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SEVENTH ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH,

60278
OF

MINNESOTA,



JANUARY, 1879.

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MINNESOTA STATE BOARD OF HEALTH,
SECRETARY'S OFFICE,
RED WING, Feby. 5th, 1879. }

*To His Excellency Hon. John S. Pillsbury,
Governor of Minnesota.*

SIR:—I have the honor herewith to transmit the seventh annual
report of the State Board of Health.

Very respectfully,

Your obedient servant,

CHARLES N. HEWITT,
Secretary.

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MEMBERS STATE BOARD OF HEALTH.

D. W. HAND, M. D., St. Paul.

V. SMITH, M. D., Duluth.

CHARLES N. HEWITT, M. D., Red Wing.

FRANKLIN STAPLES, M. D., Winona.

W. H. LEONARD, M. D., Minneapolis.

E. J. DAVIS, M. D., Mankato.

CH. GRONVALD, M. D., Holden.

NOTE.—All communications for the Board should be addressed to
SECRETARY STATE BOARD OF HEALTH,
Red Wing, Minn.

GENERAL REPORT.

State Board of Health have the honor to report their work for 1878.

DISEASE PREVALENCE.

Small Pox.

Small pox has effected a lodgement among our population twice during the year. Once it appeared at Grand Forks, D. T., just across the Red River. We were called upon for assistance, and gave it promptly, sending physicians, a nurse, vaccine virus and other supplies. Reports of these Endemics will be found in the appendix page 15. During the last two years, (1877-78) this disease has appeared in Minnesota four times. In every instance it was imported, twice from states east of us or Canada, (once certainly from Wisconsin) and once from Winnipeg. At Grand Forks it began in an immigrant, who brought it with him, we believe, from Canada. There has happened to be no competent physician in charge of the first cases, so that disease has had greater opportunity to spread than it would otherwise have had.

At Viola, Olmstead county, in 1877, the first cases were called "French Measles" by the doctor in attendance. At Wadena they were called "Measles." At Fisher's Landing the doctors seem to have been in doubt of the identity of confluent Small Pox and called it "Chicken Pox." The first cases at Grand Forks were not seen by a physician.

At Mankato, last winter, the attending physician did not recognize the disease, till it had existed two weeks, and then advised the parents of the patients to keep the facts to themselves, at the same time permitting access to the sick room, by neighbors and acquaintances. The result of this ignorance, or criminal carelessness, was speedily apparent—27 cases of the disease in eleven families in Mankato, with four deaths. Outside the city, in the adjacent

country, there occurred 11 cases and three deaths, a total of 38 cases and 7 deaths, every one of which has been clearly traced to the original case.

At Grand Forks there were 27 cases and 7 deaths. Despite this delay in recognizing the disease, when the truth was known, this Board was asked for help or volunteered it, as at Mankato. We sent competent physicians where they were needed, with vaccine, disinfectants, and nurses when necessary. Except at Mankato no new cases occurred after we had the disease under observation. Efficient measures were adopted by the local Board of Health at Mankato, with the co-operation of this Board. Animal vaccine was thoroughly and successfully used there. Dr. Davis, of this Board, contributes a report upon this subject (appendix page 23). It would be better if the legal penalties were enforced for neglect to report infectious diseases to local health authorities and this board. This loathsome disease might be literally "stamped out" if people would remember two facts as respects Small Pox.

First—that our comparative exemption from its attack is due entirely to vaccination and to strict quarantine of sufferers from the disease, by Boards of Health to whom all suspected cases of disease should be immediately reported.

Second—that vaccination should always be repeated after the fifteenth year, and in *case of doubt*, at any time when in danger of Small Pox.

We repeat what we have said in preceding reports. Animal vaccine direct from the heifer, pure and active, is easily obtained. All that has been used by our advice, for several years, has been obtained from Dr. E. L. Griffin, Fond du Lac, Wisconsin, who maintains a constant supply, from healthy animals, under his own supervision. Our secretary is authorized to supply this virus, at cost price to all who apply for it. (Present price is \$1.00 for 10 points). It can be as well obtained by the family physician, who should always, when possible, use it, and watch its operation.

Diphtheria.

One other disease, Diphtheria, has been endemic in many localities in our state for two years, and has assumed a very virulent form in some towns during the fall and winter of 1878.

The most marked endemic occurred at Mankato. It began in July and has continued, with more or less severity, to date, though the number of cases and mortality are less than at first. Not far from 350 cases have been treated by physicians, of whom 13.7, per cent.

died. This Board has given every aid possible to the local authorities. A special committee, of which Dr. Franklin Staples is chairman, have visited Mankato and other districts suffering from this disease.

An extensive correspondence has been had with leading physicians throughout the state, and their opinions with those of the committee, are given by Dr. Staples in the report on Diphtheria (appendix page 27). We call attention to this valuable paper, and repeat the warning often given before, that Diphtheria and diseases of the class to which it belongs, if not directly caused by foul air and water, and by filth-saturated soil, find in such conditions those most favorable to their development and malignancy.

This is the testimony of the correspondents of the Board, of all sanitary experience, and finds powerful collateral support in the analysis of suspected drinking water, given by Prof. Peckham in the succeeding report.

The Sanitary Water Survey of the State.

This work began early in the history of the Board, has been steadily maintained as opportunity offered and our funds permitted.

This year we give a valuable contribution by the state chemist, (appendix page 85). Samples of drinking water from suspected and other wells in Mankato are compared with the drinking water of other towns.

Prof. Peckham, at the request of the Board, visited Mankato, and his observations are worthy of serious consideration.

He lays special stress upon the constant and increasing danger of soil and water pollution by the usual methods of making cess pools and privy vaults, and the still more objectionable, and harmful practice of covering up the old vaults when new ones are made.

In towns, no longer settled than those on the Minnesota and Mississippi rivers, the danger, to the water and air supply, from these sources, is already proven to be a serious cause of ill health and acute disease.

The only cities having a system of water supply and sewers, *the one as essential as the other*, are St. Paul and Minneapolis. In neither is the system complete. The first gets its water supply from Lake Phalen, the other from the Mississippi River. A reference to Prof. Peckham's report will show that the last is contaminated with the city sewage, for which, as in St. Paul, the river is the common receptacle.

Winona has adopted the Holly system of constant supply from wells sunk in the gravel of the riverbank. There is no system of sewers.

The river towns must speedily provide these essentials of public health, to avoid the increase of those low fevers which are indices of filth pollution.

During 1879, this Board proposes to continue the study of the water supply of our larger towns, and hopes to be able to assist the growth of popular opinion in favor of these essentials of healthy living in centers of population.

Yellow Fever.

(Appendix, page 97.)

By direction of the Board, the president and secretary attended the yellow fever conference of the American Public Health Association, at Richmond, Va., last fall. Dr. D. W. Hand reports the proceedings of that meeting, and relates the history of yellow fever in the United States, and his own extended experience in its management.

It has heretofore reached as far north as Minnesota, but its chief interest for us is found in the fact that it belongs to a large class of diseases, to most of which we are exposed, and the study of every one of them adds something to our knowledge of the laws of epidemics and of the means of preventing them. This is especially true in the case of yellow fever, which has attracted the attention and study of the ablest of the medical profession of the country.

Dust Fires and Explosions.

(Appendix, page 93.)

Under this title Prof. Peck gives a summary of the very important conclusions of his study into the causes of the fire and explosion of the Washburn mill, at Minneapolis.

No more important contribution to the hygiene of flouring mills has yet been made. The Professor suggests a form of lantern for use in such mills, by which the danger of accidents is practically removed. Such protection of lives and property ought to be enforced by law.

Vaccination.

We submit the experience of physicians in Blue Earth county in the use of animal vaccine virus, in a report prepared by Dr. E. J. Davis. (Appendix, page .)

The Meteorology of Minnesota for 1878.

(Appendix, page 107.)

This work which we have maintained for several years, is of increasing importance. It sums up the monthly reports of the observers, of the Board, and of the Signal Service in the State. All appreciate the value of such work, but few, beside those who make the thousands of daily observations, know the labor involved. The thanks of the Board and of the State are due to these gentlemen who have done and continue to do this work.

Hospital for the Insane.

The permanent Hospital is crowded. As a consequence the sleeping rooms have too many occupants. It is hoped that the new Hospital, at Rochester, will give some relief.

The old Hospital, at St. Peter, is a "make shift" which ought to be discontinued.

School for Imbecile Children.

We repeat our recommendation that a school of this kind be established in connection with the Institution for Deaf and Dumb, at Faribault. There is room there, and Prof. Noyes proposed this arrangement last year.

There are at present in the Hospital for the Insane, ten boys and five girls of this class. They cannot be properly cared for at the Hospital. They occupy rooms needed by the Insane. There are many more children of this class in the State for whom some provisions ought to be made. Their claim is at least equal to that of the deaf, dumb or blind, and the proposed school, at Faribault, meets this need with the least expense to the State.

The Doors of Public Halls should Open Outward.

We call attention to the violations of the law requiring the doors of public halls to open outward. We cannot recall an instance in which it has been enforced. It should surely be obeyed in buildings belonging to the State. The public hall in the upper story of the Normal School, at Winona, is an example of this statement. In case of sudden panic or of fire in the building, it would be nearly impossible for an audience to escape in safety.

The Relations of Scholastic Methods to the Health of Pupils in the Public Schools.

This report is a continuation of the investigation began last year. It gives the health statistics of the University, one Normal and one High School for 1878, and a comparison of the physical constants of the University and Amherst College, with the same data for the Naval Academy at Annapolis. In addition are given statistics of the men drafted into the army during the late war and of soldiers from Minnesota. These statistics are so arranged as to be available for study to all interested in the subject. As relates to the pupils in our Public Schools the value of the inquiry will be apparent. It will increase as the use of a "Health Record" becomes general throughout the state.

The conclusions from these data will help to answer many questions already discussed, as to the facts of the physical deterioration of our population, the influence of co-education upon the health of girls, and the influence of school going and of study upon children of both sexes.

The Vital Statistics of the State.

We call attention to the report of the Commissioner of Statistics. The vital statistics for 1878 have been edited by the secretary of this Board, who has consolidated the births and deaths for past years, and averaged the results.

It is in this way that the value of these statistics is most evident. There is very great carelessness apparent in the collection of the vital statistics. The compensation provided by law is sufficient to reward careful, honest work. Some means ought to be devised to insure it.

The secretary of the Board continues to serve as non-resident Professor of Public health at the University, [giving annually a course of lectures upon sanitary subjects to the Senior class, and occasional addresses to the whole body of students. The financial statement is appended.

D. W. HAND,
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CHARLES N. HEWITT,
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CH. GRONVALD.