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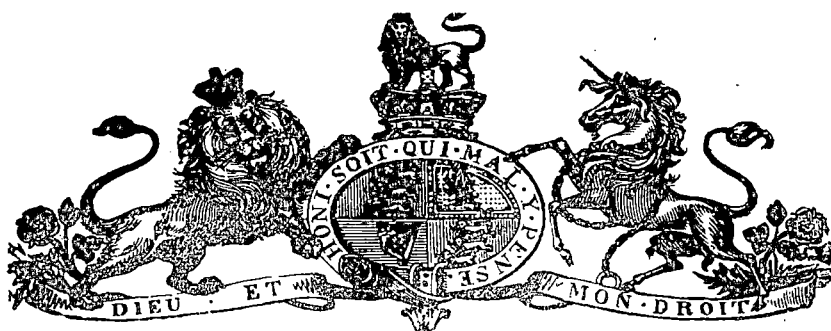
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V A C C I N A T I O N :

REPORT FOR 1886.

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Presented to both Houses of Parliament by His Excellency's Command.



## *REPORT of the Superintendent of Vaccinations for the Year 1886.*

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*Vaccination Office, Hobart, 20th April, 1887.*

SIR,

I HAVE the honor to submit my Annual Report for the year 1886.

The total number of Vaccinations performed by the Public Vaccinators during the past twelve months amounts to 1520; and of these 1357 were recorded as successful cases. Of this total 667 belong to the Northern, and 657 to the Southern Public Vaccinator; while 33 only were vaccinated in Hobart. This record shows a marked decrease in the whole number of vaccinations as compared with the previous year, and must be attributed in great measure to the agitation of a body of anti-vaccinationists for the repeal of the compulsory clauses of the Vaccination Act. This agitation culminated in the introduction into Parliament of a Bill which had as its object the total repeal of those portions of the Act; and although this measure was passed by the House of Assembly, it was rejected by the Legislative Council, leaving the Vaccination Act of 1882 as still the law of the land.

The effect of all this has been to so unsettle the minds of the people as regards the importance and true merits of vaccination, and to increase the general apathy which previously prevailed, that it has been only with the greatest difficulty parents have been induced to bring their children to be vaccinated. Dr. Davis in the north has especially had to encounter this antagonism. In Hobart, too, the effect of this baneful influence has been plainly evident by the scanty attendance at the Vaccination-rooms. All means short of prosecution have been tried in vain to prevail upon parents not to disregard this preventative against disease. Large posters containing the penal clauses of the Act have been conspicuously placed on the various hoardings of the city and suburbs; leaflets have also been printed and widely circulated showing the principles and advantages of vaccination; and in other ways public attention has been drawn to the subject: but all to no purpose as regards Hobart, for, as before stated, only 33 children were brought for vaccination during the past year.

As, according to the annual Birth returns for 1886, there were 1128 births in Hobart, and 4627 in the whole Colony, the number of vaccinations should not have been less than 1000 in the district of Hobart, after allowance for deaths and postponements, and to fully 3000 for the entire Colony in the course of a twelvemonth.

Under the provisions of the Act children should be brought for vaccination at an age not exceeding six months; and so all the children born within the first six months of the year which remain alive and are healthy should have been vaccinated by the end of the twelve months to conform with the requirements of the Act. Similarly, of course, during the first six months of the year all children born during the latter half of the previous year should have been vaccinated. We thus, and in this way only, should be enabled to keep up, *pari passu*, with the increase of the population as regards efficient vaccination; and until this be done the Colony can never be adequately protected against smallpox.

For various reasons parents shun the performance of this obvious duty, having the greatest repugnance to subject their children to vaccination at such a tender age as six months, as will be seen by the Returns; for the total number vaccinated during 1886 of the age of six months and under was only 155, and of those between six months and one year 184, while the remainder were above one year old. By these figures it will be seen that parents will brave all the penalties of the law rather than submit their children to be vaccinated at the age prescribed by the Act. In this respect the law is erroneously considered by some as unnecessarily harsh, but the age of six months was fixed upon as a time of life when infants can bear vaccination better than later on, when irritated with the troubles of dentition. In England the age is fixed at three months, and children there are frequently vaccinated when only a few weeks old. In Tasmania, then, with its far milder climate, it cannot be conceded that the law is oppressive which extends the age to six months, and more especially as it is found by experience that infants are particularly susceptible to the disease of smallpox, and invariably succumb to its attacks.

Again, parents wish the law to be optional and not compulsory. If vaccination were prescribed merely for their own immediate benefit there might be some excuse for this wish; but, as a matter of fact, the benefit to be derived from universal vaccination is National,—for the good of the State,—for the security of the community against the incursion of a plague,—and it behoves the individuals of the State to make sacrifices for the good of the whole. Hence, so long as compulsory vaccination is on the Statute Book, it is indispensable that parents should cast on one side all prejudices, and submit to the law with the consciousness that this is doing a service to the community; for, in the presence of an epidemic of smallpox, every unvaccinated person is a source of danger to his neighbour, as the infectious disease is more likely to spread among this class than the vaccinated, whereas with every one who is thus fortified that fell disease would not be so likely to obtain a foothold. Besides, each parent that denies his offspring the benefit of vaccination incurs a tremendous responsibility; for, suppose that his children should later on unfortunately take smallpox—and there is really no knowing when that scourge may be brought to our shores—and as a consequence be scarred in an unsightly manner, or lose an eye, or possibly life, how can that parent justify himself for having withdrawn his children from the safeguard of vaccination as a protection against smallpox, when the weight of evidence preponderates so greatly in its favour as a preventative? It is a responsibility, then, that should not be rashly assumed by parents, and vaccination should not be postponed or refused simply on account of any temporary inconvenience it may occasion, or from some imaginary evil that might ensue.

The overwhelming advantages of vaccination have been recently well exemplified by the outbreak of smallpox in our vicinity on board the steamer *Preussen*, and the fatal consequences that followed. Fortunately for Tasmania, the disease was confined to the several quarantine stations of the neighbouring Colonies where the passengers were landed. The disease seems not to have been of an unusual character, and yet it attacked many persons who had been vaccinated, as well as those unvaccinated; but the latter fared worse in the struggle for life, as shown by the report of the Central Board of Health at Sydney on the subject, and referred to in the *Mercury* of 25th March last, which says, "Its incidence was most severe on the unvaccinated; it fell next most heavily on the imperfectly vaccinated; and the only deaths that occurred happened amongst these two classes. The death-rate was cent. per cent. among unvaccinated children under one year of age."

I append a copy of the leaflet that has been circulated during the past year; and

I have the honor to be,

Sir,

Your most obedient Servant,

*The Hon. the Chief Secretary.*

C. E. BARNARD, M.D., Supt. of Vaccinations.

#### VACCINATION.

(1.) What is meant by Vaccination?

Vaccination is the introduction into the system of the contagious material of vaccinia, or the cowpox, with the object of protecting the person vaccinated from an attack, and especially from a severe or fatal attack, of smallpox.

(2.) Why does Vaccination protect against Smallpox?

The cowpox occurring in the cow, and the smallpox in man, have been proved to be one and the same disease, the former running a milder course than the latter; so that when the less severe cowpox is transferred to man by vaccination, the system is found to be as much protected against smallpox as if it had been originally attacked by it. For it is well known that those who have once had the smallpox enjoy almost a complete immunity from any fresh attack, and similarly those who have been successfully vaccinated enjoy a like protection afterwards.

(3.) Why is it deemed necessary to vaccinate children before they are six months old?

Because the mortality from smallpox is greater amongst children of tender age who are unvaccinated than at any other time—the disease being especially fatal in infancy—and infants also bear vaccination better before than after the period of teething. Hence it is of great importance that vaccination should be performed in very early life.

(4.) Why should Vaccination be rendered compulsory?

Because it is found by experience in older countries that compulsory legislation is the only effective means of overriding prejudice, ignorance, and carelessness. Could this or any other kind of legislation render vaccination universal, smallpox would cease to exist.

(5.) What is the ordinary Death-rate of Smallpox among the unvaccinated?

In a table published some years ago, based on an examination of 5000 cases treated in London Smallpox Hospitals extending over twenty years, Dr. Marson records the mortality of the unvaccinated as high as 35 per cent., thus showing that amongst those who had not been vaccinated, unmodified smallpox proved fatal to about one out of every three attacked.

(6.) What is the effect of Vaccination upon this excessive Death-rate?

Out of the same aggregate number of cases, Dr. Marson shows the varying mortality according to the degree of efficiency in vaccination. For instance—in those having four or more well-marked vaccine scars the mortality is 0.55, or about one-half per cent.; in those with three vaccine scars, it is 1.93 per cent.; in those with two scars, it is 4.70 per cent.; and in those only having one vaccine mark, it is as high as 7.73 per cent.; while in those who are stated to have been vaccinated, but have no marks, the mortality reaches as high as 23.57 per cent.

(7.) Is there any danger attending properly conducted Vaccination?

None whatever, to healthy children.

C. E. BARNARD, M.D., Superintendent of Vaccinations.  
2nd September, 1886.

## ADDENDUM.

SINCE the foregoing Report was penned I have received from the Secretary of the Central Board of Health, for perusal, a copy of the Report made to the Government of New South Wales by Dr. Mc'Laurin, President of the Sydney Board of Health, in connection with the quarantine of the s.s. *Preussen*, from which I have made the following extracts, affording as they do most cogent and conclusive arguments in support of the necessity of compulsory vaccination :—

"As usual in such cases, the progress of the epidemic shows very clearly the beneficial effects of perfect vaccination as a protective against smallpox. Full details will be found on this subject in the Report of the Chief Inspector; but I may mention the following salient points: Of the passengers detained at our station 19 had never been vaccinated; of these 15 took smallpox, 9 of whom died, and 1 lost her eyesight. There were 55 passengers who were said to have been vaccinated and revaccinated: of these 4 were attacked, but none died. 13 had had smallpox before; 3 of them had smallpox now, but none died. 150 persons had good or fairly good vaccination marks: of these 29 were attacked, with no deaths. 59 had deficient vaccination marks: of these 16 were attacked and 3 died."

"The awful proportion of mortality among the unvaccinated passengers should furnish a warning to the inhabitants of this Colony, who, whether from carelessness or from the influence of evil counsellors, persist in neglecting to avail themselves of the benefits of vaccination in a way that cannot fail before long to produce the most disastrous results. The efforts of this Board to prevent the introduction of smallpox into the Colony have hitherto been attended with success; but it would be unreasonable to expect, considering the extraordinary development of steam communication, that these efforts should not at some time fail. If by any misfortune this loathsome disease were to be introduced into our community, which, so far at least as the young are concerned, is practically unvaccinated, the results would be in the last degree calamitous. I have done everything in my power, by advertisement and by notices in the newspapers, to awaken the public to a sense of their danger, but as yet I regret to say that no impression seems to have been made upon them. The number of children vaccinated every week at the head office in Sydney is ridiculously small; and in the country, so far as I can judge from the returns of the Government Vaccinators, there must be an enormous number of children who have never been submitted to the operation."

It will be seen from the above extracts that Hobart does not stand alone in the neglect of its inhabitants to protect their children from the dreadful scourge of smallpox, when, in the great city of Sydney, Dr. Mc'Laurin complains so bitterly, despite of all his efforts, of the "ridiculously small number of children brought weekly to the head office to be vaccinated," and speaks also of the "enormous number of children who have never been submitted to the operation."

The Chief Medical Inspector, Dr. Ashburton Thompson, makes the following forcible remarks in his Report to the President of the Board of Health, New South Wales, upon the outbreak of smallpox on board the s.s. *Preussen* :—

"I have dealt with this outbreak at somewhat greater length and more minutely than I should have dealt with an event the like of which is within the knowledge and in most cases within the experience of all medical men, were it not that it affords a glimpse of this terrible disease, which may well serve as a warning to the unvaccinated population of New South Wales. I take up a few more lines for the same reason, in order to point out that this was a quite ordinary and commonplace manifestation of smallpox. Its incidence was most severe upon the unvaccinated; it fell next most heavily upon the imperfectly vaccinated; and the only deaths that occurred happened among these two classes. The death-rate was cent. per cent. among unvaccinated children under 1 year of age; and had a thousand such been attacked it would still have happened that the mortality was 98 per cent. Among the older unvaccinated persons the mortality was 40 per cent.; and that, again, is the usual mortality among that class. Of the survivors, one has lost both eyes, and another one eye; and that is an incident commonly observed in the course of smallpox in unvaccinated persons. For the rest, who were vaccinated, and in some cases even re-vaccinated, although they suffered in rather large numbers, the degree of illness was in almost all slight, and most often trivial. The course of the cases of all degrees of severity was quite normal and usual; there was none in which the least sign of malignancy was observed. In short, the history of this epidemic affords a faithful picture of the usual effects of the disease called smallpox without an exaggerated line; and it affords a true picture, too, (although not as favourable a one as deductions from large numbers warrant) of the protective power of vaccination against it. The attack in a slight degree of a large number of vaccinated persons—many of whom, however, were but imperfectly vaccinated—alone seems unusual, and that only until the circumstances of ship-life are considered. It is then seen to approximate closely to other outbreaks on board ship. The degree of exposure to infection is so important an element in determining the spread of disease, that outbreaks of smallpox at sea, where the exposure is most prolonged and the infection most intense, may be said to be characterised in this way; and so severe was the trial in the present instance that three persons protected in the best possible manner, that is, by previous attacks of the disease, now suffered a second time. Nor must it be supposed that the filthy state of this ship was the reason that the disease spread so widely. I do not intend to assert that filth has nothing to do with the spread of smallpox, but the distinction must be borne in mind between this and some other diseases. Cleanliness can save cities from cholera, but it can do nothing of consequence against smallpox. It can relieve Sydney of typhoid, but it cannot keep smallpox out. And, in point of fact, in many outbreaks of this disease in Her Majesty's ships of war, where, if on any ships, cleanliness is scrupulously maintained, the proportion of attacks amongst the persons on board has been as large (and even larger) than it was on board the *Preussen*. I repeat, therefore, that this account renders a true and average representation of the usual effects of smallpox; and from it the fate that will sooner or later overtake Sydney if she remains, as at present, an unvaccinated city, may be accurately foreshadowed."

I can add nothing to the foregoing irresistible testimony to impress upon parents in Tasmania the serious peril they incur for their children in withstanding the beneficent provisions of the Vaccination Act of 1882.

C. E. BARNARD, *M.D.*, Superintendent of Vaccinations.

WILLIAM THOMAS STRUTT,  
GOVERNMENT PRINTER, TASMANIA.