

**Vaccination returns of the Province of Assam : with brief explanatory notes.**

**Contributors**

Assam (India)

**Publication/Creation**

Shillong : Government Press, [1913]

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# V A C C I N A T I O N R E T U R N S

OF THE

# P R O V I N C E O F A S S A M

FOR THE YEAR

## 1912-1913.

WITH BRIEF EXPLANATORY NOTES

BY

THE HON'BLE COLONEL R. N. CAMPBELL, C.B., C.I.E., I.M.S.  
SANITARY COMMISSIONER, ASSAM.



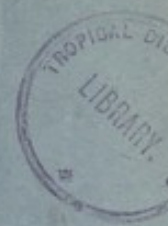
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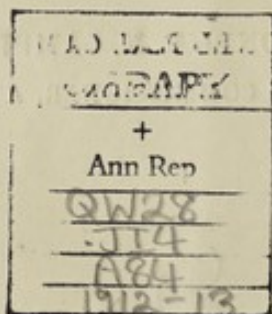
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## NOTES ON VACCINATION IN ASSAM FOR THE YEAR 1912-1913.

1. *Introductory.*—I was in charge of the Department throughout the year. The office of the Deputy Sanitary Commissioner was held by Captain T. C. McCombie Young, I.M.S., throughout the year.

2. *Vaccination agencies.*—Vaccination was performed by 330 departmental vaccinators. In tea estates vaccination was performed by the garden medical officers. On railways the vaccination work was performed by the railway medical staff, and in jails by the Sub-Assistant Surgeons in medical charge.

Of 330 departmental vaccinators, 237 were paid vaccinators, and 93 were licensed vaccinators. The average number of persons vaccinated by each vaccinator was 964, against 877 of the previous year. The number of persons vaccinated by each paid vaccinator and licensed vaccinator was 1,114 and 580, respectively.

3. *Total number of operations.*—The total number of operations performed by all agencies during the year amounted to 333,363 compared with 305,845 in 1911-12, showing an increase of 27,518 operations. Of the total number of operations performed, 298,983 were primary vaccinations and 34,380 re-vaccinations, against 290,915 and 14,930, respectively, in 1911-12.

The total for the year consists of :—

318,046	by	departmental vaccinators,
1,590	by	the staff of dispensaries,
12,504	by	tea-garden medical staff,
69	by	railway medical staff, and
1,154	by	the jail medical staff.

4. *Deaths from small-pox.*—The total number of deaths from small-pox during the year was 4,716 or '67 per mille of population against '35 of the previous year. The highest death-rate was recorded in Kamrup 1·89, followed by Sylhet with '99, and Nowgong with '95.

The Civil Surgeon, Kamrup, remarks, "an increased prevalence of small-pox occurred in the early months of the hot weather, which was surprising in view of the activity in vaccination work of late years."

The disease was unduly prevalent in Sylhet town and in certain rural areas. Steps were taken to check the spread of the disease by carrying on vaccination in infected villages. Extra vaccinators were entertained when necessary. This resulted in an increase of 28,522 operations during the year.

The diagram, showing death-rates from small-pox and the protection afforded by successful vaccination, is attached.

5. *Dispensary vaccination.*—The number of operations performed by the staff of dispensaries during the year was 1,590, of which 1,036 were primary vaccinations and 554 re-vaccinations, against 1,678 vaccinations with 1,464 primary and 214 re-vaccinations of the previous year.

Dispensary vaccination work is now carried on in hill districts only.

6. *The percentage of successful operations.*—The percentage of success of operations performed by all establishments combined was 97·91 in the case of primary vaccinations and 73·99 in that of re-vaccination, against 98·14 and 80·98, respectively, of the previous year.

The successful percentages in primary vaccinations and re-vaccinations in the case of vaccinators were 97·92 and 73·01, respectively, against 98·19 and 80·28, respectively, of the previous year; in the case of the dispensary staff 96·20 and 75·41, respectively, against 97·54 and 94·87, respectively, of the previous year, and in the case of other agencies 97·46 and 84·49, respectively, against 97·28 and 83·33, respectively, of the previous year.

The total number of persons successfully vaccinated during the year was 44·57 per mille of populations, against 41·85 of the year 1911-12.

7. *Different methods of vaccination.*—As in previous years, all vaccination operations were performed with glycerinated lymph manufactured by the Vaccine Depot at Shillong.

8. *Vaccination work in different districts.*—Out of the 12 districts and 1 Native State composing the province, there was an increase of vaccinations in 9 and a decrease in 4, as compared with the previous year.

The increase (28,522) is specially noticeable in the district of Sylhet where, as stated in paragraph 4 of the report, vaccination was vigorously pushed as a preventive measure against small-pox, which was unduly prevalent in several villages in the Habiganj, Sunamganj and North Sylhet subdivisions. Each of these subdivisions has two permanent vaccinators, who were sent to the affected localities in rotation. The Sunamganj Local Board entertained four extra vaccinators. The vaccination inspecting staff was sent to infected places to induce the people to accept vaccination. In this connection Captain Scott, Civil Surgeon, Sylhet, remarks, "it would be a very simple matter to suppress epidemics, if the people were willing to accept vaccination, or if some means of compulsion could be employed, but as things are, it is a difficult and tedious process to get sufficient vaccinations done to check an outbreak".

Thanks are due to the Subdivisional Officer of Sunamganj, who rendered great assistance by personally visiting the affected areas. As a result of this, a very large number of re-vaccinations were performed forthwith, and the epidemic rapidly subsided.

The Civil Surgeon personally visited, with good results, several places in which the populace was opposed to vaccination.

The experiment to work the district with licensed vaccinators, to which reference was made in the last year's report, shows small promise of success, as much difficulty was experienced in the realisation of fees. It might be discontinued in the next season.

A *Gonok* was found inoculating in a village in the Sunamganj subdivision legal action is being taken to deal with the offender.

The next highest increase of 4,241 operations, recorded in the Khasi and Jaintia Hills, is due to the fact that the additional vaccinators sanctioned in the season 1911-1912 displayed greater activity during the year under review than in the previous year. At first, the pay of these vaccinators was fixed at Rs. 16 a month for six months and at Rs. 8 a month for six months. On the representation of the Civil Surgeon, their pay has been raised to Rs. 16 a month throughout the year.

The increase in Cachar is partly due to better supervision of the vaccinators, who are now made to submit the return of their work done, week by week, and partly also to an increased number of operations being performed on the tea estates.

In the Lakhimpur district, people generally accept vaccination. The only section of the population, who oppose vaccination, are Muttocks. The Deputy Commissioner has promised to address their headmen with a view to producing a more favourable attitude towards vaccination.

The increase in the Kamrup district has been maintained. The year's work is the more satisfactory in that among the "Mahapurushias," who are notorious in their objection to vaccination upon religious grounds, 6,422 operations have been performed.

The decrease of 3,930 operations in the Sibsagar district, as compared with the number vaccinated in the previous year, is said to be due to the absence of small-pox in epidemic form during the year in question.

The decrease of 2,481 cases in Goalpara is due to prevalence of cholera in Dhubri, Bijni and Sidli registration circles during a portion of the vaccination season, *viz.*, November, December and January. The people were struck by panic, and did not readily submit to vaccination. One of the vaccinators and two apprentices died of cholera, and the vacancies could not be filled up for some time.

The fall of 2,401 operations in the Garo Hills district has not been accounted for in the report. This is, perhaps, due to a lack of activity on the part of the operators and an unsatisfactory method of working. The Civil Surgeon has proposed certain changes in next year's arrangements that may give better results.

The fall of nearly 2,000 operations in the Nowgong district is very unsatisfactory, in view of the fact that there was an outbreak of small-pox during the year. In 1911-1912, three extra vaccinators were entertained for 3 months, and the year before that 5 extra vaccinators were entertained, but during the year under review no extra vaccinators were appointed by the Local Board for want of funds. In

1910, the Sanitary Commissioner advised that the staff of vaccinators should be doubled, but no steps have been taken to give effect to this; the number of vaccinators remains the same, and the number of operations is decreasing. The attention of the district authorities will be drawn to this.

9. *Composition and strength of the inspecting staff.*—The inspecting staff remained the same during the year under report as in the previous year, *viz.*, 8 Inspectors and 18 Sub-Inspectors in the Provincial cadre, and 1 Inspector in the Manipur State.

From 1st April 1913, a revision in the grades of the Inspectors and Sub-Inspectors, and an increase of two additional supernumerary Sub-Inspectors has been sanctioned.

10. *Verification by the inspecting staff.*—Civil Surgeons inspected 5·54 and 2·45 per cent. of the primary vaccinations and re-vaccinations, respectively, during the year under report against 70·80 and 4·1 in 1911-1912. The Subordinate Inspecting Staff inspected 60·26 and 49·80 per cent. of the primary vaccinations and re-vaccinations, respectively, during the year under report, against 58·10 and 36·59 in 1911-1912.

The Deputy Sanitary Commissioner inspected 2,000 operations, of which 99 per cent. were successful.

11. *Working of the Compulsory Vaccination Act.*—In the towns in which the Vaccination Act is in force 1,294 or 62 per cent. of the total number of children under one year available for vaccination were successfully vaccinated against 79 per cent. of the year 1911-12.

In the town of Sylhet, only one-fourth of the available children were vaccinated. This unsatisfactory result is reported to be due to the fact that on account of prevalence of small-pox in the town, the vaccinator was largely engaged in persuading people to accept re-vaccination. He performed 1,132 cases of re-vaccination, against 277 of the previous year. The attention of the Civil Surgeon and the Municipal Commissioners will be drawn to this failure to carry out primary vaccination, a defect which, if not speedily rectified, may have a serious effect in the health of the town in the near future. In the towns of Silchar, Gauhati, Tezpur and Sibsagar only half and in Jorhat and Shillong only one-third of the available children were successfully vaccinated. This cannot be considered as satisfactory, and the Civil Surgeons concerned are being asked to impress upon the vaccination staff the necessity of paying more attention to this important branch of their duty in the next vaccination season. The inspecting staff should obtain from the Registrar of Births, the list of children born with their address and see that notices in the prescribed form have been served on the guardians and all available children have been successfully vaccinated.

In the town of Silchar, 11 persons were prosecuted under the Act, of whom 8 were convicted and fined. There were 3 prosecutions in the town of Gauhati; all were convicted and fined.

Fifty notices were served in the town of Dhubri and 88 in Goalpara. There were 3 prosecutions in the former and two in the latter, the results of which are not yet known.

12. *Vaccine Depot.*—The total cost of the depot was Rs. 22,944-7-4, against Rs. 23,468-1-11 in 1911-1912. The number of tubes loaded during the year was 1,819,859, against 1,716,938 of the previous year, showing an increase of 102,921. The average cost per tube during the year was 2·4 pies.

Of 962 calves inoculated, lymph was taken from 833 only. There were 38 failures and lymph was not taken from 91, either on account of illness or because the vesicles were not satisfactory.

This depot continues to supply lymph to the Eastern Bengal districts. The quality of the lymph is reported to be excellent.

The plan and estimates for a new vaccine depot are under preparation in the Sanitary Engineer's office.

13. *Cost of the Department.*—The total cost of the Department was Rs. 66,342-10-8, against Rs. 64,501-6-1 of the previous year, showing an increase of Rs. 1,841-4-7.

Of the former amount, Rs. 45,209-12-3 was paid from provincial funds, Rs. 19,213-8-5 from local funds, Rs. 1,060-11-0 from municipal funds, and Rs. 858-11-0 by Native States.

14. *General.*—12,504 vaccinations were performed on tea estates, of which 11,450 were primary vaccinations and 1,054 re-vaccinations. The percentage of success was 97·93 and 97·66, respectively.

Only 69 primary operations were reported to have been performed within railway limits. The percentage of success was 93·94.

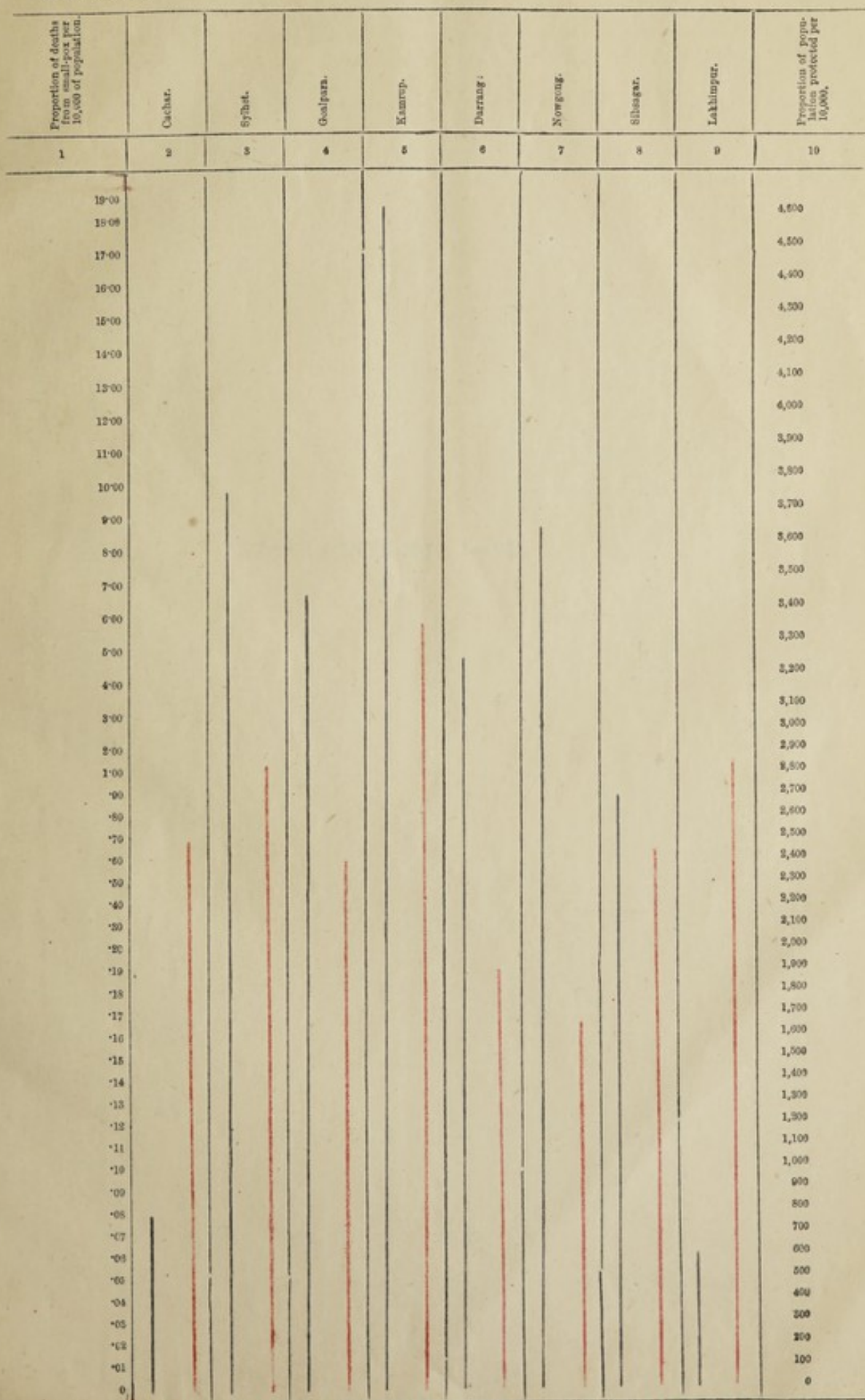
Of 1,154 operations done in the jails by the Sub-Assistant Surgeons, 286 were primary and 868 re-vaccinations. Their percentages of success were 96·31 and 82·62 respectively.

15. The prescribed statements are appended to these notes.

R. NEIL CAMPBELL, *Colonel, I.M.S.*,

*Sanitary Commissioner, Assam.*

The following diagram illustrates the death-rates from small-pox in each district side by side with the proportion of the population protected against the disease by vaccination during the seven years 1906-1907 to 1912-1913.



As to.—Black lines indicate death-rates from small-pox, Red lines indicate the proportion of population protected by vaccination.

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STATEMENTS Nos. I—VII.



DEPARTMENT.

the province of Assam during the year 1912-1913.

vaccination.		Re-vaccination.				Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.	
Successful.	Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.	Primary.		Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	
Over one and under six years.	Total of all ages.													
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
12,909	16,175	34	1,345	817	2	97.88	60.83	34.15	.2	.14	15,110	30.37	7	.01
72,399	107,052	417	20,286	15,027	99	98.97	74.43	53.33	.38	.43	86,335	34.91	679	.27
6,884	9,764	...	62	33	...	99.54	63.46	45.68	...	...	10,822	46.03	49	.20
6,325	9,300	44	2,811	1,440	57	99.23	52.29	45.68	.46	2.02	10,822	46.03	49	.20
3,817	4,815	173	26	18	1	94.16	72.00	32.50	3.23	8.84	5,194	34.71	...	...
2,521	2,631	181	282	195	27	86.31	76.47	30.98	5.60	9.57	2,448	26.84	...	...
97,941	140,003	848	24,750	17,497	186	97.96	71.23	48.54	.52	.75	119,909	34.79	735	.21
6,884	9,764	...	52	33	...	99.54	63.46	48.54	...	...	119,909	34.79	735	.21
81	373	3	25	9	9	96.13	56.25	32.84	.76	36.00	21,337	35.62	261	.43
9,319	17,762	337	1,968	1,587	63	95.64	83.52	32.84	1.78	3.45	21,337	35.62	261	.43
20,286	26,180	10	2,263	1,540	32	99.00	89.03	59.86	.03	1.41	30,649	45.89	942	1.41
9,739	12,254	7	8	4	2	99.41	68.66	59.86	.56	25.00	30,649	45.89	942	1.41
8,400	10,417	3	829	547	12	97.72	68.95	29.06	.63	1.44	8,974	23.78	477	1.26
4,565	6,540	5	...	...	...	99.84	...	21.54	.07	...	6,407	21.10	560	1.84
7,826	13,903	...	134	101	...	99.22	75.37	26.45	...	...	19,503	28.25	257	.37
2,776	4,255	...	...	...	...	93.65	...	26.45	...	...	19,503	28.25	257	.37
3,219	7,671	39	101	42	6	96.67	44.21	30.00	.48	5.86	14,658	31.10	41	.08
4,581	6,340	28	10	10	...	97.63	100.00	30.00	.43	...	14,658	31.10	41	.08
1,024	10,354	10	1,764	1,685	11	95.99	96.12	75.74	.09	.69	14,656	92.21	10	.05
45,401	75,438	70	5,116	3,924	70	98.25	77.76	37.20	.09	1.36	116,084	35.62	2,548	.78
26,445	40,611	372	1,986	1,601	70	97.38	83.56	37.20	.88	3.52	116,084	35.62	2,548	.78
1,482	11,521	1,637	...	...	...	95.85	...	38.27	11.98	...	11,901	32.64	...	...
144,224	226,962	2,555	29,566	21,421	256	97.95	73.34	42.55	1.09	.85	247,294	35.02	3,283	.46
33,329	50,375	372	2,038	1,634	70	97.79	83.03	42.55	.71	3.43	247,294	35.02	3,283	.46
177,553	277,337	2,927	31,904*	23,055	336	97.93	73.01	42.55	1.02	1.02	247,294	35.02	3,283	.46
613	937	62	554	319	131	96.20	75.41	...	5.98	23.64	2,392	...	...	...
35	62	3	...	...	...	93.94	...	...	4.34	...	...	...	...	...
4,987	11,085	131	1,054	963	68	97.93	97.66	...	1.14	6.45	11,567	...	...	...
210	261	15	858	661	63	96.31	82.62	...	5.24	7.83	269	...	...	...
183,398	280,682	3,138	34,380*	24,958	593	97.91	73.99	44.57	1.05	1.72	261,722	37.07	3,283	.46

of persons re-vaccinated equals 12 which represent secondary operations.

mary.

Percentage of successful cases in which results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccination per 1,000 of population.	Total cost of Department.	Average cost of each successful case.
Primary.	Re-vaccinations.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under six years.			
6	7	8	9	10	11	12	13	14
97.92	73.01	330	964	60,124	177,553	42.55	Rs. a. p. 66,342 10 8	Rs. a. p. 0 3 6
96.20	75.41	...	...	234	613	...	...	...
97.46	84.49	...	...	5,783	5,232	...	...	...
97.91	73.99	330	964	61,191	183,398	44.57	66,342 10 8	0 3 6

## Statement No. II—Showing the Cost of Vaccination in

No.	District.	Expen												
		European supervising officer. Pay.	Native supervising officer. Pay.	Paid vaccinators. Pay.	Licensed vaccinators. Pay.	Clerks. Pay.	Peons, etc. Pay.	Total pay of establishment.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		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.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Cachar ...	...	2	811 14 4	15	1,539 7 6	...	...	...	...	...	...	...	2,351 5 10
2	Sylhet ...	...	6	2,053 14 10	79	6,777 6 5	11	...	...	...	...	...	...	8,831 5 5
3	Khasi and Jaintia Hills ...	...	2	600 0 0	9	1,488 0 0	...	...	...	...	...	...	...	2,168 0 0
4	Naga Hills ...	...	1	300 0 0	5	840 0 0	...	...	...	...	...	...	...	1,140 0 0
5	Lushai Hills ...	...	1	300 0 0	5	486 9 4	...	...	...	...	...	...	...	786 9 4
6	Goalpara ...	...	2	840 0 0	2	354 7 0	25	...	...	...	...	...	...	1,194 7 0
7	Kamrup ...	...	3	913 15 5	46	3,105 2 2	31	...	...	...	...	...	...	4,019 1 7
8	Darrang ...	...	2	915 0 0	15	1,503 2 1	...	...	...	...	...	...	...	2,477 2 1
9	Nowgong ...	...	2	848 8 3	13	863 12 0	...	...	...	...	...	...	...	1,712 4 3
10	Sibsagar ...	...	2	949 5 4	24	1,518 8 6	11	...	...	...	1	96 0 0	...	2,563 12 10
11	Lakhimpur ...	...	2	780 0 0	14	1,440 0 0	14	...	...	...	...	...	...	2,220 0 0
12	Garo Hills ...	...	1	359 0 0	6	639 12 11	...	...	...	...	...	...	...	1,019 12 11
13	Manipur State ...	...	1	240 0 0	9	600 0 0	...	...	...	...	...	...	...	840 0 0
	Total of Districts ...	...	27	10,001 10 2	248	31,206 3 11	92	...	...	...	1	96 0 0	...	31,303 14 1
	Shillong Vaccine Depot	1	600 0 0	1	1,425 8 3	16	2,165 3 4	...	...	...	...	...	...	4,191 11 7
	Total for the Province	1	600 0 0	28	11,428 2 5	264	33,371 7 5	92	...	...	...	1	96 0 0	35,405 9 8

The average cost of each successful vaccination as shown in column 17 has been calculated on the total number of successful vaccinations  
 (a) Includes a sum of Rs. 675 paid as rewards  
 (b) Includes the cost of lymph manufactured for

## the Province of Assam during the year 1912-1913.

diture.				Paid from						Number of all successful vaccinations and revaccinations.	Average cost of each successful case.
Travelling allowance.	Contingencies.		Total cost.	Imperial Fund.	Provincial Fund.	Local Fund.	Municipalities.	Native State.	Total.		
	Cost of lymph.	Other contingencies.									
16	17	18	19	20	21	22	23	24	25	26	27
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.	Rs. a. p.	Rs. a. p.
1,433 12 3	...	42 5 0	3,827 7 1	...	2,082 7 7	1,090 15 6	84 0 0	...	3,827 7 1	16,902	0 3 7
2,431 15 0	...	408 0 10	11,671 5 10	...	3,673 5 4	7,878 0 6	120 0 0	...	11,671 5 10	131,876	0 1 5
980 15 0	...	15 0 0	3,102 15 0	...	2,910 15 0	...	192 0 0	...	3,102 15 0	10,740	0 4 7
521 10 0	...	...	1,661 10 0	...	1,661 10 0	...	...	...	1,661 10 0	4,863	0 5 6
400 0 0	...	102 6 2	1,388 5 6	...	1,388 5 6	...	...	...	1,388 5 6	2,826	0 7 10
632 2 0	...	(a) 652 14 6	2,469 8 3	...	1,410 13 7	993 2 8	66 8 0	...	2,469 8 3	10,731	0 3 0
833 11 0	...	290 0 0	5,147 13 4	...	1,781 9 2	3,067 4 2	299 0 0	...	5,147 13 4	30,978	0 2 0
467 3 0	...	...	2,944 5 7	...	1,582 3 6	1,472 2 1	90 0 0	...	2,944 5 7	10,904	0 4 3
380 0 0	...	29 2 6	2,151 15 3	...	1,214 8 3	907 7 0	30 3 0	...	2,151 15 3	6,540	0 5 3
602 7 6	...	89 0 0	3,345 5 4	...	1,730 13 10	1,614 8 6	...	...	3,345 5 4	18,330	0 2 11
628 1 6	...	393 0 0	3,278 1 6	...	1,478 1 6	1,620 0 0	180 0 0	...	3,278 1 6	14,063	0 3 9
530 14 9	...	10 0 0	1,550 11 8	...	1,550 11 8	...	...	...	1,550 11 8	12,039	0 2 0
...	...	18 11 0	858 11 0	...	...	...	...	858 11 0	858 11 0	11,521	0 1 2
10,040 13 9	...	1,047 7 6	43,298 3 4	...	22,205 4 11	10,213 8 5	1,000 11 0	858 11 0	43,298 3 4	300,592	0 2 4
...	17,216 8 0	1,530 3 9	22,944 7 4	...	22,944 7 4	...	...	...	22,944 7 4 <sup>(b)</sup>	...	...
10,040 13 9	17,216 8 0	3,583 11 3	65,342 10 6	...	45,209 12 3	10,213 8 5	1,000 11 0	858 11 0	65,342 10 6	300,592	0 3 6

and re-vaccinations performed by the Special Department only.  
to the licensed vaccinators.  
the Eastern Bengal districts.

## B.—DISPENSARY

Statement No. III—Showing Dispensary Vaccination

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 persons vaccinated by each vaccinator.	Primary vaccination.				
					Total.	Successful.			Un- known.
						Under one year.	Over one and under six years.	Total of all ages.	
1	2	3	4	5	6	7	8	9	10
Cachar ...	...	...	...	...	...	...	...	...	...
Sylhet ...	...	...	176	...	64	...	60	60	...
Khasi and Jaintia Hills	...	...	...	...	...	...	...	...	...
Naga Hills	...	...	306	...	239	22	157	219	8
Lushai "	...	...	311	...	267	12	241	253	1
Goalpara	...	...	...	...	...	...	...	...	...
Kamrup ...	...	...	...	...	...	...	...	...	...
Darrang ...	...	...	...	...	...	...	...	...	...
Nowgong	...	...	63	...	63	20	42	62	...
Sibsagar	...	...	39	...	39	23	16	39	...
Lakhimpur	...	...	...	...	...	...	...	...	...
Garo Hills	...	...	534	...	203	83	64	147	53
Manipur State	...	...	161	...	161	124	33	157	...
Total ...	...	...	1,590	...	1,036	284	613	987	62

Comparative Statement No. IV—Showing the number of persons primarily vaccinated in each of the undermentioned

Establishment.	Persons							
	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
					Year ending			
	1903-1904.		1904-1905.		1905-1906.		1906-1907.	
1	2	3	4	5	6	7	8	9
Government ...	57,771	56,474	59,039	58,226	43,036	40,857	27,714	29,119
Dispensaries ...	20,707	19,889	20,952	20,234	24,943	24,297	23,319	22,614
Municipal ...	2,333	2,187	2,487	2,481	2,038	1,977	2,748	2,735
Local Funds ...	135,702	133,075	159,698	158,266	163,252	148,926	165,182	162,257
Licensed vaccinators	23,065	22,620	20,811	20,723	19,580	19,487	37,704	37,562
Apprentices ...	1,253	1,233	3,033	2,976	4,391	4,359	10,857	7,766
Native States ...	17,096	16,504	14,700	13,855	16,389	14,232	15,527	14,281
Total ...	257,927	252,082	280,622	276,761	263,649	254,155	283,051	276,354

## VACCINATION.

*in the Province of Assam during the year 1912-1913.*

Revaccination.			Percentage of successful cases in which the results were known.		Percentage of unknown cases to total cases.	
Total.	Successful.	Unknown.	Primary.	Revaccination.	Primary.	Revaccination.
11	12	13	14	15	16	17
112	86	7	93.75	81.90	...	6.25
67	37	...	94.80	55.22	3.35	...
44	44	...	95.11	100.00	.37	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	100.00	...	...	...
...	...	...	...	...	...	...
831	152	124	98.00	73.43	26.10	37.46
...	...	...	97.51	...	...	...
554	319	181	96.2	75.41	5.98	23.64

*and the number of those persons who were successfully vaccinated in the Province of Assam official years.*

primarily 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.	Total number.	Number successfully vaccinated.
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31st March

1907-1908.		1908-1909.		1909-1910.		1910-1911.		1911-1912.		1912-1913.	
10	11	12	13	14	15	16	17	18	19	20	21
29,432	33,531	30,838	39,078	31,212	30,128	25,926	23,550	24,950	24,146	30,130	28,802
15,664	15,294	3,169	2,990	2,818	2,474	2,549	2,128	1,461	1,390	1,036	957
3,299	3,262	3,513	3,098	2,309	2,182	2,347	2,237	3,262	3,023	3,517	3,093
146,694	142,534	150,917	149,433	147,644	142,315	161,234	154,616	179,887	176,565	179,380	176,043
26,052	24,874	31,984	30,929	30,645	28,285	31,811	29,902	37,963	37,231	45,790	44,336
3,812	3,801	5,010	4,920	5,187	5,102	4,682	4,563	16,762	16,411	13,860	13,542
14,247	12,150	13,332	11,160	13,316	10,166	13,358	11,612	13,193	11,756	13,656	11,521
248,220	240,446	246,824	241,548	242,131	230,652	241,907	228,638	277,481	270,523	287,178	278,274

Statement No. V—Showing particulars of Vaccination verified by Inspecting Officers for the year 1912-1913.

District.	Total number of persons vaccinated.		Total number inspected.				Percentage of inspection to total number vaccinated.				Percentage of cases found successful to total number inspected.					
			By Deputy Sanitary Commissioners or Civil Surgeons.		By Native Superintendents or other inspecting officers.		By Deputy Sanitary Commissioners or Civil Surgeons.		By Native Superintendents or other inspecting officers.		By Deputy Sanitary Commissioners or Civil Surgeons.		By Native Superintendents or other inspecting officers.			
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Percentage of successes reported by vaccinators.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Cachar ...	16,559	1,345	541	60	23,671	1,577	3.26	4.45	142.94	117.24	20.6	83.3	95.75	53.9	97.58	60.83
Sylhet ...	119,115	20,450	5,207	60	60,042	9,224	4.37	29	50.40	45.1	98	60	97.82	64.20	95.47	74.41
Khasi and Jaintia Hills ...	9,413	5,811	434	324	6,780	1,212	4.61	11.32	73.03	43.11	97.46	56.14	90.43	56.36	90.26	42.29
Naga Hills ...	5,556	93	1,072	9	2,746	10	19.25	9.68	49.42	10.72	85.67	25	90.77	80	94.16	72.00
Lushai ...	3,496	314	30	...	1,279	117	1.03	...	36.58	37.26	100	...	82.41	64.96	80.31	76.47
Goalpara ...	19,299	1,503	1,479	1	12,076	1,867	7.66	.05	63.53	33.67	87.89	100	92.48	83.61	82.03	83.29
Kamrup ...	33,787	2,371	785	223	32,411	1,694	2.02	9.82	86.14	74.69	90.01	47.90	95.00	69.3	92.13	69.00
Darrang ...	10,603	829	400	...	5,061	309	4.63	...	55.00	25.21	93.44	...	96.78	72.03	97.72	69.83
Kowgong ...	6,618	...	731	...	2,534	...	19.00	...	22.50	...	90.56	...	90.28	...	90.84	...
Sibsagar ...	18,364	124	718	20	4,886	58	3.91	14.92	20.69	43.28	97.30	85	95.17	78.46	99.09	75.37
Lakhimpur ...	14,492	111	...	...	16,830	93	...	...	74.73	83.78	...	...	96.11	63.44	97.13	50.00
Garo Hills ...	16,500	2,695	1,608	99	2,000	90	14.62	4.72	15.03	4.72	78.79	54.94	81.07	84.94	95.99	94.12
Manipur State ...	13,817	...	2,778	...	6,819	...	28.94	...	71.05	...	25.49	...	60.64	...	93.81	...
Total ...	287,178	32,446	15,968	796	173,077	16,160	5.54	2.45	69.28	49.80	88.27	63.39	91.00	69.76	97.02	73.01

Statement No. VI—Showing the number of Vaccinations performed in Municipal towns on children under one year of age during the year 1912-1913.

District.	Town.	Number of births during the year 1912	Number of deaths amongst children under one year during the year 1912.	Number of successful vaccination on children under one year during the year ending 31st March 1913.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Cachar	... Silchar	218	45	88	21st January 1892.
Sylhet	... Sylhet	458	104	89	1st October 1882.
Khasi & Jaintia Hills	... Shillong	252	56	104	21st June 1895.
	Total of Surma Valley and Hill Districts.	928	205	281	
Goalpara	... { Dhubri	151	18	111	13th February 1891.
	... { Goalpara	185	38	174	12th November 1890.
Kamrup	... Gauhati	221	35	110	August 1882.
Darrang	... Tezpur	65	6	25	22nd May 1907.
Nowgong	... Nowgong	209	32	122	7th April 1897.
Sibsagar	... { Sibsaagar	200	31	74	21st January 1892.
	... { Jerhat	189	25	59	12th April 1892.
	... { Golaghat	85	10	94	24th March 1892.
Lakhimpur	... Dibrugarh	303	40	244	September 1833.
	Total of Assam Valley Districts.	1,608	235	1,013	
	Total for the Province.	2,596	440	1,294	

Statement No. VII—Showing, side by side, the ratios per 1,000 of population of deaths

District.	1903-1904.		1904-1905.		1905-1906.		1906-1907.	
	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.
1	2	3	4	5	6	7	8	9
Cachar ... ..	'96	9,725	'06	9,959	'01	18,519	'01	18,640
Sylhet ... ..	'07	99,696	'01	113,890	'008	110,363	'02	108,268
Khasi and Jaintia Hills ... ..	...	5,873	...	5,263	...	5,776	...	5,018
Naga Hills ... ..	...	4,089	...	5,514	...	5,952	'009	5,535
Lushai „ ... ..	...	2,592	...	2,175	...	2,320	...	1,694
Goalpara ... ..	'17	17,395	'07	20,170	'15	18,010	1'22	17,989
Kamrup ... ..	'08	23,320	'20	31,051	3'17	21,911	3'34	29,365
Darrang ... ..	'15	12,571	1'07	10,852	1'32	12,545	1'79	12,141
Nowgong ... ..	'52	9,964	3'49	11,316	'08	11,809	'09	7,796
Sibsagar ... ..	'04	31,223	'35	28,422	'14	28,466	'06	25,727
Lakhimpur ... ..	...	18,898	...	14,942	'04	14,927	'36	16,712
Garo Hills ... ..	'007	10,914	'007	11,967	...	15,830	'007	15,126
Manipur State ... ..	...	16,958	...	13,953	...	14,517	...	15,310
Total ... ..	'12	263,223	'26	279,474	'41	280,945	'55	279,321

from small-pox and the number of successful vaccination during the ten years ending 1912-1913.

1907-1908.		1908-1909.		1909-1910.		1910-1911.		1911-1912.		1912-1913.	
Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.	Ratio of deaths from small-pox.	Number of successful vaccination.
10	11	12	13	14	15	16	17	18	19	20	21
·004	15,563	·01	13,533	·02	15,177	·03	15,635	·02	16,641	·008	16,992
·09	82,038	·08	83,817	·07	79,768	·07	83,189	·38	108,987	·99	132,022
·08	13,179	·43	21,272	·59	8,815	·04	5,026	·004	7,369	·13	10,740
·02	8,557	...	4,777	...	5,335	...	4,518	...	4,836	...	5,119
·01	3,517	...	3,585	...	2,738	...	2,799	...	3,121	...	3,123
·67	16,922	·34	21,876	·83	26,561	·28	19,065	·44	23,151	·69	19,731
3·45	31,695	2·40	31,024	1·07	27,111	·58	25,006	1·21	39,178	1·89	39,978
4·19	9,226	2·77	9,028	1·22	6,778	·30	10,036	·56	10,606	·50	10,964
·35	7,139	2·44	5,483	3·49	4,523	3·05	7,456	·44	8,469	·95	6,602
·63	20,295	·85	21,814	·57	19,084	·19	21,089	·16	18,490	·09	18,298
·74	15,409	·15	14,613	·08	14,688	·05	14,470	...	14,119	·006	14,063
...	16,826	...	14,851	·09	17,120	·15	13,219	·01	15,161	·09	12,338
...	12,152	...	11,370	...	10,429	...	12,082	...	12,025	...	11,678
·78	252,518	·64	257,042	·47	238,127	·28	233,590	·35	282,163	·67	301,648





