

SMALLPOX IN EARLY SINGAPORE (PART IV) (1860-1872)

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A brief introduction to the study of the medical history of early Singapore has already been outlined.¹ The history of Smallpox in Singapore from 1819-1829,² 1830-1849³ and 1850-1859⁴ has been documented.

During the first four decades of modern Singapore's history, Smallpox had been present either endemically or epidemically. Measures at control were largely ineffective for reasons mentioned in Parts I, II and III of this series of articles. This article deals with the fifth and part of the sixth decade during which vaccination was made compulsory by law, an important step which led to Singapore being what it is today, free of Smallpox.

In early 1860, a private practitioner, Dr Robertson, wrote to the Municipal Commissioners offering to vaccinate all children sent to his surgery for a fee. (Unethical by today's standards). He was politely turned down: "... though the terms were exceedingly moderate and the Commissioners would gladly avail themselves of Dr Robertson's services, yet it is feared there would be great difficulty in inducing parents to take their children there. ...". The real reason must have been the expense. The Public Vaccinator was only paid a small allowance. At this same meeting, the Municipal Commissioners decided on two other matters relating to Smallpox and vaccination. The Secretary was directed to ask the Senior Surgeon, Dr Rose, for his views on the best method of procuring vaccine from England, Java or elsewhere and on vaccination generally. The Commissioners also deemed that a draft of an Act to make vaccination compulsory should be drawn up and forwarded through the Governor to the Legislative Council in Calcutta for enactment.⁵

The Senior Surgeon's reply to the Secretary to the Municipal Commission makes very interesting reading. Portions will be quoted as they throw light on the conditions and beliefs then prevailing.⁶

"... the most satisfactory way of ensuring good virus is to import it direct from the Jennerian Institute, London. (His

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predecessor thought Batavia was a better source). I have therefore desired a friend of mine to make arrangements with the Secretary of the above Institute (Rather irregular practice. Why wasn't this done officially?) so that a supply of virus secured in hermetically sealed glass tubes is sent to my address quarterly, together with a supply of tubes to enable me to gather virus from successful cases here and to distribute it to the different villages of this and the adjacent islands.

It is of great importance that the virus should be renewed from Europe from time to time, for it has been observed by many medical men in India that by continuing to use the same stock of virus for any length of time, especially from native to native, it becomes so deteriorated as to induce a disease identical with Smallpox, having all the worst features of that disease, being both infectious and fatal. (The most likely explanation is that by passage from person to person using exudate from fresh skin lesions there had been contamination with the variola virus as the transfer had been carried out without strict control and asepsis).

It was only about this time last year that we witnessed these deplorable consequences at this settlement, viz. Smallpox supervening after vaccination and more than one case ending fatally. I remember about the end of April 1859 being called to see the wife of one of our Chinese merchants, and as I entered the house being horror-stricken on seeing four children covered from head to foot with Smallpox. On asking 'why they had not got their children vaccinated', the parents pointed to the arms of each, on which there were two distinct marks of vaccination of about 14 days standing. They stated that 'Mr. de Souza, the Public Vaccinator, had performed the operation, that everything went on well until the morning of the 9th day when fever with delirium set in; in two cases, attended with convulsions, and in 48 hours the ruption of Smallpox made its appearance'. Such untoward results are calculated to shake the confidence of the natives as to the protection of vaccination when they see the very disease induced by the operation performed for the purpose of suppressing it. The only way therefore of preventing such lamentable results in future is to renew the virus as often as possible, and to employ as intelligent men as possible in performing the operation.

Vaccination not being compulsory in this

part of the world, we meet with great difficulty in getting parents to bring their children any distance to be vaccinated, the Chinese excepted, but they again are under the impression that if the vaccine vesicle is opened and the virus removed, it loses so much of its prophylactic power so that when it succeeds with their children, they will not bring them back for inspection. (They were probably right. After all, the exudate is a culture of the virus in the vesicle and must influence the immunisation process). As for the Malays, so apathetic are they that it is not until Smallpox is epidemic or at their very doors that they will stir themselves in this matter. . . .

I repeat, the difficulty we experience is in the want of subjects to keep up the supply of virus. On Tuesday last, not a single person came to be vaccinated though I had several good cases waiting at my house, so that unless the Police take the matter in hand as in the case of Batavia, all attempts to rid these parts of that loathsome disease, Smallpox, must fail. From Batavia, a friend of mine writes me that the way they keep up vaccination in Java is 'certain days are set apart and places appointed where the operation is performed. The Police bring the cases forward and register them and see that those vaccinated are brought back on the eighth day for the purpose of being examined by the doctor who certifies as to the results and removes as much lymph as he requires to vaccinate other children', so that they always have a good supply at hand. Until we meet with the same assistance from the Police we cannot with much indifference on the part of the natives expect to carry out vaccination with any very satisfactory results."

The vaccination programme received another set-back on 28th December 1860 when the Senior Surgeon received intimation from the Secretary to the Municipal Commissioners that "the Board found they were not justified in expending any of their funds for vaccination purposes, and regretted that the allowance (for the Public Vaccinator) would be discontinued at the end of the year."⁷

The private medical practitioners in Town did a fair bit of vaccination, but they dealt mainly with wealthier natives and Europeans. One advertisement appeared in the Straits Times of 21st December 1861:⁸

"Central Dispensary. No. 33, North Bridge Road.

Mr. W. Maney, General Medical Practitioner.

Shipping attended; and Medicine Chests replenished.

VACCINATION

Mr. Maney begs to inform the Public that he has made arrangements for a regular supply, overland from England, of liquid vaccine lymph, purity and sources guaranteed, in hermetically sealed capillary tubes which preserve it active for an indefinite period.

He has just received overland, ex 'Columbian', a supply of the above, and is prepared to vaccinate children at his Dispensary, or he will be glad to attend at the Residence of the Parents and Guardians if required."

Smallpox control continued to be very frustrating, and in October 1862, the Commissioner of Police determined that he would actively interest himself in vaccination. He proposed to the Senior Surgeon that the Government Vaccinator should visit certain places in Town and vaccinate all the children brought to him by the Police. The Senior Surgeon agreed on condition that his officer be paid a palankeen allowance by the Police Department, "for to do this once a week could cost him at least 8 Rupees per month for palankeen hire, and it seems hard that he should be expected to spend that sum out of the 20 Rupees allowed by Government."⁷

The Police Department had no funds for this and the Commissioner of Police applied to the Municipal Commissioners for assistance "to pay the expenses of some trustworthy person, e.g. an Apothecary attached to one of the hospitals, to go round to the various villages to vaccinate children", but was informed by their Secretary that the Commissioners had no power to expend funds on vaccination.⁹ Undeterred, he appealed to the Governor:

"... I have therefore to request you will be good enough to obtain the sanction of Government to expend the necessary amount, either in a stated salary or a fee for each successful case; if the latter, to be certified by the Residency Surgeon or his assistant.

The subject is of such vast importance to the Settlement and so well known to yourself that I am sure it need only be mentioned to ensure the necessary steps being taken."⁹

The Senior Surgeon was asked to comment on this. He pointed out that up to the end of 1860, the Municipal Commissioners paid \$15 per month to a Vaccinator whose duty was to go to the different villages in the countryside and the Thannahs

(Police Stations) as directed by the Commissioner of Police. The Police informed the inhabitants of the time and place of vaccination. An allowance of \$5 was given to the Government Vaccinator for assisting in Town. These allowances were discontinued on 31st December 1860. Since that time, vaccination had not been carried out to any extent. As a result, vaccine lymph was in short supply. The Senior Surgeon now and then received vaccine from England; at other times he was indebted to the kindness of the private practitioner of the place.⁷

He then outlined the routine of the Government Vaccinator. One day a week was set apart for the purpose of vaccination, and he vaccinated as many children as his supply of vaccine would allow. The Chinese and Eurasians availed themselves of this advantage but the Malays were unconcerned until an epidemic broke out. In support of the Commissioner of Police, he stated: "It is for this class of persons, by far the most numerous, that a second Vaccinator is so urgently required, as it is amongst these people that the disease commits such frightful ravages, fostered as it is by the unhealthy swamps on which their villages are usually built and the filthy condition of their houses, and surely it is the duty of the Municipal Commissioners being Conservators of the Public Health, to see that vaccination is practised in every house under their control." He then recommended that in addition to the appointment of a second Vaccinator for Singapore, the allowance for Vaccinators be increased from 20 Rupees per month to 30 Rupees per month "as the necessities of life are so expensive in these parts." One Vaccinator was adequate when "Singapore was in its infancy" but not for the present when Smallpox was rife.⁷

After considering the Senior Surgeon's proposals, the Governor decided that there was no need for a second Vaccinator and directed the Senior Surgeon to send the Government Vaccinator once a week to one of four places selected by the Police, to vaccinate all persons brought by them. Each station would thus be visited once a month, and any necessity for expenditure on carriage hire would be avoided as no transport allowance was authorised in any Government department unless the place visited was more than four miles from the home of the Government Officer. In the event of the Commissioner of Police reporting to the Senior Surgeon that the inhabitants of any district distant more than 4 miles from the Vaccinator's residence wished to have their children vaccina-

ted, the actual carriage hire disbursed in making the visit would be allowed as a contingent expense under the head of "Charitable Allowances". The Governor also did not agree to an increase of allowance to the Vaccinators.¹⁰

In June 1863, the incidence of Smallpox increased. The Editor of the Straits Times wrote an article on "Compulsory Vaccination", in which among other things, he demanded that something be done before the ravages of Smallpox reached the European community, and urged the Government to follow the example of the Dutch Government who had made vaccination compulsory in their eastern territories:¹¹

"... There is scarcely any time of the year here that we are entirely without this most noxious pestilence. ... The undoubted existence amidst us of a disease so highly contagious coupled with the fact that there appears to be no approach to diminution in the number of victims, should seriously arrest the attention of our medical authorities and of the public generally. How long may the disease confine itself to a series of isolated cases among the native population or how soon it may swell the number of its victims and extend the field of its ravages till it reaches the European community, it is of course impossible to say, but there is no doubt that such a catastrophe is possible and that we even invite it by our utter carelessness and indifference to sanitary regulations. There is much more in our power for the control of Smallpox than possibly for that of any other disease. God has placed it in the ingenuity of man to devise an almost infallible preventative for this ravaging contagion, and no doubt we are morally responsible to avail ourselves of this preventative. To those who thoroughly appreciate the seriousness of the disease and understand the efficacy of the remedy, the application of vaccination might be left to themselves and so it may. But to those who can neither so appreciate the disease nor the remedy, and of such our native population is chiefly composed, we decidedly think that vaccination should be compulsory. We have ample precedent for such a course in the conduct of the Netherlands Government in many of its eastern possessions, and we have also seen the good effects which have resulted from it. In those districts of Netherlands India (Indonesia) where vaccination has been for any length of time been compulsory, we find that the native prejudice against it almost entirely dis-

appeared, and it is eagerly sought after by most of the natives for their children.

No doubt the introduction of the measure here would be attended with similar results and that in a year or two all native prejudice to the operation would be gone. At all events, it is our duty both to ourselves and to the natives to impose this most wholesome check upon the very ravaging pestilence so that if the disease does spread or approach our own doors, we may have no cause for self-condemnation."

Six weeks later, the Straits Times published another article on Vaccination. Smallpox was still raging and compulsory vaccination was again clamoured for:¹²

"Six weeks ago we noticed the appearance in Singapore of Smallpox on a very considerable scale, and we took occasion at the time to point to the benefits which were likely to arise from the introduction of a system of compulsory vaccination. The disease has, we are very sorry to say, by no means decreased its ravages since we last wrote. We hear of whole families being stricken down with it and as many as four or five individuals carried away in a single week from under one roof. As far as we can judge, the disease is at present more particularly fatal with children than with adults, and its ravages have been chiefly confined to the Portuguese or half-caste section of our population. ... We only desire to impress upon the minds of all our readers that the sooner compulsory vaccination is introduced the better for all sections of this community and in an emergency of this kind, we really think the Government should undertake some measure of responsibility and act in what must be admitted to be the best interest of the place. ..."

Calls for legislation to make vaccination compulsory fell on deaf ears. Laws for the Straits Settlements were enacted by the Legislative Council in Bengal, and the authorities there were not particularly interested in the Settlements which were considered a burden rather than as asset.

In November 1863, the Police, in the absence of legal authorisation to compel, went about persuading people to submit voluntarily to vaccination.

"... We have repeated what is well known in the medical world here that very rarely indeed is Singapore completely free from Smallpox among the native classes. We have shown that if not indigenous to the place, it is at least inhe-

rent in more than one of the races that compose our population, and yet we felt strongly that in all we said we were merely casting our bread upon the waters with but very little slight prospect of ever seeing it returned in the shape perhaps of some legislative enactment. No such enactment it is true has yet been made, but we are glad to find that the Police authorities have seriously set to work to try what they can do in the absence of any compulsory measure, to induce the people voluntarily to submit to vaccination. On Friday last, the Deputy Commissioner of Police together with the Apothecary of the Convict Hospital started for the districts of Kampong Bahru, Siglap and Budoo, taking with them a supply of vaccine (in the shape, we understand, of four fine plumb children) and the necessary instruments, and on that one day succeeded in vaccinating no less than 77 persons including children. The spirit in which they were in most cases met was very different from that which is thought to prevail among the natives. The object of the operation seemed to be perfectly understood and its efficiency to be pretty generally relied on. Indeed, it would appear that the cause of vaccination not being generally availed of by the natives for their children at least is less an aversion to the application than the difficulty of procuring it. We consider this late effort a very valuable one indeed, valuable both from the success which has attended it and what it has made us acquainted with concerning the feelings of the people on the subject, and it is one which we trust to see frequently repeated. . . .

It is as useless as it would be wicked to shirk the consideration of this grave subject from the belief that the disease will not extend itself to Europeans. We have seen that it has already done so and it is in no man's power to say how soon or how often it may do so again. It is a selfish way thus of endeavouring ourselves to action, but it is nevertheless an effective one and we hope the efforts of the Police so praiseworthy commenced may lack no stimulus by reason of the indifference of the community."¹³

At about the same time, the Senior Surgeon came to the conclusion that the natives should be made more conscious of the value of vaccination by use of the printed word. He asked the Governor to grant permission to re-print a pamphlet which had been written some years previously:¹⁴

"... Some 25 years ago, Mr. Lewis, late Resident Councillor of Penang published a small

pamphlet in the Malay characters pointing out in simple language the benefits of vaccination. I would therefore suggest that about 500 copies of this be struck off for distribution by the Police, Catechists and Priests amongst the natives of these Settlements, say, for Singapore 250, Penang and Province Wellesley 150, Malacca 100, the whole expense for the 500 copies, Mr. Keasberry of the Mission Press informs me will be \$45 only. . . ."

This was approved on 1st December 1863.¹⁵

120 cases were successfully vaccinated by the Police from 12th November to 1st December 1863 including patients in the country districts.¹⁶ There were as usual protests from the medical profession about the dangers of medical procedures being performed by unqualified persons. The Straits Times Editor wrote a long editorial on "Police Vaccination" praising the Police efforts for "the boon offered to the community free of charge", and for acquiring "good quality vaccine". The doctors were soundly criticised by the Editor for their selfishness:¹⁷

"... the Police authorities here continue to extend as far as they can the advantages of vaccination. The credit for the introduction of this measure is due entirely, we believe, to the Chief Commissioner, Mr. Dunman, who has been most indefatigable in his exertions to inaugurate it on a permanent basis, and who has taken great pains to obtain the very best instruments and a regular supply of wholesome vaccine independent of the local medical profession. The obstacles which originally stood in the way of the measure but which have now been materially overcome, are of a much more serious character than is generally believed.

In the first place, there was a silent discouragement of the profession who from a jealous care of their own privilege rather than, we fear, from their anxiety for the people's safety, have been accustomed to enlarge upon the dangers of the application of vaccine by any but well-skilled hands. It is not unusual to hear quoted cases where from a lack of medical skill and a too great confidence on the part of inexperienced persons, the disease itself instead of the remedy has been communicated. In other words, that instead of vaccination, inoculation has been performed. . . .

Now there is nothing more fair than that those who have devoted their lives to the acquirement and practice of a profession should have a prescriptive right to the emoluments that

result from it, and besides it would be a very dangerous thing, especially in the practice of medicine, to open the door to all comers by dispensing with a qualification test, but in the matter of gratuitous vaccination by the Police, there can be no robbery of fees from the profession nor do we think that there is any ground to fear that the misadventures said to have occurred in olden times will happen here again. The Commissioner of Police is furnished regularly with supplies of fresh vaccine and though the operation is a very simple one, the Deputy Commissioner is always accompanied on his rounds by one of the hospital apothecaries. . . .”

The Editor ended by saying that if the doctors were really alarmed about what they considered irregular and dangerous practice, they could always volunteer to participate in the Police vaccination campaign. He also said that to be fair to all, he knew of several medical men in Town who vaccinated free of charge those who came to them for that purpose.

In 1863, 594 persons were vaccinated. 301 were successful cases, 47 were failures and 246 did not turn up for inspection.¹⁸

The Vaccine Department was housed in the Convict Hospital. The Senior Surgeon was also the Superintendent of Vaccination and the Apothecary of the Convict Hospital was the Vaccinator.¹⁹

For the next few years, conditions remained much the same regarding Smallpox and vaccination:

“ . . . Although Smallpox raged for a long time epidemically all over the island, it did not make its appearance in the Convict Lines until November. There have been 24 cases, of which 7 ended fatally. The disease was of a most virulent type and the prisoners attacked were chiefly newly-arrived convicts from Ceylon, men of little or no stamina.

Owing to the apathy of the natives, the extent to which vaccination has been introduced has not been so satisfactory as could be wished for. Through the exertions of the Medical Department assisted by the officers of the Police, several hundreds of children have been successfully vaccinated. Both the Senior Surgeon and the Commissioner of Police have obtained a supply of lymph from the National Vaccine Establishment in London which answered admirably.”²⁰

“ . . . In the Police Hospital . . . the main cause of death was diseases of the bowels. Smallpox

ranks next in fatality. . . .”²¹

“ . . . Smallpox was very bad throughout last year. . . . It was a most virulent form. . . .”²²

On 1st April 1867, the Straits Settlements were transferred from the India Office to the Colonial Office, and became a Crown Colony instead of being administered as a part of India. A new Governor was appointed who had more authority and power than his predecessors who were subordinate to their superiors in India. The new Governor was responsible only to the Secretary of State for the Colonies. Another change was the inauguration of a Legislative Council which included four Unofficial Members who were supposed to represent the community.

In England, the Vaccination Act 1867 (30 & 31 Vic. cap. 84 “An Act to consolidate and amend the laws relating to Vaccination”) was passed on 12th August 1867. On 3rd September 1867, the Secretary of State sent a copy of this Act to the Governor, requiring him to report whether a similar measure with such modifications as local circumstances might require should be submitted to the Legislature of the Straits Settlements.²³ (Vaccination had been made compulsory in England by law in 1853. This had been incorporated in the Act of 1867).

After consulting the Medical and Police authorities, the Governor replied in January 1868 that it was not desirable for such a measure to be submitted to the Legislature for three reasons. There would have to be an increase of staff; a system of registration of births and deaths would be required; and there might be objections on religious grounds. He however would definitely introduce a Bill in the Legislative Council should an opportunity arise.²³

“ . . . In the first place, if such a measure were passed, we have not the medical staff that would be required to carry it out, nor as I have already reported to your Grace, do I see any way of increasing the number of Subordinates of the Medical Department.

In the second place, to enable it to be worked effectually, a Registration of Births and Deaths is required, and although I am most anxious on other and more important grounds that a law should be passed for establishing such a registration, there are difficulties in the way of doing so which I do not as yet see my way to overcome.

Lastly, there is on the part of a great proportion of the population (the Mohammedans) a positive repugnance to the adoption of a pre-

caution which they consider and proclaim to be a flying in the face of Providence. Such a feeling cannot be ignored nor is it easily to be removed and it would certainly be highly inexpedient to attempt to deal with it by passing an Act rendering vaccination compulsory.

I am fully sensible of the importance of the subject, and hope that before long an opportunity of dealing with it may present itself."

Not long afterwards, the Governor changed his mind. In October 1868 he decided that a law should be passed to make vaccination compulsory. What influenced him was the enactment of the Quarantine Ordinance (An Ordinance to make provision for the better prevention of the spread of contagious disease) on 22nd June 1868. It was logical that in addition to having a law to authorise the imposition of quarantine to prevent the importation of infectious diseases, that all other possible means be taken to control infectious diseases on the island itself.

Before introducing a Bill in the Legislative Council, the Governor sought the advice of his Attorney-General, his Colonial Surgeon (new designation for the Senior Surgeon) and his Commissioner of Police.

The Attorney-General was cautious in his opinion.²⁴ He stated that the Mohammedans might consider vaccination an impious attempt to interfere with the decrees of Providence, and that it would be inadvisable to force them to act in opposition to it without attempting beforehand to remove the prejudice. Another obstacle to the immediate introduction of compulsory vaccination was the absence of any system of registration of births.

He proposed that the attention of the Legislature be confined in the first place to providing the means for general vaccination throughout the Colony without making it compulsory. After this plan had met with success and the existing prejudices overcome, then vaccination could be made compulsory. This had been the course pursued in England where several Acts of Parliament were passed providing the means to every person to have his children vaccinated before the first Compulsory Vaccination Act was enacted in 1853 only 15 years previously.

The Colonial Surgeon and the Commissioner of Police were, however, more positive in their approach, possibly because they were in direct contact with Smallpox.²⁴ They reported to the Governor that "Smallpox is prevailing in Singapore to a much greater extent than is generally

known, and that the mortality therefrom has been very considerable". They recommended for His Excellency's consideration that

"Some immediate steps should be taken, if possible, to ascertain a correct estimate of the amount of disease now existing, and to be furnished with daily reports from different sections of each district as to the increase or decrease, that where cases do exist every possible precaution should be enforced to prevent the disease being spread by unnecessary assemblage of people. In fact, that where it can be carried out, isolation of all but necessary attendants should be made imperative. . . . That every effort should be made to extend vaccination throughout the Settlement to all classes, and with this view, would recommend that vaccination be made compulsory, and that a proper staff of public vaccinators be at once organised for the purpose. . . ."

They were certain that "amongst the Chinese, Muslims and Hindus, a compulsory vaccination Bill would not meet with very serious opposition as we have already been informed by several of the leading men amongst these sections of the native community that they will exert their best efforts to forward the progress of vaccination and assist the Government in every way they can to check the increase of this pestilence."

On 16th October 1868, a Bill to extend and make compulsory the practice of vaccination was introduced in the Legislative Council.²⁴ It was also proposed that the introduction of the Compulsory Vaccination Bill be accompanied by the introduction of a Bill for Registration of Births and Deaths. This was agreed to.²⁴ This was necessary to keep track of the number of children who would be vaccinated (it was the duty of the Registrar of Births to give notice to parents of new-born children to bring them for vaccination), and to know the number of deaths and their causes (in this instance, the Smallpox deaths, to gauge the success of vaccination).

The two Bills were read a third time on 12th November 1868 and passed.²⁵ They were then despatched to the Secretary of State for the Colonies on 14th November for confirmation.²⁶ He replied on 12th January 1869:

"I have the honour . . . to convey to you Her Majesty's gracious confirmation and allowance of the following Ordinances enacted by your Government, viz. No. 18 of 1868 entitled 'An Ordinance for the Registration of Births and Deaths', and No. 19 of 1868 entitled 'An Ordi-

nance to extend and make compulsory the practice of Vaccination'. . . I should wish to be furnished with a report in due course of time upon the actual working of the Vaccination Ordinance."

The Vaccination Ordinance came into force in Singapore on 1st May 1869.²⁷ To guard against over-zealousness on the part of Government officials which might antagonise the population, the following Order was sent to the Superintendent of Vaccination on 31st May 1869.²⁸

"His Excellency has ruled that under Ordinance No. 19 of 1868, no proceedings shall be taken in the case of Chinese children until after a child is 5 months old. Every effort must be made to induce the Chinese to bring their children."

On 10th May 1870, the Superintendent of Vaccination (the Colonial Surgeon) submitted his report on the working of the Vaccination Ordinance for the first year, from 1st May 1869 to 30th April 1870.²⁹

He reported that the Ordinance was working well. 2876 patients had been vaccinated with an estimated success rate of 69 per cent. The demand for vaccination had been so very great, the numbers so large, and the places so wide apart, that it was more than one operator could manage, and a second Public Vaccinator was appointed on 1st July 1869 for work in the country districts. The hearty co-operation of the Police was duly acknowledged:

". . . The different Police Stations, both in Town and country districts, have been the principal places selected for the gathering together of children, but other children also have been vaccinated in private residences whenever found practicable to assemble 3 or 4 at a time. The notices to assemble at different places and times have been kindly given through the Commissioner of Police, and to this officer the working of the Ordinance is much indebted for its success, as whenever able, his officers have rendered every assistance both in assembling children and in endeavouring to overcome prejudice against the Ordinance on the part of the parents. . . ."

In the Town districts, vaccination was carried out everyday in the week except Sundays. In the country districts, it was not always possible to vaccinate everyday, but each district was worked at till no more children presented themselves and then the Vaccinator would proceed to another district. "The chief districts in the country where vaccination has been performed have been Siglap,

Buddoh, Changhie, Pulo Tikong, Sirangoon, Seletar, Bukit Timah, Telok Blangah, Pasir Panjang and Telok Telaga."

". . . I am happy to be able to state that the anticipated antipathy of the community to the working of the Ordinance has been very small, and whenever it has presented itself, it has been easily overcome. The greatest difficulty experienced has been the removal of lymph and the want of care among the parents of Malay and Kling children in preserving the vesicles intact, thus rendering the work still to a greater extent than otherwise would be dependent on the regular supply of lymph from England. . . ."

"Although at the time of its introduction fears were expressed by many that it would meet with much opposition, the result proved very different, and the Ordinance met with little or none."

The Vaccination Ordinance had been enacted to complement the Quarantine Ordinance. One source of infection was the many immigrants coming into Singapore. Those who were incubating the disease often fell ill with Smallpox while staying in the cheap lodging houses in Town. These people had missed being detected by the Health Officers who boarded vessels coming to Singapore from infected ports. In October 1870, an Order-in-Council was made under the Quarantine Ordinance to authorise the Police to inspect lodging houses and remove persons suffering from Smallpox to hospital. The Order also made it obligatory for the owner or occupier of a private house to report the occurrence of Smallpox in the house to the Police, who under the instructions of the medical authorities, could remove the patient to hospital. The lodging house or private house in which Smallpox had occurred had to be disinfected to the satisfaction of the Commissioner of Police whose sanction was required before the premises could be occupied again. (See Appendix).³⁰

The incidence of Smallpox in 1871 was reported to be less than usual,³¹ but rose again in 1872. A Smallpox Hospital was set up on Balestier Plain to isolate patients (the forerunner of the present Infectious Diseases Hospital, Middleton Hospital) but attempts to do so met with opposition for the following reasons:

"Smallpox is very prevalent but few cases go to the Smallpox Hospital. The Gong was beaten through the streets and an Order of the Inspector-General of Police was published that every case of Smallpox should be reported to him

without delay. The Natives are averse to sending their children to the Smallpox Hospital on Balestier Plain owing to the inconvenience of its location, the difficulty of procuring and cooking food, and the want of accommodation for themselves generally as they will not leave the nursing of their children and relatives to hospital attendants.

As we presume the hospital is not supplied with the best of attendants, we recommend this matter to the attention of the Government as it may possibly be able to remedy these defects. A few detached attap huts would doubtless suit the natives better and the cost would be trifling.³²

The strict and callous implementation of the Order of 1870 (see above) caused many patients to go into hiding, their relatives not reporting to the Police as required by law. It also led to questions being asked in the Legislative Council.³³ In August 1872, Dr. Little complained of the manner in which the Order had been carried out by the Police and Medical Officers. They had gone about their duties without regard to private rights. The Government Surgeon had done so at least on two occasions. In the first instance, he had entered the "private house of a respectable family and insisted on seeing the patient who was under Dr. Robertson's treatment." Policemen had been stationed at the door causing great embarrassment to all. In the second case, a child was forcibly taken to the Smallpox Hospital when it was already under proper treatment in its own airy home. Dr. Little disapproved of the food at the Hospital. It was very bad, "only fit for cows and dogs".

The Colonial Secretary replied that the rice at the Hospital was of good quality, only badly cooked. The Order of 1870 appeared harsh, "but was essential for natives"! The Governor also spoke of the necessity of the Order and reprimanded the Police and Medical authorities for "lack of discretion and civility in carrying out its provisions".

It was many years before Smallpox was eradicated from Singapore. The passing of laws alone cannot control an infectious disease.

APPENDIX

Gazette (28.10.1870). Notification No. 191.

At a meeting of the Executive Council on 24th October 1870, the following Order of the Governor-in-Council was directed to be published in the Government Gazette:

"Whereas it has been represented to His Excel-

lency the Governor that Smallpox has broken out in certain lodging houses in the Town of Singapore, and it is necessary to make rules for preventing the spread of the disease.

His Excellency the Governor-in-Council is pleased to order under the provisions of the Ordinance No. VII of 1868 "An Ordinance to make provision for the better prevention of the spread of Contagious Diseases":

1. That all lodging houses shall be from time to time inspected by the Police, and any person found therein suffering from Smallpox shall, if the Colonial Surgeon or other person acting under his orders so direct, be forthwith removed to such hospital as may be set aside for the reception of Smallpox patients.
2. If any person shall be attacked with Smallpox in any private house, the owner or occupier thereof shall forthwith report the same to the Commissioner of Police, and if the Colonial Surgeon or other person acting under his orders, shall be of opinion that such infected person is occupying a house, room, or place under circumstances calculated to lead to the spread of the disease, he may forthwith order the removal of such person from such house, room or place, and if there be no suitable place available for the reception and treatment of such infected person, he may order the immediate removal of such person to the Hospital or place that may be set aside for the reception of Smallpox patients.
3. The owner or occupier of all lodging or other houses in which Smallpox patients may be found shall cause such houses and all such rooms and places therein as the Police may consider to require it, to be forthwith white-washed and otherwise cleaned to the satisfaction of the Commissioner of Police and no person shall permit any house, room or place so required to be cleaned to be occupied until the Commissioner of Police has given his sanction thereto.

REFERENCES

Abbreviations Used:

- D.T. = Daily Times. Microfilm. National Library Holdings, Singapore.
- LEGCO = Legislative Council Proceedings. Microfilm. National Library Holdings, Singapore.
- S.F.P. = Singapore Free Press. Microfilm. National Library Holdings, Singapore.
- S.S.R. = Straits Settlements Records. Microfilm. National Library Holdings, Singapore.
- S.T. = Straits Times. Microfilm. National Library Holdings, Singapore.

- From S.S. = Despatches from the Secretary of State for the Colonies to the Governor of the Straits Settlements. Microfilm. National Library Holdings, Singapore.
- To S.S. = Despatches from the Governor of the Straits Settlements to the Secretary of State for the Colonies. Microfilm. National Library Holdings, Singapore.
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 8. S.T. 21.12.1861.
 9. S.S.R., W. 44 (177) (13.10.1862).
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 11. S.T. 13.6.1863.
 12. S.T. 1.8.1863.
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 14. S.S.R., W. 48 (359) (28.11.1863).
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 17. S.T. 19.12.1863.
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 21. S.S.R., W. 54 (267) (1.5.1865).
 22. S.S.R., W. 54. 15.5.1865.
 23. To S.S. 7.1.1868. Despatch No. 8.
 24. LEGCO. 16.10.1868.
 25. LEGCO. 12.11.1868.
 26. From S.S. 12.1.1869. Despatch No. 7.
 27. S.T. 1.5.1869.
 28. S.S.R., HH. 8 (321) (31.5.1869).
 29. D.T. 31.5.1870.
 30. Straits Settlements Gazette, 31.5.1870. Microfilm. National Library Holdings, Singapore.
 31. To S.S. 24.8.1872. Despatch No. 124.
 32. D.T. 17.8.1872.
 33. D.T. 13.9.1872.