

SYPHILIS IN ITS RELATION TO FEEBLE-MINDEDNESS.

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This paper will discuss two aspects of the subject of syphilis in relation to feeble-mindedness. The first is syphilis as a cause of feeble-mindedness. The second is feeble-mindedness as a cause of disseminating syphilis. The former is an old question, which has been discussed, with varying conclusions, ever since the first real efforts were made to determine any of the causes of feeble-mindedness. The second embodies a more involved problem, and interest in it is of relatively recent origin. The data presented here on either of these questions can lay no claim to any semblance of an exhaustive summary of all the facts and opinions that appear in the very extensive literature on these two phases of this most intricate and far-reaching problem of syphilis. It is believed, however, that the general trend of our present knowledge of these subjects is correctly stated.

There never has been any doubt that congenital syphilis can and does cause feeble-mindedness in children. A disease with so many other serious consequences in children and adults alike can hardly be viewed in any other way, and especially not when it is present during a period of the child's life when all causes of feeble-mindedness are known to be most effective. Two direct methods by which it may do so are noted. First, the germ cells of either parent may be impaired by the disease. Second, the embryo may be infected by an infected mother. The former means are problematical; the latter is a known fact. While the possibility of its being a cause is thus granted, the exact frequency with which it actually is responsible for feeble-mindedness is far from being determined. This question is complicated by a great variety of different factors. No statistics on the subject are capable of any simple interpretation, and the conclusions of different investigators range from the view that syphilis is almost a negligible factor in the causation of feeble-mindedness to the view that it is the determining cause in nearly a fourth of all existing cases. While the truth, as usual, undoubtedly lies somewhere between these two extremes, the extremes are so far apart as to make this knowledge of no great value.

The statistical approach to this question has been in the attempt to determine what percentage of the feeble-minded are syphilitic. Investigations of this sort have been quite numerous. I will quote the results of some of these, and then devote most of my time to their interpretation.

Statistical studies may be sharply divided into two classes: the older studies made before the discovery of the Wassermann test for syphilis, and the more recent studies made by means of the Wassermann test and its modifications. There is no comparison between the number of cases that give a positive Wassermann and the number that have unmistakable clinical symptoms of syphilis. But since we have some idea of how big this difference is in general, the older statistical studies on the frequency of syphilis with the feeble-minded still have some interest. I shall not go into the details of these older statistics based on clinical symptoms and, family histories only. The percentage of the feeble-minded that is revealed

as syphilitic in such studies is very small, usually only about one per cent. Shuttelworth, reporting on 2,380 cases, gives 1.17 per cent. But the majority of the congenitally syphilitic do not show any unmistakable clinical symptoms of the disease as adults. This fact the present methods of diagnosis has abundantly shown. We now know that these older observations revealed but a small portion of the existing cases of syphilis.

Wassermann tests have been made in great number on the feeble-minded of all ages, both in this country and in Europe, during the last decade. It will not be necessary for our present purpose to summarize these studies at length. Most had for their chief, if not sole, object the determination of the percentage of the feeble-minded that are syphilitic. They show but little uniformity in the percentage found giving positive Wassermann reactions. The following table gives the results of a number of Wassermann studies, arranged according to the percentages found giving positive reactions.

Authors	Number of Cases	% + W. R.	Date
Thomsen	•	1.5	1911
Clemenz	916	2.0	1913
Bruckner	138	4.3	1912
Thomas	•	4.8	1913
Dawson	1,113	5	1914
Kellner	216	7	1909
Moulton	600	12.8	1914
Lipmann	•	13.2	1913
Atwood	204	14.7	1910
Dean	•	15.4	1910
Gordon	•	16.5	1913
Krober	•	21	1911
Roviar	•	30	1909

These data do not permit computing an average that could be regarded as a reliable indication of the exact general frequency of positive Wassermann reactions with the feeble-minded in general. Taking them as they are, they show a general frequency of about ten per cent. If we take this as correct, how is this ten per cent to be interpreted? Many of the Wassermann test studies on the feeble-minded make no attempt at all at interpretation. Practically none make a careful analysis of results and conditions in order to arrive at a trustworthy conclusion as to the part syphilis may play in the causation of feeble-mindedness. Some venture conclusions without mentioning any of almost a score of factors that must be taken into account. A brief statement will show what some of these factors are. They may be summarized under three headings or questions.

(1) If the feeble-minded of both sexes and all grades and ages show a given percentage of positive Wassermann reactions in such investigations as the above, what indication is this of the percentage that would show positive reactions at birth? It is agreed, I think, that we may limit ourselves to congenital syphilis in discussing the question of syphilis as a cause of feeble-mindedness.

(2) How accurate is the Wassermann test as a method of detecting syphilis?

(3) Given a certain percentage of syphilitics among the feeble-minded in general, what conclusion can be drawn as to syphilis as the cause

of the feeble-mindedness? These three questions will be considered in order.

1. (a) The first consideration is the fact that a Wassermann reaction being regarded positive or negative in any significant degree is in many cases a matter of the observer's judgment. (Moulton is among those who stress this point. "The results of these tests," he notes in regard to his study, "show that of the 600 specimens examined, 523, or 87 per cent, showed complete hemolysis, ranging from complete arrest to a mere trace of inhibition It seems to be the general opinion where we have not over ten or fifteen per cent hemolysis we can in the presence of suspicious clinical conditions consider the person luetic, but how about the others?" Investigators in reporting their results have not always stated just what constitutes a positive reaction in their data.

b. Some investigators have noted in these tests on the feeble-minded that the percentage of positive Wassermann reactions decreases with age. Thus Thomsen, Boas, Hjort, and Leschly, in examining 2,061 feeble-minded of all ages, found only 1.5 per cent giving a positive reaction. But in taking the cases that were ten years or less alone, they found 3.8 per cent giving positive reactions. Of 462 feeble-minded over twenty years, Clemenz found 1.1 per cent giving a positive reaction, while of 462 cases below twenty years 3 per cent gave a positive. Re-examinations of the same cases at different ages have also shown that cases may give positive reactions first and negative reactions a few years later, without intervening anti-syphilitic treatment. In this connection it may be noted, further, that known congenitally syphilitic cases tested at birth give positive reactions, practically without exception. When, therefore, a group of cases of all ages is given a Wassermann test, we can be certain that a number of these giving negative reactions would have given a positive had they been tested younger. There is as yet not sufficient evidence to show what proportion become negative of those who would test positive at birth.

c. When older cases are tested no account can be taken of the number who may have acquired the disease at any age after birth, and acquired syphilis can be ruled out, practically entirely, as a cause of feeble-mindedness. Some authorities think that as high as 25 per cent of all acquired syphilis is acquired innocently, which would, therefore, apply to children as well as to adults. Again, feeble-mindedness, sex immorality, and acquired syphilis, are closely associated in the cases of adults. Probably many adult feeble-minded giving positive Wassermann reactions have acquired syphilis through immorality.

d. Lastly, the death rate among all syphilitic children is enormously high. Engel-Reimer (quoted by Clemenz) found that 72 per cent of congenitally syphilitic children died in early infancy or before. Of 2,038 syphilitic children in Moscow 70 per cent died before they were six months old. In Fournier's experience 60 per cent of syphilitic children found in private practice died, while 85 per cent found in the hospital died. The fact of this very high death rate among syphilitic children is obviously of great importance in interpreting the meaning of any given percentage of positive Wassermann reactions in any group of feeble-minded of all ages. If syphilis were not a cause of death at all among children, evidently the percentage

of syphilitics among the feeble-minded in general would be about three times as great as it is. In other words, the possibility of syphilis causing feeble-mindedness is reduced about 75 per cent by the high death rate.

2. A word only is necessary in regard to the reliability of the Wassermann tests. Ulrich's summary of statistics and conclusions on this point indicate that practically 100 per cent of congenitally syphilitics will give a positive reaction if tested at birth. If limited to cases that have not had any anti-syphilitic treatment, the same holds true in almost equal degree of older cases in which the disease is in one or other of the so-called primary, secondary, or tertiary stages. With the disease in the latent stage, however, Ulrich's summary gives only from 40 to 70 per cent positive reactions. It need only be added, on this point, that in the great majority of cases of syphilis among the feeble-minded in institutions, the disease is in the latent stage.

There are a few diseases other than syphilis, and some even normal conditions, that are claimed to give positive Wassermann reactions sometimes. But since these are on the whole such as are not likely to have been present among the feeble-minded giving positive reactions, they need not be discussed here.

3. The above considerations all concern the question of how many of the feeble-minded we may regard as syphilitic at birth when we have before us only the Wassermann reactions of tests made later. Assuming now that the percentage of congenitally syphilitic among the feeble-minded is determined correctly, what conclusion can be drawn as to syphilis as the cause of the feeble-mindedness? A few quotations from conclusions arrived at by different writers will suffice to show how varied and extreme opinions are on this point. "It has long been recognized," says Atwood, "that syphilis plays an important role in the causation of idiocy and the arrest of brain development." "Of all the causes (of feeble-mindedness)," says Goddard of syphilis, "there is perhaps none for which there is less evidence." "In most cases," conclude Bruckner and Clemenz, "the demonstration of the presence of syphilis explains the cause of the feeble-mindedness." "I am inclined to think," says Tredgold, "that the proportion of cases (of feeble-mindedness) so arising (i.e., from syphilis as the sole cause) is relatively small, and in the majority of patients in whom syphilis is present other factors will be found in addition, generally a neuropathic inheritance." Tredgold calls attention to at least one factor which it is of the first importance to take into account in trying to evaluate the presence of syphilis as a cause of feeble-mindedness. This is heredity. It has long been known that in the majority of cases feeble-mindedness is due to inheritance. The more data we have been getting on this subject the higher has risen the estimated percentage of hereditary feeble-mindedness, until at present it is certain that more than 75 per cent of the cases are hereditary. Our statistics on the feeble-minded that are syphilitic do not show what proportion of them had also a bad heredity. The supposition may be entertained that over three-fourths of them come from poor stock as well as being syphilitic. While heredity is by far the most important other factor associated with syphilis as the possible cause of the feeble-mindedness in the syphilitic feeble-minded, there are, of course, a number of others which

are looked upon as causes of feeble-mindedness. In order to be able to interpret our statistics properly, it is necessary at least to have a complete analysis of each case. We must know all the other factors that were present in the syphilitic cases in order to judge correctly the part syphilis alone may have played.

There is one more matter that calls for consideration. This is the frequency of syphilis in the general population. If 15 per cent of the feeble-minded were found to be syphilitic and 10 per cent of the general population were found to be affected by the same disease, one might be tempted to conclude on first thought that the difference between these two figures, or 5 per cent, represented the frequency with which syphilis caused feeble-mindedness. I shall show in a moment that even this would be attributing far too much to syphilis. But before coming to that point it may be noted that our present studies on the frequency of syphilis with the feeble-minded do not make any deduction from the number of feeble-minded found syphilitic because of syphilis in the general population. The latter is, of course, very difficult to determine in any satisfactory way, since our conclusions must necessarily be based on estimates on the basis of limited observations. I have not surveyed the literature to find out what is really known on this subject, but here are a few suggestions. Powers and Murphy (*System of Syphilis*, 1908), on the basis of clinical observations only, found .6 per cent undoubtedly syphilitics, and 15 possibly syphilitic of 4,830 out-patient children under ten years at Kings College Hospital. Fields found 1.3 per cent of 1,015 infants at the London Hospital giving a positive Wassermann. Of 3,000 obstetrical cases at Johns Hopkins Hospital Urquhart found 8 per cent stillbirths, over half of which were syphilitic cases. Counting in the syphilitic children born alive, he concludes that 5 per cent of these 3,000 women had syphilitic children. Since in many cases the children of syphilitic women are not syphilitic, and since most syphilis is not congenital but acquired, the frequency of syphilis in the general population must, of course, be regarded as considerably higher than these few figures indicate. This agrees with estimates made by others on the basis of other observations. Thus the Royal Commission on Venereal Diseases estimated that in the larger towns of England 10 per cent of the inhabitants are syphilitic. Garrish estimates that 10 per cent of the population of New York City is syphilitic, and that a higher percentage than this of the people of the United States show signs of the disease. (Quoted by Peacock). Vaughn, basing his statement on inquiries made of Ann Arbor physicians, states that of 4,000 male students of Michigan University 200 to 300, or about 6 per cent, were syphilitic. Pusey, of Chicago, places the figure at 5 per cent for the adult population of the country in general.

These few suggestions suffice to at least make it clear that a considerable deduction must be made from the percentage of feeble-minded found syphilitic because of the frequency of the disease in the general population, in order to judge correctly the influence of syphilis as a cause of feeble-mindedness, even when we assume that the feeble-minded are not more likely than others to be syphilitic because of their feeble-mindedness. But this latter assumption cannot be granted. The adult feeble-minded tend to immorality, and through immorality acquire syphilis. They produce

children who are both feeble-minded and syphilitic more frequently than do normals, primarily (because they are feeble-minded). Consequently the percentage of syphilitic among the feeble-minded runs high because their parents tend to acquire syphilis, not alone because the syphilis has produced the feeble-mindedness.

We may now summarize the main points on the question of syphilis as a cause of feeble-mindedness.

1. The percentage of feeble-minded of all ages that give positive Wassermann reaction has been found in different groups to range from 15 per cent to 30 per cent.

2. To interpret the meaning of these figures one must consider the following facts:

(a) The question as to whether a Wassermann reaction is to be called positive is in some measure a matter of judgment on the part of the observer.

(b) Positive reactions tend to disappear as the patient grows older,

(c) In a considerable percentage of syphilitic feeble-minded the disease is acquired, and stands in no causal relation to the feeble-mindedness.

(d) The death rate among syphilitic children is exceedingly high, decreasing to a very large extent the number of syphilitic feeble-minded that might otherwise exist.

(e) In a considerable percentage of syphilitic cases when the disease is in the latent stage, the Wassermann test fails to give a positive reaction.

(f) The syphilitic feeble-minded may, and in the majority of cases undoubtedly do, owe their mental deficiency to hereditary and other causes present at the same time, rather than to the syphilis.

(g) The frequency of syphilis in the general population seems to run nearly as high as it does with the feeble-minded.

With such a complexity of factors, it would be useless to attempt a conclusion as to the exact frequency with which syphilis causes feeble-mindedness. It is rather obvious that no exact statement can be made. The subject needs to be approached from another standpoint. Instead of giving Wassermann tests to the feeble-minded, one should gather observations on all children born syphilitic, to determine the percentage of miscarriages and stillbirths, and the percentage feeble-minded of those that survive and determine the other possible causes of feeble-mindedness present at the same time. But since the latter are never segregated as are the feeble-minded, they are not as available for the purpose of observation.

The second general topic mentioned for discussion, namely, the feeble-minded as a source that spreads syphilis, can be disposed of in a very few words. Since all observations agree that in the great majority of cases syphilis is spread through immorality, we need to determine the proportion of immoral persons that are feeble-minded in order to come to some conclusion on this question. This has been done in a number of instances for groups of immoral women. Unfortunately the same kind of data for immoral men can not be obtained. Apparently as a rough estimate, Vaughn

states that 33 per cent of the prostitutes in Detroit are feeble-minded. "Many competent judges," says Goddard, "estimate that 50 per cent of prostitutes are feeble-minded." Other observers make similar estimates. A number of careful individual mental examinations of different groups of prostitutes, however, have shown clearly that these estimates have been considerably too low. A recent Massachusetts Commission for the Investigation of the White Slave Traffic examined 300 prostitutes and reported 51 per cent of them feeble-minded. Their report, however, shows that a number of those reported normal had a mental age of nine to ten. Counting these as feeble-minded, as they must be, makes 63 per cent feeble-minded. The Chicago Morals Court at one time examined 639 prostitutes, finding 62 per cent feeble-minded. At another time it examined 126 cases, finding 85 per cent feeble-minded. The State Board of Charities and Corrections reporting to the Virginia Legislature states that of 120 prostitutes examined 72 per cent were found feeble-minded. No investigation involving an individual mental examination of any group of prostitutes that reports less than 50 per cent of them as feeble-minded has come to my notice. It is evident that prostitution has its basis essentially in feeble-mindedness. If the feeble-minded were eliminated, any extensive White Slave traffic would be impossible.

This, however, does not of course tell the whole story, since immorality among women is much more widespread than is common prostitution. Since there is no means of determining how much immorality of the latter sort there is, no means is available by which we can determine how much feeble-mindedness contributes to it. The probability is that feeble-mindedness is not nearly as frequent here as it is with common prostitutes. These facts introduce very large uncertain elements which make definite conclusions impossible. It would seem a safe estimate, however, to say that the feeble-minded are responsible for nearly 50 per cent of the immorality among women. From this it follows, further, that if the feeble-minded women could be protected it would be one of the most effective means of checking syphilis in the general population.

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Chas. E. Vasaly, Member State Board of Control: I should like to ask Dr. Rowntree, who is familiar with the recent rules promulgated by the State Board of Health, if he can give us some exposition of them. I have read the rules and in some aspects it seemed difficult to comply with them in our institutions. We may not be entirely equipped to do what the Board of Health wishes us to do, although we should want to do it as far as we could; and if Dr. Rowntree is familiar with all the rules, I think it would be well, preliminary to the discussion, if we could have some facts about the isolation and quarantine of persons suffering from communicable diseases, the treatment and the reporting of venereal diseases.

Dr. Rowntree: As I understand it, the Federal Government requested the State Board of Health to make syphilis a reportable disease and to quarantine it.

There are two methods in use in various parts of the world for reporting syphilis. One is by office number and the other is by name. There

seem to be great objections to both methods. There seems to be less interference with the personal rights by adopting the plan which originated in, Wert Australia, which was that every case of venereal disease should be reported to a central office of the State Board of Health, either by name or by number. The number corresponds to a name in the physician's office—Provided that the patient does not continue treatment, leaves the doctor, he is told that it will be necessary for him to continue treatment for a certain length of time, and that he will have to give his office number to any other doctor whom he consults. This really furnishes a follow-up Plan. Failing to report to another physician within six weeks, his office number is requested by the Board From the physician and the patient is brought to task.

The second part of the law has to do with the quarantining of venereal diseases. It provides that any case of active lues encountered anywhere, in an institution or out, shall be forced to undergo treatment and that the Public at large shall be protected. It deals particularly with prostitution. Dr. Irvine found in California that it is possible to corral the worst offenders, the inveterate prostitutes, rather quickly. It was possible, in California, in a short time to bring a very large number of prostitutes under the control of the court. Beds and quarters must be supplied for taking care of those individuals. In California something has been done which we hope will be done in Minnesota; that is, adequate medical and hospital Provision has been made to take care of the cases coming under this Quarantine law. During this time an attempt has been made to break the habit and to establish an interest in other lines of activities.

Douglas Wood, M. D., School for the Blind: (Mr. Chairman, Ladies and Gentlemen: In 1910 we decided that we ought to have some statistics on the matter of the causes *at* blindness, so we laid out a plan and have tried to follow it pretty closely. We started in by taking the patient's name and history and as much of the family history as we could get. This, of course, was generally a negative matter, because it is almost impossible to get a family history that is really of any account. Then we took the child in person and went over it as thoroughly as possible. We went into its present condition, not only its blind condition but the general Physical condition. Where there were any signs of congenital syphilis—i.e., enlargement of the long bones; facial expressions; Hutchinson teeth and different eye conditions that we know are generally syphilitic—notes were made. We also investigated as to whether there were any history of convulsions during the pregnancy of the mother, or any signs of rickets, T. B., etc., so that our histories are really pretty fair.

Our findings with regard to syphilis were a great deal higher than have been given in the papers today, but of course you must understand we do not have the Wassermann to fall back on. They were based on the observations that the eyes showed as the probable cause of syphilis and on some of the congenital conditions as shown in the long bone, facial expression, Hutchinson teeth, etc., as stated. We are not positive that these cases are all syphilis, but merely that they are very suggestive of syphilis.

In the family histories we also took up the matter as to whether any other member of the family were in any state institution or had any special

condition that pointed to the nervous system. A large per cent had. We found about 35 per cent of the patients showed signs of congenital syphilis.

Then we found that in the eyes of the congenital myopias 2 per cent showed syphilis; 66 per cent of the primary optic atrophies showed signs of syphilis. Then the iridochoroiditis, where there was a secondary optic atrophy, also showed signs of syphilis in 98 per cent. About 15 per cent of our cases showed some one sign outside of eye of congenital lues.

We should like to see if we can not make some arrangement with the School for Feeble-Minded whereby we can have these Wassermanns taken. Then we should be positive we were right.

Getting together on this subject is ideal. Of course at our institution we see results only; but if this Board, this committee, can get together all statistics, maybe we can do something later on.

Arthur F. Kilbourne, M. D., Superintendent Rochester State Hospital: How many children are born blind?

Dr. Wood: I can not tell you. You know that with us a large percentage of our ophthalmia neonatorum come in with a history "horn blind," but they are not born 'blind; they develop their symptoms three to seven days after birth. One child in 109 is born without eyes.

James J. Dow, Superintendent School for the Blind: From year to year they vary very greatly. Last year we had thirty-two admissions.. I think there were three or four of those that were ophthalmia neonatorum cases.

O. C. Heyerdale, M. D., Assistant Superintendent, Rochester State Hospital: Mr. Chairman, Ladies and Gentlemen: I think we should feel very much indebted to the Board for the privilege of meeting here for a discussion of this most important subject.

It seems to me that two of the greatest movements for the improvement of mankind upon which we shall have to spend our best efforts in the future are prohibition and syphilis. Both of these have been mentioned in the excellent papers to which we have just listened. Vice and intemperance go hand in hand. The suppression of either one or both is certainly going to add to the welfare of the human race.

Dr. Rowntree stated that the most important feature we have to take into consideration in the prevention of syphilis is that of the early treatment. Being a secret disease, it is difficult to round up the cases and put them all in quarantine. This is practically impossible, although the efforts made in California should be made in this and every other state and the outlook is growing more favorable. Public opinion must be educated to the point of isolation and quarantine of these cases. That preparation of the public has been going on for many, many years, and like many other great movements it is now to a certain extent culminating in more or less extensive quarantine of these venereal diseases. This applies not only to syphilis but also to the other diseases of this nature.

While a considerable percentage of the people throughout this country and every other country are syphilitic, it is a very fortunate thing that it is only during a certain stage of the disease that we have the period in which these cases are infectious. It is said that a patient may be infectious

as late as five years, but the majority of cases are infectious during about six months or a year; possibly up to two years. The infectiousness of syphilis is during the primary and secondary stages. The germs can of course be isolated from the tertiary lesions and they can also be isolated from the brain and spinal cord. It has been done. The infectiousness is active during the primary and secondary stages. In the tertiary stage the germs are buried deeply in the lesions of the various tissues, as for instance in the brain and spinal cord, and are not brought in contact with the second individual in the same manner that they are from the primary sore, or in the secondary stage, from the sores in the mouth.

Now, ordinarily speaking, without treatment a patient may run along anywhere from a few months up to two years and be an infectious case; possibly longer than that; but every individual that becomes syphilitic develops a natural immunity against syphilis and to a certain extent he cures the primary lesions, and the disease becomes one of a firmly fixed constitutional type and of a tertiary nature.

In the primary and secondary lesions we have an active, infectious stage; consequently, as Dr. Rowntree suggested, to limit the spread of syphilis, the early treatment of these cases is absolutely essential, because one syphilitic individual may infect many persons, whereas, if that individual is isolated or quarantined, or, even if not isolated and quarantined, if he can be kept under extremely active treatment, the active infectiousness of that case is reduced to two or three weeks instead of lasting from three to six or nine months. That in itself is one of the most important reasons why the active treatment of all these cases should be commenced at the earliest possible moment and be continued in the most intensive manner.

It is an interesting fact that ever since the discovery of syphilis, since the time the crews of Columbus brought the disease from the Island of Hayti to Europe in 1494, mercury has been used as a specific for the treatment of syphilis, and is today one of the strongest weapons that we have in the treatment of this disease. Some two hundred years later iodide of potassium was used. Then, until the discovery of salvarsan only a few years ago, we had those two remedies as our principal weapons against the inroads of syphilis. It was in 1909, I think, that salvarsan came in as a specific. While we must not believe or assume that it is an absolute specific, it furnishes us with one of the best methods of treatment that we have.

The salvarsan treatment, together with mercurial treatment and other hygienic measures, furnishes us with the best treatment that can be devised up to this time, and by this method we can cure a large number of cases. Consequently if we can treat these acute, infectious cases intensively, we can heal up these primary and secondary lesions and in this way render the syphilized individual unlikely to contaminate others. Therefore this early treatment is the treatment we must make the greatest effort to obtain.

As Dr. Rowntree says, in general hospital practice one sees very few acute cases. Many of the patients afflicted with general paresis whom I have examined, covering a period of many years, have told me that they

were actually cured of syphilis. They would admit that they had had the primary sore; that they went to a physician who gave them a little treatment, possibly some ointment, caustic treatment, or a little internal treatment; but contended that at the end of a month they were absolutely well and since that time had never taken any treatment. It is a fact that the primary sore will heal up in from four to six weeks, usually without any treatment, but the germs go on developing in the patient's system and he becomes constitutionally syphilitic.

No one claims that syphilis can be absolutely cured in every case. Many of the ablest physicians claim that a large percentage of cases can be cured, but every syphilographer, everyone who devotes any time to the treatment of this disease, contends that the treatment must cover a long period of time, at least two or three years. The treatment is not given constantly during this period, but constantly for a certain length of time, after which it is kept up intermittently until we can assume that in many cases the syphilis has been cured.

It is a fact that syphilis affects people very differently. At the origin of the disease in European countries it spread like wildfire; the mortality rate was excessive, extreme. Today, while syphilis becomes a constitutional disease, it is of a rather mild character, and while we have primary and secondary lesions and they are marked, and the disease goes on to the tertiary stage, people may think they are well and yet be syphilitic, so that it is not so severe in the average case today. In some cases there may result a severe syphilitic infection and the patient may die from it, but that is very unusual. The average person develops a certain amount of immunity, and the case goes along with comparatively mild symptoms.

There is another point which was brought out by Dr. Rowntree and that is as to the virulence of the syphilitic germs in different cases. It is to be assumed that in some cases the syphilitic germ is more virulent than in other cases, because we find that with practically all of the infectious diseases we have at times severe epidemics and there seems to be very great virulence, while in other epidemics we have a mild form of the same disease. Those are the varying factors.

A very interesting point in the consideration of syphilis is the causation of general paresis and locomotor ataxia, which are and have been demonstrated to be absolutely caused by syphilis, because the germs have been found in the brain and in the spinal cord. This was one of the great discoveries which Dr. Rowntree spoke of.

Why should we get cases of general paresis and cases of locomotor ataxia in certain individuals, while in the large majority of syphilitic individuals we do not get these conditions, even though the tertiary stage has been arrived at, and they have taken no great amount of treatment? Nobody can answer. Even syphilographers cannot tell why it is. There must be certain inherent qualities; a predisposition of the individual. Possibly that individual has a nervous system which is more susceptible than other tissues of his body. We know that syphilitic infection of an individual sometimes affects other organs. In fact, there is no organ immune from the attack of syphilis, so when we get it in the central nervous

system, we cannot tell why, but we know it does appear there and produces general paresis and locomotor ataxia.

Some years ago I was talking on this subject with an eminent German physician who visited Rochester in company with fifty other German physicians. He advanced the theory that in all probability we will find that general paresis is due to a certain strain of the syphilitic germ which produces that particular form of involvement of the human body. We see conjugal cases of syphilis where the wife and husband are both parietic, and we must conclude that both were infected by the same germ; that this germ was the type of syphilitic germ that would produce general paresis, while another type of syphilitic germ might produce another form of involvement of the human body.

I do not know that any great amount of attention has been paid to this theory or that it has been accepted by syphilographers in general, but they agree that it is rather an interesting point to take into consideration that possibly we may get syphilitic germs which have a tendency to produce involvement of a certain tissue of the body.

WE have had at the hospital several instances where the wife and the husband were parietic. Some time ago we admitted a man who was parietic. About two weeks later his wife was admitted to the hospital. She was parietic. The assumption was that the same germ had infected both of those individuals and produced the general paresis that was present in both. This might be thought to be prima facie evidence that the germ was of the particular type that would cause paresis, but many arguments can be brought out to show that this is not necessarily so.

There is a very important consideration in the study of syphilis, and that is as it relates to marriage. Dr. Pusey, of Chicago, has written a most excellent book on syphilis, in which he takes up the question of the marriage of syphilitic patients. He contends that life is subject to dangers! that no matter what we do, we are subject to dangers. The marriage of healthy individuals is subject to dangers. As he states, no one knows, when a couple is married, but that the first child may be the cause of the death of the mother. He points that out as one of the dangers of married life. Then he quotes a large number of authors on the question of whether or not syphilitics should marry. He contends that it is all right for syphilitics to marry, and that has been the opinion of syphilographers for many, many years, but under certain conditions. Those conditions are usually as follows: No syphilitic should marry under four or five years, and then only after he has undergone intensive anti-syphilitic treatment during this period and has been under close observation. During the last two years there should have been no evidence of any syphilis occurring in that individual. Under those conditions it is concluded that it is safe for that individual to marry.

It is very interesting to note that not all of the children of syphilitic mothers are syphilitic themselves. If a mother is actively syphilitic at the time of the birth of the child, that child will doubtless be syphilitic, but if that child is born during the tertiary stage of syphilis it is not necessarily syphilitic, although it is possible it may be.

Here is another interesting point. It has been observed that the first child of a syphilitic mother may be syphilitic; the second child may not be syphilitic; the third may; and the fourth may not; or, in some other order, which goes to prove that the children of syphilitic mothers are not all necessarily syphilitic. We as physicians should be careful to adopt a very intensive course of anti-syphilitic treatment in all pregnant syphilitic women in order that we may protect the prospective child from the terrors of syphilis.

W. L. Patterson, M. D., Assistant Superintendent, Fergus Falls State Hospital: Mr. Chairman, Ladies and Gentlemen: I should like to say a few words about our work at Fergus Falls.

We began to do Wassermanns in the fall of 1914, and we have done Wassermanns on all our new cases there ever since. From January 1, 1915, until the 1st of January this year we did 1,465 Wassermanns. Of these 272 were positive or about 18 per cent. Of these about 20 per cent were men; and 16 per cent, women.

I think I have not seen a single active case of syphilis come into the hospital. The great majority of our cases show general paresis, the proportion among the men being much greater than among the women.

With regard to the treatment of cases of general paresis we have tried the salvarsan, the neo-salvarsan, and the mercurial treatment. The salvarsan and the mercury seem to work better than any other treatment.

In general paresis while we have seen cases of temporary improvement and those that we thought we had actually cured, we find that the great majority of the cases have relapses. Even where they remain out of the hospital as long as a year, they eventually come back to us. Personally I do not believe there is any cure for general paresis. I believe syphilis can be cured in its early stages, absolutely cured, but when it gets to the stage of general paresis, where they enter a hospital for the insane, I am certainly very doubtful about a complete cure's being effected.

Of course a great majority of our cases are laboring men. They do not even know they have had syphilis. I believe they are honest when they say they did not know they had had it. They have never had any treatment whatever. If they had a chancre, the probabilities are that they did not care to spend the money to go to a physician to have treatment.

For such cases there is not any doubt in my mind that a free dispensary in the city would be of the greatest assistance, for the time to treat this disease is certainly in the beginning and not at the end, or when they reach the state hospital, which is practically in the terminal stage of the disease.

I may say that we have thoroughly tried out the salvarsan and the mercury, and our conclusions certainly are based on considerable experience with it. I am not sure but that the old mercury and potassium iodide treatment will give as good results as anything.

Dr. Rowntree: May I have the floor? Two years ago I attended a state medical meeting and sat still when I should have taken the floor. I have regretted it ever since.

We should have started a movement two years ago in this state to control venereal diseases in the early stages. I do not believe there is a man here who has had experience in the treatment of syphilis who does not agree with me in maintaining that the treatment of syphilis must be early. I believe some resolution, or resolutions, by this body would carry a great deal of weight throughout the state in making it possible to accomplish what we are attempting; namely, early treatment of syphilis and its prevention.

I should like to see a motion put to that effect, that the Board of Control and the officers of its various institutions support the movement of the Minnesota Social Hygiene Commission.

The Chairman: I suggest that this resolution be referred to the program committee.

George T. Baskett, M. D., Assistant Superintendent, St. Peter State Hospital: I do not know that I can do better than to emphasize, like those *who* have preceded me, the importance of early treatment as a means of preventing these later manifestations; such as, syphilis of the central nervous system, tabes and paresis.

In my seven or eight years' experience at St. Peter, I do not believe I have seen a single case of chancre; that is, the first stage of syphilis. I have seen a great many of the advanced types of the disease.

The proper treatment of syphilis is a long affair. It is surprising how little treatment most of our admissions have had for their primary conditions. This is true not only of cases of paresis but also of ordinary cases of insanity; like manic-depressive and dementia praecox, who have had syphilis in addition to their insanity. It is rather rare to find a man who comes to us who has been treated longer than a few months and many of them have been treated even a shorter time than this. Some have never even consulted a physician, but have treated themselves or followed the advice of the local druggist.

Our admissions then, are late; usually in the parietic stage or in the stage of tabes. The question of what patients are apt to develop these late diseases is an interesting one, but unfortunately we cannot answer it. Some contend that such cases are infected with a peculiarly virulent organism, while others hold that there is some peculiarity of the nervous system that makes invasion easier. Just what the facts are, we do not know. We admit a good many praecox and depressive cases who also have had syphilis. Just how much the syphilis has had to do with their psychoses is difficult to determine.

As I have said, the treatment of syphilis should be prolonged and should be controlled by the Wassermann test, both of the blood and of the spinal fluid. Only in this way can we be reasonably sure that a cure has been effected, and this is the only way we can be safe.

G. A. Newman, M. D., State Prison: It is rather peculiar that a disease like syphilis which is as old as recorded history, has only been studied so recently. This thought has occurred to me: Why is it that we have known so little about syphilis? We have known considerable about other diseases but very little about syphilis until the last thirteen years. It is

not quite thirteen years since Schaudinn before the Berlin Medical Congress demonstrated the germ of syphilis, the Spirochete Pallida, and only a few years ago that Noguchi fulfilled Koch's law.

It has occurred to me that, as there is no intermediary in syphilis, hosts of people in the past have blamed themselves. If there had been some other rascal that had carried it, they would probably have gotten after him.

In our institution at Stillwater we rarely see any of the primary or the early secondary effects of syphilis. It is the end products that we get, the late secondary, and they are not very amenable to treatment; for this reason that one of the characteristics of syphilis is that it attacks the very center of life, the cardiac vascular system. It is during the third, fourth and fifth decade that men who have contracted it pay the penalty at the time when they should be most useful to society.

It seems to me that there is only one way in our social system that we can combat it successfully, and that is to offer treatment in the early stages. In our state, as far as I know, there is not a single hospital that is devoted exclusively to the treatment of syphilis. In our general hospitals, they take them but they do not like to. In our maternity hospitals, if you wish to send a patient there, about the first thing they ask is: "Is the woman syphilitic?" or, "Has she venereal disease?" If you get syphilis in the early stages it can be cured, but in the later stage, the results are not so good. We can just patch them up a little. It is the arterial system that is suffering the brunt, and probably from that source we get our mental syphilis and not directly from the germ itself.

I do not know of any dispensary in our state that treats syphilis alone. We should offer men an opportunity to be cured so that they will not go to some shyster who has a treatment for blood poisoning. That word "blood poisoning" is probably better than our word "syphilis." I do not like the word "syphilis" because it means nothing.

Previous to 1530 they had various names for the disease we designate "syphilis," until Fracastorius wrote a poem in which the hero, Syphilus, a shepherd, was smitten with the disease as a punishment by the gods, because he had blamed the gods for the blight with which his flocks were afflicted.

To this day we still call the disease syphilis. I like the name "lues" better, because that conveys some idea. It means a pest, and if any disease is a pest, it certainly is syphilis.

This idea of registering and keeping track of the venereal diseases I think is all right, but I believe we should offer them treatment, also, because if we get them early we can treat them successfully. It is simply awful to think that in this country today there are 2,700,000 persons that are suffering from arterial disease due to syphilis; 15 per cent of our national army now have had venereal infection. From 3 per cent to 6 per cent of all children under one year have syphilis. We ought to be able to prevent this, and we can if we begin early. In mercury we have almost a specific. Let us provide treatment for the infected who cannot afford to pay the specialist's fee.

Geo. H. Freeman, M. D., Superintendent Willmar State Asylum: I do not feel that I have the ability to discuss this subject. I can only express my appreciation of the opportunity I have had, the opportunity of hearing the three papers and asking a few questions.

I should like to ask Dr. Rowntree whether he feels that the use of arsenical preparations is absolutely essential in the treatment of the first and the secondary stages of syphilis, and whether he feels that the Wassermann is such a test that the average man can feel that he is competent to interpret the result which he would obtain, or whether that work should be done by skilled men in central laboratories.

It has been stated that a certain number of feeble-minded and a certain number of insane showed positive Wassermann tests, but Chat in only a certain per cent of these cases was the mental condition due to syphilis. I should like to ask whether any attempt has been made on a large scale to treat the syphilitics who were not insane on account of their syphilis, and whether one can get negatives regularly in those cases which show no syphilitic insanity.

The terminal stage of syphilis is especially interesting to me at present, because of a population of about twenty inebriates, 25 per cent of them show terminal syphilis. I have three cases of tabes, one organic brain lesion, and the other case I think is of cerebral syphilis.

In going through the wards of a general hospital in London with Dr. Mott, the pathologist of London County Asylums, who has done a great deal of work among syphilitics who were insane, he stated that he regarded every aortic case he saw as almost certainly the result of antecedent syphilis.

Dr. Rowntree: With regard to the relative values of antiluetic drugs, I might say that I regard mercury as the best drug in the cure of syphilis. It actually cures. Potassium iodide plays a very great role in removing symptoms. It should be used in the third stage especially. All malignant forms of lues should have potassium iodide from the beginning and also all cases with marked headache. (Frequently, headache of luetic origin which will respond to no other drug will respond as though by magic when potassium is used. In hyalitis it is also of great value.) Salvarsan furnishes the most rapid method of sterilizing the individual and making him safe to circulate among people generally. It is not curative as a rule except when it is used in the very earliest stages and should not be depended upon for cure. It is of tremendous value but is not what Ehrlich claimed for it, a *therapia sterilisans magna*. It should be preceded, accompanied and followed by mercury.

The Wassermann is valueless unless done by a trained man. A central or state laboratory making free Wassermanns for the profession generally, and also for all institutions, is a most desirable thing. A positive Wassermann means lues. It does not mean, however, that the condition present is luetic. Every internist must face this almost daily. For instance:

We had a case come into the wards with enlarged liver and spleen very marked anaemia and blood in the stools. This man had a negative Wassermann, but the history was suggestive of lues. We put him under

treatment and he presented a positive Wassermann. We then considered very strongly the possibility of this case's being luetic, and were inclined to believe it such. The liver and spleen decreased remarkably in size under treatment. Blood disappeared from stools and the anaemia disappeared. The man left the hospital in a much improved condition. He entered the city hospital two months later and died within three months of some other cause.

We were inclined, on finding the Wassermann, to consider the case luetic. The man had lues, but he did not die of lues. Wherever we have a positive Wassermann, we have proof of lues, but then we must determine whether the lues is responsible for the condition present.

Probably the most common lesion of syphilis is a luetic aortitis. Practically every case of positive Wassermann reaction is accompanied at autopsy by change in the root of the aorta of a syphilitic nature, unquestionably a manifestation of lues.

The Chairman: Is it general opinion now that chronic gonorrhoea is as dangerous in its general aspects as syphilis?

Dr. Rowntree: In the female a chronic gonorrhoea is of course the cause, very, very frequently, of inflammatory processes in the pelvis. In the male it is apt to confine itself to a lesion in the deep urethra. This may give rise secondarily to various changes throughout the body, especially to chronic arthritis. Gonorrhoea rarely gives rise to manifestations that compare with locomotor ataxia and general paresis and syphilis of the brain.

The Chairman: I will ask Dr. Jones, the physician at the State Training School for Boys, to open the discussion this afternoon.

A. W. Jones, M. D., State Training School: A few cases of acquired syphilis come to us at Red Wing. You must remember that we are getting boys from nine to seventeen years of age. We occasionally get a case of acquired syphilis that is in an active stage at the time it comes to us.

It has not been the policy to retain those young men in the school during the time of activity. We have sent them all away for treatment, as there was fear that some of the others might contract the disease from them. As a consequence, as soon as we find that we have a boy with active syphilis, we send him away for treatment, and as a rule we have sent them to the City and County Hospital in St. Paul.

There are very few of such cases received. I have not figured them out for statistical purposes, but as near as I can recollect I should say that possibly 1/2 of 1 per cent active syphilis—I should say it was not more than that; I should think it was (below that).

The boys sent to the City and County Hospital are returned to us as soon as they are in a safe condition to mingle with the rest, and as soon as the case is a closed one. They are not allowed to leave the hospital and during treatment we have never lost one of them. We leave it to the judgment of the hospital officials how long they will keep them, and the time varies. I should say from two to three months usually. We felt that we had not the facilities for their treatment, and we wanted them to

be where they could have salvarsan and that line of intensive treatment and where they would not be a source of danger to the other boys.

We undoubtedly have some inherited syphilis. I have noted a number of cases where the pathological results were in evidence; like changes in the tibia and in the periosteum, Hutchinson teeth, and occasionally I have thought I found affected nose bones which must have been due to syphilis, although they were not wholly destroyed, more distortion than destruction. With our boys the teeth can not be relied upon for diagnosis. There are an immense number of constitutionally defective sets of teeth among us. Some of them are of rachitic origin, relics from rickets; some look to me as though they were due to a lack of vitality; some of these look very suspiciously like the Hutchinson teeth, and of the genuine Hutchinson teeth due to congenital syphilis we have specimens.

Not long ago an article appeared in one of the medical journals discussing the faulty spacing of teeth; that is, wide spaces between and the absence of some teeth, teeth that never erupted. We have a few such specimens. I should not want to say whether or not they were syphilitic, but this author, who had made a considerable study of them, believed that they were. The only explanation I could make was that it was a variety of peg teeth, where the whole body of the tooth had narrowed. If each of the teeth should do that, you would find your spacing larger.

The Wassermann reaction has never been used on our boys. From a statistical standpoint that would be very interesting.

The papers that were read this morning seemed to show pretty conclusively that syphilis was at least not a cause of feeble-mindedness in a very great number. We have a large number of feeble-minded boys. Of course the question might be debatable as to what constitutes a feeble-minded boy, but I am satisfied from tests that we have made that at least 70 per cent of our boys are below normal. When I say below normal I do not mean dull, but I mean we would not call them fully normal.

I am personally interested in more extensive work in the families of these inmates. We are doing some, have been doing some for years, but we are getting the work better systematized, more thorough, and we hope as time goes on to show its value, which can only be done by correlation with our other statistics. I take advantage of every opportunity I get to study the 'parents who come to the institution. If the Board were to ask me what to do with the Wassermann test, I should advise that they try it on the parents and guess at the boys, for I believe it would explain much of the constitutional inferiority found in many of our boys who do not show signs of congenital syphilis.

The Chairman: I will call on Dr. Hemstead, who is a member of the State Board of Health, and just now is looking after Dr. Green's work at the State Reformatory. Dr. Green, as you probably know, is now taking treatment at the State Sanatorium, and is very ill with tuberculosis.

Werner Hemstead, M. D., State Reformatory: I certainly take great pleasure in being present and listening to the able papers that have been read and the discussion that has been going on.

I want to emphasize just one point. As far as the Board of Health is

concerned, the recent regulations for reporting and treating venereal diseases were urged on us very strongly by the surgeon general, and, in conjunction with his advice and that of the Hygiene Commission we formulated a set of rules and regulations that would put the cases that develop in the same category as any other communicable diseases. These diseases would be treated at the initial onset of the disease; although probably not quite so efficiently as in the army, where the prophylactic treatment is instituted from two to six or eight hours after exposure. But the idea was to arouse a certain effort by the medical profession to get these cases under treatment at the earliest possible moment.

Almost all of the papers emphasized the fact that the real benefit that could be derived would be at the early initial onset of the disease. While these regulations may not be complete in the present form, yet eventually they will develop so that in time we shall have them just as efficient, as they are in diphtheria or scarlet fever or any of the other communicable diseases.

George Wm. Beach, M. D., Superintendent State Sanatorium: Mr. Chairman, I have always considered that there were some parallels between tuberculosis and syphilis; both are very widespread, known in every part of the world, and both have been recognized and well described for a great many years, if not centuries. Both are social diseases, and we may say that they are alike in this: that medical schools have not sufficiently prepared the undergraduates for their recognition and treatment. There are also some antitheses that are very striking. One is, that we have a treatment for syphilis, and have had it for a long time, which, if employed at an early stage and continued long enough, may be considered in most cases a specific; whereas in the treatment of tuberculosis, I say it with all regret, there is no specific, and the treatment is often unsatisfactory.

Then, again, there is a very great difference between them in that tuberculosis is a most respectable disease. Tuberculosis has been chosen by many writers of fiction as a fitting end for the heroine. For instance, in her book entitled "In Connection with the DeWilloughby Claim," Frances Hodgson Burnett, you remember, in telling of the poor girl who is dying of childbirth, unattended, in the mountains of North Carolina, relates how the brother writes to the mother that she was dying in Italy of tuberculosis, describing the blue veins, white skin and bright eyes, and telling how she insisted, as she was passing away, that she be propped up in bed, so that she may view the beautiful Italian sunset.

Syphilis, on the contrary, is a disgraceful disease. Professor Rowntree has called it a "secret" disease; it is secret because it is disgraceful. In Ibsen's "Ghosts," Oswald is seized by an obscure mental disorder resulting from the evil life of his father. In D'Annunzio's "The Intruder," the husband buys medical books, so that he may better follow the development of a disease of the spinal cord in the seducer of his wife. In such works of fiction where syphilis, or the results of syphilis, are described, the authors, otherwise so daring, avoid, almost without exception, giving the name of the disease.

Under such circumstances we can understand what a health department is going to encounter when it begins to combat the spread of syphilis, as

it has that of tuberculosis, and, in a more noteworthy way, of typhoid.

Dr. Rowntree told us this morning that in his hospital, which is one of the best equipped and best conducted in the United States, they did not get early cases, because their regulations would not allow their admission. As interne in a large metropolitan hospital I remember that I was forbidden to admit any cases of early venereal disease, whether gonorrhoea or syphilis.

Now, when a man tries to get treatment for such a trouble and is turned down in dispensaries of note, when he is refused admission to a reputable hospital where he could get expert care, when on account of his early education he feels ashamed to go to his ordinary physician—what is going to happen? He will almost certainly resort to those who will take his last cent, the shady members of the medical fraternity, and the disease is not going to be cured—frequently, not even checked.

The attitude of physicians, it must be remembered, depends somewhat upon the attitude of the public. If the public believes that this is a disgraceful disease, the man who treats it appears, in a way, disgraceful to those who have such prejudices. I recall an older physician who, upon learning that I was going to take a course on syphilis, said: "What! Are you going to prepare yourself for that sort of thing?" I replied, "Yes," and I felt called upon to excuse myself, adding that the disease was very widespread. He returned: "I have never done anything like that," and seemed to feel very virtuous in regard to his attitude.

The physician with whom I was working for about three months had me meet some of his patients. One day a patient came in, a man of some note, and while this older physician was not acquainted with him, he knew about him, and inquired: "Isn't Dr. B———your physician? Why don't you go to him?" "Simply because I have always known him," the patient replied, "and I don't feel like going to a respectable doctor for a thing like this." The doctor winced a little, but he understood.

I think the average young man does not wish to go to his family physician, the one whom he has always known and whom he respects. This is for a very wrong reason; it is from a misconception. His feeling of shame is so great that it takes away his good judgment, and that is a point I want to come to.

Sin is a theological term. Disease is something that belongs to medicine and to public health. If you mix the two, there is going to be trouble; and in the management of syphilis, in the management of all venereal diseases, from a public health point of view, there has been trouble, and there will be trouble as long as immorality is confounded with hygiene and preventive medicine. When it comes to the idealist, the mystic who claims that the body is a temple of the Holy Ghost, we must admit that one is doing great harm to that temple when during years he overeats and earns his Bright's Disease.

It would seem as if he were showing more disrespect to that temple than one—as much as any one else, I will say. The matter should be considered wholly from the public health point of view, because the coupling of this disease, or these diseases, with immorality has hindered preventive measures up to the present time. In short, if we have failed

so miserably after all these centuries during which we have had a specific against syphilis, I believe it is because we have devoted our efforts to combating the sufferer, and have not combated the disease.

The Chairman: Dr. Beach, in addition to being a great physician, is a very courageous and brave man. A man who enters into the field of theology so lightly and so bravely, especially when there are theologians in the audience, is certainly courageous. I am going to call on one of those theologians, Father Donahoe.

Rev. James Donahoe, Minneapolis: There are some people in my church who think religion is all-sufficient. I don't think it is. I know laws are very important, and I hold the enforcement of good civil laws ought to go hand in hand with the preaching of the Ten Commandments. The members of the medical profession have the floor in a matter of this kind. They had the first and ought to have the last word. I presume, however, this discussion will become a social discussion; that the social well-being of the entire community will be taken up.

One man spoke of the percentage of the men in the national army who are afflicted with venereal diseases. I am interested to know what per cent of all young men are similarly afflicted. When 15 per cent of the selected men, men who have gone through the hands of two medical boards and who have finally been considered sound and safe enough to be enlisted under the Stars and Stripes, are found to have venereal diseases, what about the thousands of men who have been rejected? I want to know if we can find out the number of men who are going down morally and physically, who are becoming failures because of the worst kind of diseases? A man afflicted with such a disease at an early age does not have the same ambition, the same character and the same energy to push on and work to the front, so these failures are becoming misfits and forming a very undesirable class.

After the abatement law was passed some time ago, I went from one attorney to another, and found many who shrugged their shoulders and did not want to enforce that law. Why? Some of those men had probably been receiving considerable fees from, these women. They gave a different reason and in nearly all cases said: "This will be a test case, and we don't want to take up the first case under the new law." I found the legal profession very reluctant to enforce such a law.

I believe the public should be educated and the public sentiment should be worked up to such a point that when you decide on the enactment of a certain law the public should be behind you in order to make its enforcement a fact. I will help make and enforce more stringent laws to lessen the number of corrupt women in our state. If there is any person I despise it is the woman who debauches herself and who does the vile thing of prostituting her body in order to make a living. She is so active she is influential, I am sorry to say. Where we find an official who is not enforcing the laws, he ought to be replaced by someone who will enforce them. The bad woman will not remain all her life in dry territory. I believe the law should be enforced not only against the vile, bad woman, but against that other business that gives her artificial stimulation, the liquor business. If we cannot drive every professional woman from the

state, let us take from her the intoxicants that do so much to debauch her and her consorts.

The Chairman: I suppose Father Donahoe would agree that for every vile, bad woman there is at least one foolish man and probably more.

There are so many phases of this problem that of course we cannot expect to touch them all: economics, morals and religion, and all that.

William W. Hodson, Director Children's Bureau: I rise, in this assemblage of medical men, with a good deal of hesitation, because I am, not qualified to say anything along that side of the problem. I do remember, however, that on the legislative side, when the Child Welfare Commission was considering the question of what legislation was desirable in connection with venereal disease and its proper control, the State Board of Health felt it would be better to have a specific law covering it (although it may possibly have had full power to proceed in the matter of requiring the reporting and regulating of syphilis just as it did in any other disease), and requested that such a provision be incorporated in the recommendations of the Commission.

As a result of that request the Child Welfare Commission recommended, among its other bills, that the powers of the State Board of Health be enlarged, giving them control over venereal diseases especially; and that was accepted by the legislature at its last session.

As the laws now stand, as the medical men no doubt know, the State Board of Health has complete power over the subject of venereal diseases, and that power is expressly stated in definite terms in the law, so that it may be handled by the State Board of Health exactly as it may handle any other disease which is of a communicable nature.

I also recall that, when this provision of the law was being considered, many of the eminent physicians of the state presented testimony to the effect that one of the great difficulties was going to be that when young men knew that by going to a physician possibly their troubles would be reported, the result would be many would go to quacks and irresponsible medical men. Others would probably not go to any physician at all because of the fear of being reported. I understand that there has been devised, however, a system whereby numbers can be used. By use of that system it will be possible, of course, to some extent to prevent the use of names and to exploit personalities. However, once the subject is regarded as one that must be reported and followed up, if necessary, I do not see how the number system will obviate the real difficulty. If the case is one that must be followed up and attended to, obviously the person's name must be disclosed.

In the Children's Bureau we can only add the testimony that this problem is mounting up in tremendous proportions. Very often we come in contact with this sort of problem: The child of venereal parents has a venereal disease himself, and there is no place in which to put him. The State Public School will not receive him; the hospitals won't receive him. Such a child can not be placed in a home, because if the people know what the facts are—and they ought to know—they are not willing to receive him. And I am sure that every agency which deals with children is

confronted with the child who is not wanted, the child who is entirely and completely an outcast.

The testimony of the medical men this morning shows that nothing short of a complete system is feasible, one that deals with the problem from its very foundation and carries it through to its ultimate conclusion. No other solution of the problem is possible.

W. A. Erickson, M. D., School for Feeble-Minded: You have heard Dr. Kuhlmann's paper read. He has presented our problem in detail. I will only add that we have subjected the blood-serum of all our inmates to the Wassermann reaction and found a little more than 1 per cent positives. If the same reaction were applied to the spinal fluid and the inmates subjected to the Noguchi test, I believe the percentage of positives would be much higher. My reason for believing so is that we are dealing with "congenital" syphilis almost exclusively. It is an established fact that the Wassermann reaction is often absent in both congenital syphilis and latent acquired syphilis, and at the same time the spinal fluid exhibits a positive reaction and the delicate cutaneous Noguchi test proves the presence of the disease.

Dr. A. J. Todd, University of Minnesota: I can only arise and apologize for not having been here this morning. I do not want to take revenge on this group for a joke which was played on me last Christmas, when I had a paper which was supposed to be read in Philadelphia. I was unable to be present myself; my paper was not read, but a number of persons got up, discussed it, and took a fall out of me. I shall not attempt, therefore, to discuss these papers which it was my misfortune to miss hearing.

I can only say, as a social worker and as one interested in the training of social workers, that I am always extremely glad to see this subject handled as freely and frankly and scientifically as it apparently has been today. We have to approach the subject from many different standpoints. I only wish that the discussions which are conducted here could be conducted likewise on the outside. I wish we could have the same frank reaction on the part of our students, for instance. Just exactly the same things as have been brought out here—this whole irrelevance, apparently, of theology and moral codes—have hindered the work of getting over to students the real conception of social hygiene. I think there is, however, a growing perception on the part of people that this sort of thing must come, and while it seems rather a disgraceful thing that we attempt to take any comfort out of the war, I do believe that as one result of it there will be a handling of this subject more effectively than we have ever thought it possible to handle it before.

I do not any longer have to make apologies for discussing this subject. The Secretary of War knew precisely what problem he was up against when he created a commission, one of whose functions was social hygiene work. When we have that distinguished backing, it is no longer something to be done in the corner. If we can once carry through under the present war momentum, it seems to me that the case is very much more hopeful for putting through some of the ideas which Dr. Beach has so clearly brought out here.

Rev. E. J. Nystrom, State Board of Visitors: Science and theology do not clash. If they do, it is either not true science or else not true theology that is presented. Truth cannot be at variance with itself.

The social evil we have here discussed has been an open sore in mankind for generations. The social workers have seen it and felt deeply for it and have tried in their respective spheres to do what they could to safeguard the young and the inexperienced from this menace, but they have been greatly handicapped in their efforts. America has been rather backward in taking positive steps to prevent the spreading of this disease. The public at large has been left in darkness. We have now, I hope, arrived at the stage where the public as a whole will see that something positive has to be done. The church and the state should join hands in combating this evil.

G. A. Merrill, Superintendent State Public School: I remember hearing a distinguished physician say that if a man should die of syphilis and his ghost should return to this earth, a test would show that he had syphilis still.

I think Dr. Heyerdale made the statement that syphilis can be cured. I am glad to know this. I am interested in a case. It is that of a little girl who has been under treatment in a hospital for a long time. The physician who has been treating her says there is no danger of her communicating the disease to others. I have been asked to take this child into the State Public School. I have objected. The physician says it has been impossible to obtain a negative Wassermann in her case. I should like to ask Dr. Heyerdale if in his opinion the child is cured as long as a positive Wassermann is obtained in every test.

Dr. Heyerdale: We would assume, at least, that the case had not been cured if a positive Wassermann were present, but the case might be in a stage which would not be infectious and yet have a positive Wassermann. Many tertiary cases which may not be infectious still have positive Wassermann.

Mr. Merrill: The doctor who has been treating this child stated that while he considered it safe for her to associate with others, he did not care to say that, in case she should grow to womanhood, it would be safe for her to marry and give birth to children. I objected to receiving her, believing it would be harmful to the reputation of our school as a placing-out agency. It certainly would be a grave injustice to a family to place a child with such specific taint with them unless they were fully informed of its affliction and prepared to keep it under medical observation.

The Chairman: I will call on Mr. Hanna, who for many years had charge of a boys' training school.

G. C. Hanna, Superintendent School for Feeble-Minded: This is a subject for discussion, it seems to me, by the medical men and experts. Since I am neither a medical man nor an expert, I do not know that I would make much headway with it.

Of the 600 boys in the institution referred to by the Chairman, about 10 per cent had some symptoms that were suspicious. Of the 60 boys

we had examined, 32 or 33 showed positive Wassermann. We never had to deal with acquired cases; all were congenital.

The facts presented by the papers today—and Dr. Kuhlmann of our institution covered the ground well—would lead me to believe that the problem is tied up closely to that of feeble-mindedness. Since syphilis is spread by prostitutes for the most part and women of very low social order, if those prostitutes are 50 per cent, 60 per cent or 75 per cent feeble-minded as indicated, we have the means of controlling the situation to the extent that we have adequate provision for caring for the feeble-minded. As fast as these feeble-minded prostitutes are brought to light through knowledge in the community or through knowledge obtained by the physicians to whom they go, it seems to me they could be dealt with immediately under our new law, effective since July. All prostitutes should be examined by experts, and if found to be feeble-minded, they should be shut up in an institution and treated there. This would be one of the very best ways of helping to control the situation.

Dr. Kilbourne: Pusey says the actual cause of the prevalence of syphilis is the sexual appetite, and no plan for its reduction or suppression can appeal as practical which does not accept this fact: That this, except within narrow limits, is beyond society's control; it is a sanitary problem.

At Jefferson Barracks only one case developed in 3,800 exposures; the previous ratio was 227 per 1,000, reduced to 18 per 1,000 by the use of 33 per cent calomel ointment, and can be eventually eradicated by the proper prophylactic treatment given on or before eighteen hours of infection, or better within eight hours.

Syphilis is the principal cause of arteriosclerosis in premature old age.

Healthy children born of syphilitic mothers may acquire syphilis at birth or soon after.

Early infection of the foetus likely means death in utero; hence the great cause of miscarriage of dead foeti.

Children born with active syphilis generally die within a few days or weeks; 75 per cent within the first year.

Every mother of a syphilitic child is a syphilitic, although she may not show any evidence of the disease. It has been shown that syphilis is not transmitted to the third generation.

It is recommended that men infected by syphilis put themselves under guardianship, anticipating any mental trouble arising from that cause.

H. M. Bracken, M. D. State Board of Health: Mr. Chairman, Ladies and Gentlemen: Dr. Rowntree came to our office about the time you were adjourning this forenoon and suggested that we draw up certain resolutions which he thought would be in line with what you wanted. We have done so but with no wish to dictate in such matters; rather to suggest. Dr. Irvine, who is with me, and who is a specialist in dealing with venereal diseases, has been in California working along these lines. He can give you information relative to his work.

H. G. Irvine, M. D., State Board of Health: I am very glad of this

opportunity to come before a group of men who are especially interested in this work; and I am sure you must be interested, as well, in anything that can be done toward preventing the things which you see before you every day.

History shows that with every war there has been a marked increase of venereal diseases, not only in the armies but in the civil communities as well. The countries abroad have had to face a tremendous problem in this respect on account of their not having had the opportunity of making preparations for handling it. The United States has had an opportunity to profit by the experiences of these countries. You perhaps are familiar with some of the figures that have been presented. The most appalling thing is the statement from England that in the first eighteen months of the war there were more men incapacitated on account of venereal disease than from the combination of wounds from shrapnel, wounds from bullets and gas combined; over 100,000 cases. It has been stated that the Germans affected in Belgium alone number over 30,000.

This has given us, so to speak, a psychological time for those interested in this as a public health affair to get something done. In the past we all have tried, but without much success, to get the public to listen to us, to get some idea of the seriousness of these things, and to let us show them what could be done if they but recognized the need. What can be done is now apparent from the work that has gone on in the army, and the public is not only willing but glad to listen.

The program that we are attempting to carry out in the various states is practically the program of the War Department, the Surgeon General's office, for combating these diseases in the army. It includes investigation of cases, isolation of the carrier of the disease, and treatment, making sufficient rules and regulations in various states so that we can get, in the first place, an idea of the prevalence of the problem with which we have to deal, so that it will be possible to get dispensaries and hospitals opened up where these people can be adequately treated and to be able to detain people who do not wish to remain under treatment. This latter so that we may protect other, perhaps innocent, victims.

This work has been going on in California, and I have had something to do with directing it during the past four months. The state appropriated \$60,000 for two years' time for the purpose of carrying on this work under a bureau. That fund, with the exception of a small amount, about \$8,000 or \$10,000, is for administrative purposes only, the idea being that the officials of this bureau, in conjunction with the local civic and health officials, should get each community to stand the cost of its own work. In that way we have gotten about \$100,000 appropriated for the actual work in the various communities.

So we are attempting here to get a fund. It was attempted in the first place before the Public Safety Commission. They felt that they could not give war emergency funds to the State Board of Health, as that body was already organized. Besides, according to the Attorney General, their fund cannot be given for such a purpose. They suggested that such funds be given to the Health Department from the Emergency Fund of the State

Treasury instead, and they asked the members of the Emergency Board to listen to the proposition.

Dr. Rowntree suggested that this group of men here today would be glad to adopt resolutions relative to the work, so we are offering you some suggestions merely for these resolutions which we should be very glad to have all of you, or your committee, go over.

*Note: A few days later the Emergency Board, composed of the Governor, Auditor, Treasurer and Attorney General, approved an appropriation of \$35,000.00 for the purpose of organizing a Division of Venereal Diseases under the State Board of Health, Dr. H. G. Irvine to be director of the division.

Elizabeth McGregor, Superintendent State Hospital for Crippled Children: We have had the Wassermann and Luetin tests given as routine for three years. We get a very small percentage of positive reactions from the Wassermann. Positive cases are repeated three times.

The children who have the positive Wassermanns are not the only children who are given specific treatment. If it is decided that there is a possibility of syphilis or lues, they are given anti-luetic treatment. We have had children respond to the treatment who gave negative Wassermanns. Our staff feels that the negative Wassermann is not always a clear indication that they do not have syphilis.

- Because of the price of the Neosalvarsan at present, many poor people could not afford to take the treatment, even if there were a hospital where they would be accepted.

I think there are at present twelve cases at our institution getting the anti-syphilitic treatment, but of the twelve there are not more than four who had positive Wassermanns. One child is less than a year old.

The Chairman: Dr. Beach, you said a little while ago there was something further you wanted to say.

Or. Beach: I did not think that I was going to get the opportunity: my courage is gone.

It has been said that a large percentage—fifty per cent or seventy-five per cent—of prostitutes are feeble-minded, and a conclusion was drawn that if they could be eliminated, we should solve at once the problem of prostitution and that of syphilis, or something to that effect. Now, during the three months that I spent years ago in this work, every man who consulted us was asked how he became infected, and—I am going to say something very disagreeable now—the women who most frequently gave the disease were married women who had gone wrong. The next most dangerous were the prostitutes who were not registered—clandestine prostitutes—and the least dangerous of all were the poor, so-called feeble-minded sisters that were registered, regular prostitutes.

Dr. Kilbourne: Who makes the diagnosis of this feeble-mindedness?

Dr. Beach: A woman could not be married long and successfully and be feeble-minded. It has not been proved against married women, at any rate.

Dr. Kilbourne: If you look at some of the men they marry, you would think they were.

Dr. Beach: The spread of syphilis is caused by others than the prostitutes that have been referred to. I believe that those prostitutes should be taken care of when they are feeble-minded, and that they should not be allowed to injure themselves any more than they should be allowed to injure others; but that that would solve the problem I feel very far from confident. In fact, the great danger is in clandestine prostitution; that is the terrible thing we must face. For that reason, as I said before, we must consider this as a wholly medical matter, and not confound it with morality or religion.

Dr. Kuhlmann: I should like to rise for a few words. To attempt to entirely control syphilis by simply trying to cure the cases as fast as they arise, does not appeal to me very strongly. What would we think of our medical profession if they attacked typhoid and malaria in the same way? None of us knows all about how to solve the problem, but I do not believe the medical profession is going to solve it on medical lines alone; it is mixed up with the social and moral problem.

As to whether or not prostitutes are a very small element in the matter of disseminating syphilis, we can only express opinions and not prove anything by the few statistics that we have, but why not try to get at the bottom of things and see how those matters stand? I do not believe that we are at all justified in making the statement that it is the intelligent married women, many from supposedly respectable classes, that are chiefly responsible for the spread of syphilis. We get this statement frequently from physicians, but it is a conclusion based on unanalyzed observations. It is quite possible that intelligent married women constitute the majority of those who seek medical treatment for syphilis. But that fact may prove nothing more than that it takes some intelligence to recognize the symptom of the disease and some understanding of the serious consequences likely to result if left untreated. One would hardly expect a feeble-minded un-instructed girl on her own initiative to seek medical treatment for an ailment that seems "no worse than a bad cold."

I should like to know something about not only the mental qualities but the home conditions, what kind of a bringing up the immoral girl and the immoral man have had. I am quite convinced that if we could get together all the immoral women who are responsible for spreading syphilis, we should find that they are in other respects different from the rest of the population; in their mental qualities, their surroundings, bringing up, and associates.

Why not include a general investigation in the medical problem? Find out what kind of people they are that are responsible for it? Along that line I am also sure that if we could get together on one side the men who are immoral and on the other side the women who are immoral, we would have two distinct groups. I am quite sure that on the whole more intelligent men are immoral than women. We have tried to solve the problem for centuries by means of moral education, but we haven't been able to do so entirely with any of the old methods; at the same time I am not absolutely pessimistic as to the possibility of at least helping the control of syphilis with old methods based on a better knowledge of facts. In fact, I believe, we are entirely right in holding that moral education has

done much in the past to control and decrease immorality, and that it can do more. No one will deny the desirability and necessity of increasing our medical efforts to the utmost. But if such an increased effort is to be at the expense of the preventative measures of moral education and all that this implies, I fear that we will help to spread instead of check syphilis. I am opposed to making it merely a medical problem.

J. T. Fulton, State Training School: One of the physicians made reference to dispensary work that appealed strongly to me. It is a well-known fact that the more disreputable members of the medical profession prey upon those who are so unfortunate as to be afflicted with these diseases. Their offices are well known. They are marked with glaring signs. Their advertisements are carried far and wide. Those afflicted naturally fall into the clutches of these men, while the reputable men in the profession are not accessible. The very fact that men are reluctant to declare themselves to their own physicians renders it necessary to have some plan worked out whereby they may be induced to take proper treatment.

I feel very much as Dr. Beach does with reference to the feeble-minded—that the gathering up of the feeble-minded of this generation would not altogether solve the problem. Doubtless feeble-mindedness has much to do with the social vice, but it is not the determining factor. The clandestine side of this matter is of the first importance. All those who come into intimate contact with delinquent boys and girls are aware of this. One of the greatest influences in promoting a worthy life is religious training. Intelligent people familiar with the history of the church, acquainted with the power of truth when sincerely and vigorously proclaimed, KNOW that it exerts a powerful influence over the lives of men and women. In my judgment this problem cannot be successfully worked out if this vital matter is neglected.

I, of course, believe most heartily in using the means that the medical profession now has at its command to combat these diseases, but we must not forget that when we have employed every means possible, there is a spring down deep in human nature, referred to by Dr. Kilbourne, that can not be easily controlled. It has been a problem of generations, and the problem is not solved and will NOT be solved in this generation.

Miss M. E. Bryne, Mental Examiner, Minneapolis Public Schools: It occurred to me, while Mr. Hanna was talking about corralling these feeble-minded women, that even under our commitment laws as we have them today, it would be some time before they were corralled.

The examining board is made up of two physicians and the probate judge, and the Board of Control may designate some person skilled in mental diagnosis to attend the hearing of a feeble-minded case. While I have been called on some cases—I have not been called often enough to make a statement of much value—there has been only one case where both physicians have agreed with me that the person in question was feeble-minded enough to be committed to the care of the State Board of Control. Even professional people need educating on the subject of feeble-mindedness. Furthermore there is great need that additional provision be made in the way of a place in which to segregate the feeble-minded.

Dr. Kilbourne: Call 'them moral delinquents and commit them if possible.

James C. Matchitt, Secretary State Board of Visitors: We have been talking about this army of unfortunate women as being feeble-minded, or moral delinquents as Dr. Kilbourne says, which is doubtless true largely, but how can these women practice their prostitution without the aid of a still greater army of men, and how are you going to classify that army of men? I should like to ask the Doctor if they are called feeble-minded.

Dr. Kilbourne: I noticed the remark by Dr. Kuhlmann that more intellectual men were not what they ought to be than women. That is perfectly true, but men don't carry that on as a profession; some women do. And those women I claim are moral delinquents if not actually feeble-minded. Of course the man is also to blame. But it is not a question of morality; it may be a question of religion; it is the ideal, as Dr. Beach says.

How are we going to get rid of this thing and prevent young men from being ruined for life because of one indiscretion? I think there should be a strong regulation by law. Every man has got to enforce the moral law within himself.

WHEAT CONSERVATION RECIPES.

Yeast Oatmeal Bread.

1 cup liquid (milk and water).	1/2	cake compressed yeast softened in
2 tablespoons sugar.	1/4	cup liquid.
1 tablespoon fat.		1 cup rolled oats.
1 teaspoon salt.		2 1/2 cups wheat flour.

This proportion makes one loaf of bread..

Scald liquid and pour over rolled oats, sugar, salt, and fat. Let stand until lukewarm. Add yeast softened in warm water. Add flour and knead. Let rise until double its bulk. Knead again and place in pans. When light bake 45 minutes to 1 hour in a moderate oven.

Yeast Rice Bread.

1/2 cup milk	1/2	cake compressed yeast softened in
6 tablespoons sugar.	1/4	cup liquid.
4 tablespoons fat.		7 cups boiled rice.
1 1/2 teaspoons salt.		8 cups flour.

This proportion makes two loaves of bread.

Scald the milk with sugar, salt and fat. Let cool until lukewarm, and pour over the boiled rice. Add yeast which has been softened in 1/4 cup warm water. Stir in flour and knead. Let rise until double its bulk. Knead again and put into pans. Let rise until light, and bake 50 minutes to 1 hour in a moderate oven.

The rice should be boiled in a large quantity of boiling water, in order to insure a dry rice. At least 8 or 10 times as much water as rice should be used.

Yeast Rice Muffins.

1 cup milk.	1/2	cake compressed yeast softened in
4 tablespoons sugar.	1/4	cup liquid.
6 tablespoons fat.		3 cups boiled rice.
3/4 teaspoon salt.		4 cups flour.

Scald milk; add fat, sugar, salt, and rice. When lukewarm add yeast softened in 1/4 cup warm water. Add flour and mix thoroughly with a spoon. The mixture is too soft to knead. Let rise and when light drop into oiled muffin tins. Let rise and bake about 30 minutes in a moderately hot oven.

Boil rice as directed for yeast rice bread.

Yeast Cornmeal Bread No. 11.

1 1/4 cups liquid (milk and water).	2	teaspoons salt.
2 tablespoons sugar.	1/2	cake compressed yeast softened in
1 tablespoon fat.	1/4	cup liquid.
2/3 cup cornmeal		
2 1/3 cups flour.		

Directions for Making Yeast Cornmeal Breads. Add sugar, fat and salt to liquid and bring to the boiling point. Add the cornmeal slowly, stirring constantly until all is added. Bring to the boiling point. Remove from the fire and cool. These proportions of cornmeal and water result in so thick a mixture that to add the given amounts of flour looks impossible. It can be done, however. Add compressed yeast softened in 1 cup water. Add flour and knead. Let rise until about double its bulk knead again, and put in pans. When light, bake in a moderate oven for at least an hour.

If dried yeast is used, a sponge should be made from about 1/2 cup liquid taken from the amount given in the proportions and some of the flour. This is allowed to rise before adding the cornmeal mixture and the remainder of the flour.