REPORT OF THE TUBERCULOSIS COMMISSION..

Your Commission, appointed by Minutes of Council, dated April 29th, 1909, to inquire into the best method of controlling the ravages of Tuberculosis in the Province of New Brunswick, submit for your consideration the following memoranda :

Tuberculosis is one of the germ diseases, the special organism concerned being the Bacillus Tuberculosis of Koch, which invades both human beings and animals and is transmitted through the ingestion of food, but more especially through the medium of the air, being carried by the air and particles of moisture and dust. The seed once planted may remain for a shorter or longer period locked up and inert in the organism, frequently to be released and become active when the vitality of the body has been lowered by intercurrent affections.

Like the other infections, it finds easier access in the earlier years of life, but no age is exempt, while its ravages are most frequently observed during the second or third decade. As a rule, the earlier its outbreak after childhood the more rapid its course.

To a slight extent the disease is in a sense hereditary, but in an infinitely greater proportion it is directly infective, from individual to individual, and the infection is carried in the discharge from diseased conditions to lie, often for long periods, in wall and dust heap, especially where protected by shade and moisture until, received into a favoring host, it again revives.

The Bacillus itself is not readily acted upon by ordinary antiseptics in a moist state, but when deprived of moisture,is very readily destroyed by the actinic rays of the sun, and the active oxygen in the air. Thus we have a disease whose cause is known, mode of action followed, and propagation traced, one therefore preventable and in a measure curable, these modes and measures we present to you as follows:

In order to gain the benefit of the experiences of other States and Provinces which have already devoted considerable attention to this matter, a sub-committee set out on the 8th of September to visit various Sanatoria for Tuberculosis, beginning at Montreal. Here

we found that a commission had just been appointed by the Quebec government to review this whole subject, but had not yet held a session.

The Montreal Exhibition.

The Tuberculosis League of the City of Montreal had been holding a Tuberculosis Exhibition, which had lasted two weeks. This had proved to be of immense benefit in the dissemination of knowledge of the disease. Specimens of diseased lungs were shown in various stages of tuberculosis. Demonstrations were given by competent persons, by means of lantern slides, drawings, photographs, models and charts. The phonograph was also employed at intervals as a relief to the speaker.

In addition to this, drawings of healthy and unhealthy houses, school rooms and factories were exhibited side by side, much information in condensed form was placed upon the walls, many pamphlets were distributed and an opportunity given to subscribe to the funds of the League.

Educational Value of Sanatoriums.

After interviewing many authorities, we were convinced that in the treatment of Tuberculosis a Sanatorium was essential for the treatment of incipient cases, while something in the form of a home or hospital was necessary for intermediate or advanced cases. We may here remark that on subsequent investigation these means of dealing with tuberculosis patients were even more strongly emphasized, though of necessity were modified in each case to meet; the local conditions.

The educational value of these various institutions was so evident that the people in some instances were clamoring for homes and sanatoriums and day camps and other expedients. Hence, in some cases where buildings specifically designed for these purposes were not obtainable, modifications were made in existing general and private hospitals to meet the demand.

Health Authorities.

New York.—In New York the Board of Health is well constituted and made all powerful by enactments of the Legislature.. Public

heal&h is better protected because not only is compulsory registration of pulmonary tuberculosis required, but it is required within one week of the first time each person comes under the observation of a physician, and it becomes the duty of such persons to observe all the sanitary rules and regulations of the Board. Failing to do this, such cases are classed as dangerous to public health, and if necessary are forcibly placed in such a position as to be no longer a danger to others. All pulmonary cases are not only registered, but followed up by competent visitors and reported upon at regular intervals to the *Central Tuberculosis Bureau. An interest is also taken in the rest of the family and should the conditions demand it (for a tuberculosis parent may have infected the rest of the family) private charitable organizations, church societies and other philanthropic agencies working in unison, step in to see that want does not follow disease.

The Health Authorities are also in very close touch with the Educational Board, so that the teachers are instructed and the rising generation is securing an intelligent understanding of Hygiene in general, but more particularly as it applies to Tuberculosis.

In fact, we found the heartiest co-operation of the city and state, through its boards, with all charitable organizations.

Dispensaries or Clinics.

In larger eities dispensaries or clinics **have been established.** These are open on certain days and hours for giving advice and treatment. New York city has twenty of **them.** In these dispensaries records are made not only of the physical condition of the patient but also of his sanitary surroundings at home and at work. The patients are provided with printed instructions for the guidance of the family to prevent the spread of disease. Charitable assistance, Sanatorium treatment, and Hospital care are provided for suitable cases. These dispensaries report all cases to the Central Office of the Department of Health.

Specimens of sputum are obtained not only by dispensaries, but by private practitioners and sent to the Board for microscopical examination and a report is sent to the attending physician free of charge. In the case of private patients the information so found is

for registration only, and no further action is taken unless with the special permission of the attending physician. In 1908, many thousands of cases were so examined, and 27 per cent. were found to be tubercular.

Boston.

Boston has made special efforts to obtain knowledge of incipient cases. This was extremely difficult at first, but is now becoming much easier, owing to the careful observation of the source of infection and the associates of the afflicted. The most favorable cases for recovery are sent to one institution, the ambulatory or intermediate cases to another-for instance a night or day camp—while those in the most advanced condition are furnished with special buildings for hospital care. Even somewhat advanced cases often recover to such an extent under sanatorium treatment that they can be transferred to an institute for "After care" and ultimately allowed to return to their homes, but are always required to report to the dispensaries as to future progress.

It might be noted that the previous remarks apply chiefly to the poor, but those who are able to have the attention and care of private medical attendants are subject to the same sanitary laws. The only difference being that the onus falls on the attending physician to see that they are carried out, and twice a year he must report to the Department on the condition of his patient-change of address or any other such information as the Department may require as to the patient's condition, etc.

Inspector--Light, Ventilation, Etc.

In Massachusetts 15 Health Inspectors are appointed for a term of five years to gather information regarding the prevalence of Tuberculosis and other diseases and influence dangerous to the health of the public. They are empowered to enforce laws in regard to light, ventilation and cleanliness in factories, schools, and all public buildings, and to regulate health matters of operatives. They issue all licenses for work to be done in tenement houses. This in Boston is considered most important, and by it many unthought of evils were remedied.

Schools.

As overcrowding is conducive to disease, and appears to have been very common in the Boston schools, the question of ventilation. has received a new prominence.

The Report upon "Tuberculosis among school children in Boston" inclines to the idea that infection with Tuberculosis is nearly, always acquired in early life, though it may remain inactive until the strain of school life and confinement and the lessening of the bodily resistance is sufficient to permit the organism to gain the upper hand and active Tuberculosis in some form follows as a result. These general facts are quoted:

1st. "Children are more susceptible to the infection of Tu-"berculosis than are adults."

2nd. "Presence of the disease in children is far less evident "than in adults."

3rd. "The disease in early years of life is far less fatal than "in adults."

4th. "The disease more frequently remains dormant than in. "adults, and as such is the probable cause of very many sickly, poorly-developed and backward children."

As a consequence of the investigation a more thorough and systematic examination of suspected children was made, and those found to be infected are being given special attention-and for some of them an out-of-door school has been established which promises well. The concluding remarks of the commission are so much to the point that we also quote:

"A child spends a large part of its life in the schoolroom. "Strong and healthy children are those that have spent, the most "time in the open air. Life in the open air is the best investment "one who is not strong can make. The nearer the school-room can "approximate to the open air the larger will be the return to the "city on its investment of schools. There would seem to be need' "in all school rooms of a more abundant supply of fresh air, of main-"taining rooms at proper temperature, and the lower the temperature "the better the air, of proper, sufficient and hygenic method of dust-

"ing, frequently done ; of the frequent washing of rooms ; of frequent "and prolonged airing of all parts of the school house by open win- "dows, and every means employed to the end that the place and air "where the child spends so much of its life as nearly as possible "that of out of doors in a dustless region."

In addition to the above there is also carried on in Boston practical methods of instructing all children, particularly tubercular ones, in the laws of personal and home hygiene, and emphasis is laid on dental and oral hygiene as an important safeguard against' disease, for as Dr. Osler has recently trenchantly remarked: "Defective teeth cause more physical deterioration than does alcohol."

Every place we visited we found co-operation of activity of all factors making for general betterment. For example:

State and Provincial or County Associations for the Prevention of Tuberculosis.

Boards of Education and all other boards, including:
Universities,
Normal Schools,
Teachers' and Farmers' Institutes,
Associated Charities,
Clergymen and all Church Societies and Helpers,
Women's Clubs,
All employers of labor,
Labor Unions, such as Printers' and Painters Unions, etc.
Tuberculosis Classes,
Fraternal organizations and such like.

It is not necessary for all of these bodies to be directly responsible in this particular cause for their country's good, but each of them can do something.

Statistics.

By these measures and agencies the death rate from Pulmonary Tuberculosis, in New York, has fallen during the years between 1881 to 1908 by 50 per cent., while in Boston the death rate of consumption has fallen from 21.1 in 1903 to 17.1 in 1908 per 10,000 population.

From our investigations and data at hand, we would respectfully submit the following recommendations :

Recommendations.

It is generally admitted that for efficiency in combatting this disease, certain factors are necessary :

1. The dissemination of knowledge in regard to the disease:
   (*a*) to the patient himself.
   (b) to those with whom he may come in contact.
   (*c*) and also to the general public.

The former is best attained by example and word of mouth, the latter by literature for the public, in short readable pamphlets, and here the publicity given by newspapers is of paramount importance. (For other ways see later.)

2. Compulsory notification (with registration at a central off ice of all cases) under penalty of a fine and making such cases by law a condition dangerous to public health, and further that such information be made available to the various charitable or other organized bodies working for the prevention of this disease.

3. Examination of the situation in each case with a view to eradicate the danger and a mechanical recurrent attention to the same until it is effected:

   (a) Obligatory free disinfection of buildings and contents after death, or removal.
   (b) Prohibition of promiscuous spitting (but with provision for expectoration in all places of public resort.)
   (c) Free examination of sputum in all necessary cases.

4. A nurse to visit the homes of the sick to investigate, instruct and assist all cases referred to her.

5. Urgent attention should be called to the existing law governing the ventilation of a21 public buildings. See Rule Provincial Board of Health-Law regarding Ventilation :

"It shall be the duty of every corporate body, managing commit-"tees, trustees or persons, owning any church, public hall, school or "other building used for church purposes, public meetings, school-"houses or school room, or any other purpose to provide sufficient "means for the proper ventilation of such building; and no public "'body or person in charge of any church or place of worship, no ""master or teacher of any school, public or private, of any Sunday

"school shall so far omit or neglect an. duty or reasonable precau-
"tions to the extent to which provision has been made in the build-
"ing therefor respecting the temperature, ventilation or cleanliness
"of any church, place of worship or school-room by reason of such
"neglect or omission the health of any person shall suffer or incur
"any unavoidable peril or detriment."

We recommend also' that these special precautions should be taken in lumber camps, and in places of compulsory confinement, etc., etc.

6. Boards of Health should take greater interest in this disease. It is their duty to the public to do' so. They have now no excuse to neglect this duty, as the disease has been made a notifiable one.

7. That the Provincial Board of Health in particular be clothed with all necessary power and stimulated to take an active interest in this matter and instruct county boards to do the same, as it requires energetic action not lethargy to fight this disease, and as it would of necessity require much time, attention and special knowledge to attend to the various details throughout the province in such a crusade, we suggest a special person and one specially qualified for the position be selected to act under the Provincial Board of Health and direct the Public Health Board in this particular disease.

Such medical adviser of the Board of Health should keep all statistics, they being supplied to him by local boards at once-give advice, lectures and in a general way act and work in the best interests of all concerned and his advice should be free to all public bodies who seek it.

8. We suggest that special dispensaries for Tuberculosis form a part or branch of all hospitals endowed or assisted by the Province and special Tuberculosis "classes" be conducted in connection with the same agreeably to the directions of the qualified authority, either directly or through charitable organizations, not only that the afflicted may be treated, but that every effort may be made to disseminate a proper understanding of the disease.

9. That under the medical director of Public Health [as suggested in Number 7) one of the medical members of the County

Boards of Health (or such other person as may be specially qualified and appointed) should act locally in regard to the matters under consideration.

10. We desire to recommend that a travelling educational exhibit on Tuberculosis should be obtained. Popular lectures should be delivered in connection with the exhibit, and this should be made a feature of all provincial exhibitions, agricultural shows, etc. Literature should be printed by the Province of various kinds to be posted up or distributed at times and places considered advisable and placed at the disposal of any Boards or bodies interested.

It would be well also to acquire a Library dealing with Tuberculosis in the public interests. The public libraries of the Province could easily collect much of it without or at least with little cost, where it could be used for reference, etc. Exhibits appeal to the public and impress them far more effectively than talks or literature.

11. That we respectfully urge upon the Board of Education the desirability of having the chapter on Tuberculosis in the new Health Reader introduced as early as possible during the Health course.

12. Inasmuch as Tuberculosis is extremely common among children, and is readily communicated to others, especially those afflicted with adenoids and colds, we submit that medical inspection of schools be made obligatory.

13. We further submit that even if all the provisions we have outlined respecting our homes and public places could be carried out, that further powers should be secured to deal with railway sanitation. (This may involve measures of an inter-provincial character).

14. We also recommend that it is desirable that an uniform nomenclature be adopted throughout our Province and if the terms employed in the Dominion census, and some other provinces could be used, we should then have a basis of comparison which would be of great service.

Finally, as it is now well recognized and as warnings have been frequently given that this disease is one best treated where it is contracted, if a permanent cure is expected, and a return to one's

native air is contemplated, we recommend that a Sanatorium be established in our own Province for incipient cases of Tuberculosis..

SANATORIUM.

In the establishing of a Sanatorium, three purposes should be kept clearly in view :

1.. The selection of a site.
2. The form of building.
3. The Superintendent.

The Site.

In selecting a site we should be guided by the following principles :

1. Near centre of population.
2. Easy of access.
3. On main line of railway and not far from it by a road.
4. On elevated land.
5. With a pleasing aspect.
6. Protected from exposure.
7. On good 'dry porous land.
8. With an ample supply of good water.
9. With a southern aspect.
10. Within easy access of a good supply of food and country produce.
11. Capable of good drainage.
12. Any other circumstances allowing it to be built and conducted along cheap, simple and economical lines.
13. Good climatic conditions.
14. A good quantity of surrounding land for expansion, cultivation, pleasure, etc.

A Superintendent.

We regard as especially important that the physician in charge of the institution should be one thoroughly trained in Sanatorium work both as regards Laboratory work and administrative capacity,

and that he should have absolute power to decide who are and who are not suitable patients for admission.

We further particularly recommend that advanced cases, as being the principal source of infection to others, and unsuitable to mix with the healthy and those who are even moderately ill, should be treated in separate institutions, particularly suited to their own conditions.

Being guided by the above principles, we recommend that a Sanatorium for incipient cases be built on the line of the Canadian Pacific Railway and between Welsford and Fredericton Junction.

Form of Building.

Coming now to consider the form of building best suited for New Brunswick, it may be briefly stated as follows, that in the treatment of Tuberculosis :

1. Care of early cases requires suitable buildings, and suitable surroundings by themselves.

2. Advanced cases should be segregated and so as foci of affection be brought under control. While it is most important to take care of the latter class, it would serve better as an object lesson and source of education to begin with the former and come to the latter as rapidly as possible thereafter.

3. The Institution itself should be divided into:

(a) An administrative building.

(b) Buildings for patients.

These ideas we have found carried out in all the institutions we have visited, among others being the famous institutions of Saranac Lake, associated with the name of Trudeau, Matapan Cottage Hospital (Boston) and Hebron (Maine).

Among these the type best suited to our requirements for the housing of patients seemed to be that of the Matapan Cottage Hospital. Such a building should contain (say) twenty-four patients, twelve in each wing, and so could accommodate both male and female patients, and would be capable of further extension if necessary—or other units on somewhat the same principle, could be added as is done at Hebron. (See Appendix B.).

An Administration Building should be separate and distinct,

snd contains amongst other rooms accommodation for dining rooms, etc., for patients and staff, etc., sleeping accommodation, etc., for staff physicians' office apartments and laboratory, etc., reception room and general sitting room, and such additional accommodation and apparatus as would be necessary for the treatment and attention of those in the institution and their requirements in general.

Such a building would be necessarily of a somewhat substantial character and should be planned on lines possible of expansion at a later date if necessary.

We further suggest that said Sanatorium be under the future supervision and control of the members of the Executive Council sitting as commissioners with such additional members as they may think requisite for the government of carrying on of the same, and decide upon such charges to the patients admitted for treatment as may seem to them just to the parties concerned.

It affords us great pleasure to state that the outlook of those persons whom it was our privilege to meet in visiting various institutions was of most hopeful character as to the possibility of gradually reducing this disease, and we would specially acknowledge our indebtedness for much of our information and many a courtesy to Dr. Hamilton, of Montreal, Dr. Livingston Farrand, the Executive Secretary, and Dr. Thomas S. Carrington, the Assistant Secretary of the National Association for the Study of Tuberculosis, as well as Dr. Knopf, of New York, Dr. A. E. Loch, of Boston, and Dr. E. Nichols, of Hebron.

In face of the fact that this may appear to be presented as too much of a medical matter, we must add these aphorisms:

1. That Tuberculosis is a germ disease and is communicated either directly or indirectly by being inhaled, or indirectly by being ingested.

2. The germs are contained in the expectoration of discharge from open sores and so should in all cases be destroyed and not allowed to dry and' be wafted about.

3. Indiscriminate kissing and the marriage of weak or predisposed persons discouraged.

4. All milk not positively known to be above suspicion should be boiled or sterilized-especially if for the use of children.

5. The caressing of all domestic animals should be discouraged-as they are frequently tubercular.

6. Life in the open air and healthy respiratory exercises should be encouraged and practiced by the growing child.

'7. The predisposed should choose for an occupation any form of outdoor life.

In conclusion, let it be understood that volumes may be filled on the question of Tuberculosis, and we have but briefly dwelt on such aspects as are of pressing and general importance.

It must not be forgotten that here as elsewhere is necessary the soil as well as the seed, and while poverty and distressing circumstances are detrimental, yet the individual factor, unfortunate ancestry, unstable, nervous system and bad habits of living, must bear an equal liability in the lowering of resisting power,

Ed.ucation and encouragement will accomplish much. When once it is thoroughly recognized that after all the commonest source of infection is from the careless cougher, we have the key to safety in ordinary social life, and one need not make of the unfortunate consumptive a social outcast. *There* is no contagion to fear from the well-taught tubercular patient and panic from this. source is unnecessary and unworthy. Let him not be avoided, but given a chance, a chance possibly to recover, if not to prolong his life to the rejoicing of his family, but if neither of these are to be, at least he may be so trained as to cease to be a centre of infection and a menace to the community. If we were not moved by the ordinary feeling of the present day that the sick must not be'neglected then remains always the economic factor. The individual represents value in dollars and cents, too many dollars indeed to be disregarded in this scantily populated country, and among people who have the material benefits of life so plentifully found in our favored province, certainly humanity as well as the necessity for development require us to adopt measures to relieve the infected and protect the suffering, both of which aims may be readily accomplished by well directed and persistent effort.

In concluding this report, we would desire to add that the Commission is possessed of a variety of information on many aspects of this subject which it would be glad to communicate were any details of other institutions required. In closing, we desire to draw particular attention to a pamphlet by Dr. L. Farrand which we have added as an appendix, (C).

APPENDIX A.

It is not our intention to speak with authority on matters of food, but we must recognize that milk is the chief diet of children and a most important addition to the food of adults as well. Therefore it is a necessity that it be pure—as well as our meat, etc. From the federal meat inspection of the United States, we find that 10 per cent. of the milch cows are affected with Tuberculosis. It may be the same in New Brunswick, but we have no statistics. Royal Commission of Tuberculosis in England puts it 20 per cent. to 30 per cent. of all cows.

One Tuberculosis cow supplies enough milk to infect many. children and adults as well, and we shudder to think of every tenth cow being affected-and we must remember that we get a mixed milk supply. Still Tuberculosis in cattle is a matter not considered within the Province-only imported cattle are' inspected or examined, and the same applies to meat—and any one with a sickly animal (from any disease) can slaughter it in private and bring it to the market or elsewhere and expose it for sale. Is our population so small or indifferent that we cannot have all our meat killed under the central inspection of a city or county slaughter house and not privately, as at present ? The present condition of affairs in this respect we strongly condemn, but would recommend it to the earnest attention of the authorities concerned. If the inspection of slaughtered animals were enforced we would find farmers taking a greater interest in the sanitary surroundings of their cattle. The farmer or herdsman is apt to think that huddling cattle together in the close atmosphere of an unventilated, dark, moist barn is necessary to keep them warm—far better would it be for them to be shivering out in the open air, as long as they got sufficient to eat, and they would then have little tuberculosis.

We consider the article on "The Social Aspect of Tuberculosis in Animals," by Rev. Hunter Boyd, in the Report on Agriculture for New Brunswick, *1908*, so important a communication that it be

considered a part of this document, and would recommend that it be printed and spread through the country, and to it might be added Chap. 16 of Dr. Knopf's Prize Essay on Tuberculosis which relates to the subject, and would be of great benefit to the owners of cattle.

Recommendations re Bovine Tuberculosis in Canada.

(Approved by your Commissioners.)

"That pending the evolution and adoption of some method "more effective and satisfactory than has been found practicable for "the control of bovine tuberculosis, with a view to its ultimate "eradication from the herds of the Dominion, it is recommended that "steps be taken at once to secure in those provinces, where legislation "of the kind does not now exist, such amendments to the Municipal "or Public Health Acts as will enable municipalities to pass by-laws "providing for the close inspection and testing with tuberculin of "all cows supplying milk for public consumption, prohibiting the "sale of milk from any save those found to be healthy.

"Further, that similar legislation be secured where necessary to "empower municipalities to prohibit, the private slaughtering of ani- "mals for food purposes, and to provide public abattoirs in which "all such animals may be killed under proper official inspection of a "character at least equal to that now enforced under the Meat and "Canned Foods Act in the case of meat food products intended for "export or inter-provincial trade.

"And further, that through all possible channels a vigorous and "systematic effort be made to create and foster a strong public opin- "ion in favor of the adoption in every community of the important "safeguards of public health above mentioned."

APPENDIX B.

*The Municipal Hospital for Advanced Consumptives in Boston.**

(By Edwin A. Locke, A. M., M. D., Chief of Staff, Boston Consumptives' Hospital., Second Assistant Visiting Physician Boston City Hospital! Assistant in Clinical Medicine, Harvard Medical School; and Simon F. Cox, M. D., Superintendent Boston Consumptives' Hospital.)

Through a comprehensive organization under municipal control, the City of Boston is attempting to solve the local problem of controlling tuberculosis. This campaign has been organized along the broadest and most comprehensive lines, and brings into co-operation all the public and private agencies which are directly or indirectly concerned in this special work. Since the state provides ample sanatorium accommodations in the State Sanatorium at Rutland for all consumptives in the incipient stage, our plan has naturally been made to include the care of all other cases. It is the purpose of the organization to have examined and permanently recorded at the Out-Patient Department (Dispensary) of the Boston Consumptives' Hospital, as a central bureau, all cases of tuberculosis in the city, except those who may have a private physician. So far as possible the incipient cases are sent to the State Sanatorium, in some instances the board of the patient while there being paid by the Consumptives' Hospital, and in all cases the family kept under supervision. All other cases remain under the control of the Consumptives' Hospital, the particular disposition being in accordance with. the scheme described below.

While admitting that the great mass of the consumptive poor must of necessity be treated and supervised in their homes, we believe that hospital care should be provided for certain cases; i. e., first, all destitute cases; second, all those who, because of ignorance, carelessness or indifference, are a menace to the community ; and

* Prepared for the International Congress on Tuberculosis, held in Washington, Sept. 21 to Oct. 12, 1908.

third, the majority of all dying cases. The strict isolation of all these classes we believe to be absolutely essential to the control of the spread of the disease, and we are, therefore, attempting to furnish institutional treatment for a very large group of the advanced consumptives. For these various classes, our plan makes certain provisions which are, perhaps, somewhat unique, and in part, at least, overcome the various serious difficulties attending such work. We are at present carrying out plans for the erection of a series of institutions adapted to this purpose. Some of these are already finished; others are now being built.

With reference to the hospital facilities needed, we have roughly divided all advanced cases into four general groups:

L-Those in the last stages, or the hopeless, and, in many instances, dying, cases.

These, in consequence of the late stage of the disease, in which the sputum is, as a rule, more abaundant, are clearly the greatest danger to others. As a result of the extreme poverty which so commonly accompanies the progress of the disease, they are frequently destitute and live under conditions which are most favorable to contagion to others. They are, in short, the most dangerous foci of infection. For all such a permanent hospital, so built and equipped as to be best adapted to the carrying out of the most exact prophylactic measures, and to afford the greatest possible comfort to the patients, is necessary. In any large centre there is always a considerable number of ignorant, careless and indifferent consumptives, who can be properly supervised only when under the restrictions of residence in a hospital. When once admitted, all such cases, with but few exceptions, should be permanently detained, forcibly, if necessary.

It is to be remembered that for this class of consumptives the same hospital accommodations are needed as for those conditions treated in an acute hospital. Since so many of the patients will die in the hospital, it is inevitable that its reputation should suffer and a certain prejudice arise in the minds of the class for whom it is built. Every attention should be given to overcoming this by making the wards attractive and by providing every possible comfort for the unfortunate afflicted. All of these considerations add to the expense of the hospital.

2.-A far larger group of ambulatory, moderately advanced consumptives, who, while incapable of regular work, yet enjoy a reasonable degree of health.

In a few of these there are reasonable prospects of a complete arrest of the disease, and, in a considerably greater percentage, of restoration to partial working capacity. Here the permanent hospital above mentioned, while it may offer adequate advantages for the best results of treatment, is not suitable because of the association with the most hopeless. The expenses of construction and maintenance of such a hospital are also unnecessarily great. Being less advanced, they are, as a rule, not such prolific centres for the spread of the disease, and are not so frequently the victims of extreme poverty. Many have reasonably good homes, where they can remain at night under favorable conditions. If constantly under a well-regulated, "hygienic-dietetic regime" during the day, and properly supervised in their homes while there, most satisfactory results can be obtained. Such provisions can be made at a minimum expense in the sanatorium day-camp to be described later.

3.—Many in this ambulatory stage, however, either have no homes, or such as are entirely unsuited to their needs, and besides the treatment furnished by the camp during the day must have provisions made for care at night also.

Probably the best and most inexpensive type of institution with this end in view is the "cottage hospital," or "lean-to." If properly constructed and located, the patient can be given every comfort, and the sanatorium treatment made possible. The grouping of these three types of institutions together under a single management greatly facilitates the transfer of patients from one to another, according to the improvement or advance of the disease.

4. A miscellaneous group for various reasons are unable or unwilling to leave their homes for treatment.

Many are more or less regularly engaged in some occupation; others have responsibilities in the home which cannot be given up or transferred to others, and still others are unwilling, though at liberty, to undergo treatment outside their homes. While it must

be admitted that the results from this method are less satisfactory, yet surprisingly good results can be obtained by home treatment under the direction of a tuberculosis dispensary. The dispensary nurses visiting in the homes can supervise the treatment laid down at the visit to the clinic, and attend to the carrying out of measures to the end that the other members of the family shall be protected. When adequate hospital treatment is once furnished for the advanced consumptives, this group will become a considerably smaller one, for the general public will soon perceive that in a hospital the hopeless can be best cared for and the less advanced offered greater assurance of improvement.

The Boston Consump ti ves Hospital Plan.

The Boston Consumptives' Hospital, a distinct city department, is under the management of a board of seven unpaid trustees, appointed by the mayor. The entire group of institutions is, administered by a single executive head (superintendent), and the medical work by a chief of staff and twenty assistant physicians. A uniform system of records is in use in all departments of the hospital.

Nearly two years ago the trustees of the Boston Consumptives" Hospital purchased an estate of fifty-five acres in Mattapan for *$65,000,* and ammediately laid plans for the development of a comprehensive group of buildings, as follows: A central. hospital of six. ward buildings, a permanent day camp, a group of cottage hospital wards ("lean-to's"), an administration, domestic and pathological building, chapel, laundry, nurses' home and central power station.. With the limited funds so far furnished *($307,000)* by the city, only the begenning of the group has been made, i. e., a central power station, the day camp, one cottage hospital and a central hospital of two pavilions. The estate is in a quiet suburb of the city, easily accessible by the electric or steam car lines, and in every respect is ideally suited to the development of the plans for the hospital group. On the highest portion of the land, far removed from the street, the main hospital is being built, and at a distance of a few hundred feet in front, on land sloping to the south and sheltered to the north by immense bowlders of pudding stones and a grove of

large trees, are located the first cottage hospital and the day-camp building.

A. Out-Patient Department. (Dispensary.)

This department is situated in the center of the city ('13 Burroughs Place), in the most favorable location possible with reference to those sections of the city where tuberculosis is most prevalent. As stated, it is our purpose to make the Out-Patient Department or Dispensary the central bureau, where all cases shall first be examined and permantly recorded. When discharged from any of these hospitals, the patient; returns to the Dispensary in order that a permanent record may be kept of him and his whereabouts, and that he may remain under supervision. Through co-operation with the Board of Health, the Boston Association for the Relief and Control of Tuberculosis and the three other tuberculosis dispensaries in the city, we are attempting a complete registration of all cases of tuberculosis in Boston. A four-story house was leased by the trustees, renovated and adapted to the needs of a tuberculosis clinic. The first clinic day was Sept. 11, 1907. The Dispensary is open four mornings each week from nine to twelve o'clock, Saturdays being reserved for children. An evening clinic is contemplated. Six physicians and four nurses are in attendance on each clinic morning.

Each patient is carefully studied, and, as a routine, receives a systematic examination, including the throat and nose. On the day following the visit to the Out,-Patient Department the patient is visited in the home by one of the dispenssry nurses, and a full report of the social conditions is made on special record cards to the department. As a result of all these. investigations, the most suitable disposition possible is made of the patient. The early cases are sent to the sanatorium, the far advanced, so far as is possible, to one of the many hospitals receiving this class. Obviously, the majority of advanced cases will not or cannot enter an institution, and these are put under home treatment. They are required to report at the dispensary at stated intervals, and are carefully supervised in their homes by a nurse from the clinic. Over 900 consumptives are at present under this form of treatment. For the purpose of this supervision, the city is divided into district's, and to each is assigned a

nurse from the clinic. The visiting nurses work in constant co-operation with the Associated Charities, Board of Health, City Charities and all benevolent associations and organizations in their respective districts. At present, twelve regular nurses are employed in this work under the supervision of a superintendent of nurses, herself a trained social worker. Each nurse attends the regular monthly conference of the Associated Charities workers for her district.

'It is the policy of the Out-Patient Department to seek relief for the needy through already existing charitable societies, as it is evident that relief can be given more economically and wisely in this way than through a special department established by the Consumptives' Hospital. Milk is, however, furnished gratis by the Dispensary to poor patients especially needing it, the expense being met from the general appropriation for maintenance. Approximately 9,000 quarts are dispensed each month.

The details of work of the Out-Patient Department do not differ in essential respects from those in vogue in other special tuberculosis clinics, and are too well known to merit enumeration here.

B. Hospital for the Far-Advanced or Dying Cases.

At the beginning of our work the most urgent need was felt for beds for the consumptives in the last stages of the disease, and consequently the earliest efforts of the trustees were directed to the erection of a hospital for this class. For reasons stated above, this is the class most needing care and for whom isolation is most necessary. In the development of plans for the hospital, therefore, two objects were constantly kept in mind, namely, the care of the patient and the provisions for the carrying out of precise phophylatic measures. The care of the advanced consumptive in the last stages of the disease differs essentially from that adaptable in the less advanced and ambulatory patient. The type of building suitable for the terminal case, chosen by the trustees after consultation with the leading specialists in tuberculosis, combines comfort to the sufferer with simplicity of management.

'The hospital is of the pavilion type, with two-story ward build-

ings facing south and connected by open corridors. The service rooms are placed in the centre of each floor, thus dividing the otherwise large ward into two small ones of fourteen beds each. This arrangement was adopted essentially because of the economy in administration which it affords and the obvious advantages of relatively small wards. The administration portion includes a store and linen closet, bowl-room for washing of hands and brushing of teeth, serving room or diet kitchen, bath room, utensil room and toilet room. All these rooms are equipped in the latest and most approved manner, including a separate ventilating system and arrangements for thorough disinfection. On the roof is a large mattress room, provided with glass roof and sides, where the mattresses, pillows and blankets can be sunned and aired. It is so equipped that it can be thoroughly disinfected with formaldehyde gas. Between each two pavilions is a veranda built out from the connecting corridor, and at the southerly end of each ward building is a wide piazza sufficient in size to accommodate all the beds in the ward.

The entire structure is of absolutely fire-proof material. The foundations and walls are of reinforced concrete. The building is plastered on the inside to a height of one foot from the floor with a mixture of Keen and Portland cement brought to a smooth surface. This wainscot is carried to the floor in a concave base and forms a close joint with the linoleum and terrazzo. All angles are rounded. Above this, the walls and ceiling are of gypsum fiber plaster. All the floor beams are steel, the partitions of terra cotta and the lathing of metal. The floors are made of reinforced concrete, smoothed and levelled with cement, and covered in the wards, and administrative corridor with battleship linoleum cemented down to the concrete floor, while the administration or service rooms are of terrazzo laid on the concrete floor. No wood architraves are used about the doors and windows. Here the plaster rounds to the door. or window frame, by which it is overlapped. A half-round strip is fitted to the frame, making a tight joint with the plaster. The windows are triple hung and extend from two feet six inches from the floor to the ceiling, thus affording a maximum of sunlight. By this means the usual transom over the windows is avoided, it being possible to use the upper sash as a transom. The doors are of the usual,

hospital type, and are wide enough to allow beds to pass readily. The wood finish is straight grain white oak veneer, carefully and fully filled. Vacuum cleaner service has been installed, with outlets conveniently placed to permit of ease in operation.

The corridors connecting the ward buildings have concrete foundations up to the water table like the ward buildings. Above they are of wood. The floors are covered with steamship deck duck laid in paint and covered with several coats of lead and oil paint. The southerly side is permanently open; the northerly side is provided with a portable partition easily removable.

The building will be lighted by electricity, with emergency gas outlets. The wards are lighted by means of reflected light from the ceiling supplemented by individual lights from the walls over each bed.

The second ward building immediately to be built is of the same general type, but instead of open wards of fourteen beds each, has small wards of four and five beds each and single rooms. The construction and finish is similar to that in the first building.

The Sanatorium Day Camp.

Early in July of the present year a permanent day camp building was opened, adjacent to the main hospital above described. It is of wood, 150 by 36 feet, one story in height, and unfinished on the inside. An open veranda, 16 feet wide, provided with rolling canvas curtains overhead, runs the entire southerly side of the building.; The structure includes a store-room with refrigerators, a large kitchen, a dining-room for patients, a nurses' dining-room, a rest room for men and one for women, lavatories, a clinical laboratory, a laryngological room, a linen room, a nurses' office, an office for the resident physicians and a large examining room. The present arrangements provides 180 places in the dining-room, but 250 can be made. Heat and light are furnished from the central power station.

The camp is situated on the slope of the rising ground and is sheltered to the north by ledges and bowlders and numerous trees, thus offering unusual opportunities for rest for patients in the open air at all seasons of the year. At least 200 patients can be in regular attendance, and more than twice as many furnished food from the

large kitchen. The cost of the day-camp, including equipment, was $14,000.

The routine of treatment is practically identical with that employed in the sanatorium. The patients are required to be in attendance at the camp not later than 8.30 each morning. On arrival, the patients report at the office, where their temperature and pulse are taken. A breakfast consisting of cereal, with milk and sugar, milk (coffee on the colder days), crackers, bread and butter is served at 9.30. During the forenoon the time is largely given up to rest in the open air, although games are permitted when the condition of the patient will admit, and graduated exercises is also prescribed. Dinner is served at 12.30, and includes soup, meat or fish, potatoes and one other vegetable, bread, butter, milk and a simple desert. Following the noon meal all patients are required to remain absolutely at rest in a reclining chair for one hour. At 4 o'clock the afternodn temperature is taken. A supper of cold meat (fish, eggs, etc.,) fruit, milk,. crackers, bread and butter (on cold days hot cocoa) is served at 4.30. A special diet of milk and eggs is furnished to patients as prescribed by the physician in charge. During the winter months the patients leave the camp for their homes from 4.30 to 5; in the summer from 5.30 to 6.

At entrance to the camp the patient is given a steamer chair and three blankets, each bearing his number, which remain his property so long as he continues a member of the institution.

Two of the assistant physicians are in constant attendance at the camp. as well as two graduate nurses. At present the supervision of the patient in his home is done by the visiting nurses in the Out-Patient Department, but in the near future it is expected that a third nurse will be assigned to the camp, who shall devote her entire time to this important work. The most rigid discipline regarding attendance and faithfulness in carrying out the treatment ordered is maintained. Delinquents are systematically followed up by the visiting nurses.

The Cottage Hospital.

The present cottage hospital is a one-story wooden structure similar to those in use in many of the sanatoria, and consists of a

central portion and wings or wards. The central portion comprises an assembly room, locker room, 2 shower baths, a tub bath, 6 lavatories and 4 water closets, an emergency ward of 2 beds, a linen room and a nurse's office. The wards are 60 by 18 feet, and each contains a single row of 15 beds. Along the entire front of each ward is a wide veranda which is separated from the wards only by a glass partition consisting of wide triple-hung windows extending from the floor to the roof. Along the north side of the wards is also a row of double-hung windows 4 feet from the floor. The walls are of plaster, as in the ward building, and the floors of first quality maple. It is heated by steam and lighted by electricity. The total cost including equipment is $15,000.

The cottage is designed for the moderately advanced cases for whom it is necessary to furnish accommodations for the night as well as treatment during the day. Food for the patients will be prepared and served in the day camp, which is immediately adjacent, and precisely the same routine of treatment will be carried out. It is hoped to build a group of cottages about the camp as a center.

APPENDIX C.

A Comprehensive Program for the Prevention of Tuberculosis,

By Livingston Farrand, M.D.

'Executive Secretary National Association for the Study and Prevention of Tuberculosis, New York.

It is evident that *a* subject as wide as that indicated by the announced title of the present paper can only be sketched on the broadest lines. It may be possible, however, to summarize certain of the lessons to be derived from the complex experiences of the last few years and such will be my task.

The basis of the campaign is the logical corollary of the pathological and clinical discoveries of the past twenty-five years. If tuberculosis is an infectious disease, the cause of which is known and can be isolated, it is necessarily preventable. The organized effort,. therefore, of the present day is in the direction of this prevention.

That one means of prevention is the destruction of the cause is obvious; that an equally important adjunct in accomplishing the same end is the ability of individuals to resist the attack is a matter of observation and experien *ce.* Our eff orts, therefore, must be directed: along either or both of these two lines-to eliminate centers of infection and to increase the resisting power of individuals. It is the more definite attack upon centers of infection and the immediate procedure necessary to reduce the dangers of the situation that present specific opportunities and permit of a relatively definite program.

Upon one point particular emphasis should be laid at the outset,. and that is that in order to accomplish results in any degree commensurate with the importance of the problem and the expenditure of energy involved, the responsibility for action must be placed primarily and squarely upon the local public authorities. The private measures, other than those of education, initiated by voluntary associations or individuals,, the inspiring efforts toward the care of suffering consumptives, are all to be regarded as temporary expedients only, justifiable so long as the public authorities fail to make

proper provision, or as means of educating those authorities to a sense of their responsibility.

With our political organization such as it is, it seems impossible to attack this disease in its recognized strongholds on a national scale under the direction of the national government. With the heartiest sympathy for the present promising movement for the establishment of a National Bureau or Department of Health, the chief promise of such a foundation in the tuberculosis campaign must be regarded as one of education and stimulation. As a distributor of information and authority and a co-ordinator of lines of effort of interstate or wider scope it will prove an adjunct of great value in the work. Such problems as those of infection in transportation, immigration, and similar fields of national significance could best be handled by such an agency.

Experience is showing that much the same state of affairs holds true of governmental effort directed from State capitols. The agitation for State sanatoriums, which for some years occupied the attention, and apparently filled the horizon, of those interested in the tuberculosis campaign in many of our commonwealths, has proved of chief value as an educational stimulus. As factors in the direct attack upon the disease these institutions may in most instances be regarded as practically negligible.

That there is a State responsibility cannot be denied. With our political constitution such as it is, it is clear that certain general regulations must be adopted by our legislature and by State boards of health in order to legitimize, and later stimulate, the local authorities to a performance of their normal tasks. Such State laws, therefore, as specify the duties of municipal boards of health, and provide means of insuring at least the possibility of their fulfilment, constitute a preliminary demand of immediate necessity.

Legislation enabling municipalities and counties to establish institutions for the care of consumptives is also a present need. The outlook for adequate legislation of this character has never been so promising as during the current, year.

Another distinctly encouraging sign of the times is the awakening of certain State boards of health to their opportunities along educational lines in the tuberculosis campaign. The recent activity of

the boards in Maryland, Ohio, Minnesota, New York, and other States gives promise of results which could not be accomplished in equal time with any other machinery available or likely to become available in the very near future.

It is, however, an axiom that tuberculosis is a social disease, a disease of housing and working conditions; in other words, of local environmerit; and this would seem to be sufficient to indicate that the successful fight must be made along local lines.

From the varied methods that have been tried out in recent years there has resulted practical agreement upon the essential features of the anti-tuberculosis program in any official municipal campaign. They are these:

1.—*Knowledge of Conditions.*

It is evident that effective activity must rest upon acquaintance with the situation. As a prerequisite to this knowledge, it is now agreed that compulsory notification and registration of all cases of tuberculosis are necessary. This procedure has now been in operation in our larger cities long enough to disprove the objections constantly raised to its introduction by the medical profession or the more timid of the laity, and has established its usefulness to a degree which insures its extension to practically every community in the United States. It is therefore presented as the first essential in the specific program.

IL-Adequate Provision for the Care of Consumptives.

If I interpret rightly the experience of recent years, it is in this field that we must expect our greatest results. It seems obvious enough that in order to prevent new infection the simplest method is to remove the infecting center. There should be, other things being equal, an inverse proportion between the amount of institutional treatment of tuberculosis and the degree of tuberculosis morbidity.

In the past the chief attention, not only of State and local authorities, but even of those most interested in the campaign along private lines, has been devoted to the establishment of sanatoriunis. The cure of curable cases, the restoration of the sick to a wage-earning capacity, has presented an appeal to legislators and philanthropists

of such force that it seems to have overshadowed the demand for other provisions of even greater significance. The growth of the sanitorium movement has been so rapid, and we have congratulated ourselves upon the interest so indicated to such a degree, that we have overlooked the shocking lack in our equipment presented by the almost total absence of provision for advanced and hopeless cases.

Of almost equal significance, and as an obvious pieliminary to sanatorium treatment, is the provision for early diagnosis and intelligent advice in those cases where most needed that is furnished by the special tuberculosis dispensary.

In the field under discussion, therefore, the order of importance of the different classes of provision for consumptive patients demanded by the present situation is:—

(a) Hospitals for advanced and hopeless cases.
(b) Dispensaries for early diagnosis, advice and treatment.
(c) Sanatorium for curable cases.
(d) Provision for day camps, night camps and home treatment.

With the momentum already gained by the movement for the establishment of sanatoriums under various auspices, this class of foundation may safely be left, for the present at least, to look out for itself. It is upon the increase of hospital facilities, either by new establishments or in existing institutions, that energy must be concentrated in the immediate future.

III.—Education of the Community.

While educational effort is a perfectly proper line of official activity, it seems certain that for some time to come voluntary organized work will be demanded before official responsibility has been roused to the point of efficient operation in many if not most of our communities. It is here, therefore, that the association for the prevention of tuberculosis finds its specific task, and it should be emphasized that the function of such associations is primarily and always educational. Their object is to create a public sentiment which will support and demand official action of an efficient character, and carry to every individual in the community the knowledge of a few simple facts regarding tuberculosis and the means of its avoidance and prevention.

It is this second phase of the educational problem which calls for the intelligent co-operation of all the available forces and for all the methods which the ingenuity afforded by an organization can. devise.

It may be worth while to outline briefly certain of the methods of education which have been found effective in reaching those classes, of the community hardest to touch, but precisely the ones most in! need of the information in question.

Literature.-The preparation and dtsirtbution of suitable literature takes, for many reasons, the leading place. Here the first point of consideration should be the character of the groups to be reached. There is not, and never will be, any leaflet, pamphlet, or book adapted to all types.

(a) Always necessary is some short, pithy, striking statement which can be printed in inexpensive form and distributed freely. There are now in existence a large number of such leaflets prepared by local associations, and it is hoped that the competition of this Congress will produce models for many more. It is often most desirable,, however, that the form and wording should be adapted to the peculiar conditions existing in the given locality.

(b) A somewhat more extended statement should also be prepared which gives in greater detail the reason for caution, the principles of hygenic living, the rules to be observed by consumptives and those living with them, and specific instructions with regard to methods of living, necessity of medical care, disinfection, the dangers of patent medicines, etc. This can best be issued in pamphlet form, and preferably of a size that can be easily carried in the pocket.,

(c) Of more general books written for the laity there are a number more or less well adapted to their purpose which need not be mentioned in detail.

(d) Literature for special classes of the community, such as teachers, school children, workers in special trades, etc., is increasing, in amount, and by constant revision in different quarters is gradually adapting itself to its ends.,

Exhibitions—The extraordinary success which has met the establishment of the so-called tuberculosis exhibitions during the last few years has proved this the most valuable single educational agency now at our disposal. It is an effort to show in graphic form the same simple facts that the literature just mentioned sets forth.

We have in these halls so striking a demonstration of the organization and installation of these exhibits that detailed discussion seems needless. The lesson to be imparted is so simple that the precise character of the material shown is of little importance, provided the visitor's attention is caught and held. We are seeking to impress upon the public the infectious character of tuberculosis, the extent of She danger, the importance of hygienic living, the possibility of cure in early cases, and, above all, the fact that the disease is preventable. These points can be and are made in connection with practically any object or view connected with the disease which may be installed.

A certain logical sequence in the arrangement of the material "is, however, advisable, and any one of several methods may be followed. Whatever plan is adopted there should be :

(a) A demonstration of conditions. This can be accomplished by maps and charts setting forth the prevalence of tuberculosis in the country, State, or city, in different trades, racial groups, etc. Maps and charts for reproduction and enlargement may easily be found. Statements of the economic loss to the country or community through the deaths from tuberculosis can be put in such striking form that they will inevitably engage the attention of the visitor.

(b) The conditions which favor the development of tuberculosis and the infectious character of the disease can be shown by photographs, models, pathological specimens, colored plates and other devices. Chief stress should be laid on housing, social and industrial conditions which favor infection, and here a wide field is open. Photographs and views of dark, unventilated homes and workshops and of unhealthy environments should be shown in contrast with what can be accomplished under similar conditions by hygienic treatment. This phase of the subject shades into-

, (c) Prevention. Here should be brought in views of model tenements, playgrounds, the work of various organizations for the

betterment of social conditions, the results of proper health regulations, and the methods which have been found effective in communities where the campaign has already been undertaken.

(d) Treatment and cure. This aspect is capable of more effective exhibition than any other. Photographs, models of sanatoriums, open-air sleeping shacks, tents, etc., may be utilized to whatever extent is deemed desirable. It should always be remembered in this connection that it is the human side which appeals, and that the average man, woman or child will notice with interest pictures of patients and their life, where ground plans or elevations of buildings will be passed by without attention. Striking photographs of outdoor life in winter, treatment on sleeping porches or roofs, where better facilities are not available, will be found desirable.

In connection with the exhibitions it is obvious that constant demonstrations and informal public talks should be arranged, and lantern slides will be found of indispensable aid in drawing and holding the audiences which it is particularly desired to attract.

It is difficult to present an estimate of the cost involved in organizing such an exhibition. Much can be accomplished by a small but effective collection which can be shown in one large room of, say, 30 by 40 feet. With the facilities available in any community a fairly effective exhibition of such proportions could be gathered together for from three hundred to five hundred dollars. Naturally the more money available, the more attractive can the installation be made; and experience is showing that money so devoted is well spent.

In our larger communities it is highly desirable that an exhibition should be made permanent and shown continuously. This is already being done in certain cities with extraordinary results.

Exhibitions under the control of State societies or State boards of health which can be readily transported and sent to smaller towns are proving admirable nuclei for educational campaigns. Some such provision is necessary to meet the demands presented by those communities where an independent, or permanent exhibition may not be called for, or could not be financed.

Possibly the most important factor in this connection is the place of exhibition. Convenience of access is the chief consideration,

and it is far more desirable to choose a vacant shop on one of the business streets of a city than more imposing quarters in some public building, which can often be more easily obtained. It is recognized that the educational results are directly proportionate to the degree of publicity obtained, and as a consequence the exhibit should be installed in such a situation that it cannot be overlooked.

Lectures and Meetings.—The third method of education comparable to those already mentioned, and possibly one which should take logical precedence of them, is the public meeting and lecture. In small communities it is often not only the easiest to arrange, but the most immediate in its results. The real difficulty in this connection is in procuring enough speakers of force and effectiveness to insure a systematic series of meetings. It is too often the case that intense interest will be aroused for a single evening or a single week, and then be allowed to lapse for lack of organized plans and persistent energy.

Where effective medical men can be secured for public lectures, they should always be utilized. The enthusiasm of the laymen can seldom rival the authority of the physician in its effect upon the public mind.

In certain cities success has followed a systematic division of the community into groups for the purposes of public lectures. Special talks have been arranged for school-teachers, school children, churches, women's clubs, trades unions, etc., and where they have been followed up with a definite schedule for an entire winter or year, the results have been most encouraging.

Time will not permit a discussion of the detailed methods which have been found effective in this movement, but if a systematic campaign of public meetings, public exhibitions, and the circulation of selected literature be carried through in any except our very largest cities, it will be found possible to reach practically every individual.

It is always dangerous to indulge in predictions as to specific results? and I have no intention of laying myself open to the. charge of unreasonable optimism. It can be said, however. that if the basis of our campaign is sound, the extent of its organization and the rapadity of its growth afford grounds for sincere congratulation. We are now seeing the effect of the propaganda 'which has been carried

on by the national, State and local societies for some years past. From what has been said it is clear that the material results of the work will first appear in the number of organizations for the prevention of tuberculosis in the increased provision for consumptive patients, and in the response of the public authorities to the demand for more enlightened legislation.

The increase in the number of anti-tuberculosis organizations is particularly striking. During the year 1907 and up to August 1, 1908, 134 new societies have come into existence. The rapadity of the growth is evident from a comparison of the figures of the last few years:

Associations established	before 1905	24
"	during 1.905	13
"	1906	25
"	1907	49
"	1908 (To August 1st)	85
Total		196

As to provision for special sanatoriums and hospitals for the care of tuberculosis patients, it may be stated that during the year 1907 and the first seven months of 1908, 93 such special institutions have been established, the comparative figures being as follows:

Tuberculosis sanatoriums and hospitals established	before 1905	115
"	during 1905	115
"	1906	17
"	1907	35
"	1908 (To August 1st)	58
Total		240

The tuberculosis dispensary upon which energy has been especially concentrated in the immediate past, has also responded to the same encouraging degree. During the last, nineteen months 123 special tuberculosis dispensaries have been opened in the United States. The comparative figures are as follows:

Dispensaries	established before 1905	19
"	" during 1905	6
"	" during 1906	11
"	" during 1907	51
"	" during 1908 (To August 1st)	72
Total		158

It is impossible to summarize in a few words the enactment of tuberculosis legislation or the plans for legislative action which are now in operation. The general laws relating to notification and registration which have been in operation in Maryland and Wisconsin have recently been strengthened by the passage in New York of a comprehensive act to the same effect which it is hoped will serve as a stimulus to other commonwealths. The plans have been laid for presentation to nearly every legislature which will be in session during the coming winter of anti-tuberculosis bills adapted to the particular needs in each State.

With the interest already existing and the impetus which will be given to the cause by the present Congress there is little doubt that many, if not most, of these plans will eventuate in law..

It is certain that the increase in the provision -of a11 sorts which has been so marked in the year just passed will continue for some time to come, and we may reasonably expect that before the convening. of the next International Congress the United States will have provided an equipment sufficient to test the legitimacy of our methods and offer hope of a second drop in the mortality curve to that of the. last quarter of a century.

Moncton Hospital.

Annual Report of the Moncton Hospital, Moncton, N. B., for the Year Ending May 31st, 1909.

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