	.....	18	223
60-64	23	19	30	34	18	13	26	17	.....	18	198
65-69	19	20	26	28	16	12	13	10	.....	14	158
70-74	11	17	15	5	8	11	15	6	.....	18	106
75-79	5	11	7	2	6	9	6	4	.....	4	54
80-84	0	7	3	1	1	0	1	2	.....	5	20
85-100	1	0	1	1	1	0	0	0	.....	0	4
Totals	572	657	783	785	591	542	516	328	.....	541	5305

(See comment of Committee, page 23).

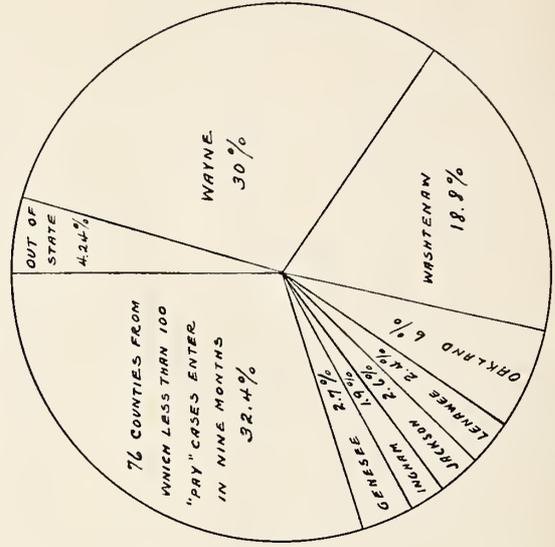
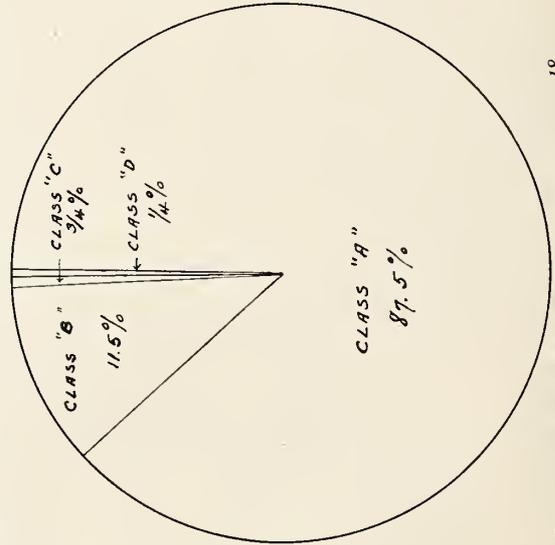
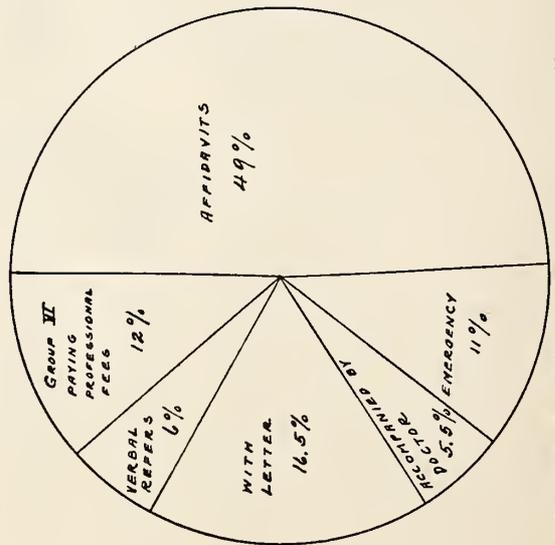
GRAPHICAL ANALYSIS OF ADMISSIONS
UNIVERSITY HOSPITAL, ANN ARBOR
ADMISSIONS -- ALL CASES



GRAPHICAL RELATION
OF ADMISSIONS - 13306 -
BY GROUPS; SEE PAGE 1 OF REPORT

TOTAL REGISTRATIONS 23249
TOTAL ADMISSIONS 13306

ANALYSIS OF "PAY" PATIENTS -- 5305



METHOD OF ADMISSION - SEE PAGE 18
FINANCIAL RATING - SEE PAG. 19
PERIOD: MAY 1ST, 1926 TO FEBRUARY 1ST, 1927.
DOMICILE - SEE PAGE 8

OUT-PATIENT DEPARTMENT (Questionnaire)

Question No. 2: Committee Comment.

Patients who are registered, but not admitted to the Hospital, constitute what, in others hospitals is commonly regarded as an "Out-Patient Department". They pay a registration fee and fees for other visits. See Question 13; also Out-Patient Department Question No. 3.

They are entitled to a thorough examination without additional cost, which includes the ordinary laboratory fees and Wassermann. Regular charges are made to them for X-ray examinations and other special service.

DR. HAYNES' REPORT (Continued)

Committee Comment: It is necessary to bring clearly before you the various classes of patients admitted to the University Hospital. The figures have a definite bearing upon the questions involved. Please bear in mind that the report covers a period of nine months only, and are the latest statistics obtainable. There are eight such groups as designated in the following report.

Group 1

Committee Comment: See page 16 of this report.

Patients under this group are entitled by law to University Hospital care. The propriety of their admission can scarcely be questioned. They are the "poor" of the state in its real sense. Bills for the service rendered them are sent to the State Treasurer, who pays them from the State Treasury. The Treasurer, in turn, collects the amount of these bills, except for crippled children, from the individual counties from which the patients come. The county must pay them without question. The amount received by the University Hospital constitutes a very large item in the support of the Hospital.

Group 2

Committee Comment: It should be noted that the group of county patients is insignificant as compared with those sent by the Probate Courts.

Group 3

Committee Comment: You should note that the group is exceedingly small, and the desirability of rendering this service very important to the University. Your Committee has not questioned its propriety.

Group 4

Committee Comment: An exceedingly important group from the standpoint of

this investigation. It is one of the most important points of contact between the University Hospital and the profession of the state. Many physicians, relying upon the excellence of the service rendered, and perhaps for other reasons, prefer to send patients to the University Hospital. At the present time full reports are rendered to the physicians who send such patients and a spirit of hearty co-operation is encouraged. These patients receive the same social investigation as others. Most of them are included in Group A, but B, C and D patients (see page 17) are not refused.

Group 5

Committee Comment: Patients who register at the University Hospital are questioned as to their financial status. They are placed under Group A, B, C, or D, as the case may be. If in Class A, they are obliged to sign the following affidavit:

UNIVERSITY HOSPITAL

ANN ARBOR, MICH.

PATIENTS ENTITLED TO ADMISSION

The Regents of the University of Michigan direct that the following classes of patients are entitled to admission to the University Hospital for examination and treatment:

1. Those whose admission is provided for by special statutes, namely, children with any disease or deformity who are cared for by the State. (For information write or confer with the Superintendent).

Also those who bring a letter from the county officials guaranteeing board and care.

2. Emergency cases.

3. All students in actual attendance at the University.

4. All persons bringing letters to the Superintendent, recommending their admission, from their usual medical attendant. Private patients can be received for Surgical, Medical and X-ray Departments.

5. Persons not included in any of the four classes above mentioned, in accordance with the rules prescribed by the Regents may register for examination and admission by making the following affidavit:

I hereby make affidavit that..... financially unable to pay the usual minimum fee of the profession outside of the hospital for such medical or surgical treatment as..... may require.

Date192.....

Signed,

P. O. Address:

Subscribed and sworn to before me this..... day of..... 192.....

Notary Public for Washtenaw County, Michigan

My commission expires..... 192.....

Your Committee is of the opinion that the method employed does not exclude from the Out-Patient Department patients who might well be paying for service outside of the University Hospital.

When the patients are assigned a bed and admitted to the hospital, further steps are taken. The hospital maintains a staff of twelve social investigators, who care for an average of between 45 and 50 admissions a day. These social investigators are trained in social welfare work and investigate candidates for admission according to accepted standards for such welfare work. They are classified as "A", "B", "C", or "D" patients (see page 18) and must pay an advance fee for the estimated cost of the service rendered them in the Hospital. A large part of the "bad debts" are here accumulated, since it is impossible to estimate the length of time of patients' stay and the item of necessary extras.

Group 6

Committee Comment: All patients in Classes "B", "C", and "D", and some in Class "A", are questioned and are subject to the payment of professional fees when they enter the Medical, Surgical, or X-ray Departments (and to a less degree in Neurology). They are not subject to such questioning in the four so-called part time departments of Otolaryngology, Obstetrics and Gynecology, Pediatrics and Ophthalmology; nor are patients in Classes "B", "C", and "D" accepted. Neurology is a part time department also, but may accept fees to meet the salary of a needed assistant not entirely provided for in the budget of the Medical School.

PART TIME DEPARTMENTS

The chiefs of these departments are paid a small salary by the University and are allowed to conduct a private practice, but only outside of the Hospital. No private practice is allowed in the Hospital.

FULL TIME DEPARTMENTS

By "full time departments" is meant that the salaries of the Chiefs of Departments and assistants are paid in part by the Medical Department of the University and in part by the professional fees obtained from patients.* The sum so collected and applied amounts just now, in round numbers, to \$50,000 a year. It about meets these present salary requirements. It is to be noted that this, at the present

*NOTE: (In the Medical Department about one-half is met by the Medical School and one-half by the University Hospital).

time, is not a large item. Patients pay such professional fees according to their circumstances, but your Committee has not estimated as to how they compare with the fees of practicing physicians in the state. Under the "full time" arrangement, the Chief of Staff and his assistants are not allowed to conduct a private practice either in or outside the Hospital. The members of the staff of these full time departments sometimes render consultation service and perform surgical operations outside of the Hospital, but only upon request of a practicing physician of the state. The fees that are obtained are credited to the account of the University Hospital.

Group 7

Committee Comment: The admission of this group has seemed to your Committee entirely proper.

Group 8

Committee Comment: Under the present plan of operation, the expediency of admitting emergency cases can scarcely be questioned.

PART II (of Dr. Haynes' Report)

Committee Comment: This part of Dr. Haynes' report is an analysis of patients admitted to the Hospital who pay their hospital expenses and sometimes professional fees in addition to this. (See Dr. Haynes' letter, page 14). It is of special interest in this investigation, and your attention is especially directed to it.

Section 2

Committee Comment: It is to be noted that a very large per cent of the "pay" patients at present admitted to the Hospital are Class "A" patients (see "Standards"). Even though we question the propriety of admitting all of the patients now included in Class "A", we must recognize that the clientele of the Hospital is derived largely from people in the lower walks of life.

Section 4

Committee Comment: This is an interesting analysis. It is to be noted, first, that the nearness of the Hospital to the domicile of the patient plays a part in elevating the figures of certain counties, but more especially is it to be noted that those counties whose Hospital facilities are defective send a far larger proportion of patients than those well supplied with such facilities. (Note Calhoun, Genesee, Oakland and Lenawee). The point has been made that the Hospital is here supplying a real need. It is to be noted that in counties

where there are good hospital facilities, the number of "pay" patients asking admission to the University Hospital is comparatively small.

OUT OF STATE PATIENTS

Committee Comment: Your Committee has made no effort up to the present to investigate the status of patients from out of the state.

Section 5

Committee Comment: This schedule needs no special comment beyond calling attention to the rather large number of children admitted to the hospital.

GRAPHICAL ANALYSIS OF ADMISSIONS

Committee Comment: This analysis puts clearly before you the analysis of admissions made in this report, and your Committee believes is of special value in estimating the merits of the questions involved.

GENERAL COMMENT

From Dr. Haynes' report and from other information which has been presented to you, you may perhaps realize something of the difficulties with which your Committee has had to contend. At the very beginning of its work, your Committee recognized that the question which has been raised as to the charity work of the University Hospital involves not only the welfare of the profession, but the institution as well, and the people of the state. It believes that any recommendations that emanate from this House of Delegates will be seriously considered by the University Hospital and those controlling its fortunes. It is therefore necessary that such recommendations be made only after the most careful investigation and consideration of all of the points involved. Hasty action might well result not only in injury to the Hospital in which we are so vitally interested, but to the people of the state and our own profession as well.

We have watched the growth of the University Hospital for something like fifty years. Your Committee has gone over the laws, as far as they could be found, relating to the building of the hospitals that have gone up in succession, and can find nothing that would prevent the Hospital from admitting and caring for persons from every station in life. Its objects, as far as can be found, are not clearly determined by law. To be sure, the law provides for the admission of patients from the Probate Courts of the counties, for crippled children, and for psychopathic

cases, but there are by law no financial limitations placed upon any admissions. The prime objects of erecting a Hospital to be operated under state administration were fairly clear in the beginning. Its first was to furnish material for the teaching of students, and, second, to provide a hospital and its professional care to state (and county) charges. It was intended also to extend the same care to indigent patients not provided for by the state (or counties). That these objects have not been clearly held in mind is very apparent. It has gradually grown into an institution of considerable magnitude, conducting itself much like other hospitals, and more especially in the splendid buildings now in operation has it digressed from its primary objects. Your Committee has been unable to determine whether the patients now in the Hospital are adequate in supplying material for medical students, or whether it is unwieldily large. The opinions from the different departments seem to vary on this question. This is a point of vital importance to medical students and to the staffs that represent the departments. A considerable number of patients admitted to the University Hospital, Groups 3, 6, and 7, are not used as clinical material, though there is no rule precluding such use.

Your Committee has questioned the propriety of the admission of Groups 4, 5, and 6, though if such patients were excluded, the Hospital income would suffer a most damaging blow, clinical material would be greatly diminished and a number of the profession, at least, would lose their now intimate contact with the University Hospital.

It must be strictly borne in mind in this investigation that the University Hospital is, at present, dependent for its support upon the various sources given you in this report, and not upon the state as a whole. There is no state appropriation, as such, for the upkeep of the Hospital. The Hospital, at present, under Dr. Haynes' splendid administration, is just about meeting its budget, with nothing to spare. This involves an expenditure of something like two and a half million dollars a year. Expediency in meeting the Hospital budget and the salaries of full time men has apparently led to the running of this Hospital in a manner more or less similar to that of any community hospital of the state. In the acceptance of patients who might otherwise pay their way in other hospitals, and professional fees for service, the hos-

pital is competing directly with other hospitals and with the medical men of the state. To be sure, the amount of such practice is comparatively small, but the principle would seem to be important, and should it be unquestionably accepted and followed, might, in time, become a factor of prime importance in the private medical practice of the state. In other words, is it encouraging state medicine?

The University Hospital, with its splendid medical school, in addition to preparing students for medical practice, might well be, your Committee believes, of infinitely greater value to the profession of the state. We should like to see it represent a high standard of scientific practice and research, and through a well organized post-graduate department, it might contribute much to raise the standards of practice throughout the state and thereby bring benefit to the people of Michigan. It is questionable whether the present plan of operating a very large institution, with the demands made upon its staff for the care of its patients and the administration of its departments, is contributing to these ends and is not deterring the Hospital from acquiring a far higher position of influence.

This report is submitted to you for your consideration, but without recommendation. Your Committee, however, is in hope that the questions involved may be satisfactorily met and that the welfare of the Hospital and its patients may be guarded and the profession benefitted.

Signed and submitted by:

Richard R. Smith, M. D., Chairman
J. W. Vaughan, M. D., Detroit
W. H. Marshall, M. D., Flint

Presented to the House of Delegates of the Michigan State Medical Society on June 16, 1927.

Accepted by the House of Delegates; the Committee's study was approved and commended; the Committee was continued and directed to proceed with its investigations and to submit a further report at the 1928 annual meeting.

APPENDIX

AN ACT TO PROVIDE FREE TREATMENT FOR CHILDREN WHOSE PARENTS OR GUARDIANS ARE UNABLE TO PAY

*Act No. 274 of the Public Acts of 1913
Which Takes Effect August 14, 1913*

HOUSE ENROLLED ACT NO. 136

An act to provide for the medical and surgical treatment of children who are afflicted with a curable malady or deformity, and whose

parents are unable to provide proper treatment, providing for the expenses thereof, and prescribing the jurisdiction of the probate court in such cases.

The people of the State of Michigan enact:

Section 1. Whenever any agent of the board of corrections and charities, supervisor, superintendent of the poor, or physician, shall find within his county any child who is deformed or afflicted with a malady which can be remedied, and whose parents or guardians are unable to provide proper care and treatment, it shall be the duty of such agent, supervisor, superintendent of the poor, or physician, to make a report of such condition to the probate judge of the county in which such child resides. Upon the filing of such a report with the judge of probate, it shall be his duty to cause a thorough investigation to be made through the county agent, or a superintendent of the poor, and a physician appointed by him for that purpose.

Section 2. If upon investigation the judge of probate is satisfied that the parents or guardians are unable to provide proper medical or surgical treatment, and the physician appointed to make the examination shall certify that, in his opinion, the deformity or malady is of such a nature that it can be remedied, the judge of probate may enter an order directing that said child be conveyed to the University hospital at Ann Arbor, for free treatment to be paid for by the State as hereinafter provided: Provided, That no such child shall be sent to or received into said hospital unless in the judgment of the physician in charge thereof, there is a reasonable chance for him to be benefited by the proposed medical or surgical treatment, and for this purpose a complete history of the case shall be furnished by the examining physician.

Section 3. It shall be the duty of the Superintendent of the University of Michigan hospital, upon receiving such child, to provide for such child a cot or bed or room in the University hospital, and he shall also assign or designate the clinic of the University hospital to which the patient shall be assigned for the treatment of the deformity or malady in each particular case, the care and treatment of such child, and the physician or surgeon in charge shall proceed with all proper speed to perform such operation and bestow such treatment upon such child as in his judgment shall be proper.

Section 4. No compensation shall be charged or allowed to the admitting physician of said hospital, or to the physician or surgeon or nurse who shall treat said child, other than the salary respectively received from the board of regents of the University of Michigan.

Section 5. The Superintendent of the University hospital shall keep a correct account of the medicine, nursing, food and necessities furnished to said child, and shall make and file with the auditor general, an affidavit containing an itemized statement as far as possible of the expense incurred at said hospital in the treatment, nursing and care of said child in accordance with the rates fixed by the regents.

Section 6. Upon filing said affidavit with the auditor general, it shall be the duty of said auditor general forthwith to draw an order on the treasurer of the State of Michigan for the amount of such expenditure, and forward the same to the treasurer of the University of Michigan. It shall be the duty of the auditor gen-

eral upon receipt thereof to credit the amount thereof to the University of Michigan, in accordance with his warrant drawn by him for the University hospital.

Section 7. The county agent or superintendent of the poor shall receive the sum of three dollars a day, except in counties where such officer or officers shall receive a fixed salary and his actual expenses while making the investigation herein provided, upon the order of the judge of probate. All claims of the county agent or superintendent of the poor for making the investigations, and actual traveling expenses and a fee of five dollars for the physician for making the examination upon the order of the probate judge under the provisions of this act, and all expenses incurred in conveying such children to and from the University hospital shall, when approved by the judge of probate ordering such services, be audited by the auditor general and paid out of the general fund. The expenses of sending such children home may be paid by the hospital and charged in the regular bill for maintenance in the discretion of the superintendent of the hospital when he is satisfied that the parents or guardians are unable to bear such necessary expense.

Act 267 Public Acts 1915

An act to provide free hospital service and medical and surgical treatment for persons afflicted with a malady or deformity which can be benefited by hospital treatment, who are unable to pay for such care and treatment and for the children of such pregnant women born during the period of hospital care, and providing for the expense thereof, and prescribing the jurisdiction of the probate court in such cases.

The People of the State of Michigan enact:

Section 1. Whenever it shall appear to any county agent of the Board of Corrections and Charities, or to any supervisor of any township, or to any superintendent of the poor of any county, that there is any adult legal resident of his county afflicted with any malady which can be remedied by proper care and medical or surgical treatment, it shall be the duty of such agent, supervisor, superintendent of the poor, or physician, to report the same to the proper judge of probate of the county in which such person or pregnant woman resides. Upon the filing of said report with the judge of probate as aforesaid, it shall be his duty to cause a thorough investigation to be made of the financial condition of the case through the county agent or superintendent of the poor of his county and to have a thorough examination and report, and a complete history of the case made by a physician appointed by him for that purpose.

Section 2. If upon such investigation it shall appear to said judge of probate that any person of either of the classes heretofore described is financially unable to secure proper care and medical or surgical treatment, and the physician so appointed to make said examination shall also certify that in his opinion the deformity or malady is of such a nature that it can be remedied by proper care and medical or surgical treatment, or that said pregnant woman is entitled to care and treatment, and is financially unable to secure the same, said judge of probate may make an order finding, determining and decreeing that such person is a resident of said

county, and that such county is liable for the expenses of such person incurred under the provisions of this act, and directing that any such person be conveyed to the University Hospital at Ann Arbor for proper hospital care and medical or surgical treatment, the expense of said hospital care and treatment to be met in the manner hereinafter provided. The expenses of the medical or surgical treatment and hospital care of any child or children which may be born in the hospital of any woman sent to the hospital as hereinbefore provided as long as it shall seem necessary and proper in the judgment of the hospital physician to keep such child or children in the hospital shall be included in the expense as hereinafter provided: Provided, that no such person or pregnant woman shall be received into said University Hospital for care and treatment unless in the judgment of the admitting physician there shall be a reasonable probability of such person being benefited by such hospital care and medical or surgical treatment.

Section 3. It shall be the duty of the admitting officer of the University hospital, upon receiving any such person, to provide a proper bed in the University hospital, and to assign or designate the clinic of the University hospital to which such person shall be assigned for treatment and the physician or surgeon in charge of said person or pregnant woman shall proceed with proper care to perform such operation and bestow such treatment upon such person or pregnant woman as in his judgment shall be proper and necessary. A proper and competent nurse shall also be assigned to look after and care for said persons during such hospital care and medical or surgical treatment, as aforesaid.

Section 4. No compensation shall be charged or received by the admitting officer of the medical faculty or by the physician, surgeon or nurses who shall treat and care for said persons other than the salaries received by them, provided by the Board of Regents of the University of Michigan.

Section 5. The superintendent of the University hospital shall keep a correct account of all medicine, nursing, food and necessities furnished to said persons and shall make and file with the Auditor General an affidavit containing so far as possible an itemized statement of all expenses incurred at said hospital in the treatment, nursing and care of said persons in accordance with the usual rates therefor fixed by the Regents of the University.

Section 6. Upon the filing of said affidavit with the Auditor General, it shall be his duty to draw an order on the treasurer of the State of Michigan, payable to the treasurer of the University of Michigan, for the amount of such expenditures in accordance with the terms of the warrant drawn by him for University purposes.

Section 7. Except in counties where the county agent or superintendent of the poor shall receive a fixed salary, such county agent or superintendent of the poor making such investigation as herein provided for shall receive for his services the sum of three dollars per day for the time actually spent, together with necessary expenses paid out in making such investigation, and the physician appointed by the probate judge to make such examination and report shall receive therefor the sum of five dollars, together with his necessary expenses incurred in making such examination, which said charges for services

and expenses and all expenses incurred in conveying such patient to and from the University hospital shall, when approved by the judge of probate ordering such services, be paid by the treasurer out of the general fund. The expenses for sending such patient home or to other institutions after being discharged from said hospital may be paid by the hospital and charged in the regular bill for maintenance, at the discretion of the superintendent of the hospital, whenever he shall be satisfied that said patient is unable financially to bear such necessary expense.

Section 8. The county from which any such

patient is sent under any such order and decree of the probate court shall be liable for all expenses incurred under the provisions of this act, and it shall be the duty of the State to collect from the treasurer of such county an amount of money sufficient to reimburse the State for all money expended from the general fund of the State in carrying out the provisions of this act.

Section 9. All other acts and parts of acts in any way contravening any of the provisions of this act are hereby repealed.

This act is ordered to take immediate effect.

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