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NEW ZEALAND.

MATERNAL MORTALITY IN NEW ZEALAND.

REPORT OF SPECIAL COMMITTEE SET UP BY BOARD OF HEALTH TO CONSIDER AND REPORT ON THE QUESTION OF THE DEATHS OF MOTHERS IN CONNECTION WITH CHILDBIRTH.

Laid on the Table of the House of Representatives by Leave.

REPORT OF SPECIAL COMMITTEE SET UP BY BOARD OF HEALTH AS ADOPTED BY THE BOARD AT ITS MEETING HELD ON 7TH OCTOBER, 1921.

THE committee appointed to consider and report on the question of the deaths of mothers in connection with childbirth have made careful inquiry and investigation, and have now the honour to submit the following report :—

The issue was raised in May last by the publication of certain statistics by the Children's Bureau of the United States Department of Labour. These figures place New Zealand second from the top of the list of nations in respect of maternal mortality in pregnancy and childbirth. The Minister of Health thereupon addressed three questions to the Director-General of Health : (1.) Were the figures for New Zealand correct ? (2.) If correct, what were the causes of this excessive maternal mortality in New Zealand ? (3.) How were these causes to be removed ?

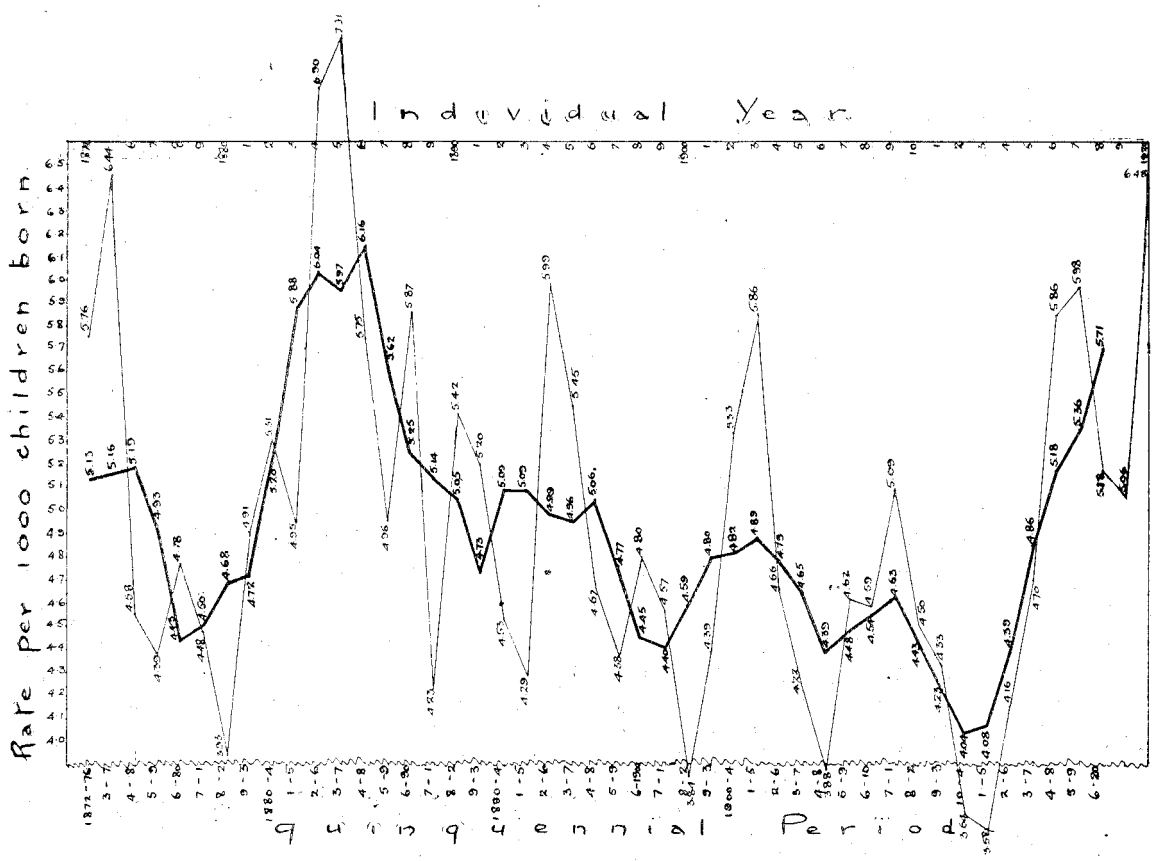
The Director-General of Health advised that as the matter was of grave importance the whole question should be referred to the Board of Health for its consideration. Accordingly, the Board of Health sat on the 27th July, 1921, and set up the present committee for the purpose of investigating the issues raised by the Minister in his memorandum to the Director-General of Health, and generally the committee was empowered to make such recommendations in the premises as it might consider reasonable and necessary.

As to the issue of whether the figures given in the American statistics of maternal mortality in different countries constitute a fair and just comparison, we regret that we are unable to obtain any definite proof one way or the other. Mr. Malcolm Fraser, the Government Statistician for New Zealand, commits himself to the statement that the figures so given are fairly comparable. Mr. Fraser, however, makes this proviso, that he has no means of ascertaining the completeness of the methods of other countries for carrying out Bertillon's international system of compiling maternal-mortality statistics. It is very possible that the countries may differ in the method of mortality returns. For example, in the event of a woman dying in the course of pregnancy of say, phthisis, one country might return such a death as due to phthisis, while another might attribute it to pregnancy. While Mr. Fraser, therefore, has no doubt as to the accuracy of our own mortality statistics, he is not in a position similarly to pledge himself with regard to the figures returned by other countries. There is, however, considerable doubt as to whether our own mortality is rightly classified. We consider that more definite instructions and information should be given to medical practitioners throughout the country, so that each death may be put under its appropriate heading, which does not appear to be always the case at present.

Dealing with the history of the matter, the committee has felt that it was its duty to go back over a considerable period of years, and we have had a graph of New Zealand maternal mortality prepared by the Statistician covering the period from 1872 to 1920. This graph is interesting. It goes to show that there are, with regard to maternal mortality in New Zealand, four varying phases or periods in our own history. The first phase or period runs from the year 1877 to 1881, when mortality was comparatively low in this country, reaching a minimum of 3·93 per 1,000 in 1880. The second cycle or period runs from 1882 to 1890, when there was a somewhat extraordinary increase in mortality, reaching a maximum of 7·31 in 1885. The third period may be assigned to the years 1890 to 1913, during which time, of some twenty years or more, there was on the whole a progressive decline from

5·42 in 1890 to 3·58 per 1,000 in 1913. The last and current period, beginning, say, from 1913 to 1920, shows another abnormal increase rising to the high figure 6·48 in the latter year. It has to be noted that, probably owing to greater statistical accuracy and more careful inquiry since about 1916, more cases have been included under puerperal mortality than before 1916. It has been suggested that an investigation of the mortality figures of other diseases, such as scarlet fever, rheumatic fever, phthisis, pneumonia, and diphtheria, would probably disclose similar fluctuations, and the committee has requested the Department to gather data and prepare graphs for comparison.

With reference to the published figures, it is fair to note that the mortality of the year 1917 was the highest since 1894. The one plain deduction from our investigation of these figures is that there has been a remarkable increase since 1914 in the New Zealand maternal death-rate. Our own figures establish this fact, notwithstanding any doubt as to their exact comparability with the statistics of other countries. We enclose a copy of the graph for the information of the Board.



GRAPH SHOWING DEATH-RATES OF WOMEN FROM PUERPERAL CAUSES (PER 1,000 CHILDREN BORN) FOR INDIVIDUAL YEARS, AND MOVING AVERAGE FOR QUINQUENNIAL PERIOD 1872–1920.

(Individual years shown by light line; quinquennial moving average by heavy line.)

We have endeavoured to investigate, so far as we were able, the causes of such high mortality. The principal causes of death are as follows: (1) Puerperal septicæmia; (2) puerperal albuminuria and convulsions; (3) puerperal hæmorrhage; (4) accidents of pregnancy and other accidents of labour.

During the last quinquennial period the average annual maternal mortality has been 157 deaths, and of this number fifty-seven are due to sepsis. The recommendations hereinafter contained, though having a special application to sepsis as a cause of death, are to a great extent of general application, and, it is hoped, will, if adopted, materially reduce the mortality due to other causes associated with pregnancy.

It should be noted that deaths from sepsis are largely preventible, and for this reason your committee has devoted special attention to this dominant cause. The factors which lead to the occurrence of sepsis in this country must be put down under three main heads.

(1.) Abnormal virulence of organisms and diminished resistance of individuals, due possibly to conditions during and subsequent to the war period. Dr. Jellett stated that from his own experience at Home sepsis seemed to be harder to deal with, and in a more virulent form than during the "nineties."

The committee feels that the lack of domestic help and the fact of housing difficulties may well be factors contributing to the diminished resistance which apparently affects women nowadays. There is another disturbing cause to which we must draw attention. Evidence was forthcoming clearly indicating that in this country there is an abnormally high death-rate due to septic conditions following on attempts to procure abortion, which deaths are included in our figures of general maternal mortality.

(2.) Unsuitable surroundings are another factor. Private houses are often quite unhealthy places for confinements. Moreover, some private maternity hospitals are not free from conditions which easily lead to septicæmia and allied troubles.

(3.) The medical witnesses were agreed that another reason of septic mortality was the unduly large use of instruments and other operative measures at confinements, and they stated with emphasis that the use of anæsthetics and instruments was urged and pressed on medical men by the patients and their friends. Medical witnesses were agreed that some reduction in instrumental delivery was urgently necessary.

Having in mind the above-mentioned matters, we have carefully considered what remedies and reforms may be necessary to eliminate, or, at least, materially reduce, the evils of an excessive maternal death-rate in this country, and we beg to make the following

Recommendations.

1. That the Health Department should consider the present form of certificate of cause of death with the view of seeing whether it could be amended so as to elicit from the medical man concerned a definite expression of opinion (*a*) as to the cause of death where there are associated diseases, and (*b*) as to associated causes, setting out primary, secondary, &c.

2. That every case of maternal death shall be forthwith personally investigated by the Medical Officer of Health, who shall report to the Director-General of Health.

3. That every case of notified puerperal sepsis shall be forthwith personally investigated by the Medical Officer of Health, who shall report to the Director-General of Health.

4. That all maternity hospitals, public and private, make a quarterly return to the Department of morbidity-rate as well as mortality-rate—a temperature of 100 degrees occurring on two different days between the second and the tenth days of the puerperium shall be included in morbidity conditions. Dr. Jellett's observations on this point are apposite. He says: "It would be very satisfactory if it was made a standard for a hospital to work on what was known as the morbidity-rate rather than the mortality-rate. By the morbidity-rate it was the practice to group the cases according to temperatures during the puerperal period. In an ordinary properly-run hospital they might have a rate of about 8 per cent., and if a hospital had a rate of 6 per cent. it would be considered that the hospital was working satisfactorily. If a hospital had a morbidity-rate of 20 per cent. it would be considered that there was something wrong with the administration of the institution. He might say that the British Medical Association in England had gone into the question, and they had laid down a standard of morbidity by which a temperature occurring in labour was to be regarded as morbid when it reached a height of 100 degrees Fahr. on any two occasions between the second and the tenth day. Such a system was generally recognized as being a proper criterion of a hospital's technique."

5. That, as it is absolutely essential that every mother should be attended during confinement by a reliable and highly trained midwifery nurse, the committee recommends that facilities should be given to all practising maternity nurses to take a refresher or post-graduate course at the various St. Helens Hospitals, or other approved institutions, at regular intervals of, say, two or three years, and that compliance be made compulsory. The Government should subsidize cost of transport and accommodation in the case of nurses taking such course.

6. That the Hospitals and Charitable Institutions Act be amended to prevent the admission of one or more cases of confinement into any house for treatment in consideration of payment made unless such house be licensed for the purpose.

7. That the committee is strongly of opinion that a more strict and regular inspection of private maternity hospitals is necessary, and that for this purpose more nurse inspectors of proved competence and experience be obtained. A very careful revision of technique should also take place, and inspection must be directed especially to seeing that recommendations are carried out, and that technique is kept up to date.

8. That the committee considers that efficiently equipped private midwifery wards for paying patients should be established as soon as possible in connection with public midwifery institutions or in other suitable places.

9. That while the committee has reason to believe that the system of training midwives pursued in New Zealand is not inferior to that obtaining in other countries, still the committee is impressed with the necessity of improving the present training, especially with regard to the supreme importance of a thorough knowledge of asepsis. The committee therefore recommends that the syllabus and course of training be revised so as to secure a greater efficiency than at present obtained.

10. That the importance of a sound training in midwifery at the Otago Medical School should be recognized by the creation of a professorship instead of the present lectureship, thus enhancing the status of this subject in the medical curriculum.

11. The committee finds on evidence before it that the use of instruments in midwifery practice is excessive, and suggests that the special attention of the medical profession be called to this fact, and that the co-operation and assistance of the profession should be sought in this connection. The committee learns with satisfaction that the medical profession through its organization is alive to its responsibilities in this matter, and has already taken steps to investigate the question, and very shortly is holding a Dominion conference at which methods of technique are to be considered with the view of reducing to the lowest possible limit maternal mortality in this country.

The evidence shows that undue pressure is frequently brought by patients and friends to expedite the course of labour by the use of instruments. In this connection the committee believes that it should be widely known and clearly understood by the public that the great majority of cases of confinement do not require instrumental assistance.

12. The committee desires to stress the importance of the use of ante-natal clinics, and in private practice the serious importance of ante-natal examination. It cannot be too widely known that already ante-natal clinics have been established in each of the seven St. Helens Hospitals in New Zealand, and also at the maternity hospitals or wards under the control of Hospital Boards. An extension of these establishments, more especially as a function of the ordinary public hospital, is necessary, and the committee is pleased to recognize the fact that local hospital authorities are sympathetic to the cause of the further development of this work. The Health Department urges all pregnant women to seek skilled advice during the latter months of pregnancy at ante-natal clinics wherever available, or at the hands of the ordinary medical adviser. Such examination should enable the medical man to detect many abnormalities, and consequently avert dangerous complications.

Concluding Remarks.

Before bringing this report to conclusion we desire to strike a note of reassurance. Childbirth is a normal physiological process, and to the healthy woman in healthy surroundings is attended with very small risk. Furthermore, there must not be undue alarm because of the statistics. It must not be overlooked that under the international "Bertillon" system of classification which is in use in New Zealand, and which has as its basis the maternal mortality-rate per thousand live births, our statistics of maternal mortality include not only deaths resulting at or after childbirth, but also those occurring during the whole course of pregnancy, and considered as essentially due to that condition.

Lastly, the committee strongly believes that if the preventive measures indicated in this report be adopted in this country, the reproach of an excessive maternal mortality under which New Zealand at present labours will early be removed.

C. J. PARR (Chairman).
D. McGAVIN.
J. S. ELLIOTT.

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