Triennial report on vaccination in Burma.

TRIENNIAL REPORT

ON

VACCINATION IN BURMA

FOR THE YEARS 1899-1900—1901-02.

RANGOON:

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRINTING, BURMA.

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TRIENNIAL REPORT ON VACCINATION IN BURMA FOR THE YEARS 1899-1900—1901-02.

RESOLUTION

ON THE

TRIENNIAL REPORT ON VACCINATION IN BURMA

FOR THE YEARS 1899-1900—1901-02.

Extract from the Proceedings of the Government of Burma in the General Department,—No. 1Z.-16, dated the 5th August 1902.

READ—

The Triennial Report on Vaccination in Burma for the period 1899-1900—1901-02.

RESOLUTION.—The report was due in the Secretariat on the 31st May and was received in an incomplete state on the 22nd July. The delay constitutes a serious contravention of the recent orders of the Government of India insisting on the punctual submission of reports and the Lieutenant-Governor desires to have a special report on the subject with the explanations of the officers at fault.

2. *General results.*—Although the staff employed has been increased, the total number of operations and the work done by each vaccinator show a serious falling off. The figures of the last year of the triennial period are the most unsatisfactory. Various causes are alleged as contributing to the decline. The Lieutenant-Governor has little doubt that the chief reason is that the wholesale falsification of returns, which seems to have been prevalent, has to some extent been checked. So far as the unpopularity of vaccination is due to defects in the lymph supply, the evil appears to be susceptible of a remedy and it is to be hoped that the establishment of the new depôt at Meiktila will set matters on a better footing. The remarks of the Superintendent-General regarding the prevalence of inoculation are of interest. It has been decided that this practice cannot be forcibly suppressed at the present time at any rate. As the sphere of vaccination is gradually extended its advantages will be seen and the practice of inoculation will become a thing of the past. Speaking generally His Honour cannot avoid the conclusion that the returns are not yet worthy of trust and he doubts whether any general conclusions of value can be drawn from them.

3. *Miscellaneous.*—The cost of vaccination operations has increased somewhat. Extensive proposals were made for a re-organization of the staff. The scheme of the Superintendent-General appeared to the Lieutenant-Governor to be costly and unsound and he was unable to accept it, but he has expressed his willingness to consider reasonable proposals provided they are supported by the local officers.

By order of the Lieutenant-Governor of Burma,

J. B. WINGATE,

Secretary to the Government of Burma.

TRIENNIAL REPORT

ON

VACCINATION IN BURMA

FOR THE YEARS 1899-1900—1901-02.

DURING the triennium under report no change was made in the constitution of the Department save in the number of vaccinators as shown in the margin, and the average for the three years compared with previous triennium shows an increase of 3 Superintendents and 19 Vaccinators. A vaccinator has been employed in the Chin Hills since November 1901. Statement I.

Year.	District Superintendents (Civil Surgeons).	Native Superintendents.	Vaccinators.
1899-1900	38	14	195
1900-1901	38	14	192
1901-1902	38	14	194
Average ...	38	14	194

A re-organization scheme was submitted during the year but did not meet with the approval of Government.

2. *General results during the triennium.*—The total number of operations performed during the triennium was 1,254,324 as compared with 1,302,939 in the previous three years or a decrease of 48,615. Statement I.

Year.	Primary.	Re-vaccination.	Total.
1899-1900	456,762	34,125	490,887
1900-1901	385,652	24,809	410,461
1901-1902	329,686	23,290	352,976

Primary vaccination.—The number of primary operations was 1,172,100, or 57,934 less than in the previous triennium, and the percentage of success was 92·47 against an average of 93·94.

Re-vaccination.—The number of re-vaccinations rose from 72,905 in the period 1896—1899 to 82,224 in 1899—1902, but the rate of success fell from 60·07 to 54·23, a rate which is, I consider, still too high. Opinion evidently differs as to what is successful re-vaccination and what percentage of these operations ought to reach a certain standard, but no such standard has been laid down by authority. In the majority of persons the regular phenomena of vaccination can only be produced once in a life-time, any subsequent introduction of vaccine lymph either failing to produce any local effect whatever, or producing a modified effect resembling one of the forms of spurious vaccination (*Seaton's Hand-book of Vaccination*). Thus the immediate result of the performance of re-vaccination may be either the typical vaccine vesicle, the modified vesicle or papule, or total failure. It is only in a minority of the operations that the same degree of success is attained as in primary vaccination and some twenty years' experience as a Superintendent of Vaccination leads me to put down 25 per cent. as about the limit of perfect success in re-vaccination, a similar rate for modified results and 50 per cent. for failure. As there is no column in the returns for modified success some Superintendents do not discriminate between the modified and perfect vesicle, but lump the two together as successful, whilst others, with perhaps better judgment, allow only the perfect vesicle to be shown as successful. My experience was with pure lymph, direct from the calf to the arm of the subject, so there could be no question of the lymph being inert, and the work inspected by myself and my Superintendents over a series of years rarely produced more than 25 per cent. of success in re-vaccination, that is, the appearances were such as one is accustomed to see in infants after successful primary vaccination.

The proportion of the population under vaccination protected during the triennium was in the annual ratio of 43·36 per 1,000 as against 49·07 in the previous corresponding period. As vaccination extends so will the proportion of the population protected decline until the time comes when only the natural increase by births will remain to be vaccinated.

Statement I. 3. *Average work of each vaccinator.*—The average number of operations performed by each vaccinator has decreased from 2,579 to 2,200. Generally, this is due to more effective inspection and closer scrutiny of the vaccinators' returns. Some vaccinators were in the habit of returning impossible figures, as in the Sandoway district for instance, where the average number of operations per vaccinator in 1898-99 is shown as 7,247. The attention of Civil Surgeons having been called to the point, the result has been a general fall in numbers. Ordinarily 2,000 primary operations per vaccinator is a fair year's work and the best energies of the staff should be entirely devoted to primary vaccination. Re-vacination is the resort of the lazy vaccinator, who, having neglected his work during the month, has thus to re-vaccinate a number of his adult acquaintances or to submit their names as re-vaccinated, for such cases can seldom be found for verification and fictitious returns can thus be submitted with impunity.

The only occasion when re-vaccination is justifiable, in the present state of infantile vaccination, is when small-pox is prevalent and re-vaccination is resorted to in order to stop the spread of infection from any particular centre, or in cases where the primary operation has been irregular or imperfect. From a long practical experience of vaccination in the East I strongly hold to the opinion that vaccination efficiently performed once in a life-time confers, as a rule, absolute protection against small-pox and will protect the constitution from the disease as much as the inoculated or natural small-pox itself will. The proportion of the efficiently vaccinated subsequently contracting small-pox is so small, and in these the disease is so modified by the vaccination as to be generally void of danger, that we may, as a general rule in an Eastern country and amongst primitive people, disregard re-vaccination entirely, save under the conditions specified above, and devote our entire energy to primary vaccination in the first instance, until the entire population has been generally protected. Re-vaccination rather tends to discredit vaccination in Burma, where inoculation is so generally practised, for why, it is asked, should we prefer vaccination, which has to be repeated once or oftener, to afford certain protection, when the indigenous inoculator, who has been working amongst the people from time immemorial, can protect by a small puncture not nearly so severe as the vaccinator's scarifications.

To induce the Burman to willingly accept vaccination he must be made to understand that it is quite as effective, when efficiently performed, as inoculation to prevent the occurrence of small-pox. But then comes the question, what is efficient vaccination?

It has been established as a fact that the efficiency of vaccination is determined by the character and area of the cicatrices. The experienced or well-instructed vaccinator should be able to discriminate with accuracy the perfect vesicle and the typical cicatrix of successful vaccination, from spurious or unsuccessful results. The lesson is not very difficult to learn, but there are very few, if any, of our vaccinators who have even a fair knowledge of the subject, judging from the cases brought up before me on my inspections. As regards area, the standard which I have suggested should be aimed at is the production of three scars, each not less than the size of a two-anna piece.

I have seen a large amount of insufficient and almost useless vaccination producing results which, though in one sense successful, still left the individual very imperfectly protected against small-pox.

More competency on the part of vaccinators and more supervision of their work is required and till this is attained, I am of opinion, that re-vaccination should not be generally practised, but more care and attention should be given to the efficient performance of the primary operation; for carelessness in primary vaccination cannot be excused on the grounds that re-vaccination will make good its defects.

4. *Age.*—Of the ages of those successfully vaccinated during the triennium, 316,709 were children under one year of age, 536,875 children between one and six years old and 230,260 over six years of age and adults. Thus out of every 100 persons successfully vaccinated 29·22 were infants, 49·53 children between one and six years and 21·25 of other ages. Statement I.

Year.	Registered births during the calendar years.	Registered deaths under one year during calendar years.	Number of children available for vaccination.	Infants successfully vaccinated during the year ending 31st March.	Percentage of available infants protected.
1899 ...	158,787	29,525	129,262	75,737	58·59
1900 ..	164,024	31,544	132,480	57,774	43·61
1901 ..	170,638	32,168	138,470	38,251	27·62

5. The table in the margin shows the protection afforded to infants during the trienniun in Lower Burma. Statement I.

Birth registration is in force in only 13 towns of Upper Burma.

Though it is not quite correct to assume that all infants dying under one year of age escape vaccination, still, as the operation is not usually performed on infants under six months old, a large proportion of the deaths would necessarily be unprotected. The table may therefore be taken as approximately showing the infantile protection afforded.

6. *Protection to population.*—The comparative statement and diagram required by the Government of India, form Appendices A and C to this report. From this statement it will be seen that with the increase in vaccination small-pox mortality has not decreased in a corresponding ratio but on the other hand has increased, as the table in the margin would show. Appendices A and C.

Quinquennium	Quinquennial mean	
	Ratio per 1,000 of population successfully vaccinated.	Ratio per 1,000 of mortality from small-pox.
1886—1890 ...	204·42	4·06
1891—1895 ...	315·66	4·02
1896—1900 ...	596·62	7·74

This increase may be attributed to two causes: (*a*) to improvement in registration of deaths from small-pox,—Civil Surgeons are of opinion that mortality under small-pox is still understated by village headmen,—and (*b*) to increase in inoculation.

7. *Inoculation.*—The reports of Civil Surgeons, especially in Lower Burma, go to show that inoculation is freely carried on throughout the Province and is favoured and supported by the majority of Burmans, who consider it an unfailing protection against small-pox, whereas vaccination has to be repeated once or perhaps twice to ensure immunity: therefore they prefer inoculation to avoid the trouble of getting their children vaccinated several times. Further, the inoculators are *sayas* or Native doctors, who treat the vaccinated subjects professionally in their own way and generally look after them till well, whereas the vaccinators are ignorant of such treatment and only see the vaccinated cases once, when verifying results.

District Medical Officers report outbreaks of small-pox caused by inoculated persons having travelled into their districts and thus set alight the disease. In one case an inoculator was prosecuted and fined by a Township Officer, but he appealed and the Chief Court upset the conviction and since then the Civil Surgeon reports this man has been parading the written judgment of the Chief Court as authority granted by Government for him to work as an inoculator, with the result that vaccination is becoming increasingly more difficult.

8. *Result by districts.*—In 20 of the 39 districts the total number vaccinated and the number of successful primary operations declined during the three years under review. This decline is most marked in the districts noted in the margin. In the Thôngwa and Thatôn districts the decrease in numbers reaches the enormous figures of twenty-three and nineteen thousands respectively. The Civil Surgeon, Thôngwa district, attributes the falling off to the change made by placing the vaccinators under the supervision of Township Officers. The Civil Surgeon, Sandoway, rather curiously states the reason for the falling off as due "to the vaccinators not getting help from officials." The Civil Surgeon, Hantha- Statement I.

(1) Sandoway. (2) Hanthawaddy. (3) Tharrawaddy. (4) Thôngwa. (5) Bassein. (6) Amherst. (7) Thatôn. (8) Mandalay (9) Shwebo. (10) Sagaing. (11) Pakôkku.

waddy district, assigns various causes as contributing to the falling off, the chief among them being that the figures for 1899-1900 and for the period April to November 1900 are untrustworthy. The vaccinators worked directly under the supervision of a Civil Assistant Surgeon for about a year, from November 1900, and there was therefore less opportunity for falsifying the returns. Owing to demands for Assistant Surgeons elsewhere, this officer had to be withdrawn in November 1901, and I have not been able to replace him. The decrease in the Tharrawaddy district is said to be due to no arm-to-arm vaccination being done, lymph being too dilute, and to more reliable returns. The Civil Surgeon, Bassein district, attributes the decline to non-prevalence of small-pox, paucity of subjects, and careless work done by district vaccinators coupled with marked opposition on "the part of parents and often small officials." Two causes are assigned for the decrease in the Amherst district, namely, (1) less small-pox than the previous year and (2) inoculation, which the Civil Surgeon says, "has "been more extensively carried out than in former years, and this has had a most "injurious effect upon vaccination, several villages having taken to inoculation "which in previous years readily accepted vaccination." In Upper Burma districts the Civil Surgeons report that among other causes the falling off is mainly due to want of regular supplies of lymph and paucity of subjects, the people not being favourably disposed towards vaccination.

In only three districts has there been a steady increase in the outturn of work—Henzada, Myaungmya and the Northern Shan States.

The percentage of success in primary vaccination has fallen considerably in the last year of the triennium under review. In neither of the first two years of this period did the percentage fall below 62 per cent., but in 1901-02, excluding the Chin Hills, which has recently begun work in this direction, the percentage has been reduced to 37·60 in the Salween district and 60·25 in the Rangoon Town district. Six districts return a percentage of less than 80, in 13 districts the range is between 80 and 89 per cent. and the remaining 19 districts return 90 per cent. and over. In 1899-1900 no less than 35 districts returned a percentage of 90 per cent. and over, and in the following year only 22 districts obtained similar percentages. Various reasons are given in the reports received from Civil Surgeons for the poor results obtained; the majority are disposed to blame the lymph supplies, but when the officers are confronted with the reports received from other districts of results obtained with material supplied from the same stock, they seem disposed to blame the vaccinators for careless work. These are, I fear, cases of bad workmen, who quarrel with their tools. The demand for a higher criterion of success since the report for the year 1899-1900 [*vide* paragraph 15 (*b*), page 15] may have also contributed towards this decline.

9. *Lymph supply.*—Calf lymph is in general use throughout the Province and arm-to-arm vaccination is only resorted to when the supply of animal vaccine fails.

During the triennium the depôts at Taunggyi, Rangoon and Mandalay supplied glycerinated or lanolinized calf lymph for district work generally. Animal vaccination was also carried on at Moulmein, Akyab and Bassein, but only for local use. Some Municipalities obtained their supplies from Bangalore and generally this lymph was found to be more active than that raised in the Province.

The reason of the Burma lymph being less effective I attributed to inexperience of the depôt establishments in the preparation and despatch of the vaccine. Captain Williams, the Officiating Health Officer of the Rangoon Municipality, however, who visited the Local Government Board Vaccine Establishment in London and studied the methods observed there, is of opinion the fault lies with the Burman calf which does not develop vesicles like its English congenere. A similar opinion is not apparently entertained at any of the other stations where lymph is raised, the calves, however, supplied in Rangoon are poor and generally in indifferent health, which may possibly account for the difference in the quality of the lymph. This question, will, however, be thoroughly worked out in the depôt recently opened at Meiktila.

The Civil Surgeon, Akyab, reports that lymph obtained from calves vaccinated with paste received from Bangalore gave very good results. An average of two calves monthly suffice for purposes of work in his district. The Civil Surgeon, Bassein, states that animal vaccination was carried out and glycerine used as the medium. The quality of the lymph obtained was satisfactory. It may be here remarked that this district returned the third highest percentage (98·62) in 1899-1900, and has obtained the highest rates, 98·84 and 98·02, for the two succeeding years. Thirty calves were vaccinated in 1901-02. The Civil Surgeon, Moulmein, reports that Bangalore lymph paste is used for calf vaccination. Children are vaccinated in the town direct from the calf. He was perfectly satisfied with results so obtained. Calf vaccination was also regularly carried on at Mandalay. Statement I.

Owing to failure in the supply the depôt at Taunggyi was closed in June 1901 and the establishment brought to Rangoon to assist the Health Officer of the Municipality, who, it was hoped, could, with this extra aid, have supplied the whole province with glycerinated lymph. Here, however, owing to cattle-disease, the supply of calves also failed, and a new depôt was opened at Meiktila in February 1902. Meiktila was selected, after consultation with the Commissioner of the Division, as a centre, where the supply of calves was not likely to fail and where the climate is cooler and dryer than Rangoon.

The work is being carried on in a hired house, but a site has been selected and plans and estimates prepared and the building will, it is believed, be commenced almost immediately.

10. *Cost.*—The total expenditure on account of vaccination during the triennium was Rs. 2,31,674 and the cost of each successful case 3 annas and 4 pies. There has been an increase in expenditure each year of the triennium under the head "contingencies" owing to a larger quantity of lymph paste being purchased, on account of local supplies not being productive of satisfactory results. Statement II.

Year.	Establishment.	Travelling allowance.	Contingencies.	Total.	Average cost per case.
	Rs.	Rs.	Rs.	Rs.	Rs. A. P.
1899-1900 ...	55,218	15,382	3,083	73,683	0 3 7
1900-1901 ...	55,041	16,211	3,702	78,854	0 3 5
1901-1902 ...	57,745	15,026	5,466	79,137	0 4 1

In consequence of the decrease in the outturn of work the average cost per head has increased, but bearing in mind that the figures returned for 1899-1900 and previous years were "exaggerated" to a very great extent, this increase may be regarded as more apparent than real. The average cost in 1899-1900 varied from Rs. 1-1-4 in Rangoon, 7 annas in Myitkyina, 6 annas 10 pies in the Northern Shan States to 1 anna 6 pies in Sagaing, 1 anna 4 pies in Shwebo, 1 anna 2 pies in Tavoy and 1 anna in Sandoway. In 1900-01, it ranged from Rs. 1-7-0 in Rangoon, 9 annas 2 pies in the Salween, 7 annas 8 pies in the Myitkyina, to 1 anna 11 pies in Thayetmyo, 1 anna 10 pies in Henzada, 1 anna 9 pies in Sagaing and 1 anna 3 pies in Shwebo. In the last year of the triennium the average varied from 15 annas 9 pies in the Salween, 15 annas 7 pies in the Chin Hills, 13 annas 7 pies in Rangoon and Thatôn, 13 annas 6 pies in Thôngwa, to 1 anna 8 pies in Shwebo and Lower Chindwin districts.

11. *Percentage of cost.*—The percentage of the total cost born eby Government and other funds in each of the three years 1899—1902 is given in the margin. As in the previous triennium local funds bore the major portion of the expenditure, the percentage being local funds 51·35, Municipalities 24·67, Government 23·46, and Native States ·52 for the period 1899—1902 against 50·00, 29·00 and 21·00 for Local funds, Statement II.

Year.	Government.	Municipality.	Local funds.	Native States.
1899-1900	22·31	25·51	51·65	·53
1900-1901	22·37	25·45	51·67	·51
1901-1902	25·62	23·13	50·74	·51

Municipalities and Government respectively. The contribution from Native States which was received from the year 1898-99 only and is omitted from the latter calculations. The increase in cost under Local funds and Government over that of the previous triennium is due to increased establishment.

12. *Municipal towns.*—In the triennium ending with the year 1898-99 sixteen towns showed a steady increase in the total outturn of work and eight a continuous decline. In the triennium under review only two towns, Paungdè and Henzada, return a continuous increase each year, while no less than sixteen show a smaller number each year. In most places the decline is attributed to closer supervision and the deterrent effect which punishments have had when fraudulent work was detected, to re-vaccination being discouraged when no epidemic of small-pox is apprehended and to some extent, difficulties in obtaining lymph.

The quality of work done in Municipal towns has, like that in districts, fallen considerably and the remarks made in paragraph 8 of this report may be held to apply here also.

Appendix B. 13. *Protection afforded to infants in Municipal towns.*—It will be seen that there is a marked improvement in the number of children stated to have been vaccinated within Municipal limits. In previous years the numbers shown as operated upon were invariably in excess of the numbers available and this was stated to be due to children being brought in from outside Municipal limits. Orders were issued that attention should be paid to this important matter and strict supervision enjoined. The result has been that only ten towns return a larger number than the number shown to be available; in the previous year only about ten towns returned a number less than the number of infants available. Three towns (Tavoy, Pyinmana and Taungdwingyi) protected a number of infants equal to the number available. At Kyaukpyu 57·78, Rangoon 56·89, Ma-ubin 23·66, Kyangin 8·32 per cent. only of the number available were protected. This is not satisfactory and the attention of the officers concerned has been invited to the deficienncy.

Statement III. 14. *Dispensary vaccination.*—There has been a continuous falling off in each of the three years under report in the total number of persons vaccinated: 7,248 subjects having been operated on against 9,450 in 1900-1901 and 12,672 in 1899-1900. This is for the most part attributable to parents and others resorting in smaller numbers to the hospitals for vaccination when vaccinators can be got to visit them at their houses. The ratio of success obtained in primary vaccination was low in each of the three years, while that in re-vaccinations was high, but the latter rate has fallen from 61·03 in 1899-1900 to 44·61 in 1901-1902. This is due to more care being taken in discriminating between primary and re-vaccination.

Statement IV. 15. *Statement No. IV* compares the number of primary vaccinations and the number of successful primary vaccinations in each of the years of the decade ending 1901-1902 by Government, Municipal and Local Fund Vaccinators as well as in Native States and at Dispensaries and in Cantonments. A falling off is noticeable everywhere except in Native States in the last year of the decade. The reasons for this have been already stated, and I may here only add that every establishment has returned for 1901-1902 an outturn of work less than what the numbers stood at in the first year (1896-1897) of the triennium preceding that under review.

Statement V. 16. *Inspections.*—The percentage of inspections to total number vaccinated, which amounted to 40 in the previous triennium fell to 36 in the period under review. This is partly due to the smaller numbers returned in the last year of the latter triennium. It is satisfactory to note that Civil Surgeons have been more alive to their responsibilities in this connection,—the percentages of inspections to total number vaccinated having risen from 22·91 in 1899-1900 and 21·55 in 1900-1901 to 23·26 in 1901-1902; on the other hand the percentage however verified by Native Superintendents has fallen considerably, being 14·13, 14·92, and 11·93 in each of the years just referred to. The percentage of primary and re-vaccination is shown separately for the first time in this statement under orders contained in Government of India Home Department (Sanitary letter No. 2238, dated the 30th November 1901. In some districts no record was maintained showing the

inspections of primary and re-vaccinations prior to the issue of the orders just quoted. The percentage of re-vaccinations inspected is larger than of those primarily vaccinated. In the case of Civil Surgeons it is understood that this is due to the inspections including all vaccination in jail. That Native Superintendents should have inspected only 10·53 of the primary vaccinations is at first sight unsatisfactory, but the majority of the districts which help to reduce this percentage do not employ Native Superintendents and the figures given against them represent work done by Hospital Assistants in connection with Dispensary vaccination and who fall under the heading "other inspecting officers." The quality of work found on inspection and that reported calls for no special remark.

RANGOON:
The 10th July 1902.

C. C. LITTLE, M.D., *Colonel, I.M.S.,*
Superintendent-General of Vaccination, Burma.

APPENDICES.

A.—Vaccination Department.

B.—Dispensary Vaccination.

A.—VACCINATION

STATEMENT No. I.—*Showing particulars of Vaccination in the*

No.	Circles and Districts.	Population of district according to Census of 1901.	Average population per square mile.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Pri
					Males.	Females.	Total.		Total.
1	2	3	4	5	6			7	8
	ARAKAN DIVISION.								
1	Akyab	481,666	93·78	6	4,714	3,689	8,403	1,401	7,852
2	Hill Tracts, Northern Arakan...	20,682	3·95	1	673	307	980	980	980
3	Kyaukpyu	168,827	38·48	6	4,319	3,874	8,193	1,366	7,787
4	Sandoway	90,927	24·03	3	1,323	1,235	2,558	853	2,462
	Total ...	762,102	41·11	16	11,029	9,105	20,134	1,258	19,081
	PEGU DIVISION.								
5	Rangoon	234,881	12,362·16	6	4,598	2,279	6,877	1,146	4,465
6	Hanthawaddy	484,811	160·37	5	2,907	2,997	5,904	1,181	5,532
7	Pegu	339,572	79·41	7	5,660	5,696	11,356	1,622	11,207
8	Tharrawaddy	395,570	138·75	8	5,526	5,012	10,538	1,317	10,538
9	Prome	365,794	125·49	12	13,612	11,655	25,267	2,106	23,559
	Total ...	1,820,628	139·15	38	32,303	27,639	59,942	1,577	55,301
	IRRAWADDY DIVISION.								
10	Thôngwa	484,410	139·56	12	2,403	2,395	4,788	399	4,735
11	Bassein	391,427	94·85	9	9,342	6,873	16,215	1,802	12,576
12	Henzada	484,358	168·72	15	23,530	20,879	44,409	2,961	42,786
13	Myaungmya	303,274	102·11	6	4,693	4,349	8,952	1,492	8,697
	Total ...	1,663,469	123·77	42	39,968	34,396	74,364	1,814	68,794
	TENASSERIM DIVISION.								
14	Amherst	300,173	42·51	5	8,108	6,752	14,860	2,972	13,397
15	Tavoy	109,979	20·72	5	8,533	8,743	17,276	3,455	13,342
16	Mergui	88,744	9·07	3	2,009	1,739	3,748	1,249	3,602
17	Toungoo	279,315	45·26	7	4,873	4,441	9,314	1,331	9,106
18	Thatôn	343,510	67·63	7	2,560	2,396	4,956	708	4,944
19	Salween	37,837	14·19	1	539	455	984	984	984
	Total ...	1,159,558	32·14	28	26,612	24,526	51,138	1,826	45,375
	MANDALAY DIVISION.								
20	Mandalay	366,507	176·89	8	6,715	6,780	13,495	1,687	11,794
21	Bhamo	79,515	19·18	2	1,532	1,323	2,855	1,428	2,533
22	Katha	176,523	25·24	1	848	909	1,757	1,757	1,745
23	Ruby Mines	86,914	15·87	2	1,337	1,339	2,676	1,458	2,843
24	Myitkyina	67,399	6·33	1	466	453	919	919	919
	Total ...	776,858	26·49	14	11,118	10,824	21,942	1,567	19,834
	SAGAING DIVISION.								
25	Shwebo	286,891	50·92	5	7,032	8,014	15,046	3,009	14,980
26	Sagaing	282,614	151·78	4	3,807	3,873	7,680	1,920	7,544
27	Lower Chindwin	276,383	79·42	3	5,532	5,888	11,420	3,807	11,356
28	Upper Chindwin	154,551	8·11	4	4,375	4,617	8,992	2,248	8,324
	Total ...	1,000,439	33·30	16	20,746	22,392	43,138	2,696	42,204
	MINBU DIVISION.								
29	Thayetmyo	239,705	50·46	7	11,176	10,117	21,293	3,042	19,961
30	Pakôkku	356,189	57·36	3	2,386	2,219	4,605	1,535	4,242
31	Minbu	333,139	70·67	3	3,646	3,991	7,637	2,545	7,215
32	Magwe	246,708	84·69	3	4,153	3,880	8,033	2,677	7,900
	Total ...	1,075,742	62·65	16	21,361	20,207	41,568	2,598	39,318
	MEIKTILA DIVISION.								
33	Meiktila	252,305	115·58	2	2,715	2,764	5,479	2,739	5,468
34	Yamèthin	243,197	57·12	5	4,627	4,427	9,054	1,811	8,599
35	Kyauksè	141,353	110·87	3	3,307	3,694	7,001	2,334	6,936
36	Myingyan	356,145	113·53	5	4,665	4,779	9,444	1,889	9,048
	Total ...	992,900	91·49	15	15,314	15,664	30,978	2,065	30,051
	SHAN STATES.								
37	Northern Shan States ...	321,090	22·07	3	2,130	2,186	4,316	1,439	4,316
38	Southern Shan States ...	818,642	18·90	5	2,628	2,399	5,027	1,005	4,988
	Total ...	1,139,732	19·68	8	4,758	4,585	9,343	1,168	9,304
	CHIN HILLS.								
39	Chin Hills	87,189	3·17	1	290	139	429	429	424
	Total ...	87,189	3·17	1	290	139	429	429	424
	Grand Total of the Province for 1901-02.	10,478,617	41·26	194	183,499	169,477	352,976	1,829	329,686
	Grand Total of the Province for 1900-01.	8,146,855	81·29	190	213,852	196,609	410,461	2,160	385,652
	Grand Total of the Province for 1899-00.	8,146,855	81·29	188	255,765	235,122	490,887	2,611	456,762

DEPARTMENT.

Province of Burma during the year 1901-02 (paras. 1 to 5, 8 and 9).

MARY VACCINATION.			REVACCINATION.		PERCENTAGE OF SUCCESSFUL CASES.		Persons successfully vaccinated per 1,000 of population.	AVERAGE NUMBER OF PERSONS SUCCESSFULLY VACCINATED DURING PREVIOUS FIVE YEARS.		AVERAGE ANNUAL NUMBER OF DEATHS FROM SMALL-POX DURING PREVIOUS FIVE YEARS.	
Successful.											
Under one year.	Over one and under six years.	Total of all ages.	Total.	Successful.	Primary.	Revaccination.		Number.	Ratio per 1,000	Number.	Ratio per 1,000
9	10	11	12	13	14	15	16	17	18	19	20
1,792	4,157	7,163	551	473	92·50	85·84	16·06	7,214	17·57	5	·01
44	248	944	...	...	96·33	...	45·64	1,186	81·11	...	...
1,295	3,995	6,838	406	163	87·81	40·15	41·47	9,573	58·43	79	·50
371	1,002	2,102	96	9	85·42	9·38	23·22	15,233	194·25	12	·43
3,503	9,402	17,147	1,053	645	89·86	61·25	23·35	33,206	49·48	96	·15
1,213	1,193	2,690	2,412	1,111	60·25	46·06	16·18	9,263	55·03	275	1·53
796	3,130	4,359	372	233	78·80	62·63	9·47	17,522	43·03	430	1·09
2,267	6,569	10,712	149	92	95·58	61·74	31·83	11,484	48·24	355	1·49
2,294	5,769	9,155	...	...	86·88	...	23·14	18,630	54·68	528	1·56
3,958	15,041	22,449	1,708	826	95·29	48·36	63·63	24,615	67·06	79	·21
10,528	31,711	49,365	4,641	2,362	89·27	48·74	28·36	81,514	53·52	1,667	1·10
1,516	2,540	4,362	53	12	90·01	22·64	8·82	20,046	60·11	354	1·06
3,441	5,029	12,327	3,639	2,458	98·02	67·55	37·77	15,034	47·56	172	·54
8,500	19,766	39,767	1,623	1,023	92·94	63·03	84·21	32,321	75·01	282	·65
1,504	3,661	7,915	255	122	91·01	47·45	26·50	6,692	31·42	210	1·00
13,061	31,806	64,371	5,570	3,614	93·43	64·88	40·81	74,093	56·97	1,018	·79
2,835	5,596	12,727	1,463	425	95·00	29·05	43·81	19,398	83·56	142	·63
2,630	4,750	12,550	3,934	996	94·06	25·32	123·17	14,309	150·75	178	1·87
638	1,374	2,756	146	50	76·51	34·25	31·62	5,854	79·38	6	·12
2,656	3,813	8,022	208	150	88·10	72·12	29·26	11,381	53·74	134	·75
1,464	1,705	3,788	12	9	76·62	75·00	11·05	20,330	76·30	177	·69
36	156	370	...	...	37·60	...	9·78	1,186	37·71	...	...
10,259	17,394	40,213	5,763	1,630	88·62	28·28	36·09	72,458	79·47	637	·78
7,150	3,510	11,275	1,701	1,445	95·60	84·95	34·71	16,962	45·29	26	·08
2,252	127	2,458	322	126	97·04	39·13	32·59	2,640	61·75	...	...
172	1,073	1,637	12	4	93·81	33·33	9·30	2,002	14·35	...	...
871	1,104	2,633	73	33	94·37	45·21	31·25	2,921	85·77	...	...
247	327	785	...	...	85·42	...	11·65	744	14·59	...	...
10,692	6,141	18,838	2,108	1,608	94·98	76·28	26·32	25,269	39·42	26	·08
3,674	8,417	13,340	66	22	89·05	33·33	46·58	17,822	77·22	9	·04
3,851	2,290	6,141	136	83	81·40	61·03	22·02	10,712	43·41	32	·13
2,105	6,928	9,995	64	51	88·02	79·69	36·35	7,731	31·13	67	·36
1,698	3,615	7,007	668	321	84·18	48·05	47·41	6,431	57·75	...	...
11,328	21,250	36,483	934	477	86·44	51·07	36·94	42,696	51·93	·108	...
1,971	10,478	18,087	1,332	578	95·12	73·42	83·29	18,359	73·39	84	·37
1,635	1,548	3,322	363	114	78·31	31·40	9·65	8,808	28·08	272	1·13
2,655	3,862	6,778	422	228	93·04	54·03	30·05	5,790	27·04	82	·48
2,707	3,285	7,581	133	110	95·96	82·71	31·17	7,427	33·88	158	·72
8,968	19,173	36,668	2,250	1,430	93·26	63·56	35·42	40,384	...	576	...
552	3,330	4,410	11	5	80·65	45·45	17·50	3,609	16·95	7	·06
2,655	4,039	7,895	455	124	91·82	27·25	32·98	8,399	39·94	8	·08
4,018	2,115	6,262	65	18	90·28	27·69	44·46	5,770	45·57	1	...
2,143	4,936	7,943	306	245	87·79	61·87	22·99	10,648	30·25	109	·31
9,368	14,420	26,511	937	392	88·22	42·29	27·10	28,426	31·50	125	...
211	2,077	3,540	...	...	82·02	...	11·02	} 5,458	14·52	...	...
888	2,041	4,452	39	27	89·25	69·23	5·47				
1,099	4,118	7,992	39	27	85·90	69·23	7·04	5,458	14·52	...	...
4	49	125	5	2	29·48	40·00	1·46	...	...	...	...
4	49	125	5	2	29·48	40·00	1·46	...	...	...	...
79,710	155,554	297,613	23,290	12,087	90·27	51·90	29·56	...	...	...	...
107,622	172,957	353,609	24,809	13,470	91·69	50·26	44·95	...	...	...	...
129,377	208,364	432,622	34,125	20,035	94·71	58·72	55·56	...	...	...	...

A.—VACCINATION

STATEMENT No. II.—*Showing the cost of the Department in the*

No.	Circle and Districts.	Expenditure.										
		European supervising officer.	Pay.	Native supervising officer.	Pay.	Vaccinators.	Pay.	Clerks.	Pay.	Peons, &c.	Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13
	ARAKAN DIVISION.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.	Rs. A. P.
1	Akyab	...	.....	2	888 0 0	6	1,820 5 1	..	.....	...	.....	2,708 5 1
2	Hill Tracts, Northern Arakan	...	.....	...	.....	1	270 5 1	...	.....	...	.....	270 5 1
3	Kyaukpyu	...	.....	...	.....	6	1,341 14 9	...	.....	...	.....	1,341 14 9
4	Sandoway	...	.....	..	.....	3	831 12 5	..	.....	...	.....	831 12 5
	Total	...	.....	2	888 0 0	16	4,264 5 4	...	.....	...	.....	5,152 5 4
	PEGU DIVISION.											
5	Rangoon Vaccine Depôt	...	.....	1	1,253 9 1	...	.....	1	282 10 3	2	185 10 6	1,721 13 10
6	Rangoon	...	.....	...	.....	6	2,878 0 0	...	.....	...	.....	2,878 0 0
7	Hanthawaddy	...	.....	1	550 0 0	5	925 12 4	...	.....	...	.....	1,475 12 4
8	Pegu	...	.....	...	.....	7	1,801 11 10	..	.....	...	.....	1,801 11 10
9	Tharrawaddy	...	.....	1	480 0 0	8	2,015 13 5	...	.....	...	.....	2,495 13 5
10	Prome	...	.....	...	.....	12	3,302 0 0	...	.....	..	.....	3,302 0 0
	Total	...	.....	3	2,283 9 1	38	10,923 5 7	1	282 10 3	2	185 10 6	13,675 3 5
	IRRAWADDY DIVISION.											
11	Thôngwa	...	.....	...	.....	12	2,981 13 7	...	.....	...	.....	2,981 13 7
12	Basscin	...	.....	2	720 0 0	9	2,257 9 6	...	.....	...	.....	2,977 9 6
13	Henzada	...	.....	...	.....	15	4,029 12 6	...	.....	...	.....	4,029 12 6
14	Myaungmya	...	.....	..	.....	6	1,557 5 7	...	.....	..	.....	1,557 5 7
	Total	...	.....	2	720 0 0	42	10,826 9 2	...	.....	...	.....	11,546 9 2
	TENASSERIM DIVISION.											
15	Amherst	...	.....	2	1,200 0 0	5	1,575 14 1	1	64 8 2	...	.....	2,840 6 3
16	Tavoy	...	.....	...	.....	5	1,437 0 0	...	.....	...	.....	1,437 0 0
17	Mergui	...	.....	...	.....	3	780 0 0	...	.....	...	.....	780 0 0
18	Thatôn	...	.....	1	480 0 0	7	1,856 0 0	...	.....	...	.....	2,336 0 0
19	Toungoo	...	.....	1	429 10 10	7	1,450 10 0	...	.....	...	.....	1,880 4 10
20	Salween Hill Tracts	...	.....	...	.....	1	300 0 0	..	.....	...	.....	300 0 0
	Total	...	.....	4	2,109 10 10	28	7,399 8 1	1	64 8 2	...	.....	9,573 11 1
	MANDALAY DIVISION.											
21	Mandalay	...	.....	1	479 10 10	8	2,601 12 7	...	.....	...	.....	3,081 7 5
22	Bhamo	...	.....	...	.....	2	538 0 0	...	.....	...	.....	538 0 0
23	Katha	...	.....	...	.....	1	219 1 1	...	.....	...	.....	219 1 1
24	Ruby Mines	...	.....	...	.....	2	575 0 0	...	.....	...	.....	575 0 0
25	Myitkyina	...	.....	...	.....	1	374 12 11	...	.....	...	.....	374 12 11
	Total	...	.....	1	479 10 10	14	4,308 10 7	...	.....	...	.....	4,788 5 5
	SAGAING DIVISION.											
26	Shwebo	...	.....	...	.....	5	1,009 2 4	...	.....	...	.....	1,009 2 4
27	Sagaing	...	.....	...	.....	4	755 0 0	...	.....	...	.....	755 0 0
28	Lower Chindwin	...	.....	...	.....	3	699 0 0	...	.....	...	.....	699 0 0
29	Upper Chindwin	...	.....	...	.....	4	703 0 0	...	.....	...	.....	763 0 0
	Total	...	.....	...	.....	16	3,226 2 4	...	.....	...	.....	3,226 2 4
	MINBU DIVISION.											
30	Thayetmyo	...	.....	...	.....	7	2,060 8 0	...	.....	...	.....	2,060 8 0
31	Pakôkku	...	.....	...	.....	3	510 0 0	...	.....	...	.....	510 0 0
32	Minbu	...	.....	...	.....	3	970 4 10	...	.....	...	.....	970 4 10
33	Magwe	...	.....	1	314 5 4	3	718 0 0	..	.....	...	.....	832 5 4
	Total	...	.....	1	314 5 4	16	4,258 12 11	...	.....	...	.....	4,573 2 2
	MEIKTILA DIVISION.											
34	Meiktila Vaccine Depôt	...	.....	...	.....	...	.....	...	.....	...	.....	.....
35	Meiktila	...	.....	...	.....	2	447 3 11	...	.....	...	.....	447 3 11
36	Yamêthin	...	.....	1	60 0 0	5	1,122 9 2	...	.....	...	.....	1,182 9 2
37	Kyauksè	...	.....	...	.....	3	781 2 0	...	.....	...	.....	781 2 0
38	Myingyan	...	.....	...	.....	5	1,001 8 0	...	.....	...	.....	1,001 8 0
	Total	...	.....	1	60 0 0	15	3,352 12 1	...	.....	...	.....	3,412 12 1
	SHAN STATES.											
39	Northern Shan States	...	.....	...	.....	3	743 1 7	...	.....	...	.....	743 1 7
40	Southern Shan States	...	.....	...	.....	5	831 2 4	...	.....	...	.....	831 2 4
41	Taunggyi Vaccine Depôt	...	.....	...	.....	...	.....	...	218 15 9	1	103 11 3	322 11 0
	Total	...	.....	...	.....	8	1,574 3 11	...	218 15 9	1	103 11 3	1,896 14 11
	CHIN HILLS.											
42	Chin Hills	...	.....	..	.....	1	100 0 0	...	.....	...	.....	100 0 0
	Total	...	.....	...	.....	1	100 0 0	...	.....	...	.....	100 0 0
	Grand Total of the Province, for 1901-02.	...	.....	14	6,655 4 1	194	50,234 5 11	2	566 2 2	3	289 5 9	57,745 1 11
	Grand Total of the Province, for 1900-01.	...	.....	14	6,768 15 5	192	50,289 11 1	3	1,080 2 8	6	802 0 0	58,940 13 2
	Grand Total of the Province, for 1899-00.	...	.....	14	5,449 5 8	195	48,132 0 1	2	647 7 6	8	988 12 10	55,217 10 1

DEPARTMENT.

Province of Burma during the year 1901-02 (paras. 10 and 11).

Travelling allowance.	Contingencies.	Total cost.	Paid from. Imperial funds.	Provincial funds	Local funds.	Municipalities.	Native States.	Total.	Number of all successful vaccinations and revaccinations.	Average cost of each successful case.
14	15	16	17	18	19	20	21	22	23	24
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs A. P.
668 8 0	141 11 2	3,518 8 3	.....	339 11 1	2,787 6 0	391 7 2	.....	3,518 8 3	7,736	0 7 3
55 7 0	.....	325 12 1	.....	325 12 1	..	.....	.....	325 12 1	944	0 5 6
615 4 0	.....	1,957 2 9	.....	...	1,837 2 9	120 0 0	.....	1,957 2 9	7,001	0 4 6
195 0 0	.....	1,026 12 5	.....	.....	966 12 5	60 0 0	.....	1,026 12 5	2,111	0 7 9
1,534 3 0	141 11 2	6,828 3 6	.....	665 7 2	5,591 5 2	571 7 2	.....	6,828 3 6	17,792	0 6 2
.....	1,401 9 5	3,123 7 3	.....	2,561 13 10	.....	561 9 5	.....	3,123 7 3	.....	...
.....	349 15 10	3,227 15 10	.....	318 0 0	.....	2,909 15 10	.....	3,227 15 10	3,801	0 13 7
493 15 9	.....	1,969 12 1	.....	.....	1,969 12 1	.....	.....	1,969 12 1	4,592	0 6 10
599 13 6	.....	2,401 9 4	.....	.....	2,164 9 4	237 0 0	.....	2,401 9 4	10,804	0 3 7
899 1 0	43 14 0	3,438 12 5	.....	.....	2,598 14 0	839 14 5	.....	3,438 12 5	9,155	0 6 0
1,001 5 0	.....	4,303 5 0	.....	.....	3,474 5 0	829 0 0	.....	4,303 5 0	23,375	0 2 11
2,994 3 3	1,795 7 3	18,464 13 11	.....	2,879 13 10	10,207 8 5	5,377 7 8	.....	18,464 13 11	51,627	0 5 9
616 13 8	.....	3,398 11 3	.....	.....	2,960 8 7	638 2 8	.....	3,398 11 3	4,274	0 13 6
974 6 9	273 1 4	4,225 1 7	.....	4 0 0	3,218 14 9	1,002 2 10	.....	4,225 1 7	14,785	0 4 7
1,397 4 0	43 4 0	5,370 4 6	.....	.....	3,970 8 1	1,399 12 5	.....	5,370 4 6	40,790	0 2 1
506 4 2	16 5 5	2,079 15 2	.....	.....	2,077 5 2	2 10 0	.....	2,079 15 2	8,036	0 4 2
3,394 12 7	332 10 9	15,274 0 6	.....	4 0 0	12,227 3 7	3,042 11 11	.....	15,274 0 6	67,885	0 3 7
676 8 0	257 0 3	3,773 14 6	.....	.....	2,560 6 1	1,213 8 5	.....	3,773 14 6	13,152	0 4 7
156 2 0	.....	1,593 2 0	.....	.....	1,113 2 0	480 0 0	.....	1,593 2 0	13,546	0 1 11
434 13 6	81 13 0	1,896 10 6	.....	.....	1,056 10 6	240 0 0	.....	1,896 10 6	3,806	0 7 5
880 15 0	.....	3,216 15 0	.....	.....	2,796 15 0	420 0 0	.....	3,216 15 0	3,797	0 13 7
685 2 6	141 5 0	2,706 12 4	.....	.....	2,111 7 0	595 5 4	.....	2,706 12 4	8,172	6 5 4
63 6 0	.....	363 6 0	.....	.....	363 6 0	.....	.....	363 6 0	370	0 15 9
2,896 15 0	480 2 3	12,950 12 4	.....	.....	10,001 14 7	2,948 13 9	.....	12,950 12 4	41,843	0 4 11
342 11 6	412 9 6	3,836 12 5	.....	1,331 14 4	30 0 0	2,474 14 1	.....	3,836 12 5	12,720	0 4 10
157 4 0	.....	695 4 0	.....	396 4 0	.....	299 0 0	.....	695 4 0	2,584	0 4 4
136 9 6	31 10 0	377 4 7	.....	377 4 7	.....	.....	.....	377 4 7	1,641	0 3 8
173 10 0	4 0 0	752 10 0	.....	345 2 0	.....	.....	407 8 0	752 10 0	2,716	0 4 5
86 14 10	1 7 0	463 2 9	.....	463 2 9	.....	.....	.....	463 2 9	785	0 9 5
897 1 10	439 10 6	6,125 1 9	.....	2,913 11 8	30 0 0	3,773 14 1	407 8 0	6,125 1 9	20,446	0 4 10
308 4 0	60 8 0	1,377 14 4	.....	1,176 14 4	.....	201 0 0	.....	1,377 14 4	13,362	0 1 8
415 2 0	.....	1,170 2 0	.....	955 2 0	.....	215 0 0	.....	1,170 2 0	6,324	0 3 0
179 13 0	168 8 3	1,047 5 3	.....	795 5 3	.....	252 0 0	.....	1,047 5 3	10,046	0 1 8
285 4 3	.....	1,048 4 3	.....	1,048 4 3	.....	.....	.....	1,048 4 3	7,328	0 2 3
1,188 7 3	229 0 3	4,643 9 10	.....	3,975 9 10	.....	668 0 0	.....	4,643 9 10	36,960	0 2 0
660 0 0	17 13 6	2,738 5 6	.....	.....	2,095 4 6	643 1 0	.....	2,738 5 6	19,965	0 2 2
157 2 0	105 6 9	772 8 9	.....	498 1 6	.....	274 7 3	.....	772 8 9	3,436	0 3 7
181 0 0	56 7 0	1,207 11 10	.....	581 5 10	.....	626 6 0	.....	1,207 11 10	7,006	0 2 9
249 0 0	20 0 0	1,101 5 4	.....	801 5 4	.....	300 0 0	.....	1,101 5 4	7,691	0 2 3
1,247 2 0	199 11 3	5,819 15 5	.....	1,880 12 8	2,095 4 6	1,843 14 3	.....	5,819 15 5	38,098	0 2 5
.....	1,601 0 10	1,601 0 10	.....	1,601 0 10	.....	.....	.....	1,601 0 10	.....	.....
163 0 0	18 0 0	628 8 11	.....	628 8 11	.....	.....	.....	628 8 11	4,415	0 2 3
319 15 6	14 6 0	1,516 14 8	.....	977 2 8	.....	539 12 0	.....	1,516 14 8	8,020	0 3 0
324 14 6	.....	1,106 0 6	.....	1,003 14 6	.....	102 2 0	.....	1,106 0 6	6,280	0 2 10
322 15 0	24 3 0	1,348 10 0	.....	913 10 0	.....	435 0 0	.....	1,348 10 0	8,188	0 2 8
1,130 13 0	1,657 9 10	6,201 2 11	.....	5,124 4 11	.....	1,076 14 0	.....	6,201 2 11	26,903	0 3 8
337 4 6	108 12 0	1,189 2 1	1,189 2 1	.....	.....	.....	.....	1,189 2 1	3,540	0 5 4
283 4 0	.....	1,114 6 4	1,114 6 4	.....	.....	.....	.....	1,114 6 4	4,479	0 4 0
.....	79 12 4	402 7 4	402 7 4	.....	.....	.....	.....	402 7 4	.....	.....
620 8 6	188 8 4	2,705 15 9	2,705 15 9	.....	.....	.....	.....	2,705 15 9	8,019	0 5 5
21 8 0	1 14 0	123 6 0	123 6 0	.....	.....	.....	.....	123 6 0	127	0 15 7
21 8 0	1 14 0	123 6 0	123 6 0	.....	.....	.....	.....	123 6 0	127	0 15 7
15,925 10 5	5,466 5 7	79,137 1 11	2,829 5 9	17,443 12 1	40,153 5 3	18,303 2 10	407 8 0	79,137 1 11	309,700	0 4 1
16,210 14 10	3,701 13 4	78,853 9 9	3,463 9 4	14,170 13 1	40,744 10 8	20,068 10 2	405 14 0	78,853 9 4	366,079	0 3 5
15,382 3 9	3,083 9 7	73,683 7 5	2,831 10 3	13,604 1 7	38,057 4 5	18,800 7 2	390 0 0	73,683 7 5	452,657	0 2 7

B.—DISPENSARY

STATEMENT No. III—*Showing Dispensary Vaccination in the*

No.	District.	Number of dispensaries in each district to which a vaccinator is attached.	Average number of vaccinators attached to dispensaries during the season.	Total number of persons vaccinated.	Average number of previous vaccinated by each vaccinator.
1	2	3	4	5	6
	ARAKAN DIVISION.				
1	Akyab			29	
2	Hill Tracts, Northern Arakan			7	
3	Kyaukpyu			114	
4	Sandoway			176	
	Total			326	
	PEGU DIVISION.				
5	Rangoon				
6	Hanthawaddy			1,586	
7	Pegu			60	
8	Tharrawaddy			62	
9	Prome			87	
	Total			1,795	
	IRRAWADDY DIVISION.				
10	Thôngwa			823	
11	Bassein			47	
12	Henzada				
13	Myaungmya			280	
	Total			1,150	
	TENASSERIM DIVISION.				
14	Amherst			25	
15	Tavoy			630	
16	Mergui			22	
17	Thatôn				
18	Toungoo			439	
19	Salween Hill Tracts				
	Total			1,106	
	MANDALAY DIVISION.				
20	Mandalay			51	
21	Bhamo			85	
22	Katha			237	
23	Ruby Mines			48	
24	Myitkyina			43	
25	Mogaung (subdivision)			27	
	Total			491	
	SAGAING DIVISION.				
26	Shwebo			122	
27	Sagaing			253	
28	Lower Chindwin			119	
29	Upper Chindwin			469	
	Total			943	
	MINBU DIVISION.				
30	Thayetmyo			316	
31	Pakôkku			42	
32	Minbu				
33	Magwe			117	
	Total			475	
	MEIKTILA DIVISION.				
34	Meiktila			327	
35	Yamèthin			12	
36	Kyauksè			37	
37	Myingyan			71	
	Total			437	
	SHAN STATES.				
38	Northern Shan States			14	
39	Southern Shan States			105	
	Total			119	
	CHIN HILLS.				
40	Chin Hills			406	
	Total			406	
	GRAND TOTAL, 1901-02			7,248	
	GRAND TOTAL, 1900-01			9,450	
	GRAND TOTAL, 1879-1900			13,627	

VACCINATION.

Province of Burma for the year 1901-02 (para. 14).

Primary Vaccination.				Revaccination.		Percentage of successful cases.	
Total.	Successful.			Total.	Successful.	Primary.	Re-vaccination.
	Under one year.	Over one and under six years.	Total of all ages.				
7	8	9	10	11	12	13	14
29	...	8	8	...	...	27·59	...
7	...	7	7	...	...	100·00	...
114	18	58	93	...	...	81·58	...
129	4	5	119	47	7	92·25	14·89
279	22	78	227	47	7	81·36	14·89
...	...	...	...	...	...	...	...
70	1	5	45	1,516	894	64·29	58·97
49	7	30	49	11	7	100·00	63·64
62	37	27	54	...	...	87·10	...
87	46	41	87	...	...	100·00	...
268	81	103	235	1,527	901	87·69	59·00
19	...	2	13	804	347	68·42	39·43
44	12	13	25	3	2	56·82	66·67
...	...	...	...	...	...	...	...
253	18	15	144	27	2	56·92	7·41
316	30	30	182	834	321	57·59	38·49
25	...	5	8	...	...	32·00	...
590	154	278	546	30	13	92·54	43·33
22	2	12	22	...	...	100·00	...
...	...	...	...	...	...	...	...
44	2	...	43	395	78	97·73	19·75
...	...	...	...	...	...	...	...
681	158	295	619	425	91	90·90	21·41
47	12	25	47	4	3	100·00	75·00
85	45	13	81	...	...	95·29	...
8	2	...	8	229	36	100·00	15·72
44	4	10	44	4	...	100·00	...
43	24	5	36	...	...	83·72	...
27	...	13	23	...	...	85·19	...
254	87	66	239	237	39	94·09	16·46
122	20	44	108	...	...	88·52	...
341	99	104	303	12	4	84·23	33·33
99	4	29	74	20	20	74·75	100·00
441	29	134	324	8	6	50·79	75·00
903	152	311	609	40	30	67·44	75·00
304	74	180	282	12	11	92·76	91·67
42	8	29	40	...	...	95·24	...
...	...	...	...	...	...	...	...
...	...	...	...	117	51	...	43·59
346	82	209	322	129	62	93·60	48·06
327	40	151	305	...	...	93·27	...
12	6	5	12	...	...	100·00	...
35	17	8	25	2	2	100·00	100·00
71	21	8	30	...	...	42·25	...
435	84	172	372	2	2	85·52	100·00
12	...	2	12	2	...	100·00	...
105	20	19	62	...	...	59·05	...
117	20	21	74	2	...	63·25	...
372	22	51	154	34	9	41·40	26·47
372	22	51	154	34	9	41·40	26·47
3,071	738	1,336	3,033	3,277	1,462	76·38	44·61
6,653	1,387	1,906	4,219	2,797	1,291	63·57	47·59
6,033	1,445	2,161	5,421	6,594	4,014	89·86	61·03

COMPARATIVE STATEMENT NO. IV.—*Showing the number of persons primarily vaccinated Burma, in each of the under*

Establishment.	Persons primarily									
	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
	1892-93.		1893-94.		1894-95.		1895-96.		1896-97.	
Government	4,144	3,503	67,777	60,498	85,936	77,976	92,369	85,137	118,666	110,486
Municipal	47,503	40,608	72,315	62,372	64,647	57,908	81,340	74,204	83,282	78,036
Local Funds	139,748	121,326	91,302	82,233	113,991	102,437	155,537	142,638	188,718	172,580
Native States	...	...	...	...	...	...	...	...	...	...
Dispensary	2,857	2,395	4,143	3,455	6,690	6,127	6,056	5,546	5,466	4,964
Army	...	...	...	...	...	...	...	...	...	...
Europeans	83	35	761	443	97	53	68	45	31	26
Natives	133	77			533	354	604	329	655	390
Total ...	194,468	167,044	236,298	209,001	271,894	244,855	335,074	307,899	396,818	366,482

and the number of those persons who were successfully vaccinated in the Province of mentioned official years (para 15).

VACCINATED.

Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
1897-98.		1898-99.		1899-1900.		1900-01.		1901-02.	
95,153	88,851	116,621	106,892	122,193	112,483	106,629	95,392	94,530	83,082
82,034	78,827	81,987	78,636	72,287	69,705	62,338	58,008	52,227	46,695
222,231	210,880	238,334	228,367	260,518	248,803	215,111	198,789	181,107	166,283
...	...	2,108	1,941	1,764	1,631	1,574	1,420	1,822	1,553
5,151	4,891	8,209	7,278	6,033	5,421	6,653	4,229	3,971	3,033
...	...	...	...	...	...	...	...	...	...
80	50	53	42	28	19	23	10	20	9
379	249	546	363	782	344	391	207	114	67
405,928	383,748	447,858	423,519	463,605	438,406	392,719	358,055	333,791	300,722

STATEMENT No. V.—*Showing particulars of*

Number.	District.	Total number of persons vaccinated.		Total number inspected			
				By Civil Surgeons.		By Native Superintendents or other inspecting officers.	
		Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.
1	2	3	4	5	6	7	8
1	Akyab	7,881	551	472	546	3,602	551
2	Arakan Hill Tracts ...	987	...	...	...	44	...
3	Kyaukpyu	7,901	406	2,102	207	59	...
4	Sandoway	2,591	143	1,168	6	134	42
5	Rangoon	4,465	2,412	1,185	1,522	805	305
6	Hanthawaddy	5,602	1,888	1,195	900	2,158	886
7	Pegu	11,256	160	2,160	51	263	23
8	Tharrawaddy	10,600	...	956	...	5,644	...
9	Prome	23,646	1,708	1,798	731	1,326	977
10	Thôngwa	4,754	857	289	804	446	304
11	Bassein*	12,620	3,642	3,806		6,349	
12	Henzada	42,786	1,623	2,050	392	480	221
13	Myaungmya*	8,950	282	1,845		198	
14	Amherst*	13,422	1,463	1,333		6,814	
15	Tavoy	13,932	3,964	4,437	1,556	738	1,285
16	Mergui	3,624	146	1,074	20	173	...
17	Thatôn	4,944	12	1,840	...	2,039	...
18	Toungoo*	9,150	603	1,214		3,065	
19	Salween	984	...	...	...	7	...
20	Mandalay	11,881	1,705	5,108	168	3,139	20
21	Bhamo*	2,618	322	1,100		423	
22	Katha	1,753	241	732	208	143	229
23	Ruby Mines	2,887	77	1,677	4	34	...
24	Myitkyina	989	...	689	...	66	...
25	Shwebo	15,102	66	2,604	41	1,652	...
26	Sagaing*	7,785	148	3,647		216	
27	Lower Chindwin ...	11,455	84	5,509	38	80	26
28	Upper Chindwin ...	8,768	676	621	...	335	8
29	Thayetmyo	20,265	1,344	1,269	681	1,774	48
30	Pakôkku	4,284	363	3,166	354	42	...
31	Minbu*	7,215	422	523		861	
32	Magwe	7,900	250	1,499	117	323	133
33	Meiktila	5,795	11	2,495	11	95	...
34	Yamèthin	8,611	455	2,358	388	1,644	...
35	Kyaukse	6,961	67	3,315	5	95	2
36	Myingyan	9,119	396	5,523	396	734	...
37	Lashio	4,328	2	2,611	2	12	...
38	Taunggyi	5,093	39	259	...	479	...
39	Chin Hills*	796	39	38		354	
	Grand Total to the Province for 1901-02.	333,657	26,567	61,061	9,238	28,535	5,160
				13,506		18,280	
	Grand Total of the Province for 1900-01.	419,911		90,507		62,651	
	Grand Total of the Province for 1899-1900.	503,514		115,365		71,156	

Information showing separately number of primary

Vaccination verified by inspecting Officers (para. 16).

Percentage of inspections to total number vaccinated.				Percentage of cases found successful of total number inspected.				Percentage of successes reported by vaccinators.	
By Civil Surgeons.		By Native Superintendents or other inspecting officers.		By Civil Surgeons.		By Native Superintendents or other inspecting officers.			
Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.
9	10	11	12	13	14	15	16	17	18
5·99	99·09	45·70	100	98·94	85·90	...	...	93·50	85·84
...	...	4·46	...	...	...	95·45	...	96·33	...
26·60	50·99	·75	...	96·81	51·69	96·61	...	87·81	40·15
45·08	4·20	5·17	29·37	95·46	...	88·81	16·67	85·42	9·38
26·54	63·10	18·08	12·65	91·07	50·92	97·89	49·18	60·25	46·06
21·33	52·44	38·52	46·93	73·39	54·34	85·17	56·09	78·80	62·63
19·19	31·88	2·34	14·37	93·89	92·16	87·83	78·26	95·58	61·74
9·02	...	53·25	...	83·79	...	...	88·22	86·88	...
7·60	42·80	5·61	57·20	99·00	69·22	92·01	32·75	95·39	48·36
6·08	93·82	9·38	35·47	76·12	39·43	90·36	33·22	90·01	22·64
23·40		39·04		90·15		83·70		98·02	67·55
6·90	24·15	1·12	13·62	74·91	72·45	91·46	39·82	92·94	63·03
19·98		2·14		68·51		74·75		91·01	47·45
8·96		45·78		89·59		90·65		95·00	29·05
31·85	39·25	5·30	34·94	90·71	25·51	91·87	19·27	94·06	25·32
29·64	13·70	4·77	...	87·62	100·00	97·11	...	76·51	34·25
37·22	...	41·04	...	66·85	...	75·60	...	76·62	75·00
13·45		31·43		64·33		85·51		88·10	72·12
...	...	·71	...	...	...	100·00	...	37·60	...
43·14	9·88	26·51	1·18	99·10	91·67	83·37	90·00	95·60	84·95
37·41		14·39		90·45		87·71		97·04	39·13
41·76	86·31	8·16	95·02	89·62	15·38	92·31	15·70	93·81	33·33
58·09	5·19	1·18	...	96·60	100·00	100·00	...	94·37	45·21
69·67	...	6·67	...	82·73	...	87·88	...	85·42	...
17·24	62·12	10·91	...	91·36	58·54	80·02	...	89·05	33·33
45·97		2·72		86·57		91·11		81·40	61·03
48·09	45·24	·70	30·95	85·30	78·95	70·00	80·76	88·02	79·69
7·08	...	3·82	1·18	55·39	...	64·48	75·00	84·18	48·05
6·26	50·67	8·75	3·57	95·98	80·03	94·93	70·17	95·12	73·42
73·90	97·52	·98	...	86·17	31·07	95·24	...	78·31	31·40
6·85		11·27		96·37		83·52		93·94	54·03
18·97	46·80	4·09	53·20	95·93	43·59	99·38	82·71	95·96	82·71
43·05	100·00	16·39	...	84·53	45·45	77·89	...	80·65	45·45
27·38	85·27	19·09	...	89·95	17·53	99·94	...	91·82	27·25
47·62	7·46	1·36	2·99	85·91	20·00	100·00	100·00	90·28	27·69
60·57	100·00	7·83	...	84·12	61·87	79·97	...	87·79	61·87
60·33	100·00	·28	...	91·38	100·00	100·00	...	82·02	...
5·09	...	9·41	...	96·53	...	96·69	...	89·25	60·23
4·55		42·40		60·53		75·48		39·48	40·00
22·52	47·02	10·53	26·26	88·10	42·55	11·17	32·54	90·27	51·99
19·44		26·31		85·26		87·66			
21·55		14·92		84·77		84·70		89·19	
23·91		14·13		87·49		89·88		92·21	

accinations inspected and found successful not available.

APPENDIX A.

Showing the ratio per 10,000 successfully vaccinated and the mortality from small-pox by quinquennial periods for Lower Burma only (para. 6).

Official year.	Ratio per 10,000 successfully vaccinated.	Quinquennial mean.	Calendar year.	Ratio per 10,000 of mortality from small-pox.	Quinquennial mean.
1886-1887	146·90		1886	·30	
1887-1888	167·00		1887	·60	
1888-1889	197·90	204·42	1888	1·60	4·06
1889-1890	266·70		1889	7·70	
1890-1891	243·60		1890	10·10	
1891-1892	214·20		1891	2·90	
1892-1893	257·90		1892	3·20	
1893-1894	303·50	315·66	1893	6·80	4·02
1894-1895	353·80		1894	3·80	
1895-1896	448·90		1895	3·40	
1896-1897	554·40		1896	3·70	
1897-1898	586·70		1897	4·30	
1898-1899	652·50	596·62	1898	10·70	7·74
1899-1900	678·10		1899	13·20	
1900-1901	511·40		1900	6·80	
1901-1902	331·40		1901	4·57	

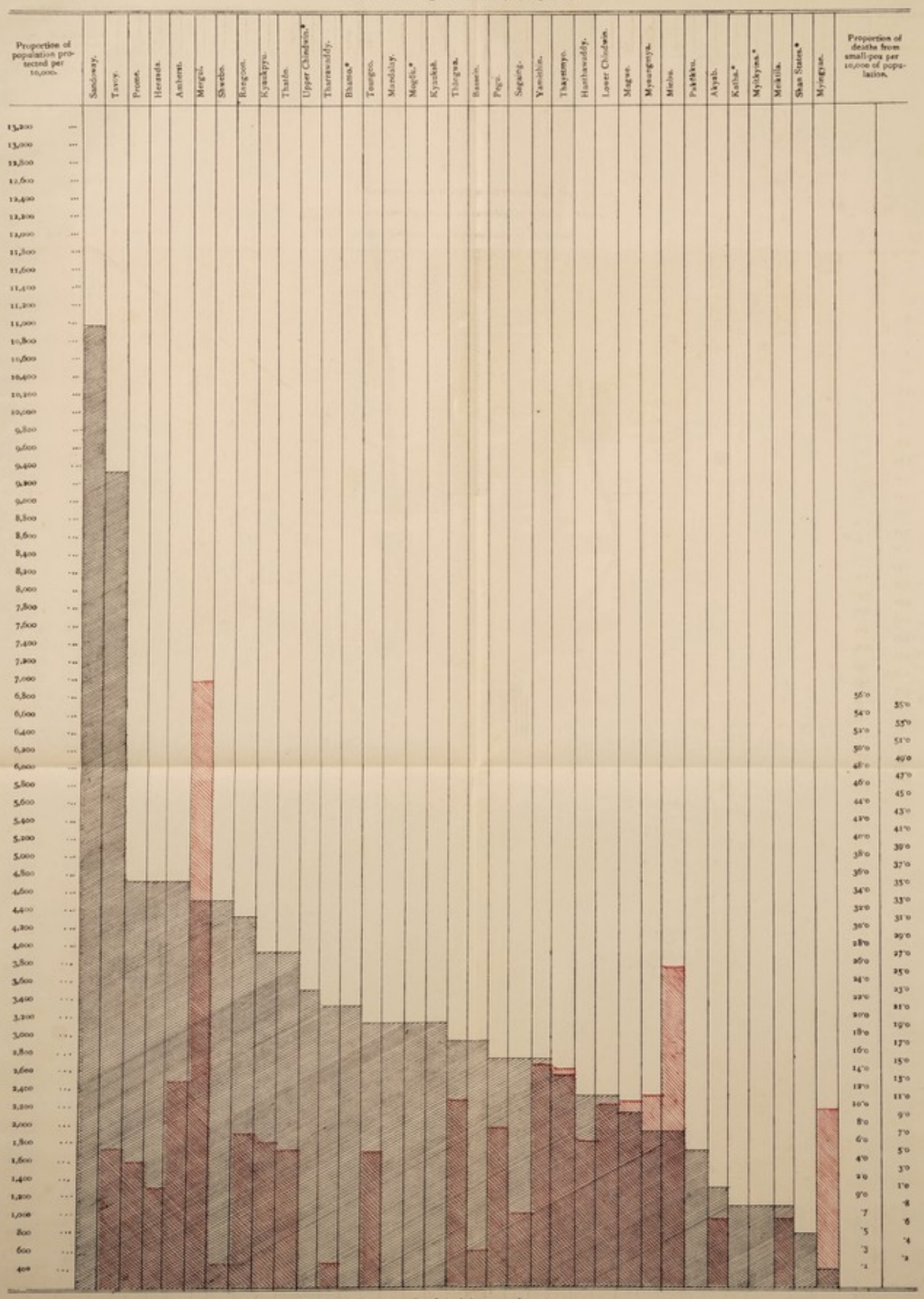
APPENDIX B.

Statistics relating to the number of children under one year of age in towns available for vaccination and the number of successful operations performed on them (para. 13).

Towns.	Number of births during the year 1901-02.	Number of deaths among children under one year of age.	Number living after deducting deaths in column 3.	Number of successful vaccinations on children under one year of age.	Date of extension of Vaccination Act into town.
1	2	3	4	5	6
Akyab	680	260	420	405	August 1883.
Kyaukpyu	59	14	45	26	April 1894.
Sandoway	96	16	80	55	September 1890.
Rangoon	2,982	1,143	1,839	1,041	April 1884.
Pegu	386	100	286	234	March 1893.
Prome	895	166	729	766	June 1890.
Paungdè	356	43	313	530	August 1890.
Gyobingauk	215	43	172	137	February 1897.
Letpadàn	252	122	130	123	January 1897.
Thônzè	251	100	151	99	October 1897.
Ma-ubin	165	34	131	31	October 1891.
Yandoon	Information not available.				January 1892.
Bassein	1,098	253	845	923	September 1888.
Ngathainggyaung	212	42	170	180	February 1890.
Myaungmya	133	34	99	101	June 1894.
Henzada	926	275	651	595	January 1889.
Zalun	286	55	231	227	August 1894.
Myanaung	249	45	204	147	July 1889.
Kyangin	2,172	514	1,658	138	August 1894.
Moulmein	1,297	187	1,110	1,076	August 1885.
Thatôn	404	80	324	222	October 1891.
Kyaikto	231	45	186	128	March 1897.
Tavoy	763	82	681	681	December 1889.
Mergui	307	40	267	242	October 1891.
Toungoo	538	115	423	288	May 1889.
Shwegyin	233	43	190	142	January 1890.
Mandalay	7,966	2,425	5,541	5,311	August 1891.
Sagaing	403	104	299	273	April 1894.
Mônywa	261	78	183	171	March 1893.
Thayetmyo	445	118	327	456	May 1889.
Yamèthin	271	62	219	159	February 1892.
Pyinmana	577	101	476	477	November 1891.
Myingyan	730	298	432	460	September 1891.
Pagan	269	25	244	264	November 1891.
Shwebo	301	108	193	190	June 1894.
Pakôkku	932	260	662	625	April 1892.
Kyauksè	225	66	159	175	May 1894.
Minbu	135	39	96	116	March 1896.
Salin	No data.			353	March 1896.
Taungdwingyi	270	80	190	190	February 1893.
Total	27,061	7,614	20,347	17,757	

APPENDIX C.

Diagram showing the proportion of population protected during the seven official years from 1895-96 to 1901-02 and death-rate from small-pox during the calendar year 1901 in districts where registration is in force (para. 6).



No. 841, Secy., 10-8-1902—400.

TRIENNIAL REPORT

ON

VACCINATION IN BURMA

FOR THE YEARS 1899-1900—1901-02.

RANGOON:

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRINTING, BURMA.

1902.

[Price,—Re. 0-9-0=10d.]