

# MAINE STATE LEGISLATURE

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# PUBLIC DOCUMENTS

OF THE

## STATE OF MAINE

BEING THE



# REPORTS

OF THE VARIOUS

PUBLIC OFFICERS  
DEPARTMENTS AND  
INSTITUTIONS

FOR THE YEAR 1918

VOLUME III

ANNUAL REPORT

OF THE

TRUSTEES

OF THE

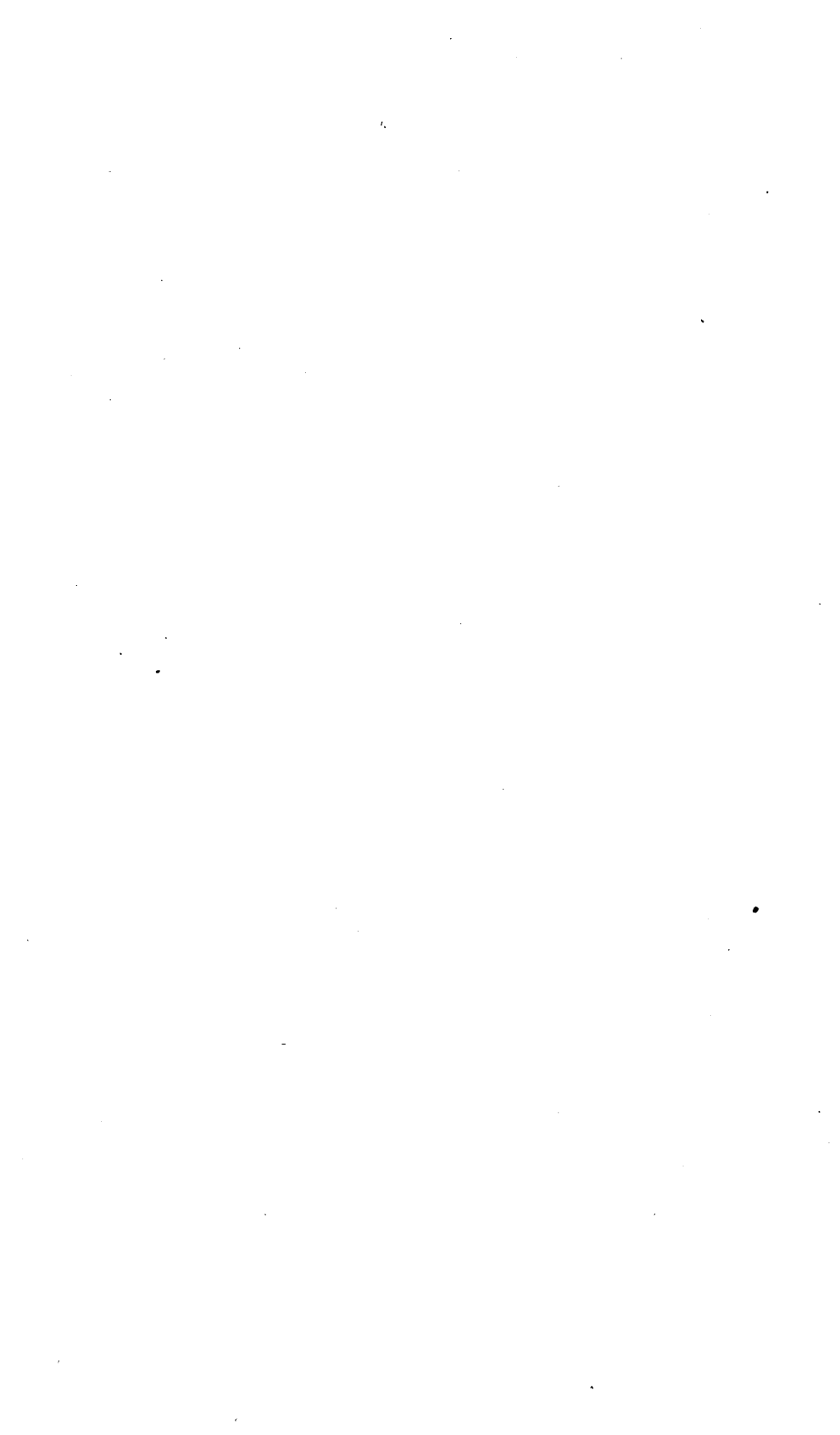
TUBERCULOSIS SANATORIUMS

FOR THE YEAR

**1918**



WATERVILLE  
SENTINEL PUBLISHING COMPANY  
1918



*To His Excellency, Carl E. Milliken, Governor and the Honorable Executive Council:*

Herewith is submitted the third annual report of the Trustees for Tuberculosis Sanatoriums with recommendations.

#### GENERAL.

The admitting office as in previous years has been maintained at the chairman's office in Waterville; to whom the admitting of all patients and fixing rates for treatment has been delegated. Under the original law all patients ill with tuberculosis and making application for treatment were admitted at a rate not to exceed \$5.00 per week. This method of rating seemed unfair as we were obliged to give treatment at \$5.00 per week to people who were perfectly able to pay the full cost of treatment.

Accordingly at the last session of the legislature the law was so amended as to allow the Board of Trustees to fix any rate from free treatment up to the cost of the treatment to the State. This cost to the State we have fixed a \$12.00 per week which, while it is a little less than the actual cost during the past year we believe will be fairly accurate for a series of years. By the provision of this amendment the Trustees are required to make an investigation of the financial circumstances of each applicant and to fix a rate in each case according to his or her ability to pay. This work has been done at the receiving office by Miss Shackford, secretary to the chairman. Each applicant is required to give a statement of their financial condition. All such information is on file at the receiving office. From the information so obtained a rate believed to be fair and just to all is made and the patient admitted after filing a bond guaranteeing the payment of this rate.

The statements of the applicants are always investigated either by correspondence or personal interview. As a whole we find this method works out very well. We have repeatedly checked up these ratings and believe that the patients in practically all cases are paying all they can afford to pay for treatment. Necessarily the number of patients who are unable to pay anything for treatment is very large. This will be well understood when we consider that tuberculosis is largely a disease of the poorer classes and that the period of treatment is a matter of months and years rather than days and weeks as is true of most disease. We have endeavored in making rates to deprive no one of needed treatment and a large number have been admitted absolutely free. Some have been rated as low as 50 cents per week as we believe

it wiser to charge those able to pay even that small sum than to encourage absolute dependency. The rate in each case is only known at the receiving office and to the business management of each institution. This is done that the patients and their friends may feel that there is no discrimination made in treatment because of the rate paid.

In connection with the financial investigation inquiry is also made into the social conditions of each applicant and a careful record of these findings is kept on file. We also endeavor to get frequent reports on all discharged patients thus keeping in touch with their progress. The work has been of too short duration to make an estimate of its value but we believe if continued it will be of great worth in checking up progress and outlining future plans. We believe that funds should be provided for the employment of a follow-up nurse. Such a nurse should make frequent visits to discharged patients to observe their condition, advise and encourage them and also visit all homes from which patients have been admitted to the institutions to be sure that there are no other cases of infection in their families.

Another work done at the receiving office is the sending of reports on patients' condition and progress to the family physician, thus keeping him in touch with his patients while under treatment. We believe this is of value to the community in an educational way and is a source of much comfort to the patient's family and friends.

#### WESTERN MAINE SANATORIUM.

The work at this institution has gone on in the same satisfactory way as heretofore. It has been the policy of the Board to treat at this institution only ambulatory cases. It has been impossible to follow this plan absolutely but on the whole the condition of the patients here has averaged better than at any previous time. A fuller account of the methods and success of the treatment will be found in the superintendent's report which is appended. We have an average of about thirty patients of school age; for the benefit of these children we have conducted a school thus enabling them to continue their education while under treatment.

The medical staff here has been disturbed by the war; Dr. Frisbee entering the service early in the year and his successor being called later. The farm which came to us with this institution has presented vexing problems. The scarcity of labor and war conditions generally have made it difficult to show satisfactory returns. Whether it is wise to continue farming on a large scale here has been difficult for us to decide. The majority of the Board however favor further trial.

A new sewerage system has been installed and is working out satisfactorily. General repairs have been attended to and considerable concrete work has been done. Men's cottage which was cheaply constructed will soon require extensive repairs or replacement. Your Board feels that it would be wiser to replace this building with a new

one and have asked for an appropriation to make the change. We have no suitable shed for the storage of farm implements. If farming is to be continued such a shed should be built. The piggery has been the most profitable department of the farm. The farm superintendent recommended better provisions or their care. An appropriation has been asked for this purpose.

#### CENTRAL MAINE SANATORIUM.

The capacity at the Central Maine Sanatorium has been increased during the past year from thirty-four beds to one hundred and twenty-five beds. Cottage A which we consider one of the most satisfactory buildings in New England for its purpose was erected at an expense slightly in excess of \$40,000, money available for that purpose.

Chase Memorial Building has been so remodelled as to provide a large and spacious dining room and kitchen sufficient not only for our present needs but any increased needs that may come. A perfectly satisfactory business office, suitable apartments for the medical staff, present nursing staff and help have been provided. Grounds have been graded and improved, the old shack used for dining room and kitchen in the past have been removed. An ice house located so as to be easily accessible to the kitchen has been erected, a sterilizer for disinfecting beds and bedding has been installed and proper laboratory equipped.

All these improvements have entailed a large expense for which only partial funds were available from the appropriation of the last legislature. Because of the great emergency Your Excellency and Council have made available money enough to meet these great needs and to provide maintenance for the large increase of patients we have been able to care for under the new conditions. For your generous attitude and co-operation the Board of Trustees wish to express their deep gratitude and appreciation.

This institution as heretofore is used as a receiving place for all patients entering either institution. Here they are observed, their progress noted and then transferred as their condition warrants. Our plan is to treat here those who are acutely ill and require bed treatment. This does not mean that this institution is used only for advanced hopeless cases as many of these acutely sick patients have only slight lung involvement and will make favorable progress. The institution is under the same medical management as heretofore. The increased number of patients made necessary the employment of an assistant physician which place was filled by Dr. Carl Sturgis. At the present time there is a vacancy because of Dr. Sturgis entering the service. We hope to fill this vacancy shortly.

The great need at the Central Maine Sanatorium is suitable provision for the treatment of children. About twenty per cent of applicants or treatment are of school age. For the past two years these children have been treated at Hebron in conjunction with adult patients. This is extremely unsatisfactory and should not be continued. Because of

the more central location of the Fairfield institution it seems to the majority of the Board wiser to treat these children at this institution and we have asked the legislature for funds to erect a children's building equipped for school purposes, including domestic science and manual training departments. It has been fairly definitely established that all tuberculous infection occurs in childhood. If this is true the importance of equipment to give children proper treatment cannot be overestimated as the whole anti-tuberculosis campaign is centered here. We also recommend that the present law be so amended as to make it possible to receive and treat children in the so called pre-tuberculous stage, that is before active disease is developed. We trust that our recommendations will receive favorable support from the coming legislature. If a children's building is made possible it will be necessary to provide a second building to be used as a home for nurses. At the present time we are obliged to use one room for nurses which otherwise would be available for treatment of patients. Provision for any increase in the nursing staff which would be necessitated by the erection of the children's building will have to be made. Contingent on the erection of these new buildings is the problem of a central heating plant. In our estimates for the coming two years such a plant has been provided for also a vegetable cellar and storage house.

#### NORTHERN MAINE SANATORIUM.

The last legislature appropriated \$20,000 for the erection and maintenance of a sanatorium in Aroostook county, provided a suitable site was furnished by the citizens of that county. Only one site deemed suitable by your Board has been offered. This site contained about twenty-five acres of land has been given by the citizens of Presque Isle and is situated just out of that town on the Caribou road. It is easily accessible with a splendid view. We have had the water supply which must be from artesian wells investigated and feel that it is sufficient. Because of the building restrictions imposed by the Federal Government nothing has been done on construction to date. We have asked for an appropriation to complete construction next year, also maintenance for forty patients.

In conclusion we wish to call your attention to the fact that there is no provision made in this state for the treatment of surgical tuberculosis, neither is there any provision for the proper care of pregnant women afflicted with tuberculosis. We believe that as soon as possible the State should provide for these two very great needs.

Respectfully submitted,

THEODORE E. HARDY, M. D., *Chairman*,  
C. H. BAYARD, M. D.,  
STANLEY BISBEE,  
MRS. GEO. H. FRENCH,  
RALPH JEWELL.



## SUPERINTENDENT'S REPORT

*To the Board of Trustees of the State Sanatoriums:*

GENTLEMEN:—Herewith is presented the superintendent's annual report of the Western Maine Sanatorium for the official year ending June 30, 1918. Full statistical and financial tables showing details and summary of the work for the year are appended. A brief outline of these tables is translated into words.

### MOVEMENT OF POPULATION.

On July 1, 1918, there were 107 patients present in the sanatorium. During the year 114 patients were admitted including 15 re-admissions. Their condition on admission was as follows: Incipient 28, moderately advanced 70, far advanced 16. The number of patients discharged was 132 including 8 deaths in the institution. Two hundred twenty-one patients were treated during the year. On June 30, 1918, there were 89 patients remaining at the sanatorium. The greatest number present at any time was 107, the least number was 89. The daily average of patients for the year was 103.9 and the average length of residence of discharged cases was nine months.

### TEMPORARY RESULTS.

Of the 132 patients discharged from the sanatorium during the year, 4 had their disease arrested, 13 apparently arrested, 46 were quiescent, 44 were improved and 25 were unimproved including 8 deaths. Eighty per cent of the cases discharged as unimproved were either far advanced on admission or moderately advanced Turban III. Two cases discharged as unimproved stayed less than two weeks.

### END RESULTS.

The permanence of the results of treatment can be determined only by the condition of the discharged patients after they have been returned to their former mode of living for six months or longer. It is our aim to keep in touch with all ex-patients by letters of inquiry sent six months after their discharge and at intervals of six months thereafter. As the number of ex-patients increases, this work becomes more onerous and expensive but at the same time of more interest and value. There were 285 patients discharged from the institution from October 6, 1915, to January 1, 1918. Of this number, we have been able to trace and determine the condition of all but ten cases or 3.5% of the total number. Only

one case has not been heard from at all since discharge. Two hundred eighteen cases or 76.4% of the whole are known to be living, while 147 or 51.5% are living and working. The number of deaths has been 57 or 20% of the discharged cases.

It is interesting to note the present condition of the discharged cases when grouped according to their condition on admission. Forty-three or 15% of the whole were classified as incipient. Of the incipient cases 41 or 95.3% are living and 33 or 76.7% are living and working. Only one case or 2.3% is known to be dead. The 215 moderately advanced (75.4% of the whole) show 166 or 77.1% living, 110 or 51.1% living and working and 41 or 18.1% dead. The 27 far advanced cases, as must be expected, do not show as good results. Forty and seven-tenths per cent are living and only 4 or 14.8% are living and working while 15 or 55.5% are dead.

Studying the series of 295 cases from their condition on discharge from the sanatorium, the subsequent histories of the three cases discharged as arrested show 100% or all of them now living, and 66.6% living and working. Twenty-one cases were discharged as apparently arrested. Eighteen or 85.6% are known to be living, and 16 or 76.1% living and working. Of the 96 cases discharged as quiescent, 83 or 96.4% are living and 63 or 73.2% are living and working. The 141 cases discharged as improved show 106 or 85.1% living, with 46.8% living and working. Thirty-four cases were discharged as unimproved. All of this group have been traced. Nine or 26.4% are living and only 1 or 2.9% is living and working. Twenty-five or 73.5% are dead.

#### SANATORIUM AS AN INVESTMENT FOR THE STATE.

The weekly earnings of discharged patients was determined in 29 cases. These earnings ranged from \$2.00 to \$28 a week or an average of \$13.25. If the average weekly earnings of the 147 discharged cases who were working had been the same during the past year they would have earned or produced \$101,283.00 which is nearly twice as much as the Western Maine Sanatorium cost the State for maintenance during this time. It is hardly fair to assume that all these cases would not have been restored to wage earners without sanatorium treatment. If one-third of this number had recovered without the sanatorium, the earnings of the remainder would have amounted to more than the cost of maintenance this year plus over 4% interest on the investment. The economic value of preventing the spread of the disease by isolation of the patients during their illness or of the education of the public through discharged cases is not estimated.

#### RESIDENCE—COUNTIES.

The records show, as in other years, that the Western Maine Sanatorium treated patients from all counties in the State. Androscoggin and Aroostook counties sent 40 patients each, the greatest number from

any county. Kennebec was next with 29 patients. Cumberland county, the largest in population, sent 22 patients, ranking fourth in the number of patients. Fifty-one or 23% of the patients treated were foreign born.

#### AGES OF PATIENTS.

The average age of the patients treated this year was 26.5 years. The oldest patient treated was 78 years old on admission, the youngest was 7 years old. Forty-three and one-tenth per cent of all the patients treated in the sanatorium since October 6, 1915, were between the ages of 20 and 30, or at the time in life when the individual passes from years of dependency to years of production.

#### ETIOLOGY.

A complete list of the occupations of the patients treated is tabulated elsewhere. Eighty-two and eight tenths per cent of the 221 patients gave a history of indoor occupations. Twenty-six patients worked in dusty places. In only 18 cases could a history of exposure to the disease be obtained except from relatives of the patient.

The time elapsing from the first symptom of tuberculosis till a physician was consulted averaged 6.9 weeks per patient. There was an average of 11.6 weeks from the consultation of a physician till the patient was told the name and nature of the disease. Our records show that the average duration of disease previous to admission was 26.8 months. Of the cases treated this year there was an average of 22.2 months between the diagnosis and the admission of the patient at the Western Maine Sanatorium. A glance at the table showing the present condition of discharged cases is sufficient proof of the importance of early and radical treatment.

#### LABORATORY.

Routine laboratory work has been maintained the same as last year. Nine hundred fifteen specimens of sputum were examined for acid fast organisms and the prevailing type of secondary organism noted. In addition, once a month, the 24-hour amount of sputum from patients who had expectoration, was weighed. This is an index to the progress of the disease and is a valuable guide in prescribing exercise. Three hundred fifty-five specimens of urine were examined. One hundred seventeen or 52.4% of the patients treated have either no expectoration or no tubercle bacilli in sputum. For details of sputum examination of discharged patients see Table 31.

#### SANATORIUM OPEN-AIR SCHOOL.

The open air school began Sept. 3, 1917, and continued till June 28, 1918, with the exception of a recess during the severe winter weather from Dec. 21st to March 1st. Except for a few severe stormy days,

sessions were held regularly five days a week at the "open air shack" which was fitted out for a schoolroom last year. The school hours were from 9 to 12 A. M., and 3 to 4 P. M. When the physical condition of the pupils permitted they attended both sessions. The average daily attendance was 24.

The work of the open-air school corresponds as nearly as possible with that of other graded schools. While, of necessity, there were many grades, the time spent with each grade could not equal that of a one grade room, yet the work was thoroughly done. Whenever it happened that two or three grades were studying the same subject, they were combined. A little time was devoted to nature study with good results as the pupils enjoyed their out-door life more by observing the things about them. Nature study correlated with English and Geography gave new zest to these lessons. During the spring term the three pupils in the ninth grade were given a general review in preparation for the high school entrance examinations, sent out by the State Superintendent of Public Schools. They passed the examination and were granted the certificate issued by the State. At the close of the spring term all the pupils except three little beginners, who came in near the end of the term, were given promotion cards with the feeling that they were fitted to do the work of their grade in any school. Miss Lois Piper taught the school from the time it opened Sept. 3, 1917, till March 30, 1918, when she resigned. Miss Bettie Marden of Farmington finished the school year and has been engaged to teach next year.

#### NURSES' TRAINING SCHOOL.

In the training school for nurses there has been a daily average of four pupil nurses on duty. Miss Lynch, a teacher of dietetics in the public schools of Lewiston and the Central Maine General Hospital Training School, gave 14 lectures and demonstrations on practical dietetics. The course of study was made to conform to the requirements of the Maine State Board of Registration of Nurses as outlined in the pamphlet (1918) published by the Board. The graduates, by taking six to eight months in a general hospital giving practical work in surgical and obstetrical nursing, are able to meet these requirements. The following nurses were granted diplomas:

\* Ruth H. Shaw, Hartland, N. B.; Amanda Cosgrove, Lewiston, Me.; Fannie G. Thaxter, West Sullivan, Me.

#### TREATMENT.

The usual hygienic-dietetic treatment has been continued as in past years. The period of rest at the commencement of treatment was increased in all types of cases and in cases that showed some acute symp-

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\* Has taken six months' practical surgical and obstetrical training at the Long Island College Hospital.

toms radical bed rest was continued longer than formerly. Tuberculin has been administered in carefully selected cases. A table showing the present condition of the patients treated with tuberculin during the years 1916 and 1917 is appended. This table compared with the one showing the present condition of all cases does not reveal any marked differences in results. The temporary results show a small percentage in favor of the tuberculin patients but this is open to many errors because of the difference in length of residence, etc., of the cases. There were an unusual number of surgical tuberculous complications that required dressings. Over 915 surgical dressings were done during the year. One case of empyema was opened and drained besides several cold abscesses.

Nebulizer treatments have been increased in frequency to relieve irritation of the upper air passages with cases having cough. There have been only three cases of tuberculous ulceration of the larynx and one of the epiglottis under treatment this year.

Graduated exercise has been continued as in former years. Owing to the scarcity of help, patient labor has been used with greater economic value to the institution than heretofore. Not over two hours work with a total of four hours exercise a day has been prescribed for a patient. If possible, all patients should remain till they are taking the same hours of exercise under observation as their occupation requires of them. The women patients worked 3,576½ hours and the men 3,659 hours during the year or an average of 19½ hours a day for both sexes.

#### FREE TREATMENT.

The financial status of 221 patients treated during the year ending June 30, 1918, was as follows:

Entirely free .....	135
Paying \$1.00 per week.....	2
Paying 2.00 per week.....	5
Paying 2.50 per week.....	1
Paying 3.00 per week.....	4
Paying 4.00 per week.....	3
Paying 5.00 per week.....	41
Paying 6.00 per week.....	4
Paying 7.00 per week.....	2
Paying 8.00 per week.....	2
Paying 9.00 per week.....	2
Paying 10.00 per week.....	3
Paying 12.00 per week.....	11
Admitted to pay \$1.00 per week but charged off with- out paying .....	1
Admitted to pay \$1.25 per week but charged off with- out paying .....	1

Admitted to pay \$2.00 per week but charged off without paying ..... 3

Admitted to pay \$3.00 per week but charged off without paying ..... 1

The total receipts for treatment of patients including laundry was \$10,364.95. The average income per patient was \$1.912 per week. The number of days treatment was 37,933.

Of the 89 patients remaining June 30, 1918, 24 or 26.9% are paying an average rate of \$6.10 a week for treatment. Sixty-five or 73.1% are entirely free or an average rate for all patients in the house of \$1.25.

#### PER CAPITA COSTS.

Comparison for the years ending June 30, 1917, and June 30, 1918:

	1917.	1918.
Average number of patients.....	102.3	103.9
Average gross weekly per capita cost.....	\$12.859	\$14.103
Less miscellaneous income.....	1.799	1.424
Average weekly per capita expense.....	11.095	12.679
Less income from patients.....	2.219	1.918
Average weekly per capita cost to State.....	8.876	10.761

#### DIETARY.

The dietary has been about the same as last year. More wheat substitutes were used than in previous years. Last year the dietary contained about 25% wheat substitutes but this year has been increased to over 40% by making "war bread." Great care has been exercised to prevent the waste of food. Special lunches were served as the condition of patients demanded. Routine lunches were issued as in previous years. (See report June 30, 1916.)

The average gain in weight of the patients this year was less because more patients remained longer at Fairfield Sanatorium where they reached their normal weight before being transferred to Hebron. A sample of one week's dietary is printed elsewhere.

#### FARM.

The farm has been conducted with the idea for a gradual improvement in stock, soil and fruit trees rather than to produce a maximum yield at the expense of future years. A total of 40 acres was planted this year which is five acres more than was planted last year.

The following farm produce was sold or used by the institution during the official year ending June 30, 1918:

Milk, quarts .....	1364
Cream, quarts .....	2864
Butter, pounds .....	15
Pigs sold .....	20
Pigs consumed .....	8496
Boar pig sold.....	1
Dressed fowl, pounds .....	555
Dressed chicken, pounds .....	358
Veal, pounds .....	1731
Calf skins ..*	15
Beef hides.....	5
Beef .....	2678
Beef cows .....	5
Registered bull calf .....	1
Grade bull calves.....	2
Grade heifer calves.....	3
Apples, barrels .....	172
Plums, pecks .....	28
Sweet corn, ears .....	2685
Squash, pounds .....	458
Turnip, barrels .....	25
Rhubarb, pounds .....	40
Radishes, bunches .....	531
Lettuce, heads .....	1368
Cabbages, pounds .....	2446
Beet greens, bushels .....	8
Beans, pounds .....	694
Swiss chard, bushels .....	2
Green peas, pecks .....	153
Shelled beans, pecks .....	6
Kale, bushels .....	3
Cucumbers .....	1513
Beets, bushels .....	9
String beans, pecks .....	26
Carrots, bushels.....	6
Potatoes, bushels .....	619
Wood, cords .....	31

## IMPROVEMENTS.

Cement floors were laid for the employes' smoking room, serving room, cellar at the "Cushman House," and a partial floor for the lower pavillion at Reception Cottage. A cement foundation was built for the garbage cooker. Repairs were made on the cement floor in basement porch of Administration Building. A walk at the kitchen door where the garbage cans are left was built of cement so that it could be easily cleaned. The driveway to the barn was replaced by cement. The

subway to the Reception Cottage was repaired to keep it from leaking. A two-compartment septic tank for sewage disposal was built of reinforced cement. The cost of this tank including excavation and 400 feet of sewer pipe was \$2,014.59. The sum of \$2,500 was appropriated for this purpose.

Extensive repairs and replacements were made upon the heating system. In the power house a return flow tank was installed and the return flow cold water traps were changed over and repaired. All the flange joints over the boiler were repacked. Portions of 2-inch steam pipe were replaced in duct from power house to Administration Building. Two new blow-off cocks were installed on boilers. The automatic damper was repaired. In addition, one fire box was relined and a new set of grates was installed. An 80-gallon hot water copper tank and a water trap were installed for the laundry.

At the men's cottage a new trap on the hot water tank was installed. All valves were repacked on steam pipes and one radiator section was installed. The same repairs were made at the women's cottage. At the Reception Cottage, repairs were made to valves where necessary. A trap was installed on the steam table and the return flow trap was repaired. In the basement room a steam heating coil was installed. At the Administration Building all valves were repacked and the steam table in kitchen repaired.

The engine and dynamo of the lighting system were extensively repaired. The cylinder was rebored and a new piston made. The box on the crank shaft was rebabbited. The governor was repaired and brass collector rings on the dynamo were turned down. The total expense including labor was \$231.85. Over 240 feet of 2-inch water pipe was relaid between the men's and women's cottages.

A crescent electric dish washer was installed in the serving room at a cost of \$245. The serving room, dining room, and help's dining room were painted. Hardwood dish sink, tray rack and side table were built for the serving room and the wood floor replaced by cement. A hard wood top was made for the side table in the kitchen. The total expense for hard wood work was \$146.

One two-ton G. M. C. truck was purchased for \$2,431.51. A two-horse potato sprayer, sulky plow and cutaway harrow were purchased for the farm. The section of lawn east of Reception Cottage was plowed, reseeded and drained.

Nearly all the beds used by patients have been enameled. The porches at the Men's Cottage were painted and the kitchen and parts of Reception Cottage were painted.

An Empire milking machine consisting of three single units was purchased for the farm. This not only reduced the number of milkers by two but the milk is cleaner and the production greater.



## RECOMMENDATIONS.

During the summer months the temperature of the large refrigerator is not low enough to keep the meats and milk in good condition. It is also in need of extensive repairs and is over crowded. The cutting and hauling of ice over two miles incurs a good deal of expense. An ammonia refrigerating plant or a new and larger refrigerator is recommended.

The present accommodation for male employees is insufficient. The erection of a new cottage for help, or a new cottage for ambulatory patients is recommended so that part of the men's cottage may be used for male employees.

Treating children housed with adults is not satisfactory from the therapeutic standpoint, nor from the management standpoint. A special building for children should be provided. The heating plant at the Western Maine Sanatorium is adequate for heating a building large enough to accommodate thirty (30) patients.

Every severe shower washes our drives badly. Gutters should be built to take care of the overflow or the drives built of crushed rock similar to State roads.

The board walk to the men's and women's cottages should be replaced by cement. The piazza at the Administration Building is in need of extensive repairs. The floor timbers and boards should be replaced with new. The piazza at the farm cottage should be repaired.

A small incubator is recommended for the laboratory to be used in making autogenous vaccines and for other laboratory work.

The housing accommodations for the farming tools is not sufficient. A shed should be built back of the stables for this purpose.

Pigs are one of the best paying lines of the farm, because they are fed mostly from the garbage which would otherwise be wasted. At present, there are 101 pigs and we are greatly hampered by lack of suitable place to house them. A new hog house is needed to accomplish best results.

## ENTERTAINMENTS.

Entertainments and diversion are a great help in treating tuberculosis. The money for entertainments, moving pictures, holiday celebrations, etc., is given chiefly by patients and employes. It has been very hard to secure enough money this year to maintain the moving picture machine. The income from the Brown Fund amounts to about \$60.00 a year and the income from the Stewart Fund is \$3,640.00 a year. The letter of bequest from D. E. Stewart, dated at St. Albans January 18, 1913, reads: "Enclosed is check for \$75,000.00 for the benefit of the Sanatorium at Hebron. I trust this gift may be helpful to the poorer class of sufferers in the Sanatorium for many generations." It is recommended that the income from the Stewart Fund be used for the entertainment and comfort of the patients similar to the way the Coburn fund is used at the Augusta State Hospital (see report 1916, p. 70).

## RELIGIOUS SERVICES.

Through the efforts of Rev. Irad B. Hardy, one of the patients, a Christian Endeavor Society was organized among the patients and employées at the sanatorium.

Regular Catholic services have been held throughout the year by Rev. P. J. Bovin from the rectory at Norway, Me. Rev. T. M. Griffiths of the Baptist church at Hebron, has conducted services at the sanatorium whenever requested.

## CHANGE IN OFFICERS.

Dr. Edward B. Frisbee resigned Dec. 8, 1917, to take the position of assistant surgeon at the Soldiers' Home at Dayton, Ohio. Dr. Charles N. Stanhope was appointed assistant superintendent and assumed his duties March 5, 1918.

Mr. Frank W. Goodrich, who has been storekeeper since February, 1917, and who has had many years of experience in handling supplies for state institutions, was appointed acting steward May 14, 1918.

Mrs. Clara Gage resigned as housekeeper Aug. 28, 1917. Miss Julia Malia was hired to fill this vacancy.

Mr. Walter H. Thyng, who was employed last year as general repair man was placed in charge of the power house as chief mechanic in addition to his other work.

## RELIGIOUS SERVICES.

Rev. T. M. Griffiths, Hebron, Me.; Rev. P. J. Bovin, Norway, Me.; Rev. Irad B. Hardy, Sanford, Me.; Rev. Geo. G. Finnie and Choir, Lewiston, Me.

## GIFTS.

Zion's Advocate, Waterville, Me.; Humane Review; Hon. Robert H. Gardiner, Gardiner, Me.

## ACKNOWLEDGMENTS.

A full list of those contributing to the entertainment and welfare of the patients is printed elsewhere. This list does not include the names of patients and employees who gave generously of their time in entertaining or helping to raise money for entertainment purposes.

I wish to express my appreciation to all employees for their co-operation and efficient service and again do I wish to thank the Board of Trustees for their continued confidence and counsel.

Respectfully submitted,

OLIN S. PETTINGILL, M. D.,

*Superintendent.*

June 30, 1918.

## I—MOVEMENT OF POPULATION.

PATIENTS.	Males.	Females.	Totals.
Number remaining July 1, 1917.....	46	61	107
Number admitted within the year.....	48	66	114
Number treated during the year.....	94	127	221
Number discharged during the year.....	62	70	132
Number remaining June 30, 1918.....	32	57	89

## 2—MONTHLY ADMISSIONS, DISCHARGES AND AVERAGES.

MONTHS.	ADMISSIONS.			DISCHARGES.			Daily average of patients.
	Males.	Females.	Totals.	Males.	Females.	Totals.	
July.....	2	6	8	4	8	12	105.7
August.....	5	5	10	3	3	6	106.1
September.....	9	13	22	10	13	23	105.9
October.....	6	8	14	6	9	15	104.5
November.....	2	6	8	2	4	6	105.3
December.....	7	6	13	7	7	14	105.1
January.....	4	2	6	4	1	5	105.6
February.....	1	1	2	1	2	3	106.6
March.....	2	5	7	4	7	11	105.9
April.....	9	10	19	9	7	16	102.7
May.....	1	4	5	9	4	13	100.8
June.....	—	—	—	3	5	8	93.5
Totals.....	48	60	114	62	70	132	103.97

## 3—NATIVITY BY STATES, ON NATIVE-BORN PATIENTS.

STATES.	Males.	Females.	Totals.
Florida.....	1	—	1
Maine.....	58	85	143
Massachusetts.....	6	5	11
Minnesota.....	1	—	1
New Hampshire.....	1	3	4
New York.....	2	2	4
Ohio.....	—	1	1
Pennsylvania.....	—	1	1
South Carolina.....	1	—	1
Vermont.....	—	2	2
Missing.....	—	1	1
Totals.....	70	100	170

## 4—NATIVITY OF FOREIGN-BORN PATIENTS.

COUNTRIES.	Males.	Females.	Totals.
Austria . . . . .	—	1	1
Canada (English) . . . . .	7	10	17
Canada (French) . . . . .	6	11	17
Greece . . . . .	3	—	3
Ireland . . . . .	1	1	2
Italy . . . . .	3	—	3
Russia . . . . .	1	2	3
Scotland . . . . .	1	—	1
Sweden . . . . .	1	1	2
Syria . . . . .	1	1	2
Totals . . . . .	24	27	51

## 5—RESIDENCE—COUNTIES.

	Males.	Females.	Totals.
Androscoggin . . . . .	16	24	40
Aroostook . . . . .	12	28	40
Cumberland . . . . .	12	10	22
Franklin . . . . .	—	1	1
Hancock . . . . .	1	1	2
Kennebec . . . . .	6	23	29
Knox . . . . .	6	7	13
Lincoln . . . . .	3	1	4
Oxford . . . . .	7	3	10
Penobscot . . . . .	12	6	18
Piscataquis . . . . .	7	10	17
Sagadahoc . . . . .	—	2	2
Somerset . . . . .	5	4	9
Waldo . . . . .	1	1	2
Washington . . . . .	2	5	7
York . . . . .	4	1	5
Totals . . . . .	94	127	221

## 6—AGES.

	Males.	Females.	Totals.
5 to 10 years . . . . .	4	7	11
10 to 15 years . . . . .	8	15	23
15 to 20 years . . . . .	9	21	30
20 to 30 years . . . . .	34	45	79
30 to 40 years . . . . .	22	24	46
40 to 50 years . . . . .	14	10	24
Over 50 years . . . . .	3	5	8
Totals . . . . .	94	127	221

## 7—CIVIL CONDITION.

	Males.	Females.	Totals.
Single.....	56	80	136
Married.....	33	30	63
Widowed.....	3	13	16
Separated.....	2	3	5
Divorced.....	-	1	1
Totals.....	94	127	221

## 8—EDUCATION.

	Males.	Females.	Totals.
Academic.....	2	-	2
Collegiate.....	5	3	8
Elementary.....	63	74	137
High School.....	17	39	56
Able to "read and write".....	1	2	3
Illiterate.....	3	5	8
Normal school.....	-	4	4
Not given.....	3	-	3
Totals.....	94	127	221

## 9—RELIGION.

	Males.	Females.	Totals
Catholics.....	29	46	75
Hebrews.....	1	2	3
Mohammedan.....	1	-	1
Protestants.....	63	79	142
Totals.....	94	127	221

## 10—OCCUPATIONS.

	Males.	Females.	Totals.
Agriculturists.....	1	—	1
Barbers.....	1	—	1
Blacksmith.....	1	—	1
Bookkeepers.....	—	3	3
Canvasser.....	—	1	1
Chocolate dipper.....	—	1	1
Clergyman.....	1	—	1
Clerks.....	6	5	11
Cooks.....	1	1	2
Dentists.....	1	—	1
Dressmakers.....	—	1	1
Electricians.....	1	—	1
Farmers.....	6	—	6
Housemaids.....	—	13	13
Housewives.....	—	39	39
Laborers.....	8	—	8
Loom fixers.....	1	—	1
Lumberman.....	1	—	1
Machinists.....	5	—	5
Mechanic.....	1	—	1
Mill operatives.....	7	3	10
No occupation.....	—	1	1
Nurses.....	—	7	7
Painters.....	3	—	3
Paper makers.....	1	—	1
Porters.....	1	—	1
Painters.....	1	—	1
Railroading.....	4	—	4
Salesmen.....	3	—	3
Sardine packers.....	1	1	2
School teachers.....	2	4	6
Seamen.....	2	—	2
Shoemakers.....	5	3	8
Snowshoe Makers.....	1	—	1
Stenographers.....	—	2	2
Stone cutters.....	2	—	2
Students.....	17	35	52
Student nurses.....	—	2	2
Teamsters.....	3	—	3
Textile workers.....	2	—	2
Typists.....	—	1	1
Waiters.....	2	—	2
Waitresses.....	—	3	3
Watchmakers.....	1	—	1
Weavers.....	1	1	2
Totals.....	94	127	221

## 11—ETIOLOGY.

1.—SOURCES OF INFECTION.	Males.	Females.	Totals.
Family: Mother, father, sister or brother.....	22	34	56
Other relatives.....	3	4	7
Associations, other than relatives.....	8	10	18
Marked exposure to infection.....	—	1	1
*Doubtful.....	13	16	29
2.—CONTRIBUTORY CAUSES.			
Store, stone or office dust.....	5	5	10
Wool or cotton dust.....	1	3	4
Shoe or machine dust.....	7	1	8
Box or Paper mill.....	4	—	4

\*Many patients were children who knew little of their history.

Columns cannot be totalled on account of patients having exposure from more than one source.

## 12—PRESUMABLE DURATION OF DISEASE BEFORE ADMISSION.

	Males	Females.	Totals.
From 0 to 3 months.....	2	2	4
From 3 to 6 months.....	13	14	27
From 6 to 12 months.....	24	22	46
From 1 to 2 years.....	22	28	50
From 2 to 5 years.....	24	34	58
From 5 to 10 years.....	5	15	20
From 10 to 20 years.....	2	7	9
Over 20 years.....	-	-	-
Unknown.....	2	5	7
Totals.....	94	127	221

Average duration by months, 26.82.

## 13—PROMINENT SYMPTOMS PREVIOUS TO ADMISSION.

	Males.	Females.	Totals.	Percentage.
Hoarseness.....	18	32	50	43.8
Cough.....	39	51	90	78.8
Expectoration.....	36	48	94	82.4
Chills.....	22	24	46	40.3
Fever.....	25	46	71	62.4
Night Sweats.....	30	25	55	48.2
Haemoptysis.....	23	31	54	47.3
Pleurisy.....	32	46	78	68.4

Column cannot be totaled as most patients had more than one symptom.  
Four patients gave no history of prominent symptoms.

## 14—PHYSICAL CONDITION ON ADMISSION.

	FROM JUNE 30, 1917. TO JULY 1, 1918.			PREVIOUS TO JULY 1, 1917.		
	Males.	Females.	Totals.	Males.	Females.	Totals.
Incipient.....	12	16	28	11	27	38
Moderately advanced.....	27	43	70	98	108	206
Far advanced.....	9	7	16	13	20	33
Non-tuberculous.....	-	-	-	-	1	1
Totals.....	48	66	114	122	156	278

15—TABLE SHOWING TIME LOST IN DETERMINING PRESENCE OF TUBERCULOSIS.

	0-3 wks.	3-6 wks.	6-10 wks.	10 wks. to 3 mos.	3-6 mos.	6 mos. to 1 yr.	1-2 yrs.	2-5 yrs.	Five and over.	Practically no time lost.
*Number of patients who lost time between first symptom and consulting physician.....	3	5	6	5	7	4	3	1	-	80
†Number of instances in which time was lost by physician in making a diagnosis of the consultation.....	1	5	6	8	13	2	1	3	1	74

\*Average loss of time 6.9 weeks.

†Average loss of time:11.6 weeks.



## 16—AVERAGE NUMBER OF BED PATIENTS, BY MONTHS.

	Males.	Females.	Totals.
July.....	7.6	12.9	20.5
August.....	9.3	13.2	22.5
September.....	9.7	14.7	24.4
October.....	9	13.4	22.4
November.....	9.5	13.9	23.4
December.....	10.2	13	23.2
January.....	10.6	16.6	27.2
February.....	9.2	18.1	27.3
March.....	9.2	18.1	27.3
April.....	10.5	16.1	26.6
May.....	11.9	12.5	24.4
June.....	8.9	11.	19.9
Daily average.....	9.6	14.6	24.25

17—DURATION OF RESIDENCE. PATIENTS IN SANATORIUM  
JUNE 30, 1918.

	Males.	Females.	Totals.
Under 3 months.....	9	14	23
3 to 6 months.....	3	6	9
6 to 12 months.....	9	20	29
12 to 18 months.....	5	7	12
18 to 24 months.....	4	3	7
Over 2 years.....	2	7	9
Totals.....	32	57	89

## 18—DURATION OF TREATMENT OF DISCHARGED PATIENTS.

	Males.	Females.	Totals.
Under 1 month.....	4	2	6
1 to 3 months.....	11	8	19
3 to 6 months.....	15	22	37
6 to 12 months.....	15	21	36
12 to 18 months.....	12	10	22
18 to 24 months.....	2	7	9
Over 2 years.....	3	-	3
Totals.....	62	70	132
Average duration of treatment by months 9.			

## 19—CAUSES OF DISCHARGE.

	Males.	Females.	Totals.
Left with consent.....	18	28	46
Left against advice.....	31	29	60
Infraction of rules.....	3	-	3
With consent to go to another institution.....	4	11	15
Died.....	6	2	8
Totals.....	62	70	132

## 20—REASONS GIVEN FOR LEAVING AGAINST ADVICE.

	Males.	Females.	Totals.
Homesickness.....	3	1	4
Support or care of family.....	1	6	7
To continue treatment at home.....	11	13	24
To return to work.....	5	-	5
No good reason given.....	11	9	20
Totals.....	31	29	60

## 21—PHYSICAL CONDITION ON DISCHARGE.

	Males.	Females.	Totals.	Per cent.
Arrested.....	2	2	4	3.03
Apparently arrested.....	7	6	13	9.84
Quiescent.....	23	23	46	34.84
Improved.....	16	28	44	33.33
Unimproved.....	8	9	17	12.87
Died.....	6	2	8	6.06
Totals.....	62	70	132	69.97

22—SUMMARY OF PRESENT CONDITION OF ALL CASES DISCHARGED PREVIOUS TO JANUARY 1, 1918, GROUPED ACCORDING TO THE CONDITION ON ADMISSION.

CLASS.	No.	Per cent.	CONDITION JUNE 30, 1918.		
			No.	Per cent.	
Incipient.....	43	15.1	Living and working.....	33	76.7
			Living, not working.....	2	18.6
			Dead.....	1	2.3
			Unknown.....	1	3.3
Moderately advanced.....	215	75.4	Living and working.....	110	51.1
			Living, not working.....	56	26.0
			Dead.....	41	19.1
			Unknown.....	8	3.7
Far advanced.....	27	9.4	Living and working.....	4	14.8
			Living, not working.....	7	25.9
			Dead.....	15	55.5
			Unknown.....	1	3.7

One case tabulated as unknown, reported twice as living and working.  
 One case, non-tuberculous, not traced.  
 One case not traced at all.

23—SUMMARY OF PRESENT CONDITION OF ALL CASES DISCHARGED PREVIOUS TO JANUARY 1, 1918, GROUPED ACCORDING TO THEIR CONDITION ON DISCHARGE.

CONDITION ON DISCHARGE.	No.	Per cent.	CONDITION JUNE 30, 1918.		
			No.	Per cent.	
Arrested.....	3	1.0	Living and working.....	2	66.6
			Living, not working.....	1	33.3
			Dead.....	-	-
			Unknown.....	-	-
Apparently arrested.....	21	7.3	Living and working.....	16	76.1
			Living, not working.....	2	9.5
			Dead.....	1	4.7
			Unknown.....	2	9.5
Quiescent.....	66	32.3	Living and working.....	63	73.2
			Living, not working.....	20	23.2
			Dead.....	1	1.1
			Unknown.....	2	2.3
Improved.....	141	49.4	Living and working.....	66	46.8
			Living, not working.....	40	28.3
			Dead.....	30	21.2
			Unknown.....	5	3.5
Unimproved.....	34	11.9	Living and working.....	1	2.9
			Living, not working.....	8	23.5
			Dead.....	25	73.5
			Unknown.....	-	-

## 24—SUMMARY.

CLASS.	Extent of physical signs according to Turban.	T. B. found at any time.	HYGIENIC-DEITETIC TREATMENT WITH AND WITHOUT TUBERCULIN. 110 PATIENTS WHO STAYED 90 DAYS OR MORE. AVERAGE RESIDENCE, 295 DAYS.						
			Cases.	Arrested.	Apparently arrested.	Quiescent.	Improved.	Unimproved.	Died.
Incipient.....	0	0	8 = 7.2	2 = 25.0	2 = 25.0	2 = 25.0	2 = 25.0	-	-
Incipient.....	I	0	16 = 14.5	1 = 6.2	6 = 37.5	6 = 37.5	1 = 6.2	1 = 6.2	1 = 6.2
Incipient.....	I	+	1 = .9	-	-	-	1 = 100.0	-	-
Moderately advanced.....	I	0	20 = 18.2	-	1 = 5.0	4 = 20.0	13 = 65.0	1 = 5.0	1 = 5.0
Moderately advanced.....	I	+	2 = 1.8	1 = 50.0	-	-	1 = 50.0	-	-
Moderately advanced.....	II	0	12 = 10.9	-	2 = 16.6	10 = 83.3	-	-	-
Moderately advanced.....	II	+	15 = 13.6	-	1 = 6.8	8 = 53.3	4 = 26.6	2 = 13.3	-
Moderately advanced.....	III	0	3 = 2.7	-	-	3 = 100.0	-	-	-
Moderately advanced.....	III	+	18 = 16.3	-	-	10 = 55.5	4 = 22.2	3 = 16.6	1 = 5.5
Far advanced.....	II	+	1 = 9	-	-	-	-	1 = 100.0	-
Far advanced.....	III	+	14 = 12.7	-	1 = 7.1	-	4 = 28.55	5 = 35.7	4 = 28.5

In this summary, 15 cases which had tubercle bacilli in the sputum previous to admission, are counted as + as well as those which had tubercle bacilli at any time during residence.

25—SUMMARY.

MONTHS.	Minimum temperature.	Maximum temperature.	Mean temperature.	Clear days.	Partly cloudy days.	Cloudy days.	Days with rain.	Days with snow.	Days with fog.
July.....	32	91	71.7	22	2	2	2	-	3
August.....	50	94	72	18	2	2	7	-	2
September.....	32	74	57	22	1	3	2	-	2
October.....	30	70	47	17	-	6	5	1	2
November.....	4	62	33.2	21	1	3	-	4	1
December.....	19	48	18.8	15	2	8	-	5	-
January.....	8	54	29	18	1	3	-	6	-
February.....	16	60	24.9	14	-	4	4	6	1
March.....	2	72	32.5	22	1	2	-	5	1
April.....	24	78	48.1	19	2	-	3	2	4
May.....	34	84	59	19	-	4	1	-	2
June.....	40	80	60	16	-	2	5	-	-
Totals.....	-	-	-	223	12	39	29	33	17

Reports for May and June not complete.

## WESTERN MAINE SANATORIUM.

Hebron, Maine.

Fiscal statement for the year ending June 30, 1918:

## ASSETS AND LIABILITIES.

## Assets:

State of Maine, auditor's balance.....		\$47,120 10
Patients' accounts .....		4,943 33
Inventory, equipment and supplies.....		42,302 42
Plant .....		186,092 22
Trust funds invested .....		76,100 00
		<hr/>
		\$356,558 07

## Liabilities:

## Appropriations,

Personal services .....	\$12,552 58	
Food supplies .....	16,794 24	
Repairs and equipment.....	3,846 05	
General expense .....	10,914 23	
1917 Balances .....	243 61	
	<hr/>	44,350 71
Audit vouchers .....		3,203 81
Income, due State .....		4,943 33
Trust funds,		
Levi M. Stewart Fund.....	\$75,000 00	
W. W. Brown Fund.....	1,000 00	
Hebron's Home Tel. stock.....	100 00	
	<hr/>	\$76,100 00
Surplus .....		227,960 22
		<hr/>
		\$356,558 07

## INCOME AND EXPENSES.

## INCOME.

Care and treatment of patients.....	\$9,488 37	
Laundry .....	876 58	
	<hr/>	10,364 95
Dividend, W. W. Brown Fund.....	\$30 00	
Interest, Levi M. Stewart Fund.....	3,640 00	
	<hr/>	3,670 00
Transients .....	\$221 03	
Store .....	159 98	
Training school .....	3 83	
Rebate on liability insurance.....	73 94	
	<hr/>	458 78

## Farm:

Dairy .....	\$7,525 03	
Swine .....	2,706 13	
Poultry .....	620 63	
Fields and orchards .....	1,899 50	
Stable .....	1,065 66	
Rent of house on Nichol's farm.....	142 96	
	<hr/>	13,959 91
		<hr/>
		\$28,453 64
Increase in inventory .....	\$6,459 39	
Increase in plant.....	2,014 59	
	<hr/>	\$8,473 98
Appropriation .....		87,219 16
		<hr/>
		\$124,146 78

## EXPENSE.

## Salaries and Pay Roll:

Trustees .....	\$540 00	
Steward .....	288 93	
Investigator .....	401 58	
Institution salaries .....	17,554 45	
	<hr/>	18,784 96
Food supplies .....		33,583 84

## Renewals and Equipment:

Labor .....	\$1,847 06	
Auto truck .....	2,431 51	
Materials for buildings and grounds.....	1,681 27	
Team work .....	300 00	
Household fittings and furnishings.....	1,089 85	
Office furniture and equipment.....	141 88	
Surgical instruments .....	7 12	
Machinery and tools.....	615 00	
Insurance .....	481 45	
Pipe and fittings.....	15 14	
	<hr/>	8,610 28

## General Expenses:

Range coal .....	\$262 13	
Water .....	300 00	
Electricity .....	506 75	
Household supplies .....	1,602 69	
Auto truck supplies.....	44 94	
Office supplies and expense.....	721 25	
Medical supplies and expense.....	3,054 44	
Trustees, expenses .....	631 41	
Transportation, traveling expense .....	680 69	
Laundry .....	395 52	
School supplies .....	89 25	
Unclassified .....	385 87	
	<hr/>	8,674 94

## Heat, Light and Power:

Coal, including freight and hauling.....	\$11,662 77
Salaries .....	1,188 38
Machinery and tools.....	36 49
Pipe and fittings.....	58 27
Supplies .....	390 48
Electrical supplies .....	238 74

---

 13,575 13

## Farm:

Labor .....	\$2,810 14
Equipment .....	716 41
Grain .....	5,913 34
Seeds and fertilizer .....	149 10
Pasture .....	70 00
General expenses .....	178 71

---

 9,837 70

---

 \$93,066 85

Sewerage tanks, construction .....

2,014 59

---

 \$95,081 44

Cash sent to State treasurer.....

13,307 11

Credits .....

3,908 24

Charged off .....

1,371 27

Increase in income.....

104 51

Increase in surplus .....

10,374 21

---

 \$124,146 78

## PER CAPITA COST.

July 1, 1917, to June 30, 1918.

Average number of patients for year.....

103.9

Total maintenance appropriation expenditures..

82,655 10

Less increased inventory.....

6,459 39

---

 \$76,195 71

Average gross weekly per capita cost.....

14.103

Less miscellaneous income.....

7,695 27

1.424

---

 \$68,500 44
Average weekly per capita expense for support  
of patients and maintenance of property.....

12.679

Less income from patients.....

10,364 95

1.918

---

 \$58,135 49

Average weekly per capita cost to State.....

10.761



# CENTRAL MAINE SANATORIUM

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## THIRD ANNUAL REPORT.

June 30, 1917 to June 30, 1918.

*To the Honorable Board of Trustees for Tuberculosis Sanatoriums:*

I have the honor to submit the third annual report of the Central Maine Sanatorium.

The number of treatment days provided was 29,646, an increase of 14,028 over last year. The highest daily census was 111 and the lowest 42. The daily average of patients was 81.2 as compared with 42.8 last year. The average length of stay was 80.1 days.

The average gain in weight was 41 lbs. and the greatest individual gain 32 lbs.

Of the 370 patients admitted 44 or 11.62% were incipient, 184 or 49.72% were moderately advanced, 133 or 35.94% were far advanced, 7 or 1.89% per non-tuberculosis and 2 or .54% were surgical tuberculosis.

### OFFICERS.

Karl B. Sturgis, M. D., was appointed assistant superintendent March, 1918. Miss Dorothy Wells was appointed matron but has resigned. Miss Elizabeth Marco has been retained as superintendent of nurses.

### MEDICAL REPORT.

It is noted with much gratification that although the number of hospital days is nearly doubled, the number of deceased patients is one less than last year. The reason is found in the closer co-operation of physicians and more and better work by the State, district and county nurses.

Medical treatment has been along the lines used in former years. I believe that our method of treatment has improved much in that the patient is treated more individually. At the first examination the patient is told in a general way and frankly, the extent of involvement and why rest or prolonged treatment is necessary, impressing on him the necessity of his complete intelligent co-operation.

Our greatly increased capacity has allowed a greater range in classification. Wards 5, 6, 7, top floor, Cottage A are reserved for bed patients. Wards 2, 3, 4, for those cases allowed sitting up exercise and Ward 1 for male ambulatory cases. The Chase Building is used for female ambulatory cases only, at present. The north ward of this building can be used for male or female patients according to the preponderance of either sex on the waiting list.

It is a matter of regret that the average duration of residence is not more lengthy. Six months is necessary in all cases and the average case should undergo at least one year of treatment. It is necessary in order that treatment bear fruit that some provision be made at the sanatorium to prepare the patient for his position in society. Patients on discharge, owing to the short length of stay, have little idea of their capacity for work, or better, of their limitations. It will be impossible for many of these to resume their former avocation, particularly those of the laboring class. For this reason it would seem advisable to have a manual training school under competent management where patients could be tested out as to their working capacity and also where they could be taught new trades which would not interfere with a continuance of good health nor impair their earning power. (I recommend that provision for the erection of such a building be included in the estimates for the next two years.)

No table on condition on discharge is included in this report. Owing to the great number of discharges being far advanced cases and also the greater number of favorable cases being transferred to Hebron, the work done here appeared in a light not justified by the facts.

#### TRAINING SCHOOL.

Three have been graduated during the past year. There are 4 pupil nurses in the training school at present.

#### RECOMMENDATIONS.

*Consulting Staff.* A consulting staff of physicians, consisting of surgeon, internist, and laryngologist, should be appointed.

*Vegetable Cellar.* A separate building for the proper care of vegetables, and also flour is needed, and should be built this fall if possible.

*Defective Heating.* The corridor Ward 1, Cottage "A," is heated by open supply pipe which is inadequate. Radiators should be installed at once.

*Road.* The building of a road from the pump house to the kitchen with connecting service roads is recommended.

*Moving Picture Machine Booth.* As we have the machine it would seem advisable to purchase a booth as soon as possible. The site of installation of this booth presents some difficulty but I believe some slight changes could be made in the dining room which would con-

veniently take care of the booth and at the same time not be detrimental to the good appearance of the room.

*Weigh Scales.* These should be installed for the proper checking of coal, potatoes, etc.

*Vacuum Cleaners.* As both new buildings are piped, the installation of machines would be an advantage.

*Under-Ground Passage.* An underground passage from Cottage A to the main dining room would be a great comfort to the patients and of great value in the conveyance of food.

*Children's Pavilion.* A special building for the care of children is a necessity. If this is built as contemplated it will necessitate the erection of a nurses' home. It is hoped that both these buildings can be built next year.

*X-ray Machine.* The installation of a good machine would aid greatly in the diagnosis of many doubtful cases and is earnestly recommended for consideration.

*Acknowledgments.* During the year, we have received many donations of magazines, books, papers, clothing and flowers and for which we are sincerely grateful.

I wish to express my thanks to the Protestant and Catholic clergy for religious services performed.

To our heads of departments, nurses and employees I wish to express my appreciation for loyal service rendered.

To the Board, I am indeed grateful for your continued confidence.

Respectfully submitted,

JOHN F. SHAW,

*Superintendent.*

## FINANCIAL STATEMENT.

## STATEMENTS OF ASSETS AND LIABILITIES.

## ASSETS.

State of Maine account, consisting of auditor's balance, viz.:	
Appropriation for maintenance 1918 unused....	\$19,479 63
Appropriation for Chase Mem. equipment.....	2,899 31
Appropriation for new pavilion (1917).....	28 16
Appropriation for sewerage and water main....	57 50
	<hr/>
	\$21,464 60
Appropriation for Remod. Chase Mem.....	10,340 47
	<hr/>
(Overdrawn) .....	11,124 13
Patient's Account:	
Amount due from various private means.....	3,259 29
Plant Account:	
Consisting of building and land purchased by order of Governor and Council, Sept. 29, 1915, under chapter 351, Public Laws 1915 and known as Chase Memorial Build- ing .....	
	15,000 00
Remodeling Chase Memorial Building.....	25,840 49
New pavilion, known as Cottage A.....	46,573 23
Sewerage and water mains.....	5,986 73
Inventories:	
Consisting of supplies and equipment.....	30,489 44
	<hr/>
	\$138,333 31

## LIABILITIES.

## Appropriation Accounts:

Consisting of balance appropriation unexpired,

Personal services .....	\$3,405 17
Food supplies .....	10,339 17
General expenses .....	5,151 58
Chase Mem. equipment .....	2,899 31
New pavilion .....	28 18
Sewerage and water main.....	57 50
	<hr/>

\$22,080 89

Repairs and equipment		
(Overdrawn) .....	\$4,292 85	
Remodeling Chase Mem.		
(Overdrawn) .....	\$10,340 40	
	<hr/>	14,632 82
		<hr/>
		7,448 07
Audited Vouchers:		
Unpaid vouchers June 30, 1918.....		13,179 15
Income due State:		
Being patient's account Ledger A.....	\$1,023 42	
Being patient's account Ledger B.....	2,235 87	
	<hr/>	3,259 29
Surplus: :		
Consisting of buildings, grounds, and inven-		
tory, etc. ....	114,386 80	
	<hr/>	138,333 31

INCOME AND EXPENSE.

Income:		
Appropriation accounts .....	\$150,633 60	
Board of patients .....	7,506 45	
Increase in inventory.....	25,122 12	
Increase in plant .....	78,400 45	
	<hr/>	261,682 62
Expenses:		
Salaries and pay roll.....	\$13,207 94	
Subsistence .....	27,947 08	
Clothing .....	59 55	
Renewals and equipment.....	14,816 46	
Sundry expenses .....	20,712 65	
Remodeling Chase Memorial.....	25,840 49	
Equipment Chase Memorial.....	4,153 97	
Cottage A .....	46,573 23	
Sewerage and water main.....	5,986 73	
Income to State.....	8,365 04	
Surplus increased .....	94,029 48	
	<hr/>	261,682 62

MAINTENANCE APPROPRIATION EXPENDITURES.

	1917	1918	Total
Personal services .....	\$5,232 14	\$7,994 83	\$13,226 97
Food supplies .....	10,731 79	17,460 83	28,192 62
Renewals and equipment.....	5,529 70	11,292 35	16,322 05
General expenses .....	9,543 62	11,948 42	21,492 04
	<hr/>		
Expended from 1917 appropriation....	\$31,037 25		
		<hr/>	
Expended from 1918 appropriation....		\$48,696 43	
		<hr/>	
Total expended for year.....			\$79,833 68

Hospital days .....	29,646
Weekly per capita cost.....	12 88
Income (actual cash received).....	7,506 45
Weekly per capita income.....	1 75
Weekly expenses to State.....	11 13

## LIABILITIES.

7. Appropriation accounts .....	\$7,448 07
8. Income due State.....	3,252 29
Maintenance expenses .....	5,179 14
Land, buildings, etc.....	800 01
9. Surplus (or net assets).....	10,100 98
10. Total .....	\$123,017 49

## CENSUS OR POPULATION RETURN.

1. Number brought forward from last return:				
In-Patients.	Males.	Females.	Total.	
(a) Present .....	21	25	46	
2. Number of admissions during the period	153	171	324	
				370
3. Number of withdrawals:				
(a) By discharge, etc.....	96	117		
(b) By death .....	27	20	260	
4. Number remaining at midnight on last day of period .....	53	57	110	
				370
5. Average number of patients during period (daily)				
(a) Present .....	Paid.	Free.	Total.	
	31.3	46.8	78.1	
6. Largest number of patients present on any one day during the period.....			111	
7. Number of beds for patients (normal capacity) .....			122	
		Out-Patient.		
		Department		
		District		
		Nurse		
	In-Patient			
	Department.	Service.		Total.
12. Daily average number of employees on pay roll or receiving allowances such as board, room, etc.:				
(a) Physician .....	2			
(b) Graduate nurses .....	5			

(c) Pupil nurses .....	4	
(d) Attendants .....	1	
(e) Paid solicitors and collectors...		
(f) Other employees .....	21	33
13. Of the total of item 12, the number provided by the institution with,		
(a) Board and room, was.....	32	32
(b) With board only.....		

I, John F. Shaw, certify that the foregoing schedules contain a true statement of the income, expenses, assets, and liabilities of the above-named institution for the year indicated; that the same agrees with the books of account kept by the financial officer of the institution or under his direction; that these accounts have been audited by Geo. H. Bangs, special auditor, and that all items of income have been properly accounted for and all items of expense properly avouched.

JOHN F. SHAW,

*Superintendent.*

SPECIAL REPORT REQUIRED BY STATE BOARD OF  
CHARITIES AND CORRECTIONS.

Fiscal statement of the Central Maine Sanatorium for the year ending June 30, 1918:

SUMMARY.

1. Surplus (or net assets) as reported to the State Board of Charities and Corrections at the end of the previous fiscal year .....	\$20,367 32
2. Income for the year as per Schedule A.....	251,426 80
	\$271,794 12
3. Total to be accounted for.....	\$271,794 12
4. Maintenance expenses incurred during the year as per Schedule B .....	\$80,897 65
5. Special expenses as per Schedule C.....	86,765 49
6. Surplus (or net assets) at the end of this year as per Schedule D .....	104,130 98
	\$271,794 12
7. Total accounted for (same as item 3).....	\$271,794 12

\* SCHEDULE A—INCOME.

1. Board and care paid by the State, by counties, by municipalities, and by persons cared for or their relatives and friends.....	\$7,506 45
2. Other income:	
(a) Increase in value of land and buildings.....	78,400 45
(b) Increase in inventories.....	14,866 30
3. State, county or municipal appropriations (except payments for board and care—see item 2).....	150,653 60
	\$251,426 80
4. Total income .....	\$251,426 80

SCHEDULE B—MAINTENANCE EXPENSES.

1. Personal services:	
(a) All other employees, except as noted under item 4 .....	\$13,207 94
2. Food supplies .....	27,947 08
3. Clothing .....	59 55
4. Repairs and equipment:	
(a) Salaries and wages, furniture, equipment, materials and insurance .....	18,970 43



5. General expenses:	
(a) Heat, light and water.....	3,955 91
(b) Other maintenance expenses and supplies.....	16,756 74
	<hr/>
6. Total maintenance expenses.....	\$80,897 65

## SCHEDULE C—SPECIAL EXPENSES.

1. Land, buildings and attached fixtures.....	\$78,400 45
2. Income sent State.....	8,365 04
	<hr/>
3. Total special expenses.....	\$86,765 49

## SCHEDULE D—ASSETS AND LIABILITIES.

1. Land, buildings and attached fixtures, used for institution purposes .....	\$93,400 45
2. Furniture and equipment.....	12,591 38
3. Supplies .....	7,642 24
4. Accounts receivable .....	3,259 29
5. State of Maine account.....	11,124 13
	<hr/>
6. Total .....	\$128,017 49

## STATISTICAL TABLES.

## MOVEMENT OF POPULATION.

	Male.	Female.	Total.
Patients in Sanatorium June 30, 1917.....	21	25	46
Patients admitted .....	153	171	324
			<hr/>
			370
Patients transferred .....	45	66	111
Patients discharged .....	51	51	102
Patients deceased .....	27	20	47
Patients in Sanatorium June 30, 1918.....	53	57	110
			<hr/>
			370
Voluntary discharges .....			95
Discharged as non-tuberculous .....			7

TABLE 1.

## ADMITTANCE BY MONTHS.

	Male.	Female.	Total.
July, 1917 .....	18	15	33
August, 1917 .....	11	14	25
September, 1917 .....	14	15	29
October, 1917 .....	8	8	16
November, 1917 .....	5	9	14
December, 1917 .....	14	17	31
January, 1918 .....	8	14	22
February, 1918 .....	12	10	22
March, 1918 .....	13	23	36
April, 1918 .....	22	22	44
May, 1918 .....	15	10	25
June, 1918 .....	13	14	27

TABLE 2.

## HOSPITAL DAYS.

July .....	1,756
August .....	2,060
September .....	2,061
October .....	2,106
November .....	1,992
December .....	2,199
January .....	2,475
February .....	2,237
March .....	3,000
April .....	2,933
May .....	3,061
June .....	3,036
	28,916

TABLE 3.

## ADMISSIONS BY COUNTIES.

	Male.	Female.	Total.
Androscoggin .....	18	19	37
Aroostook .....	26	32	58
Cumberland .....	33	27	60
Franklin .....	4	3	7
Hancock .....	2	3	5
Kennebec .....	26	21	47
Knox .....	11	7	18

Lincoln .....	3	0	3
Oxford .....	6	6	12
Penobscot .....	7	20	27
Piscataquis .....	13	11	24
Sagadahoc .....	4	7	11
Somerset .....	15	15	30
Waldo .....	1	3	4
Washington .....	9	9	18
York .....	6	4	10
	<hr/>	<hr/>	<hr/>
	174	196	370

TABLE 4.

## CONDITION OF PATIENTS ON ADMISSION.

	Male.	Female.	Total.
Incipient .....	10	34	44
Moderately advanced .....	79	105	184
Far advanced .....	80	53	133
Surgical T. B.....	0	2	2
Non T. B.....	5	2	7
	<hr/>	<hr/>	<hr/>
	174	196	370

TABLE 5.

## CIVIL CONDITION OF PATIENTS.

	Male.	Female.	Total.
Married .....	57	87	141
Single .....	103	98	201
Widowed .....	11	13	24
Divorced .....	3	1	4
	<hr/>	<hr/>	<hr/>
	174	196	370

TABLE 6.

## NATIVITY OF PATIENTS.

United States .....	292
Albania .....	4
Canada .....	51
England .....	3
Greece .....	1
Ireland .....	3
Italy .....	4
Russia .....	4
Scotland .....	2
Spain .....	2
Sweden .....	2
Syria .....	2

TABLE 7.

## AGE AND SEX.

## ADMITTANCES.

Age	Under 10	10-19	20-29	30-39	40-49	50-59	60	70-79	Total
Male	5	25	64	37	29	12	2	0	174
Female	14	39	74	36	24	7	0	2	196
	19	64	138	73	53	19	2	2	370

TABLE 8.

## AGE AND SEX OF DECEASED PATIENTS.

Age	Under 10	10-19	20-29	30-39	40-49	50-59	60-69	Total
Male	0	6	5	8	6	2	1	28
Female	1	3	8	3	4	0	0	19
	1	9	13	11	10	2	1	47

TABLE II.

## DEATHS, DURATION OF RESIDENCE AND CAUSE OF DEATH.

Case No.	Duration of Residence.	Cause of Death.
263	66 weeks	Pulmonary T. B.
095	134 weeks	Pulmonary T. B.
477	14 weeks	Pulmonary T. B.
510	14 weeks	Nephritis and Pulmonary T. B.
429	33 weeks	Pulmonary T. B.
449	12 weeks	Laryngeal and Pulmonary T. B.
80	25 weeks	Pulmonary T. B.
443	49 weeks	Pulmonary T. B.
250	77 weeks	Pulmonary T. B.
516	15 weeks	Laryngeal and Pulmonary T. B.
619	11 weeks	Pulmonary T. B.
627	23 weeks	Pulmonary T. B.
799	3 weeks	Pulmonary T. B.
767	5 weeks	Laryngeal and Pulmonary T. B.
727	3 weeks	Pulmonary T. B.
783	4 weeks	Pulmonary T. B.
638	12 weeks	Pulmonary T. B.
738	12 weeks	Hemorrhage and Pulmonary T. B.
761	3 weeks	Pulmonary T. B.
755	6 weeks	Pulmonary T. B.
651	3 days	Pulmonary T. B.

589	2 weeks	Pulmonary T. B.
857	4 weeks	T. B. Enteritis and Pulmonary T. B.
734	5 days	Pulmonary T. B.
563	11 days	Pulmonary T. B.
537	33 weeks	Pulmonary T. B.
540	24 weeks	Pulmonary T. B.
539	39 weeks	Pulmonary T. B.
577	45 weeks	Pulmonary T. B.
559	18 weeks	Pulmonary T. B.
583	39 weeks	Pulmonary T. B.
576	26 weeks	Pulmonary T. B.
620	6 weeks	Gassed and Pulmonary T. B.
592	3 weeks	Pulmonary T. B.
594	35 weeks	Hemorrhage and Pulmonary T. B.
593	3 weeks	Pulmonary T. B.
644	3 weeks	Pulmonary T. B.
775	9 weeks	Pulmonary T. B.
781	9 weeks	Pulmonary T. B.
817	2 weeks	Pulmonary T. B.
696	11 weeks	Hemorrhage and Pulmonary T. B.
584	27 weeks	Pulmonary T. B.
872	5 weeks	Pulmonary T. B.
394	29 weeks	T. B. Adenitis, Pott's and Pulmonary T. B.
567	6 weeks	Pulmonary T. B.
616	2 days	Pulmonary T. B.
416	12 weeks	Pulmonary T. B.