

ANNUAL REPORT
OF THE WORK OF THE
VACCINE SECTION OF THE
KING INSTITUTE OF PREVENTIVE
MEDICINE, MADRAS,
AND
REPORT ON VACCINATION
IN
THE MADRAS PRESIDENCY

FOR THE YEAR

1912-1913.

MADRAS:
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ANNUAL REPORT



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PART I.

Work Done in the Vaccine Section,
King Institute, Guindy.

1 MAY

Worship Group in the Assembly Section

Karen Lundquist, Chair

ANNUAL REPORT ON THE WORKING OF THE VACCINE SECTION
OF THE KING INSTITUTE OF PREVENTIVE MEDICINE, GUINDY,
FOR THE YEAR ENDING 31ST MARCH 1913.

The total amount of vaccine supplied by the Institute during the year under report amounts to 1,887,639 cases which is 14,138 cases more than last year, but, when we consider that there was no failure of the supply such as occurred in the two previous years, this apparent increase is fallacious, and compared with an estimated full supply for 1911-12 there is a drop of about 77,000 cases.

TABLE I.

Table showing the quantity of Vaccine supplied to various bodies from 1908-09 to 1912-13.

To whom supplied.	1908-1909.	1909-1910.	1910-1911.	1911-1912.	1912-1913.
Government officers including Jails ...	28,688	36,860	58,086	46,722	41,902
Agency Tracts	25,936	28,055	27,830	25,160	27,130
Military Department	17,954	15,032	13,869	15,917	12,333
District Boards	1,681,836	1,642,497	1,522,650	1,501,366	1,560,341
Municipalities	135,867	171,760	179,084	177,185	173,255
Private Bodies	79,263	55,542	52,688	47,151	72,678
Total ...	1,969,054	1,949,746	1,853,657	1,873,501	1,887,639

The main amount of this decrease is shown in the supplies sent to District Boards, but under the heading, Government Officers (including Jails and the Military) there is an even greater falling off in proportion. There is also a marked falling off in the supplies to Municipalities. All these headings show reduced figures for this year in spite of there having been no period of short supplies.

Agency tracts show a slight and Private Bodies a very marked increase even after the period of short supply in 1911-12 has been taken into account. More than one-half of the large increase of supplies to Private Bodies is accounted for by the supply made to the Bangalore Institute during a period of stress which it underwent.

As usual the bulk of the material issued was in the form of lanolinated vaccine, but the same authorities quoted in last year's report continued to take their supplies glycerinated.

The same system of fortnightly despatches has been continued but there is a growing feeling that more frequent despatches, necessitating the using of the material in a shorter time, would be advisable. Extra supplies constituted about 10 per cent. of the total which is perhaps as low a figure as this item can be reduced to.

Fortnightly returns continued to be made in an unsatisfactory manner and in G.O. No. 1195 L., dated 23rd August 1912 it was ordered that these returns should in future be submitted through the Deputy Inspectors of Vaccination and once a month only. The change however was slowly introduced and was not in full working order till the end of the year under report. Sufficient time has not elapsed to judge as to whether the change has produced a beneficial effect.

REPORT OF THE KING INSTITUTE, GUINDY.

TABLE II.

Statement showing the expenditure incurred during the year 1912-13 under all heads of expenditure of the Vaccine Section of the King Institute of Preventive Medicine, Guindy.

Detailed heads of account.	Amount.		
	RS.	A.	P.
Establishment Charges—			
Assistant Director	10,437	14	6
Clerks and Servants	6,852	10	7
Deputy Inspectors	3,980	0	0
Faming Batta	279	15	8
Travelling allowance of Officers, Deputy Inspectors and Establishment	175	1	6
 Total establishment ...	21,725	10	3
 Supplies, Services and Contingencies—			
Purchase of stores, apparatus	6,171	2	4
Cost of boxes and receptacles for vaccine	911	6	2
Cost of calves including transport	18,932	6	0
Feeding charges of calves	1,523	4	.11
Water works	396	12	0
Gas works	108	1	8
Purchase and repair of furniture	49	2	0
Hot and cold weather charges	79	15	0
Tour charges	87	7	6
Cleaning charges	80	0	0
Service postage and telegram charges	2,327	6	0
Telephone charges	77	8	0
Office expenses	721	13	9
Miscellaneous	12	8	0
Pay of menials	2,075	10	9
 Total, supplies, services and contingencies ...	83,504	8	1
 Proportionate cost of stationery supplied for 1912-13 ...	155	1	8
Cost of clothing supplied for 1912-13 ...	43	11	6
Cost of repairs to vaccine buildings for 1912-13 as per statement furnished by the Executive Engineer, South Presidency Division, Madras, with his letter No. 303 M., dated 13th May 1913.			
Add-amount ordered to be recovered in G.O. No. 1939 L, dated 23rd December 1912 ...	-108	6	1
	175	6	3
 Total cost of stationery, clothing, repairs, etc. ...	265	12	11
 Grand total, Vaccine section ...	55,495	15	3

TABLE III.

Statement showing the net expenditure incurred during the year 1912-13 in the King Institute of Preventive Medicine, Vaccine section.

Particulars.	Amount.		
	RS.	A.	P.
Gross expenditure as per Table No. II.	55,495	15	3
<i>Deduct—</i>			
(1) Credits under sale of calves and miscellaneous receipts remitted to treasury ...	4,985	10	0
(2) Cost of vaccine supplied to private bodies during the year	4,542	6	0
 Net total expenditure ...	45,967	15	3

REPORT OF THE KING INSTITUTE, GUINDY.

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TABLE IV.

Statement showing the number of cases for which Vaccine was despatched to different bodies—Private bodies being excluded—during the year 1912-13.

To whom supplied.	Number of cases for which Vaccine was despatched.	Rate per case.	Total amount debitible.
			Rs. A. P.
1. Government officers including jails	41,902		* 1,053 0 2
2. Agency Tracts	27,130	pies.	+ 712 2 11
3. Military Department	12,383		306 5 10
4. District Boards	1,560,341	4763446 pies.	‡ 39,587 11 6
5. Municipalities	173,255		§ 4,358 10 10
	1,814,961		45,967 15 8

* Includes Rs. 12 2 0 for registering vaccine packets.

+ " 38 4 0 "

++ " 777 8 0 "

§ " 54 14 0 "

882 12 0

N.B.—In calculating the cost per case of Vaccine Rs. 882-12-0 has been deducted from Rs. 45,967-15-8 as the former represents registration charges and it will be charged to the bodies concerned.

As will be seen from tables II, III and IV there has been a rise in working costs, and this has resulted in an enhanced price of nearly 0·3 pies per case. This was not unanticipated and is mainly due to the cost of running and maintaining the Refrigerating Plant.

An increase charge is also seen under the head of Establishment, since at no time during the year was an Assistant Surgeon in charge of the duties of the Assistant Director.

TABLE V.

Returns recorded in the King Institute from the whole of the Madras Presidency according to the month of the year.

Serial number.	Months.	Number successful.	Number unsuccessful.	Percentage of success.
1912.				
1 April	...	92,052	14,089	86·72
2 May	...	87,203	21,026	80·57
3 June	...	91,031	18,848	82·84
4 July	...	104,161	13,637	88·42
5 August	...	101,900	14,699	87·39
6 September	...	99,889	17,708	84·87
7 October	...	100,208	13,632	88·02
8 November	...	103,947	9,546	91·58
9 December	...	113,464	10,222	91·73
1913.				
10 January	...	113,153	8,515	93·00
11 February	...	107,036	9,781	91·62
12 March	...	98,915	12,770	88·56
	Total	1,212,458	164,473	88·05

Table V shows the success rate obtained with the vaccine monthwar. Over the whole year there has been a regrettable drop of 1·5 per cent. but a similar temperature effect may be derived from the figures this year. Thus May is always the worst month and January the best and in these we may infer that the effect on the result is in greater part the effect of the temperature on the vaccine. We cannot

so explain the drop seen in August and September; a similar drop was noted in September-October of the previous year. The actual temperatures here are not so high, but these months apart from their actual temperatures are admittedly more trying to human beings and perhaps it is not unjustifiable to deduce from this the greater part of the falling off in these months is due to the effect of the climate on the vaccinator. Generally speaking the fluctuations are more pronounced this year than last year.

TABLE VI.

Returns recorded in the King Institute from the whole of the Madras Presidency, according to districts, 1912-13.

Serial number.	Districts.	Total successful.	Total unsuccessful.	Percentage of success.
1	Anantapur...	26,904	1,281	95·45
2	Bellary ...	27,808	996	96·48
3	Chingleput ...	83,720	12,150	73·51
4	Chittoor ...	28,082	2,883	90·68
5	Coimbatore ...	45,210	19,751	69·59
6	Cuddapah ...	31,432	1,994	94·03
7	Ganjam ...	64,814	5,713	91·89
8	Godavari ...	55,255	14,662	79·04
9	Guntur ...	49,049	5,871	89·30
10	Kista ...	69,460	7,838	89·86
11	Kurnool ...	31,641	993	96·95
12	Madura ...	41,797	12,528	76·93
13	Malsbar ...	130,820	14,915	89·76
14	Nellore ...	36,365	6,623	84·59
15	Nilgiris ...	5,676	98	98·30
16	North Arcot ...	51,609	10,913	82·54
17	Ramnad ...	51,971	1,787	96·67
18	Salem ...	60,892	5,444	91·79
19	South Arcot ...	48,346	9,743	83·23
20	South Canara ...	41,332	6,426	86·54
21	Tanjore ...	73,291	4,459	94·26
22	Tinnaevelly ...	58,022	3,951	98·62
23	Trichinopoly ...	60,693	5,092	92·25
24	Vizagapatam ...	88,750	8,872	91·37
Total ...		1,212,459	164,473	88·05

Table VI gives the results obtained according to districts and in the main the features noticed in past reports are repeated. The same districts remain consistently good, the same consistently bad. Chingleput and Coimbatore have passed all records and show falls of over 10 and 6 per cent. respectively, and the latter shows for the first time on record a success rate of under 70 per cent. A comparison between this district and the neighbouring one of Salem is curious. The figures are, Salem 91·79, Coimbatore 69·59. Two-thirds of the total falling off this year are due to Coimbatore and Chingleput alone.

TABLE VII.

Statement showing the percentage of success obtained in certain districts selected for comparison in each of the last seven years.

Serial number.	District.	1906-1907.	1907-1908.	1908-1909.	1909-1910.	1910-1911.	1911-1912.	1912-1913.	Average.
1	Bellary ...	97·0	97·69	98·51	97·86	96·51	97·65	96·48	97·39
2	Anantapur ...	98·5	95·76	97·54	96·80	94·86	95·23	95·45	96·02
3	Kurnool ...	94·1	96·83	96·96	95·42	96·20	96·16	96·95	96·09
4	Godavari ...	77·7	92·17	89·81	85·44	71·29	78·13	79·04	81·94
5	Coimbatore ...	88·1	91·04	89·57	81·17	75·54	75·74	69·59	81·54

Table VII shows the percentage rate of success attained in certain districts selected for comparison in each of the last seven years. It will be noted that there is no change in the relationships, except in degree, between the good and the bad districts. Coimbatore as a result of its shocking return this year, is now at the bottom of the list and averages no less than 15·85 per cent. less than Bellary over the whole seven years.

TABLE VIII.

Statement showing the percentage of success obtained in the different months of the year for seven years and the average for each month during that time.

Serial number.	Months.	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	Average.
1912.									
1	April	92·3	95·03	96·71	94·30	88·32	84·33	86·72	91·10
2	May	83·4	93·04	93·49	90·91	84·53	83·63	80·57	87·07
3	June	90·1	93·59	92·65	87·02	81·22	88·15	82·84	87·94
4	July	95·1	98·17	92·84	89·61	85·11	89·13	88·42	90·51
5	August	96·3	94·78	94·28	93·20	90·26	90·54	87·89	92·39
6	September	95·1	95·76	93·66	93·47	92·45	89·30	84·87	92·90
7	October	94·8	95·85	93·86	92·79	85·26	89·73	88·02	91·40
8	November	94·8	96·49	96·56	91·52	86·65	92·36	91·58	92·85
9	December	95·7	97·28	97·38	92·86	87·31	93·28	91·73	93·58
1913.									
10	January	95·1	97·68	93·27	93·03	87·00	93·29	93·00	93·91
11	February	95·9	98·16	97·71	90·85	91·91	88·57	91·62	93·53
12	March	94·5	97·55	96·87	91·92	93·62	89·08	88·56	93·13

For the purpose of comparison Table VIII has been extended to the past seven years and shows the percentage success obtained in the different months of the year for seven years and the average for each month during that time. It will be seen that the success continues to follow the thermometric gradient closely with the exception of the slight autumnal variation. This feature has already been discussed in this report, but it appears to be a constantly recurring one.

TABLE IX.

Statement showing the duration of storage of Lanoline paste during the official year 1912-1913.

	Name of month.	Duration of storage each month.		Remarks.
		Minimum period.	Maximum period.	
1912.				
April	...	6½ weeks	8½ weeks	...
May	...	8½ "	11 "	...
June	...	11 "	13 "	...
July	...	13 "	16 "	...
August	...	5 "	13½ "	...
September	...	6½ "	9 "	...
October	...	9 "	11 "	...
November	...	11 "	13½ "	...
December	...	18½ "	14 "	...
1913.				
January	...	14 "	15 "	...
February	...	15 "	16 "	...
March	...	16 "	17 "	...

TABLE X.

Statement showing the duration of storage of Glycerine paste during the official year 1912-1913.

Name of month.	Duration of storage.			Remarks.
	Minimum period.		Maximum period.	
1912.				
April	1 day	...	5½ weeks	...
May	"	...	8 "	...
June	8 weeks	...	12 "	...
July	12 "	...	16 "	...
August	16 "	...	20 "	...
September	3 "	...	11 "	...
October	7 "	...	12 "	...
November	5½ "	...	9 "	...
December	4 "	...	12 "	...
1913.				
January	2½ "	...	14 "	...
February	2½ "	...	6 "	...
March	1 day	...	2 "	...

During the year the new Refrigerating Plant and Cold Store was in operation. It worked with great efficiency and it was possible to keep large reserves of vaccine in hand.

Tables IX and X show the duration of storage of lanolinated and glycerinated vaccines during each month of the year. The maximum period of storage was longer this year than last, but may probably be greatly extended even yet. The falling off of the duration of storage shown in August, September and October indicates reduced reserves owing to the intermission of preparation during May, June and July.

It has not yet been possible to formulate rules for the working of the reserve and done depots for calves. Correspondence with the railway authorities in the matter of facilities will shortly be submitted along with suggestions for the housing of the European Sergeant in charge of the former. Meanwhile an ample supply of calves is being furnished by the Contractors.

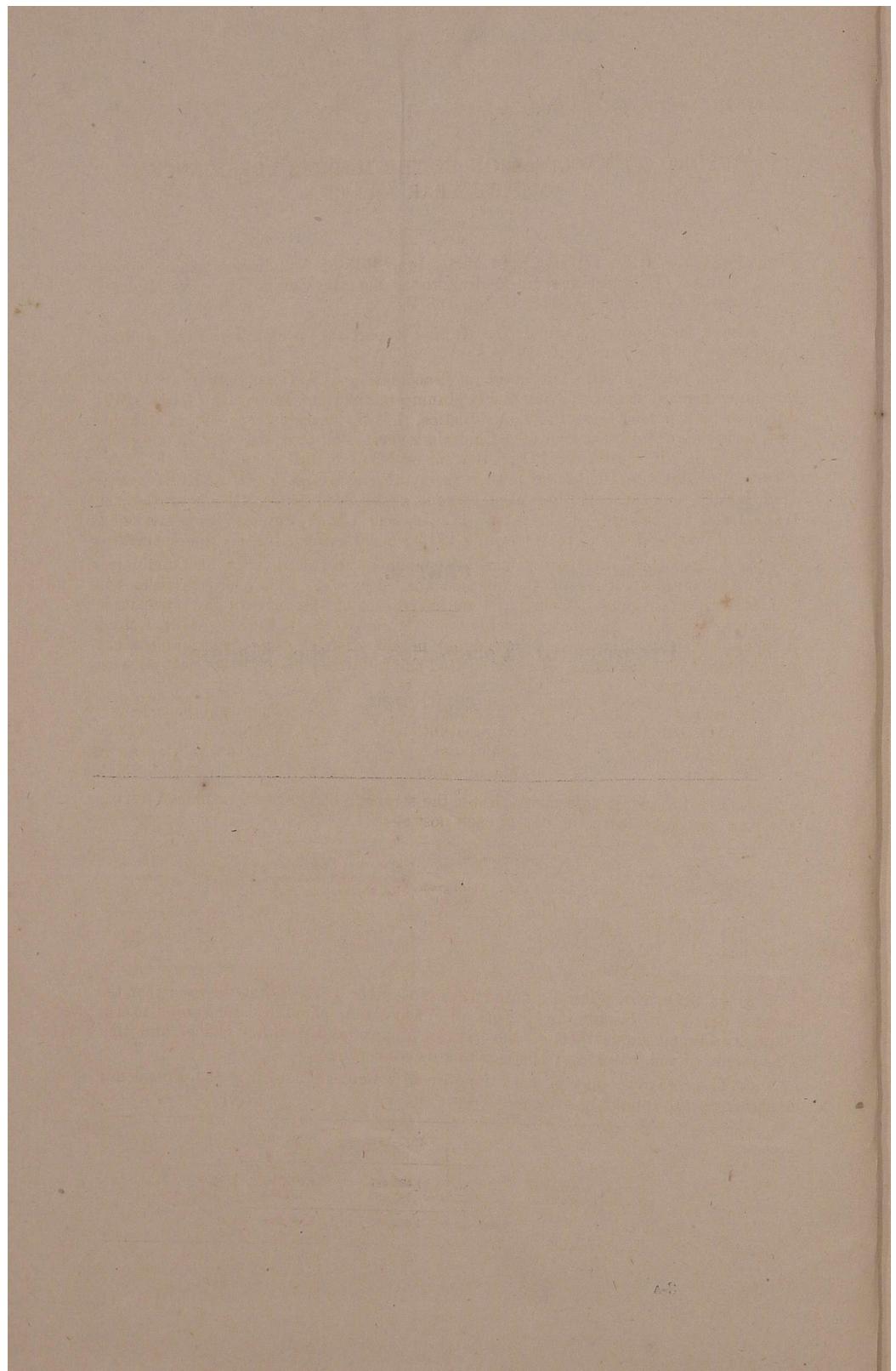
The immediate working of the Section was in the hands of the Assistant Director, Captain F. W. Cragg, I.M.S.

THE KING INSTITUTE, GUINDY,
22nd June 1913.

F. MAITLAND GIBSON, M.B., B.Sc.,
Director.

PART II.

Progress of Vaccination in the Madras
Presidency.



REPORT ON VACCINATION IN THE MADRAS PRESIDENCY
FOR THE YEAR 1912-13.

From Captain M. J. QUIRKE, I.M.S., Inspector of Vaccination and Deputy Sanitary Commissioner for Madras, to the Sanitary Commissioner for Madras, dated the 8th July 1913, D. No. 168/V.

I have the honour to submit the Annual Report on Vaccination in the Madras Presidency for the year 1912-13.

2. The office of the Inspector of Vaccination and Deputy Sanitary Commissioner remained vacant from the beginning of the year up to 12th May 1912, during which period Captain W. A. Justice, I.M.S., carried on the work in addition to his own duties as Sanitary Commissioner. The post was held by me from 13th May to 5th September 1912. I went on leave on 6th September 1912 and returned to duty on 15th June 1913. In my absence, Captain O. A. R. Berkeley-Hill, I.M.S., held the acting appointment up to 24th April 1913, when he was transferred to Lahore. Captain W. A. Justice, I.M.S., Sanitary Commissioner, again did double duty up to 15th June 1913 when I returned to my appointment.

3. I inspected vaccination work (49 villages) in the district of Coimbatore and in the municipalities of Coimbatore and Tirupati. Under orders from the Sanitary Commissioner, I visited the municipalities of Mannārgudi and Tirupati in connection with certain sanitary schemes. Captain O. A. R. Berkeley-Hill, I.M.S., inspected vaccination work (43 villages) in the district of Gōdāvāri and in the municipality of Cocanada. He also visited the following places in connection with sanitary schemes :—

Cocanada.	Chicacole.	Mannārgudi.
Tiruvannāmalai.	Negapatam.	Ongole.
Chidambaram.	Wālajapet.	Palghat.
Anantapur.	Masulipatam.	

4. The following statement shows the strength of the staff employed during the past two years with the pay of each post :—

Years.	Deputy Inspectors.			First-class vaccinators, Rs. 20-15.	Second-class vaccinators, Rs. 12-10.	Probationers, Rs. 7-5.	Total number of vaccinators.
	First grade, Rs. 70.	Second grade, Rs. 60.	Third grade, Rs. 40.				
1911-1912	21	24	37	263	467	120	850
1912-1913	21	23	38	266	450	121	837

5. In G.O., No. 1758 L., dated 19th November 1912, it was directed that the weekly diaries of Deputy Inspectors of Vaccination should be forwarded to the Sanitary Commissioner through the District Medical and Sanitary Officer and that Presidents of the Taluk and District Boards concerned.

6. The total vaccination work done by all agencies throughout the Presidency is shown in the following table :—

		1911-1912.	1912-1913.
		Primary vaccination	1,455,485
		Re-vaccination	147,492
	Total ...	1,602,977	1,586,344

7. The districts which show the largest increase are Salem (11,261), Madura (7,623), Guntur (7,493) and Kistna (5,427). The largest decrease is shown in the following districts:—Malabar (24,002), Ganjam (10,387), Cuddapah (3,613) and South Canara (3,047).

The explanations for the decreases offered by the Deputy Inspectors of Vaccination are given below:—

Malabar.—Prevalence of cholera.—Less prevalence of small-pox during the year.—Non-entertainment of temporary vaccinators.

Ganjam.—Absence of vaccinators without substitutes.—Prevalence of cholera.—Non-prevalence of small-pox in an epidemic form.

Cuddapah.—Prevalence of cholera and plague.—Reduction of “minimum” of vaccinators.

South Canara.—Non-prevalence of small-pox in an epidemic form. Non-entertainment of temporary vaccinators.

8. The subjoined table shows the total successful vaccination by all agencies and the percentage of successful cases including re-vaccination:—

Establishment.	Number of successful vaccination.					Total of successful vaccination.	
	1911-1912.		1912-1913.				
	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	1911-1912.	1912-1913.	
1	2	3	4	5	6	7	
Local Fund vaccinators	1,133,151	60,260	1,118,543	54,641	1,193,411	1,173,184	
Government do.	10,545	851	13,254	1,263	11,396	14,617	
Municipal do.	103,028	28,499	99,018	28,647	181,527	122,665	
Cantonment do.	3,421	4,169	4,689	1,250	7,590	5,931	
Dispensaries	60	63	11	72	123	83	
Medical subordinates	322	5,882	118	5,133	6,204	5,251	
Total ...	1,250,527	99,724	1,235,625	86,006	1,350,251	1,321,681	
Ratio per cent. of successful cases.							
Establishment.	1911-1912.		1912-1913.			Ratio per cent. of total successful cases.	
	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	1911-1912.	1912-1913.	
	8	9	10	11	12	13	
Local Fund vaccinators	89·3	79·8	88·0	80·2	88·7	87·6	
Government do.	93·4	92·1	86·5	93·5	93·3	87·0	
Municipal do.	94·2	72·2	93·2	76·2	88·3	89·3	
Cantonment do.	95·6	81·6	94·4	80·9	87·4	91·1	
Dispensaries	96·8	64·9	84·6	63·7	77·4	65·8	
Medical subordinates	72·7	73·1	77·6	77·0	73·1	77·1	
Total ...	89·7	77·2	88·4	79·0	88·6	87·7	

9. The following districts show the largest increase in infantile vaccination when compared with the previous year:—Ganjam (13·2), South Arcot (7·0), Madura (5·7), and Salem (5·1). The districts which show the largest decrease are: Cuddapah (11·0), Anantapur (10·4), North Arcot (9·3), Nilgiris (6·9), Chingleput (5·8), Coimbatore (5·7) and Nellore (5·6). From the following table, it will be observed that the decrease in infantile vaccination in the Chingleput and North Arcot districts is attributed to the large number of unsuccessful vaccinations in

some of the ranges therein and in Saidapet range chicken-pox and measles were prevalent :—

	Ranges.	Number of successful vaccinations under one year of age.		Explanations offered by Deputy Inspectors of Vaccination.
		1911-1912.	1912-1913.	
Chingleput District.	Chingleput	7,556	7,549	The decrease is chiefly due to transfer of Vaccinators and Deputy Inspectors during the year.
	Saidapet	7,089	6,235	Decrease is due to the large number of failures of cases vaccinated, prevalence of chicken-pox and measles.
	Ponnari	9,083	8,504	The decrease is due to the large number of failures attributed to the unfavorable state of climate during the year.
Total ...		23,728	22,238	
North Arcot District.	Vellore	7,741	7,862	Increase is due to the efficiency of paste during the year.
	Ranipet	5,700	4,882	Decrease is due to the large number of unsuccessful cases.
	Polar	5,192	4,821	Decrease is due to failures of cases vaccinated which is attributed to careless work of Vaccinators.
	Tiruppattur *	5,985	6,102	Increase is due to many unprotected cases under one year having been vaccinated during the year.
Total ...		24,618	23,667	

* Trial scheme is not in force in the Tiruppattur range.

10. As regards municipalities, 37 towns against 30 in the previous year succeeded in vaccinating 75 per cent and over of children under one year of age. The municipalities showing the largest increase are : Tenali (28·2), Nandyal (26·8), Rajahmundry (25·8), Cannanore (22·7), Coonoor (22·0) Berhampur (21·9), and Coimbatore (20·8). The municipalities of Palni (35·4) and Gudiyattam (23·0) show the largest decrease. In the former it is due to the absence of the vaccinator for three months without substitute and in the latter to the evacuation of the town on account of plague.

11. The following table shows the cost of the various establishments and the average cost of each successful case :—

Establishment.	Total expenditure.		Average cost of each successful case.	
	1911-1912.	1912-1913.	1911-1912.	1912-1913.
Government establishment...	Rs. 4,588 8 6	Rs. 7,460 15 8	Rs. 0 6 5	Rs. 0 8 2
Local Fund do.	2,74,283 9 1	2,82,675 8 2	0 3 8	0 3 10
Municipal do.	35,081 3 11	35,291 7 2	0 4 3	0 4 7
Cantonment do.	2,655 12 5	2,913 15 8	0 5 9	0 7 10
Total ...	† 3,16,559 1 11	† 3,28,341 14 8	0 3 9	0 3 11

+ Exclusive of the pay and allowances of the Inspector of Vaccination and Deputy Sanitary Commissioner, Madras.

12. 146,692 operations were performed in municipalities during the year under review against 160,567 in the preceding year. The towns that showed a marked decrease are : Madras (10,916), Tuticorin (2,502), Madura (1,761), Negapatam (1,098) and Cannanore (454).

In Madras the decrease is due to closure of the Natal Emigration Depot, frequent changes among first-class vaccinators and less prevalence of small-pox. In the remaining towns, the decrease is attributed to one or more of the following causes :—Absence and less prevalence of small-pox and non-entertainment of temporary vaccinators during the year.

13. The following table shows the comparative success obtained by the use of different kinds of lymph in primary vaccination (re-vaccination omitted) :—

Number of cases excluding unknown.	Area.	Method.	Whence obtained.	Percentage of success.
1,286,148	Local Fund	... Lanoline lymph ...	Supplied by the King Institute of Preventive Medicine, Guindy.	88·0
...	Do.	... Glycerine lymph ...	Do.	.....
84,492	Municipalities	... Lanoline lymph ...	Do.	92·7
* 21,755	Do.	... Glycerine lymph ...	Do.	95·1

* Cases performed in the Corporation of Madras.

Lanoline paste from the King Institute, Guindy, was used in all the Local Fund Districts and Municipalities. The percentage of success in the Local Fund area fell from 89·6 to 88·0 and similarly in municipalities from 93·2 to 92·7. Glycerinated lymph yielded a percentage of 95·1 against 97·6 in the preceding year.

14. 13,535 deaths occurred from small-pox against 19,198 during the previous year.

15. The diagrams attached hereto show the proportion of population protected in the districts and municipalities.

16. Four Deputy Inspectors of Vaccination failed to verify 50 per cent. of cases vaccinated in their ranges. Ganjam Hill Tracts (46·0), Calicut (46·7), Palghat (39·0) and Malapuram (43·2). The explanations offered by them appear to be satisfactory.

17. The number of Deputy Inspectors (80) is the same as it was last year, of these 73 are certificated Sanitary Inspectors. One retired from service and another died. Six were fined for carelessness and similar offences. Two were reduced, one from the first grade to the second grade and the other from the second grade to the third grade for misconduct. One was suspended and another is under suspension pending enquiry into certain irregularities reported against him. The service registers of all Deputy Inspectors of Vaccination have been verified and brought up-to-date, with the exception of those who are on probation.

18. The "Trial Scheme" continues to be in force in the whole of the Chingleput district and in portions of North Arcot, South Arcot and Madura districts.

Under G.O. No. 1435 i., dated 27th October 1911, references have been made to the Presidents of District Boards regarding the extension of the "Trial Scheme" to their districts and on receipt of complete information from them, a separate report on the subject will be submitted as ordered by Government.

19. With regard to the extension of the practice of vaccination in the Presidency, Captain O. A. R. Berkeley-Hill, I.M.S., who recently acted as Inspector of Vaccination and Deputy Sanitary Commissioner writes as follows :—

" It is of primary importance to bear in mind that we are face to face with a community whose appreciation of any preventive measure against disease is of the most illusory nature. Preventive medicine is hardly yet understood and appreciated in Europe. In India it is still an inconceivably fragile exotic, still struggling for the barest existence under a stifling load of misconception of which the tendency to regard all manifestations of disease as an expression of Divine wrath is perhaps the most prominent feature.

Suggestion.—That some steps be taken to illustrate by use of pictures and pamphlets, especially the former, the ravages of small-pox. The lines adopted might very well follow those pursued elsewhere in India in regard to the education of the poorer classes towards the necessity of taking 'anti-malarial' measures. If necessary expert opinion could be obtained from the Research Defence Society whose business it is to study the best means of combating similar prejudices in England."

It seems to me to be an open question whether or not such demonstration of the ravages of small-pox would lead to a more ready acceptance of vaccination. Small-pox has never been eradicated here and the people have not forgotten its terrors but a knowledge of the character of the disease does not convince them that vaccination can prevent it. There is not, I believe, any widespread antagonism to the practice of vaccination. Intelligent antagonism can be met by the exhibition of arguments; apathy and prejudice are harder to combat. I consider that progress is most likely to be achieved by improving existing facilities for vaccination. Let the visits of the vaccination staff to each village be frequent and regular and let the work be carried out punctually and methodically. Each visit brings the practice to the notice of the villagers and in time a habit of vaccination tends to become established. This is the aim and object of the "Trial Scheme" when carried out in its entirety.

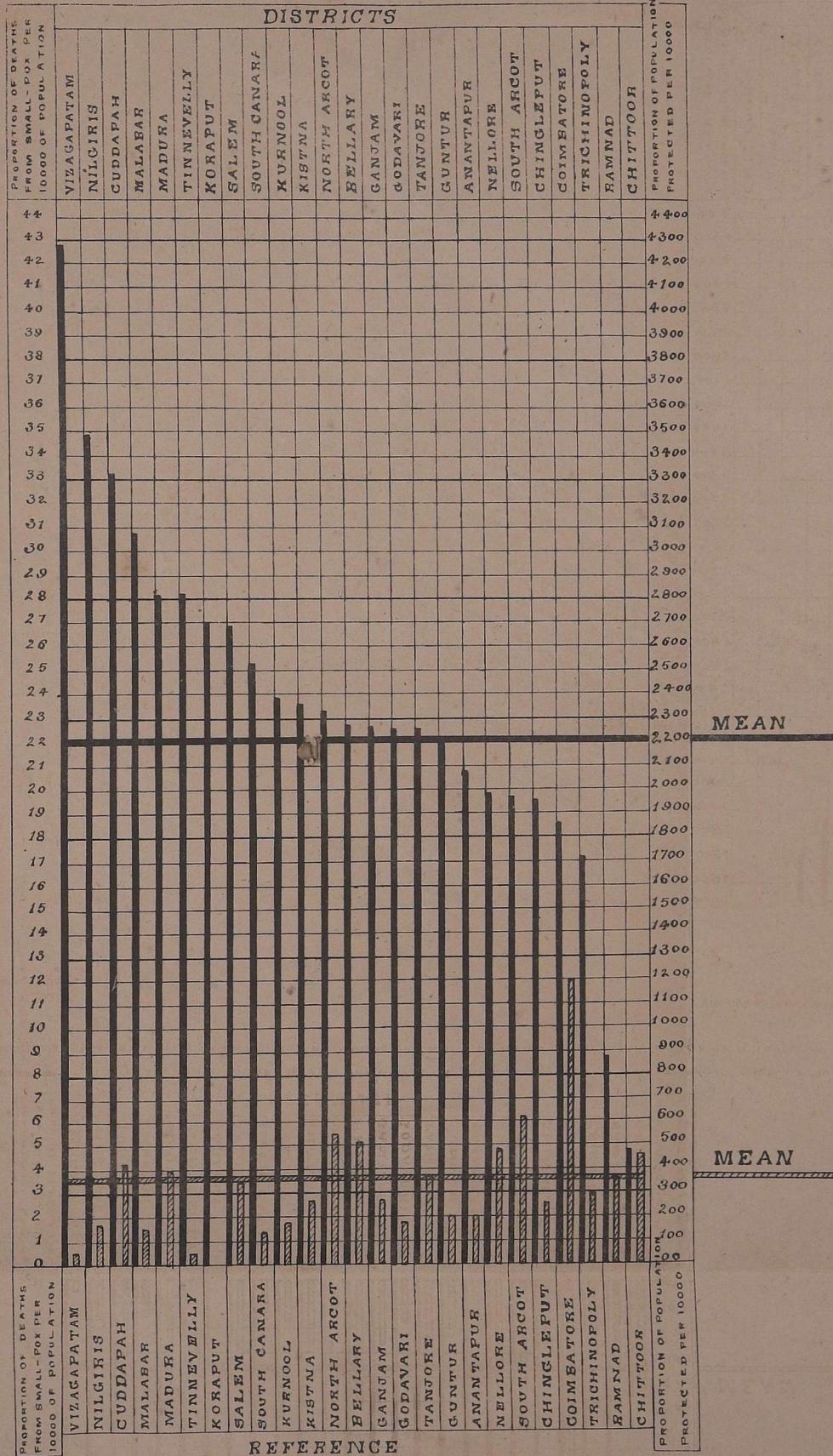
I have the honour to be,

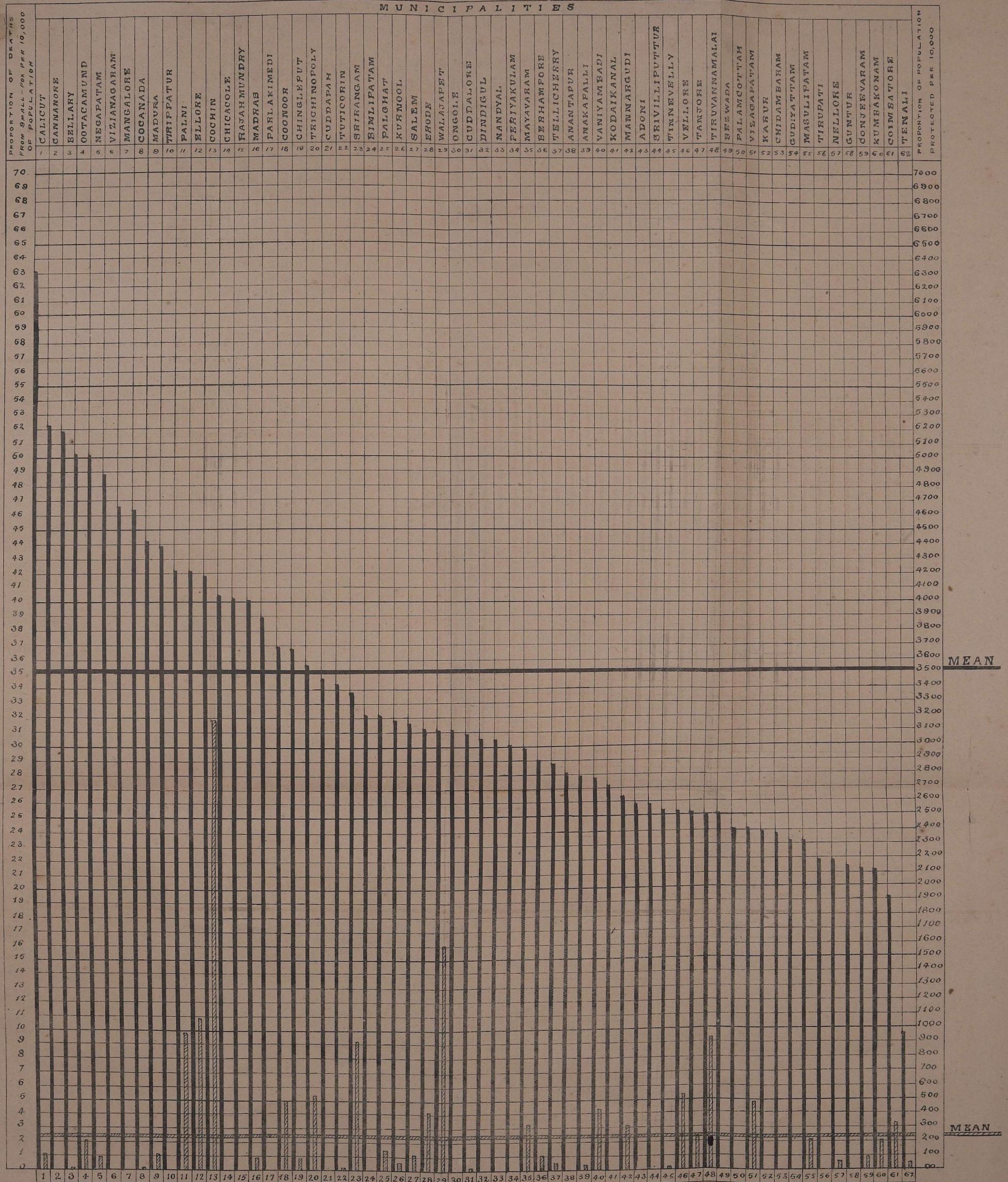
Sir,

Your most obedient servant,

M. J. QUIRKE, Captain, I.M.S.,
*Inspector of Vaccination and Deputy Sanitary
Commissioner for Madras.*

DISTRICTS





REFERENCE

THICK BLACK LINES REPRESENT THE PROPORTION OF POPULATION PER 10,000 PROTECTED FROM SMALL-POX.

SHADeD LINES REPRESENT THE PROPORTION OF DEATHS FROM SMALL-POX PER 10,000 OF POPULATION.

APPENDIX.

VACCINATION RETURNS.

A—VACCINE

STATEMENT No. I showing the Particulars of Vaccination in the

Number.	Districts.	Circles.			Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.	Average number of persons vaccinated by each vaccinator.	Primary
		1	2	3						
1	Anantapur circle	444,221	135	7	6,764	6,134	12,898	1,842	12,924	7,525
	Pennkonda do.	510,345	119	9	9,133	8,094	17,227	1,914	17,135	8,678
	Total of district	954,766	142	16	15,897	14,228	30,125	1,883	30,059	16,198
3	Bellary circle	902,835	156	{ 10	7,284	7,114	14,398	1,439	14,527	8,766
4	Hospet do.			{ 10	6,882	5,384	12,266	1,226	11,830	8,243
	Total of district	* 902,835	156	20	14,166	12,498	26,664	1,333	26,357	17,009
5	Chingleput circle	1,340,518	436	{ 4	8,130	8,050	16,180	4,045	16,716	7,549
6	Saidapet do.			{ 4	7,438	6,987	14,425	3,606	16,127	6,235
7	Ponnari do.			{ 4	10,304	9,025	19,329	4,832	16,360	8,504
	Total of district	1,340,518	436	12	25,872	24,062	49,934	4,161	49,203	22,288
8	Chittoor circle	528,016	194	10	7,619	6,640	14,259	1,426	12,981	5,184
9	Karvetnagar do.	694,026	234	13	9,259	8,771	18,030	1,387	18,414	8,123
	Total of district	1,222,041	215	23	16,878	15,411	32,289	1,404	31,385	13,307
10	Coimbatore circle	489,392	165	9	9,235	8,420	17,655	1,961	16,820	4,821
11	East do. do.	554,719	383	9	11,177	11,400	22,577	2,508	21,291	5,916
12	South do. do.	367,884	211	7	6,741	6,409	13,150	1,878	11,336	5,088
13	Central do. do.	640,861	414	9	9,564	9,073	18,637	2,070	17,915	6,103
	Total of district	2,052,856	266	34	36,717	35,802	72,019	2,118	67,362	21,928
14	Cuddapah circle	303,660	137	8	4,882	4,203	9,085	1,135	10,063	4,888
15	Proddatur do.	287,972	198	7	4,599	4,157	8,756	1,251	8,946	4,332
16	Sidhout do.	305,459	131	8	6,301	5,876	11,677	1,459	12,088	5,868
	Total of district	876,191	148	23	15,782	13,736	29,518	1,283	31,097	15,088
17	Berhampur circle			{ 9	6,770	6,499	13,269	1,474	13,212	6,263
18	Chicacole do.			{ 9	5,958	5,607	11,565	1,285	11,455	6,003
19	Ganjam Hill tracts			{ 15	6,930	6,017	12,947	863	12,085	2,418
20	Aska circle			{ 7	6,477	5,688	12,165	1,738	11,784	3,048
21	Parlikimedi circle			{ 8	5,324	5,046	10,370	1,296	10,269	4,054
22	Purushottapur circle			{ 8	6,073	5,503	11,576	1,447	11,688	3,776
	Total of district	* 2,153,614	257	56	37,532	34,360	71,892	1,283	70,443	25,557
23	Cocanada circle	341,838		{ 7	6,402	6,188	12,600	1,800	12,757	3,818
24	Rajahmundry do.	574,472		{ 10	12,940	12,049	24,989	2,499	24,831	3,874
25	Polavaram do.	130,992		{ 5	3,122	2,878	6,000	1,200	5,974	1,581
26	Peddapur do.	427,120		{ 10	9,537	9,006	18,543	1,854	19,492	8,182
27	Bhadrachalam do.	75,910		{ 4	1,862	1,690	3,552	888	4,156	666
	Total of district	* 1,550,332	249	36	33,863	31,821	65,684	1,824	67,310	18,121

* Excludes Sundur (18,526).

† Includes Hill Tracts.

DEPARTMENT.

Madras Presidency for the official year 1912-1913.

vaccination.	Re-vaccination.			Percentage of successful cases in which the results were known.	Average annual number of persons successfully vaccinated during previous 5 years.	Average annual number of deaths from small-pox during previous 5 years.						
	Successful.	Total number of operations.	Unknown.				Primary vaccination.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.	Number.	Ratio per 1,000.
1	1 and under 6 years.	11,846 6,769	12,634 16,200	22 46	262 613	229 543	31 36	97·9 94·8	99·1 94·1	28·9 32·7	0·1 0·2	11·8 5·8
2	Total of all ages.	11,615	28,834	68	875	772	67	96·1 ..	95·5 5·9	31·0 29·7	0·2 0·07	7·6 0·07
3	Chittor circle	4,769 3,186	14,280 11,652	11	184 742	178 734	.. 5	98·3 98·7	96·7 99·5	..	0·07 0·2	.. 0·6
4	Hospet do.	7,955	25,932	40	926	912	5	98·5 ..	99·0 ..	29·7 ..	0·1 0·5	29,872 33·0
5	Bellary circle	3,685 2,893 2,252	11,376 9,267 11,364	1,638 2,154 1,780	852 881 2,980	403 419 1,243	186 111 398	75·4 66·3 54·4	60·5 54·4 48·1	25·4 ..	9·7 13·3	21·8 12·6
6	Chingleput circle	8,830	32,007	5,572	4,713	2,065	695	73·4 ..	51·3 ..	25·4 ..	11·3 ..	14·7 ..
7	Saidapet do.	5,518 8,192	11,042 16,685	459 405	1,765 380	906 225	325 78	88·1 92·6	63·0 79·7	22·6 24·3	3·5 2·2	18·5 21·6
8	Ponnari do.	13,710	27,727	864	2,125	1,131	406	90·8 ..	65·7 ..	23·6 ..	2·7 ..	19·1 ..
9	North Coimbatore circle	4,673 5,624 4,398 5,257	9,971 11,802 9,768 11,522	1,032 2,329 338 1,007	1,685 2,456 1,892 890	575 905 388 434	286 446 1,610 102	63·1 62·2 59·3 68·1	41·1 45·0 88·8 55·0	21·5 22·9 30·9 18·6	6·1 10·9 2·9 5·6	16·9 18·1 6·8 11·4
10	Central do. do.	19,952	48,063	4,706	6,923	3,524	963	68·7 ..	59·1 ..	22·6 ..	6·9 ..	13·9 ..
11	South do. do.	3,673 2,984 4,450	9,196 8,511 11,375	110 109 200	251 273 324	219 255 286	4 11 22	92·3 96·3 95·6	88·6 97·3 94·7	31·0 32·8 38·1	1·0 1·2 1·6	1·5 4·0 6·7
12	East do. do.	11,107	29,082	419	848	760	37	94·8 ..	93·7 ..	34·0 ..	1·3 ..	4·3 ..
13	Chicacole do.	5,264 3,852 6,141 6,618 4,554 5,777	11,912 10,142 10,694 10,156 8,827 9,833	376 655 755 453 581 697	232 416 1,284 425 253 127	154 282 1,213 78 192 102	47 92 20 78 34 15	92·8 93·9 94·3 89·6 91·1 89·8	83·2 87·0 95·9 94·4 87·6 91·0	2·8 5·7 6·2 3·8 5·6 5·9	20·2 22·1 1·5 14·7 13·4 11·8	..
14	Ganjam Hill tracts	32,206	61,564	3,517	2,840	2,368	286	91·9 ..	92·7 ..	29·6 ..	4·9 ..	10·0 ..
15	Berhampur circle	5,989 11,615 2,558 5,609 1,253	10,236 17,207 4,624 14,731 2,081	715 2,130 220 947 671	172 969 230 795 114	35 258 134 354 50	59 32·7 23·0 74·9 59·7	85·0 246 80·3 65·4 57·4	30·9 32·7 36·3 35·3 28·0	5·6 3·7 4·8 4·8 16·1	34·3 25·3 10·0 32·3 23·6	..
16	Aska circle	27,024	48,879	4,685	2,280	881	609	78·1 ..	49·7 ..	32·0 ..	6·9 ..	26·7 ..
17	Parlikimedi circle											
18	Purushottapur circle											
19	Bhadrachalam do.											
20	Cocanada circle											
21	Rajahmundry do.											
22	Polavaram do.											
23	Peddapur do.											
24	Godavari.											
25	Ganjam.											
26												
27												

* Includes Sundur (18,526).

† Includes Hill Tracts.

A—VACCINE

STATEMENT No. I showing the Particulars of Vaccination in the

Number.	Circles.		Population of districts or circles according to the census of 1911.			Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.			
	Number.	Districts.	3	4	5	6	7	8	9	10		
1	2	Guntur.				Males.	Females.	Total.				
28		Guntur circle ...				10	9,077	8,302	17,379	1,787	18,467	8,224
29		Narasaraopet circle ...				10	8,184	7,064	15,248	1,524	13,826	6,029
30		Bäpatla do.				11	9,694	9,357	19,051	1,732	19,030	7,444
		Total of district ...	1,625,541	283	31	26,955	24,723	51,678	1,667	51,323	21,697	
31		Eloore circle ...				14	13,289	12,901	26,190	1,871	26,832	9,558
32		Masulipatam circle ...				14	12,867	12,010	24,877	1,776	24,927	9,222
33		Narasapur do.				12	11,289	10,711	22,000	1,833	22,970	7,371
		Total of district ...	1,884,726	319	40	37,445	35,622	73,067	1,826	74,729	26,151	
34		Cumbrum circle ...	395,841	118		12	8,135	6,662	14,787	1,233	13,720	6,620
35		Kurnool do.	497,088	119		12	8,973	8,047	17,020	1,418	17,061	8,249
		Total of district ...	* 892,929	118	24	17,108	14,709	31,817	1,821	30,781	14,869	
36		Dindigul circle ...				4	8,383	8,294	16,687	4,172	17,500	6,568
37		Madura do.				4	9,803	8,176	17,473	4,369	16,822	6,446
38		Usilampatti do.				5	10,915	10,231	21,146	4,229	21,159	9,448
		Total of district ...	1,738,818	354	13	28,611	26,701	55,312	4,255	55,481	22,462	
39		Tellicherry circle ...				11	15,587	14,116	29,683	2,698	27,925	4,449
40		Calicut do.				11	15,851	15,803	31,654	2,877	28,658	3,507
41		Palghat do.				12	22,161	21,717	43,878	3,656	42,688	7,819
42		Malappuram do.				11	19,945	18,400	38,345	3,486	37,907	4,412
		Total of district ...	+ 2,809,117	485	45	73,524	70,036	143,560	3,190	137,178	19,687	
43		Kävali ...				9	8,572	7,846	16,418	1,824	17,331	5,408
44		Gudur ...				7	6,572	5,961	12,533	1,790	12,889	4,965
45		Kanigiri ...				8	6,721	6,361	13,082	1,635	15,018	3,728
		Total of district ...	1,294,906	162	24	21,865	20,168	42,033	1,751	45,188	14,101	
46		Nilgiri circle ...	89,856	89	3	2,497	2,205	4,702	1,567	4,211	1,355	
		Total of district ...	89,856	89	3	2,497	2,205	4,702	1,567	4,211	1,355	
47		Vellore circle ...				3	7,040	6,858	13,898	4,683	14,358	7,882
48		Rämipettai do.				3	6,504	6,000	12,504	4,168	13,570	4,882
49		Polar do.				3	6,736	6,523	13,259	4,420	15,017	4,821
50		Tiruppattur do.				11	9,128	8,728	17,856	1,623	18,488	6,102
		Total of district ...	1,825,742	371	20	29,408	28,109	57,517	2,875	61,433	23,667	
51		Sivilliputtur circle ...				9	8,521	7,882	16,403	1,822	16,346	8,090
52		Paramagudi do.				10	9,478	8,724	18,202	1,820	17,880	6,724
53		Tiruppattur do.				11	9,024	8,459	17,483	1,589	17,115	4,582
		Total of district ...	1,629,387	337	30	27,023	25,065	52,088	1,736	51,141	19,396	

* Excludes Banganapalle (39,344).

[†] Excludes Laccadives (10,610).

VACCINATION RETURNS.

DEPARTMENT.

Madras Presidency for the official year 1912-1913—continued.

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 5 years.		Average annual number of deaths from small-pox during previous 5 years.			
Successful.		1 and under 6 years.	Total of all ages.		Unknown.	Total number of operations.		Successful.	Unknown.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
7,131	16,194	448	429	368	20	89·8	89·9	28·8 {		2·4	4·6	51,892		31·9	711	0·4	
5,885	12,082	536	1,867	1,861	6	90·5	100·0	3·8		0·3	... ...		... ...		... ...
7,393	16,166	614	269	222	32	87·7	98·6	3·2		11·8	... ...		... ...		... ...
20,409	44,392	1,598	2,565	2,451	58	89·3	97·7	28·8	3·1	2·2	... ...		... ...		... ...
12,303	23,852	462	325	244	33	90·4	83·5	1·7		10·1	... ...		... ...		... ...
11,202	21,959	466	596	524	15	89·7	90·1	35·4 {		1·8	2·5	... ...		... ...
11,250	19,915	544	301	233	29	88·8	85·6	2·3		9·6	... ...		... ...		... ...
34,760	65,726	1,472	1,222	1,001	77	89·7	87·4	35·4	1·9	6·3	61,457	32·6	683	0·8	... ...	
5,876	13,141	114	1,364	1,231	66	96·5	94·8	36·3 {		0·8	4·8	... ...		... ...
7,361	16,404	146	523	430	34	96·9	87·9	33·8 {		0·8	6·5	... ...		... ...
13,237	29,545	260	1,887	1,661	100	96·8	92·9	34·9	0·8	5·3	30,514	34·1	340	0·8	... ...	
3,812	10,677	1,323	373	72	15	66·0	20·1	21·8 {		7·5	4·0	... ...		... ...
4,772	11,590	1,907	873	849	126	77·7	41·3	11·3		14·4	... ...		... ...		... ...
5,575	15,248	2,620	385	162	157	82·2	71·0	12·3		40·7	... ...		... ...		... ...
14,159	37,515	5,850	1,631	543	298	75·5	40·7	21·8	10·5	18·2	71,642	41·2	742	0·4	... ...	
13,188	22,840	746	1,758	983	143	84·0	57·7	44·2 {		2·6	8·1	... ...		... ...
13,587	26,809	361	3,030	2,524	70	94·7	85·2	2·6		2·3	... ...		... ...		... ...
21,695	37,078	1,143	1,482	1,206	56	89·2	84·5	3·5		10·6	... ...		... ...		... ...
19,910	32,639	1,329	594	278	63	89·2	52·3	28·9		18·4	126,554		45·0	1,640	0·5	
68,381	119,366	3,579	6,864	4,941	332	89·3	75·6	44·2	2·6	4·8	... ...		... ...		... ...
7,081	13,919	1,140	596	308	110	85·9	63·3	28·8 {		6·5	18·4	... ...		... ...
4,840	10,904	548	476	359	51	88·7	84·4	4·2		10·7	... ...		... ...		... ...
6,397	11,155	846	221	97	64	78·7	61·8	5·6		28·9	... ...		... ...		... ...
18,318	35,978	2,534	1,293	764	225	84·8	71·5	28·3	5·6	17·4	36,110	27·8	904	0·6	... ...	
2,089	4,121	19	502	447	22	98·8	93·1	50·8	0·4	4·3	4,592	51·1	17	0·1	... ...	
2,089	4,121	19	502	447	22	98·3	93·1	50·8	0·4	4·3	4,582	51·1	17	0·1	... ...	
3,081	11,044	1,310	79	28	17	84·6	45·1	25·1 {		9·1	21·5	... ...		... ...
4,186	9,126	1,049	650	98	105	72·8	17·9	8·7		16·1	... ...		... ...		... ...
5,510	10,600	1,310	294	39	107	77·3	20·8	8·2		36·4	... ...		... ...		... ...
8,147	14,827	1,522	287	170	74	87·3	79·8	25·8		25·8	... ...		... ...		... ...
20,924	45,591	5,191	1,310	335	308	81·0	33·2	25·1	8·4	23·1	63,110	34·5	2,538	0·3	... ...	
6,236	15,154	414	386	309	19	95·1	84·2	30·7 {		2·5	4·9	... ...		... ...
9,021	17,157	84	524	444	47	97·5	98·0	0·4		8·9	... ...		... ...		... ...
10,109	16,704	288	442	384	27	99·0	92·5	1·5		6·1	... ...		... ...		... ...
25,366	49,015	756	1,352	1,137	93	97·2	90·3	30·7	1·4	6·8	47,897	29·3	1,140	0·6	... ...	

A—VACCINE

STATEMENT No. I showing the Particulars of Vaccination in the

Number.	Districts.	Circles.			Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.			Primary			
		1	2	3				4	5	6	7	8		
54	Salem.	Salem circle	...	...	500,311	262	6	8,290	7,923	16,213	2,702	16,524	6,774
55		Sankari circle	...	...	605,833	392	10	12,218	11,365	23,583	2,858	25,991	9,748
56		Hosur do.	...	...	601,383	213	9	10,919	10,474	21,393	2,377	20,823	11,714
		Total of district	...	...	1,707,527	256	25	31,427	29,762	61,189	2,447	62,838	28,236
57	South Arcot.	Cuddalore circle	...	...	494,072	737	4	7,712	7,885	15,597	3,899	17,438	6,330
58		Vridhāchalam circle	...	...	481,882	393	7	7,523	7,460	14,983	2,140	15,486	6,404
59		Tirukkoyil circle	...	...	405,559	501	6	6,669	6,519	13,188	2,198	13,515	3,764
60		Tindivanam do.	...	...	395,246	485	5	6,317	6,153	12,470	2,494	12,765	3,825
61		Villupuram do.	...	...	507,906	755	4	8,320	8,035	16,355	4,089	17,368	7,506
		Total of district	...	...	2,284,665	545	26	36,541	36,052	72,593	2,792	76,872	27,829
62	South Canara.	Northern circle	...	...	8	7,329	6,950	14,279	1,784	14,045	4,101		
63		Central do.	...	...	8	6,318	6,108	12,421	1,552	11,447	5,312		
64		Southern do.	...	...	9	7,354	7,188	14,542	1,615	13,855	4,177		
		Total of district	...	...	* 1,142,860	285	25	21,001	20,241	41,242	1,649	39,347	13,590
65	Tanjore.	Tanjore circle	...	...	410,870	417	7	6,300	5,941	12,241	1,748	11,927	4,807
66		Negapattam do.	...	...	536,509	791	9	9,047	8,721	17,768	1,974	16,132	6,362
67		Patinkottai do.	...	...	563,520	407	11	10,246	9,929	20,175	1,834	20,184	5,531
68		Kumbakonam do.	...	...	618,122	973	12	10,413	10,184	20,597	1,716	19,609	7,754
		Total of district	...	...	2,129,014	578	39	36,006	34,775	70,781	1,815	67,832	24,454
69	Tiruvarur.	Shermadevi circle	...	...	8	11,135	10,117	21,252	2,656	20,662	10,457		
70		Sriyankantam do.	...	...	8	11,714	9,961	21,675	2,408	20,061	10,550		
71		Kolpatti do.	...	...	8	9,972	8,221	18,193	2,274	17,596	8,454		
		Total of district	...	...	1,860,720	381	25	32,821	28,299	61,120	2,445	58,319	29,461
72	Trichinopoly.	Trichinopoly circle	...	...	12	12,366	11,576	23,942	1,995	23,880	8,955		
73		Ariyalur do.	...	...	8	7,922	7,670	15,592	1,949	15,236	6,312		
74		Nāmakkal do.	...	...	9	10,208	10,000	20,203	2,244	20,506	7,623		
		Total of district	...	...	+ 1,941,044	393	29	30,491	29,246	59,737	2,060	59,622	22,898
75	Vizagapatam.	Gunapur circle	...	...	9	5,318	3,983	9,301	1,033	6,548	1,138		
76		Vizagapatam circle	...	...	18	12,115	12,084	24,199	1,861	23,713	7,240		
		Government vaccinators (Gudem hills)	...	...	1	280	265	545	545	545	25		
77		Vizianagram circle	...	...	13	14,616	16,544	31,160	2,397	23,632	6,079		
78		Pārvatipūram do.	...	...	18	10,938	11,284	22,220	1,709	21,546	8,144		
		Total of district	...	...	+ 2,454,029	49	43,265	44,160	87,425	1,784	75,984	22,626	
79	Koraput.	Jeyapore circle	71	9	7,371	6,893	14,264	1,585	13,158	2,835		
80		Koraput do.	77	7	6,091	5,726	11,817	1,688	10,248	2,264		
		Total of district	...	...	624,860	74	16	13,462	12,619	26,081	1,630	23,406	5,089
	Total of circles and districts ...		...	...	38,788,924	291	684	706,157	663,910	1,370,067	2,003	1,348,911	487,069

* Excludes Amindivi islands (3,955).

† Excludes Pudukkottai (411,866).
‡ Includes Hill Tracts.

DEPARTMENT.

Madras Presidency for the official year 1912-1913—continued.

vaccination.	Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Average annual number of persons successfully vaccinated during previous 5 years.	Average annual number of deaths from small-pox during previous 5 years.
	Successful.		Re-vaccination.					
	1 and under 6 years.	Total of all ages.	Unknown.					
6,930 11,712 7,132	14,280 22,558 19,308	679 834 242	570 1,255 1,412	376 884 1,203	65 180 126	90·1 89·6 93·5	74·4 77·5 84·1	29·2 38·6 34·1
25,774	56,141	1,755	3,237	2,413	371	91·9	84·1	34·2
2,988 6,272 7,089 6,720 3,743	9,427 13,206 11,775 12,867 11,398	4,145 736 441 614 2,435	824 373 225 125 600	274 257 130 51 294	309 46 89·5 60 236	70·9 89·6 90·0 88·4 78·7	19·6 27·9 29·3 27·6 23·0	23·7 47 3·2 4·8 13·7
6,537 4,087 5,637	11,884 10,431 11,487	545 236 630	809 1,398 1,248	572 1,158 864	70 63 100	88·0 96·7 86·8	77·4 31·8 75·2	3·8 2·0 4·5
16,281	33,802	1,411	3,455	2,594	233	89·1	80·5	31·8
6,338 7,649 10,248 9,301	11,681 15,417 18,042 18,821	56 254 348 214	470 1,881 578 1,586	446 1,744 473 1,452	19 71 36 89	98·4 96·3 91·0 96·9	29·5 31·9 32·8 32·7	0·4 1·5 1·7 5·6
33,536	63,961	872	4,515	4,115	215	95·5	95·7	31·9
7,276 7,273 6,720	18,862 19,072 16,165	368 235 2,199	1,265 2,085 2,085	1,228 44 44	14 96·1 96·7	92·9 97·0 91·0	1·2 2·0 2·6	1·7 2·0 1·6
21,260	54,099	889	4,900	4,698	96	94·1	97·7	35·4
10,824 6,169 9,865	20,518 13,429 17,563	1,271 644 1,397	414 895 347	305 798 270	43 80 42	90·7 97·9 91·9	82·2 96·3 88·5	2·7 8·9 12·1
26,358	51,510	3,812	1,656	1,373	165	91·4	92·0	27·2
2,539 10,590	6,326 19,844	93 1,760	2,758 1,439	2,660 1,016	53 226	98·0 90·4	98·3 83·7	1·4 7·4
261 11,567 8,779	479 19,240 18,739	37 2,186 565	... 552 861	... 94·2 750	... 42	94·2 89·7 90·9	31·6 ... 91·5	6·8 9·2 2·6
33,736	65,628	4,641	18,938	11,998	873	92·0	91·8	31·6
6,381 4,606	12,084 9,562	291 91	1,123 1,628	877 1,189	29 36	93·9 94·1	80·1 74·6	32·7 46·8
10,987	21,646	382	2,751	2,066	65	94·0	76·9	37·9
544,775	1,131,797	62,763	76,755	55,904	7,325	88·0	80·5	30·6
								4·6
								9·5
								1,308,418
								33·7
								20,680
								0·5

A—VACCINE

STATEMENT No. I showing the Particulars of Vaccination in the

Number.	Districts.	Circles.			Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Primary		
		1	2	3				4	5	6
1	Military Cantonments.	Bangalore	...	...	100,834	7,447	2	Males. 407	Females. 221	Total. 628
2		Secunderabad	...	...	103,879	5,467	4	3,010	2,781	5,791
	Total of cantonments ...		204,713	6,291	6	3,417	3,002	6,419	1,069	4,974
	* Medical Subordinates.		...	...	...	7,017	159	7,176	...	206
										...
1	Anakāpalle	Ādoni	...	...	31,645	2,281	1	585	417	1,002
2		Anantapur	...	...	8,457	940	1	304	114	418
3		Anakāpalle	...	...	20,625	1,719	1	572	344	916
4		Bellary	...	...	34,956	6,991	3	2,121	1,185	3,306
5		Berhampur	...	...	31,456	5,244	1	866	534	1,400
6	Bezwada	Bezwada	...	...	32,867	5,976	1	675	546	1,221
7		Bimlipatam	...	...	9,314	179	1	267	159	426
8		Calicut	...	...	78,417	7,292	3	4,303	2,714	7,017
9		Cannanore	...	...	28,957	5,791	1	1,229	614	1,843
10		Chicacole	...	...	17,852	5,617	1	519	544	1,063
11	Chidambaram	Chidambaram	...	...	21,327	10,663	1	460	270	730
12		Chingleput	...	...	11,626	9,301	1	501	237	738
13		Cochin	...	...	20,923	20,023	1	1,254	459	1,713
14		Cocanada	...	...	54,110	9,018	2	6,489	1,516	8,055
15		Coimbatore	...	...	47,007	11,060	2	1,369	895	2,264
16	Conjeeveram	Conjeeveram	...	...	53,864	13,466	2	1,062	925	1,987
17		Goonor	...	...	9,933	1,710	1	432	286	718
18		Cuddalore	...	...	56,574	4,254	2	1,378	1,060	2,488
19		Cuddapah	...	...	17,807	903	1	637	216	553
20		Dindigul	...	...	25,052	9,635	1	683	438	1,121
21	Municipalities.	Ellore	...	...	37,819	12,606	2	1,483	1,239	2,722
22		Erode	...	...	16,701	16,701	1	562	348	910
23		Gudiyāttam	...	...	23,390	23,390	1	313	269	582
24		Guntūr	...	...	40,520	9,096	1	860	510	1,370
25		Karur	...	...	17,674	8,837	1	374	236	610
26	Kodaikanal	Kodaikanal	...	...	2,906	528	1	47	48	95
27		Kumbakōnam	...	...	64,647	14,626	3	1,091	881	1,972
28		Kurnool	...	...	26,040	5,208	1	859	464	1,323
29		Madras	...	...	518,660	19,209	21	15,891	11,290	27,181
30		Madura	...	...	134,130	5,086	4	4,207	3,495	7,702
31	Mannārgudi	Mannārgudi	...	...	21,398	3,566	1	466	331	797
32		Mangalore	...	...	48,412	9,380	2	1,507	1,043	2,550
33		Masulipatam	...	...	42,123	2,113	2	1,091	644	1,735
34		Māyavaram	...	...	27,121	9,040	1	630	543	1,173
35		Nandyal	...	...	16,230	3,607	1	548	263	811
36	Negapatam	Negapatam	...	...	60,168	11,638	3	2,775	1,876	4,651
37		Nellore	...	...	33,246	2,078	2	1,094	543	1,637
38		Ongole	...	...	13,286	3,321	1	379	211	590
39		Ootacamund	...	...	18,829	1,345	2	927	561	1,488
40		Palamcottah	...	...	44,909	11,227	2	1,288	566	1,854
41	Palghat	Palghat	...	...	44,319	4,185	2	1,217	1,093	2,310
42		Parlākīmedī	...	...	18,370	13,812	1	730	318	1,048
43		Periyakulam	...	...	18,715	24,953	1	487	366	853
44		Palni	...	...	13,211	7,549	1	501	214	715
45		Rajahmundry	...	...	48,417	14,583	2	2,553	779	3,332

* Work performed in police hospitals, jails, revenue and other departments.

DEPARTMENT.

Madras Presidency for the official year 1912-1913—continued.

vaccination.	Re-vaccination.			Percentage of successful cases in which the results were known.			Percentage of unknown cases to total cases.			Average annual number of persons successfully vaccinated during previous 5 years.			Average annual number of small-pox deaths during previous 5 years.		
	Successful.		Unsuccessful.	Total number of operations		Successful.	Unsuccessful.	Persons successfully vaccinated per 1,000 of population.		Primary vaccination.	Re-vaccination.	Number.		Ratio per 1,000.	
	1 and under 6 years.	Total of all ages.	13	14	15	16	17	18	19	20	21	22	23	24	25
107	344	...	248	196	...	90·5	79·0	5·3	...	...	1,331	13·2	49	0·4
952	4,337	14	1,350	1,054	54	94·6	81·3	51·8	0·3	4·0	5,133	49·4	1	0·009	
1,059	4,681	14	1,598	1,250	54	94·4	80·9	28·9	0·3	3·3	6,464	31·5	50	0·2	
3	118	54	6,970	5,133	311	77·6	77·0	...	26·2	4·4	...	...	...	...
27	722	161	144	138	6	99·4	100·0	27·1	18·1	4·1	1,235	39·0	6	0·1	
29	202	5	201	128	44	88·5	81·5	39·0	2·1	21·8	342	40·4	15	1·7	
88	719	4	188	110	10	93·2	61·7	40·1	0·5	5·3	847	41·0	15	0·7	
213	2,273	...	846	679	...	89·4	80·2	84·4	...	...	2,618	74·8	3	0·08
101	841	4	527	423	20	88·1	83·4	40·1	0·4	3·7	1,339	42·5	3	0·09	
128	1,025	6	188	139	9	98·0	77·6	35·4	0·5	4·7	1,173	35·6	6	0·1	
45	282	...	125	62	4	80·8	51·2	36·9	...	3·2	44·7	47·9	2	0·2	
657	4,728	18	2,267	2,190	49	98·1	98·7	88·2	0·3	2·1	6,614	84·3	52	0·6	
288	1,209	30	647	312	150	93·1	62·7	52·5	2·2	23·1	2,136	73·7	121	1·1	
110	561	..	509	506	...	97·9	99·4	59·7	...	...	1,033	57·8	5	0·2
47	549	25	171	151	14	88·5	96·1	32·8	3·8	8·1	710	33·2	1	0·04	
40	413	...	317	207	55	96·9	79·0	53·3	...	17·3	602	51·7	1	0·08	
94	806	25	867	230	128	91·0	30·9	51·7	2·7	14·1	1,260	62·9	42	2·0	
778	2,202	230	5,785	776	459	76·1	65·0	55·0	7·3	7·9	3,508	70·3	65	1·2	
391	1,596	20	421	219	54	83·9	59·6	38·6	1·0	12·8	1,124	29·9	97	2·0	
533	2,166	1	459	250	59	94·1	62·5	68·8	0·04	12·8	2,244	59·3	40	1·0	
95	688	...	189	134	5	93·9	70·8	49·2	...	...	738	44·1	5	0·3
41	421	8	127	71	49	94·1	91·0	21·0	1·7	38·5	834	35·6	...	...
104	959	30	815	274	14	93·1	91·0	30·4	2·8	4·4	1,235	30·4	26	0·6	
52	490	...	150	116	23	90·0	91·3	34·2	...	15·3	601	34·0	1	0·05	
3	87	6	6	4	...	97·7	66·6	31·3	...	...	114	39·2	1	0·3
302	1,634	10	208	145	5	87·8	71·4	27·5	0·5	2·4	1,906	29·4	22	0·3	
127	978	...	381	161	106	99·6	58·5	43·7	...	27·8	1,203	46·1	1	0·03	
2,556	20,695	499	5,280	2,790	781	95·1	61·7	45·2	2·2	14·4	31,219	69·1	141	0·2	
1,960	6,839	1	1,268	1,160	...	95·2	91·4	59·6	0·01	...	8,879	66·1	221	1·6	
110	692	...	71	43	21	93·8	86·0	34·3	...	29·5	824	38·5	33	1·5	
527	1,829	1	694	638	17	93·5	94·2	50·9	0·05	2·4	3,529	72·8	122	2·5	
39	415	19	110	95	6	95·3	92·2	39·1	...	1,348	32·0	23	0·6		
79	800	...	291	217	8	83·5	76·6	37·4	...	2·7	1,237	45·6	14	0·5	
103	594	2	221	195	16	93·8	95·1	48·6	0·3	7·2					

A—VACCINE

STATEMENT No. I showing the Particulars of Vaccination in the

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.			Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated.	Primary		
			1	2	3				4	5	6
46	Salem	59,153	13,984	2	1,750	1,450	3,200	1,600	2,859	2,759	
47	Srirangam	24,799	3,543	1	655	598	1,253	1,253	1,183	684	
48	Sripilliputtur	29,066	20,761	1	509	534	1,043	1,043	949	827	
49	Tanjore	60,341	805	2	2,237	1,277	3,514	1,757	1,924	1,492	
50	Tellicherry	29,258	11,703	2	1,355	745	2,100	1,050	969	825	
Municipalities—cont.	Tenali	18,195	6,998	1	439	270	709	709	708	442	
	Tinnevelly	44,805	7,469	2	1,202	779	1,981	990	1,654	1,226	
	Trichinopoly	123,512	14,899	3	3,877	2,888	6,265	2,088	5,154	3,804	
	Tiruppattur	10,470	4,188	1	338	191	529	529	434	337	
	Tirupati	16,701	5,010	1	358	226	614	614	442	379	
	Tiruvannamalai	21,244	1,931	1	497	375	872	872	818	587	
	Tuticorin	40,185	11,481	1	1,069	677	1,746	1,746	1,284	1,078	
	Vaniyambadi	20,406	5,830	1	348	294	642	642	622	379	
	Vellore	49,746	8,102	2	1,478	815	2,288	1,144	1,675	1,412	
	Vizagapatam	43,413	8,849	2	1,050	933	1,983	991	1,253	811	
	Vizianagram	37,550	7,510	2	2,197	1,444	3,641	1,820	1,913	1,340	
	Walajapet	9,962	9,962	1	338	148	486	486	324	235	
Total of municipalities.		2,601,925	7,051	114	87,308	54,748	142,056	1,246	107,682	78,495	
Grand Total	...	*41,390,849	311	804	803,899	721,819	1,525,718	+1,888	1,611,773	568,905	

* Excludes the population of the Cantonments of Bangalore and Secunderabad.

† In finding the average number of persons vaccinated, the total work of medical

Note.—(1) Difference between number of operations and number of persons

(2) This statement does not include the statistics of dispensary vaccination

N.B.—In calculating the percentage of success shown in this statement and

SUMMARY OF STATEMENT No. I.

1	Total number of persons vaccinated.		Total number of operations performed.		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 vaccinations per 1,000 of population.	Under one year.	One and under six years.	Ratio of successful vaccinations per 1,000 of population.	Total cost of department.	Average cost of each successful case.	
	2	Re-vaccination.	Primary.	Re-vaccination.										
By Special staff (statement No. I).	1,401,530	124,188	1,461,773	124,333	88·4	79·0	804	1,888	568,905	563,558	31·7	RS. A. P. 3,28,341 14 8	RS. A. P. 0 8 11	
By Dispensary staff (statement No. III).	17	221	17	221	84·6	63·7	...	...	...	...	...	...	...	...
By other agencies, if any.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	1,401,547	124,409	1,461,790	124,554	88·4	79·0	804	1,888	568,905	563,558	31·7	RS. A. P. 3,28,341 14 8	RS. A. P. 0 8 11	

‡ Exclusive of the pay and allowances of the Inspector of Vaccination and Deputy Sanitary Commissioner, Madras.

DEPARTMENT.

Madras Presidency for the official year 1912–1913—continued.

vaccination.	Re-vaccination.			Percentage of successful cases in which the results were known.		Percentage of unknown cases to total cases.	Average annual number of persons successfully vaccinated during previous 5 years.	Average annual number of deaths from small-pox during previous 5 years.	Average annual number of persons vaccinated per 1,000 of population.	Number.	Ratio per 1,000.			
	Successful.	Total of all ages.	Unknown.	Successful.	Unknown.				Primary vaccination.	Re-vaccination.				
1	2	3	4	5	6	17	18	19	20	21	22	23	24	25
88	2,847	...	344	282	...	99·5	81·9	52·8	...	2,607	44·0	7	0·1	
415	1,139	24	70	59	7	98·2	93·6	48·3	2·0	1,189	47·9	21	0·8	
65	900	12	111	66	27	96·0	78·5	33·2	1·2	24·3	1,085	37·8	1	0·03
305	1,840	43	1,659	1,201	172	97·8	80·7	50·3	2·2	10·3	2,036	33·7	90	1·4
64	903	1	1,142	385	166	93·2	39·4	44·0	0·1	14·5	1,177	40·2	25	0·8
110	560	29	100	58	23	82·4	75·3	33·9	4·0	23·0	554	30·9	1	0·05
187	1,476	11	484	395	63	89·8	93·8	41·7	0·6	13·0	1,537	35·4	28	0·6
1,219	5,061	20	1,111	872	60	98·5	82·9	48·0	0·3	5·4	6,131	49·6	89	0·7
...	431	...	95	92	...	99·3	96·8	49·9	...	...	671	64·0	16	1·5
37	422	1	172	113	38	95·6	84·3	32·0	0·2	22·0	513	30·7	1	0·05
95	698	2	119	93	10	85·5	85·3	37·2	0·2	8·4	775	36·4	21	0·9
139	1,260	...	462	411	13	98·1	91·5	41·5	2·8	2,150	53·5	33	0·8	
23	402	94	68	28	37	76·1	90·3	21·0	15·1	54·4	880	43·1	5	0·2
236	1,667	1	613	169	409	99·5	82·8	36·9	0·06	66·7	1,826	36·7	22	0·4
227	1,070	2	835	426	98	85·5	57·8	34·4	0·1	11·7	1,511	34·8	22	0·5
271	1,638	11	1,891	41	86·1	84·7	80·5	0·5	2·1	2,673	71·1	15	0·4	
36	276	5	179	139	34	86·5	95·8	41·6	1·5	19·0	440	45·0	...	...
17,721	99,018	1,435	39,010	23,647	7,984	93·2	76·2	47·1	1·3	20·4	132,612	50·9	1,720	0·6
563,553	12,35,614	64,266	124,333	85,934	15,674	88·4	79·0	31·7	4·4	12·6	1,441,030	84·8	22,450	0·5

subordinates is excluded.

vaccinated, equals 60,388 which represents secondary operations.

which are exhibited separately in statement No. III.

statement No. III, unknown cases have not been taken into account.

A—VACCINE DEPARTMENT.

STATEMENT No. II showing the Cost of the Department in the Madras Presidency for the official year 1912-1913.

Number. Districts.	Circles.	Deputy Inspectors.						Vaccinators.						Peons, etc.								
		First grade.			Second grade.			First class.			Second class.			Probationers.			Pay.					
		R.B.	A.	P.	R.B.	A.	P.	R.S.	A.	P.	R.S.	A.	P.	R.S.	A.	P.	R.S.	A.	P.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16							
1	Anantapur circle Pennkonda do.	... ...	... ...	... ...	... ...	... ...	... ...	1 1	480 480	0 0	3 3	3 3	1,751 2,151	4 10	1 1	95 96	15 0	11 0	2,337 2,727	4 13	10 10
2	Total of district	...	...	...	...	...	...	2	960 893	0 13	6 4	6 6	2,122 2,032	1 2	1 1	191 97	15 8	11 0	-5,065	2	8
3	Bellary circle Hospet do.	... ...	... ...	... ...	... ...	... ...	1	480 893	0 13	5 4	6 6	1,774 4,214	3 5	1 2	97 195	8 0	0 0	2,699 5,789	9 20	6 10	
4	Total of district	...	...	...	...	...	1	1,379 13	2	9	12	1	1,774 4,214	3 5	1 2	195 195	0 0	0 0	2,619 5,789	10 20	9 10
5	Chingleput circle Sattaipet do.	... ...	... ...	... ...	... ...	... ...	1	661 540	7 0	2	4 ...	4 ...	1,774 1,280	3 2	1 1	104 1,166	8 10	0 6	2,619 1,280	10 10	9 10
6	Ponnani do.	...	...	...	...	...	1	720 700	0 0	...	4 3	4 3	1,774 1,468	3 2	1 1	99 946	8 12	0 10	1,986 1,946	8 10	6 10
7	Total of district	...	...	...	...	...	2	1,921 7	2	...	12	...	4,281 1,111	11	3	288 288	0 0	0 0	6,440 6,440	9 9	1 1
8	Chittor circle Kaveribaugar circle	1	840 720	0 0	5 6	4 6	1	1,418 1,712	13 5	11	1 1	96 84	0 0	0 0	2,354 2,516	13 16	11 7
9	Total of district	...	...	...	...	...	1	1,560 1,560	0 0	11	10	2	3,131 3,131	3 6	2	180 180	0 0	0 0	4,871 4,871	3 6	6 6
10	North Coimbatore circle East do. South do.	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	1	480 840 840	0 0 0	3 1 2	5 6 3	2 2 3	1,578 1,468 1,364	15 8 6	2 1 1	101 102 101	8 0 0	0 0 0	2,160 2,351 2,305	7 8 10	2 2 10
11	Coimbatore circle Chittoor circle	... ...	... ...	... ...	... ...	... ...	1	720 840	0 0	2 2	3 2	1	1,418 1,364	13 6	11	94 101	8 0	0 0	1,740 1,740	12 11	10 10
12	Total of district	2	1	2,860 0	0	8	20	7	5,289 5,289	7	8	489 489	0	0	8,558 8,558	7	8
13	Total of district	

Inspector of Vaccination.

Station and Deputy Sanit.

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A—VACCINE DEPARTMENT.

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1912-1913—continued.

Number.	Districts.	Expenditure—cont.												Paid from																			
		Circles.						* Travelling allowances.						Imperial funds.						Local funds.						Municipal funds.							
		Total cost.	Contingencies.	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	Anantapur circle	390	8	604	4	3,331	12	6	2,808	18	8	...	3,331	12	6	12,843	0	4	8	3,385	3	4	16,743	0	3	8	3,331	12	6	12,843	0	3	8
2	Penikonda do.	365	8	801	13	3	3,895	3	1	2,931	3	1	...	3,895	3	4	16,743	0	3	8	3,895	3	4	16,743	0	3	8						
3	Bellary circle	755	11	1,406	1	3	7,226	15	10	...	1,983	15	1	5,240	0	9	...	7,226	15	10	29,006	0	3	10	...	7,226	15	10	29,006	0	3	10	
4	Hospital do.	567	15	565	8	5	4,203	0	9	...	1,689	2	3	2,663	14	6	...	3,658	11	3	14,488	0	3	11	...	4,203	0	9	12,386	0	5	5	
5	Chingleput circle	326	11	9	558	6	0	3,558	11	3	...	964	11	7	2,693	15	8	...	3,410	12	2	11,775	0	4	7	...	3,404	12	11	9,686	0	5	7
6	Sainikpet. Ponmudi	878	10	9	1,038	14	5	7,761	12	0	...	2,603	13	10	5,157	14	2	...	7,761	12	0	28,844	0	4	7	...	3,647	14	1	12,607	0	4	7
7	Chittoor, Chingleput, Kurnool, Karvetnagar circle	323	1	5	568	0	0	3,410	12	2	...	1,139	7	9	2,271	4	5	...	3,410	12	2	11,775	0	4	7	...	3,404	12	11	9,686	0	5	7
8	Chittoor circle	851	5	618	12	6	3,404	12	11	...	1,007	0	2	2,387	12	9	...	3,404	12	11	9,686	0	5	7	...	3,404	12	11	9,686	0	5	7	
9	Karvetnagar circle	914	6	2	747	4	5	3,647	14	1	...	1,349	11	1	2,248	3	0	...	3,647	14	1	12,607	0	4	7	...	3,647	14	1	12,607	0	4	7
10	North Coimbatore circle	2,068	13	2	1,934	0	11	10,463	7	2	...	3,496	3	0	6,367	4	2	...	10,463	7	2	34,072	0	4	10	...	10,463	7	2	34,072	0	4	10
11	East do.	947	14	1	540	14	10	3,848	10	10	...	1,419	8	0	2,424	2	6	...	3,848	10	10	11,948	0	5	1	...	3,848	10	10	11,948	0	5	1
12	South do.	1,194	6	7	723	5	6	4,433	1	8	...	1,447	6	3	2,955	11	5	...	4,433	1	8	16,910	0	4	2	...	4,433	1	8	16,910	0	4	2
13	Central do.	679	5	6	834	10	5	3,719	11	5	...	2,866	14	8	5,409	13	10	...	8,276	12	6	28,855	0	4	7	...	8,276	12	6	28,855	0	4	7
14	Total of district	2,142	4	8	1,263	4	4	8,276	12	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	North Coimbatore circle	435	6	0	751	10	11	3,347	8	1	...	982	14	6	2,384	9	7	...	3,347	8	1	10,546	0	5	0	...	3,347	8	1	10,546	0	5	0
16	South do.	447	3	1	938	5	1	3,734	8	4	...	1,616	1	6	2,217	14	10	...	3,734	8	4	12,707	0	4	8	...	3,734	8	4	12,707	0	4	8
17	Central do.	272	5	8	585	4	3	2,598	6	9	...	1,186	4	6	1,412	2	3	...	2,598	6	9	11,378	0	3	7	...	2,598	6	9	11,378	0	3	7
18	Total of district	1,754	4	3	3,105	14	8	13,369	10	7	...	5,388	5	9	8,011	4	10	...	13,369	10	7	46,587	0	4	7	...	13,369	10	7	46,587	0	4	7

Number.	Districts.	Expenditure—cont.												Paid from																				
		Circles.						* Travelling allowances.						Imperial funds.						Local funds.						Municipal funds.								
		Total cost.	Contingencies.	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.						
14	Onddalph circle	736	18	9	432	14	5	3,358	15	2	...	1,143	5	3	2,215	9	11	...	3,358	15	2	9,445	0	5	8	...	3,358	15	2	9,445	0	5	8	
15	Produdur. Sidhout do.	605	4	3	394	7	6	2,756	2	0	...	986	5	9	1,819	12	9	...	3,756	2	0	8,766	0	4	8	...	3,756	2	13	8	11,661	0	4	8
16	Total of district	748	6	1	659	6	7	3,447	13	8	...	1,194	15	9	2,262	13	11	...	3,447	13	8	11,661	0	4	8	...	3,447	13	8	11,661	0	4	8	
17	Berlangam circle	2,090	8	1	1,416	12	4	9,562	15	4	...	3,274	10	9	6,288	4	7	...	9,562	15	4	29,842	0	5	1	...	9,562	15	4	29,842	0	5	1	
18	Chocoole. Gajinam Hill tracts do.	336	5	0	723	8	0	3,377	6	3	...	1,525	5	10	1,882	0	5	...	3,377	6	3	12,063	0	4	5	...	3,377	6	3	12,063	0	4	5	
19	Asta circle	1,088	11	6	615	6	5	4,346	8	7	...	* 4,346	8	7	4,346	8	7	...	4,346	8	7	11,907	0	5	10	...	4,346	8	7	11,907	0	5	10	
20	Paihamedu circle	512	13	3	827	0	1	3,089	4	1	...	1,434	9	10	1,654	10	9	...	3,089	4	10	10,519	0	5	10	...	3,089	4	10	10,519	0	5	10	
21	Purushottapur do.	496	2	9	632	15	7	3,310	10	8	...	1,528	12	1	1,787	13	9	...	2,844	12	11	9,935	0	4	6	...	2,844	12	11	9,935	0	4	6	
22	Total of district	3,393	7	0	3,724	3	10	19,981	7	2	...	11,001	2	2	8,980	5	0	...	13,981	7	2	63,932	0	5	0	...	13,981	7	2	63,932	0	5	0	
23	Cocanada circle	563	11	7	455	5	2	2,740	4	3	...	769	1	6	1,971	2	9	...	2,740	4	3	10,271	0	4	3	...	2,740	4	3	10,271	0	4	3	
24	Rajahmundry circle	938	10	8	961	4	4	3,932	3	2	...	1,037	0	11	2,845	2	3	...	3,932	3	2	17,465	0	3	7	...	3,932	3	2	17,465	0	3	7	
25	Polavaram Pedupur. Bhudechalam do.	1,013	4	0	269	12	10	3,109	13	10	...	1,347	15	7	1,752	4	11	...	3,100	4	6	4,755	0	3	10	...	3,100	4	6	4,755	0	3	10	
26	Narasaropet circle	855	10	5	661	5	5	3,659	1	2	...	1,003	7	9	2,655	9	5	...	3,557	3	10	16,388	0	3	6	...	3,557	3	10	16,388	0	3	6	
27	Total of district	4,002	1	1	2,860	13	7	16,198	0	11	...	6,891	13	7	9,274	3	4	...	10,042	10	6	46,813	0	3	5	...	10,042	10	6	46,813	0	3	5	
28	Guntur circle	249	4	3	666	4	9	3,425	12	11	...	1,116	16	8	2,229	13	3	...	3,425	12	11	16,562	0	3	3	...	3,425	12	11	16,562	0	3	3	
29	Narapatna circle	719	1	5	715	15	2	3,557	3	10	...	1,184	10	6	1,915	7	11	...	3,557	3	10	16,388	0	3	6	...	3,557	3	10	16,388	0	3	6	
30	Total of district	1,506	11	10	1,932	1	9	10,062	10	6	...</td																							

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STATEMENT No. II showing the Cost of the Department in the Madras Presidency for the financial year 1912-1913—continued

Expenditure.

APPENDIX.

VACCINATION RETURNS

* Includes cost of lymph supplied by King Institute of Preventive Medicine during 1912-1918

A—VACCINE DEPARTMENT.

STATEMENT No. II showing the Cost of the Department in the Madras Presidency for the official year 1912-1913—continued.

Number.	Name of Municipalities.	Expenditure.			Deputy Inspectors.			Vaccinators.			Peons, etc.		
		Pay.			RS. A. P.			RS. A. P.			RS. A. P.		
		First grade.	Second grade.	Third grade.	First class.	Second class.	Third class.	First class.	Second class.	Third class.	First class.	Second class.	Third class.
1	Inspector of Vaccinia, tary Government and Deputy Sanit-	4	5	6	7	8	9	10	11	12	13	14	15
2	Adoni	...	...	...	...	...	...	...	...	...	209	0	209
3	Anantapur	...	...	...	...	...	...	...	...	...	115	0	115
4	Anakapalle	...	...	...	...	...	...	...	...	...	77	0	77
5	Bellary	...	...	...	...	...	...	...	...	...	585	14	585
6	Benzara	...	...	...	...	...	...	...	...	...	0	0	0
7	Bimmapatam	...	...	...	...	...	...	...	...	...	228	0	228
8	Cafficut	...	...	...	...	...	...	...	...	...	96	0	96
9	Cannanore	...	...	...	...	...	...	...	...	...	324	0	324
10	Chittacole	...	...	...	...	...	...	...	...	...	210	0	210
11	Chidambaram	...	...	...	...	...	...	...	...	...	607	0	607
12	Chingappt	...	...	...	...	...	...	...	...	...	240	0	240
13	Cochin	...	...	...	...	...	...	...	...	...	228	0	228
14	Cocanada	...	...	...	...	...	...	...	...	...	0	0	0
15	Comintatore	...	...	...	...	...	...	...	...	...	299	12	299
16	Coonoor	...	...	...	...	...	...	...	...	...	0	0	0
17	Cuddalore	...	...	...	...	...	...	...	...	...	318	10	318
18	Cuddapah	...	...	...	...	...	...	...	...	...	11	9	11
19	Dindigul	...	...	...	...	...	...	...	...	...	218	15	218
20	Ellore	...	...	...	...	...	...	...	...	...	896	0	896
21	Erode	...	...	...	...	...	...	...	...	...	157	6	157
22	Gudiyattam	...	...	...	...	...	...	...	...	...	6	2	6
23	Guntur	...	...	...	...	...	...	...	...	...	187	0	187
24	Kardar	...	...	...	...	...	...	...	...	...	0	0	0
25	Opfites,	...	...	...	...	...	...	...	...	...	348	2	348
26	Kodaikanal	...	...	...	...	...	...	...	...	...	215	8	215
27	Kumbakonam	...	...	...	...	...	...	...	...	...	120	0	120
28	Madras	...	...	...	...	...	...	...	...	...	0	0	0
29	Madura	...	...	...	...	...	...	...	...	...	324	0	324
30	Mangalgudi	...	...	...	...	...	...	...	...	...	9	1	9
31	Mangalore	...	...	...	...	...	...	...	...	...	2,432	14	2,432
32	Marulipatam	...	...	...	...	...	...	...	...	...	10	1	10
33	Mavarayaram	...	...	...	...	...	...	...	...	...	3	1	3
34	Naduyal	...	...	...	...	...	...	...	...	...	1	1	1
35	Nagapatam	...	...	...	...	...	...	...	...	...	1	1	1
36	Nellore	...	...	...	...	...	...	...	...	...	1	1	1
37	Ongole	...	...	...	...	...	...	...	...	...	1	1	1
38	Ootacamund	...	...	...	...	...	...	...	...	...	1	1	1
39	Paluncottah	...	...	...	...	...	...	...	...	...	1	1	1
40	Palghat	...	...	...	...	...	...	...	...	...	1	1	1
41	Parakimedi	...	...	...	...	...	...	...	...	...	1	1	1
42	Perrykanthi	...	...	...	...	...	...	...	...	...	1	1	1
43	Tanjore	...	...	...	...	...	...	...	...	...	1	1	1
44	Tellicherry	...	...	...	...	...	...	...	...	...	1	1	1
45	Rajahmundry	...	...	...	...	...	...	...	...	...	1	1	1
46	Salem	...	...	...	...	...	...	...	...	...	1	1	1
47	Srirangam	...	...	...	...	...	...	...	...	...	1	1	1
48	Srirangipet	...	...	...	...	...	...	...	...	...	1	1	1
49	Tirumalai	...	...	...	...	...	...	...	...	...	1	1	1
50	Tiruchirapalli	...	...	...	...	...	...	...	...	...	1	1	1
51	Tiruvallur	...	...	...	...	...	...	...	...	...	1	1	1
52	Tiruvelli	...	...	...	...	...	...	...	...	...	1	1	1
53	Tiruvelloi	...	...	...	...	...	...	...	...	...	1	1	1
54	Tiruchinopoly	...	...	...	...	...	...	...	...	...	1	1	1
55	Tirupattar	...	...	...	...	...	...	...	...	...	1	1	1
56	Tiruppathi	...	...	...	...	...	...	...	...	...	1	1	1
57	Vellore	...	...	...	...	...	...	...	...	...	1	1	1
58	Vizianagaram	...	...	...	...	...	...	...	...	...	1	1	1
59	Walajipet	...	...	...	...	...	...	...	...	...	1	1	1
60	Total of municipalities	...	...	...	...	...	...	...	...	...	...	...	...
61	Bangalore	...	...	...	...	...	...	...	...	...	1,155	9	1,155
62	Secunderabad	...	...	...	...	...	...	...	...	...	3	3	3
1	Mettur	...	...	...	...	...	...	...	...	...	288	14	288
2	Grand Total	...	...	...	...	...	...	...	...	...	122	122	122
		1	9,692	14	7	21	23	24	41	56,610	4	266	450

Assistant Deputy Inspectors.	Expenditure.												Vaccination.			Peons, etc.			
	Pay.			RS. A. P.			Pay.			RS. A. P.			Pay.			RS. A. P.			
	First grade.	Second grade.	Third grade.	First class.	Second class.	Third class.	First class.	Second class.	Third class.	First class.	Second class.	Third class.	First class.	Second class.	Third class.	First class.	Second class.	Third class.	
26	60	0	0	1	2	...	60	10	4	1	30	0	90	0	0	90	0	0	
27	539	10	4	...	...	...	539	10	4	...	...	...	539	10	4	539	10	4	
28	228	0	0	...	...	...	5,907	1	6	9	87	3	9	228	0	0	9,238	0	1
29	5,907	1	6	9	...	...	647	15	3	...	...	...	647	15	3	647	15	3	
30	647	15	3	...	...	...	133	0	0	1	96	0	0	133	0	0	133	0	0
31	606	11	6	1	1	...	606	11	6	1	701	11	6	701	11	6	701	11	6
32	228	0	0	...	...	...	353	15	0	1	353	15	0	353	15	0	353	15	0
33	191	0	0	1	1	...	191	0	0	1	165	0	0	191	0	0	191	0	0
34	351	3	0	1	1	...	351	3	0	1	56	10	2	211	10	2	211	10	2
35	622	5	0	...	...	...	238	2	7	...	...	...	522	5	0	522	5	0	
36	192	0	0	1	1	...	170	0	0	1	174	8	0	174	8	0	174	8	0
37	228	0	0	...	...	...	228	0	0	1	336	0	0	336	0	0	336	0	0
38	180	0	0	1	1	...	180	0	0	1	342	3	0	342	3	0	342	3	0
39	184	3	7	...	...	...	250	0	0	1	294	0	0	294	0	0	294	0	0
40	250	0	0	1	1	...	155	0	0	1	155	0	0	155	0	0	155	0	0
41	174	8	0	...	...	...	324	0	0	1	435	9	0	435	9	0	435	9	0
42	174	8	0	1	1	...	180	0	0	1	276	8	0	276	8	0	276	8	0
43	180	0	0	1	1	...	180	0	0	1	299	9	0	299	9	0	299	9	0
44	180	0	0	1	1	...	180	0	0	1	130	0	0	130	0	0	130	0	0
45	180	0	0	1	1	...	180	0	0	1	180	0	0	180	0	0	180	0	0
46	180	0	0	1	1	...	180	0	0	1	180	0	0	180	0	0	180	0	0
47	180	0	0	1	1	...	180	0	0	1	180	0	0	180	0	0	180	0	0
48	180	0	0	1	1	...	180	0	0	1	180	0	0	180	0	0	180	0	0
49	180	0	0	1	1	...	180	0	0	1	180	0	0	180	0	0	180	0	0
50	180	0	0	1	1	...	180	0	0	1	180	0	0	180	0	0	180	0	0
51	180	0	0	1	1	...	180	0	0	1	180	0	0	180	0	0</td			

A—VACCINE DEPARTMENT.

STATEMENT No. II showing the Cost of the Department in the Madras Presidency for the official year 1912-1913—continued.

Number of Municipalities	Expenditure—cont.										Paid from									
	Municipalities.					Travelling allowance.					Contingencies.					Provincial funds.				
	17	18	19	20	21	22	23	24	25	26	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	
1 Adoni	55 1 1	264 1 1	...	...	...	284 1 1	264 1 1	880 0 4 10	...	...	...	...	...	...	...	...	...
2 Anantapur	10 10 11	125 13 6	...	...	...	125 13 6	125 13 6	330 0 6 1	...	...	...	...	...	...	...	...	...
3 Ankapalle	44 8 11	221 8 11	...	...	...	221 8 11	221 8 11	829 0 4 3	...	...	...	...	...	...	...	...	...
4 Bellary	163 1 6	738 15 11	...	...	...	738 15 11	738 15 11	2,362 0 4 0	...	...	...	...	...	...	...	...	...
5 Berhampur	46 16 2	274 15 2	...	...	...	274 15 2	274 15 2	1,294 0 3 5	...	...	...	...	...	...	...	...	...
6 Bezwada	40 1 9	364 1 9	...	...	...	364 1 9	364 1 9	1,164 0 5 0	...	...	...	...	...	...	...	...	...
7 Binnyatam	17 0 7	227 0 7	...	...	...	227 0 7	227 0 7	344 0 10 6	...	...	...	...	...	...	...	...	...
8 Calicut	352 10 1	859 1 1	...	...	...	859 1 1	859 1 1	1,036 0 4 0	...	...	...	...	...	...	...	...	...
9 Cannanore	65 9 6	303 9 6	...	...	...	305 9 6	305 9 6	918 0 1 11	...	...	...	...	...	...	...	...	...
10 Chiacole	43 4 3	271 4 3	...	...	...	271 4 3	271 4 3	1,521 0 3 2	...	...	...	...	...	...	...	...	...
11 Chittanaharam	25 1 5	234 1 5	...	...	...	234 1 5	234 1 5	1,067 0 4 0	...	...	...	...	...	...	...	...	...
12 Chingleputt	58 3 5	207 12 5	...	...	...	207 12 5	207 12 5	700 0 5 4	...	...	...	...	...	...	...	...	...
13 Cochin	43 16 9	259 1 9	...	...	...	259 1 9	259 1 9	620 0 5 4	...	...	...	...	...	...	...	...	...
14 Coimbatore	486 12 9	906 4 1	...	...	...	906 4 1	906 4 1	1,036 0 4 0	...	...	...	...	...	...	...	...	...
15 Ettore	103 3 11	492 15 11	...	...	...	492 15 11	492 15 11	1,083 0 3 2	...	...	...	...	...	...	...	...	...
16 Coonoor	126 0 11	444 11 8	...	...	...	444 11 8	444 11 8	1,707 0 3 6	...	...	...	...	...	...	...	...	...
17 Cudalore	65 12 5	284 12 4	...	...	...	284 12 4	284 12 4	635 0 6 9	...	...	...	...	...	...	...	...	...
18 Dindigul	172 3 9	568 3 9	...	...	...	568 3 9	568 3 9	2,273 0 3 11	...	...	...	...	...	...	...	...	...
19 Ettore	26 16 5	184 5 7	...	...	...	184 5 7	184 5 7	7,767 0 3 10	...	...	...	...	...	...	...	...	...
20 Ellore	29 12 11	216 12 11	...	...	...	216 12 11	216 12 11	1,083 0 3 2	...	...	...	...	...	...	...	...	...
21 Erode	141 9 7	489 12 5	...	...	...	489 12 5	489 12 5	2,416 0 3 2	...	...	...	...	...	...	...	...	...
22 Gudiyattam	39 16 7	23 15 7	...	...	...	23 15 7	23 15 7	2,416 0 3 2	...	...	...	...	...	...	...	...	...
23 Guinjar	79 6 4	403 6 4	...	...	...	403 6 4	403 6 4	492 0 5 2	...	...	...	...	...	...	...	...	...
24 Karur	33 18 11	259 13 11	...	...	...	259 13 11	259 13 11	1,233 0 5 2	...	...	...	...	...	...	...	...	...
25 Kaveri	606 0 6 10	...	...	...	...	...	...	...	...	...

APPENDIX.

Number of Municipalities	Expenditure—cont.										Paid from										
	Municipalities.					Travelling allowance.					Contingencies.					Provincial funds.					
	17	18	19	20	21	22	23	24	25	26	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	18s. A. P.	
26 Kodakkalai	5 15 5	95 15 5	...	...	...	...	...	95 15 5	95 15 5	91 1 0 10	...	...	...	...	...	...	...	...
27 Kumbakonam	52 2 8	591 13 8	...	...	...	...	...	591 13 8	591 13 8	1,779 0 5 3	...	...	...	...	...	...	...	...
28 Kurnool	33 6 7	261 6 7	...	...	...	...	...	261 6 7	261 6 7	1,139 0 3 8	...	...	...	...	...	...	...	...
29 Madras	3818 4 0	12,787 9 7	...	...	...	...	...	12,787 9 7	12,787 9 7	23,485 0 8 8	...	...	...	...	...	...	...	...
30 Madura	384 2 8	1,012 1 11	...	...	...	...	...	1,012 1 11	1,012 1 11	1,012 1 11	1,012 1 11	1,012 1 11	1,012 1 11	1,012 1 11	1,012 1 11	1,012 1 11	1,012 1 11	
31 Mannargudi	50 7 7	188 7 7	...	...	...	...	...	188 7 7	188 7 7	735 0 3 11	...	...	...	...	...	...	...	...
32 Mangalore	127 0 2	823 11 8	...	...	...	...	...	823 11 8	823 11 8	2,467 0 5 4	...	...	...	...	...	...	...	...
33 Masulipatam	164 10	518 0 10	...	...	...	...	...	518 0 10	518 0 10	1,650 0 5 0	...	...	...	...	...	...	...	...
34 Mayavaram	37 4 2	228 4 2	...	...	...	...	...	228 4 2	228 4 2	2,017 0 3 7	...	...	...	...	...	...	...	...
35 Nandiyal	21 5 10	233 0 0	...	...	...	...	...	233 0 0	233 0 0	789 0 4 8	...	...	...	...	...	...	...	...
36 Negapatam	268 6 10	790 11 10	...	...	...	...	...	790 11 10	790 11 10	4,170 0 3 0	...	...	...	...	...	...	...	...
37 Nelore	47 12 8	285 15 3	...	...	...	...	...	285 15 3	285 15 3	1,144 0 4 8	...	...	...	...	...	...	...	...
38 Ongole	38 13 8	230 13 8	...	...	...	...	...	230 13 8	230 13 8	610 0 7 2	...	...	...	...	...	...	...	...
39 Ottacumudi	48 4 5	276 4 5	...	...	...	...	...	276 4 5	276 4 5	1,417 0 4 8	...	...	...	...	...	...	...	...
40 Palancottah	75 2 8	492 5 8	...	...	...	...	...	492 5 8	492 5 8	1,671 0 4 8	...	...	...	...	...	...	...	...
41 Palghat	122 3 3	464 6 3	...	...	...	...	...	464 6 3	464 6 3	1,977 0 3 9	...	...	...	...	...	...	...	...
42 Paraiyakinedi	131 10	260 10 0	...	...	...	...	...	259 10 0	259 10 0	960 0 4 8	...	...	...	...	...	...	...	...
43 Periyakulam	23 13 6	198 13 6	...	...	...	...	...	198 13 6	198 13 6	793 0 3 10	...	...	...	...	...	...	...	...
44 Rajahmundry	19 14 6	194 6 10	...	...	...	...	...	194 6 10	194 6 10	648 0 4 9	...	...	...	...	...	...	...	...
45 Salora	83 1 10	419 1 10	...	...	...	...	...	419 1 10	419 1 10	2,810 0 2 4	...	...	...	...	...	...	...	...
46 Sirugan	155 2 10	524 2 10	...	...	...	...	...	524 2 10	524 2 10	3,129 0 2 8	...	...	...	...	...	...	...	...
47 Sirvilliputur	62 14 5	278 14 5	...	...	...	...	...	278 14 5	278 14 5	1,198 0 2 8	...	...	...	...	...	...	...	...
48 Tanjore	60 5 2	195 2 5	...	...	...	...	...	195 2 5	195 2 5	968 0 2 8	...	...	...	...	...	...	...	...
49 Tenali	131 4 5	381 2 5	...	...	...	...	...	381 2 5	381 2 5	3,041 0 2 0	...	...	...	...	...	...	...	...
50 Tiruchirapalli	106 1 5	472 1 5	...	...	...	...	...	472 1 5	472 1 5	1,288 0 2 10	...	...	...	...	...	...	...	...
51 Tiruvelloi	31 6 3	186 6 3	...	...	...	...	...	186 6 3	186 6 3	618 0 4 9	...	...	...	...	...	...	...	...
52 Trichinopoly	98 14 9	502 14 9	...	...	...	...	...	502 14 9	502 14 9	1,871 0 4 3	...	...	...	...	...	...	...	...
53 Vellore	387 10 3	823 3 3	...	...	...	...	...	823 3 3	823 3 3	5,938 0 2 2	...	...	...	...	...	...	...	...
54 Tirupati	11 11 1	191 11 1	...	...	...	...	...	191 11 1	191 11 1	523 0 2 10	...	...	...	...	...	...	...	...
55																					

B—DISPENSARY VACCINATION.

STATEMENT No. III showing Dispensary Vaccination in the Madras Presidency for the official year 1912-1913.

Districts.	1	Number of dispensaries in each district to which a vaccinator is attached.	Average number of vaccinators attached to dispensaries during the year.	Total number of persons vaccinated.	Average number of persons vaccinated by each vaccinator.	Primary vaccination.			Re-vaccination.			Percentage of successful cases in which the results were known.	Percentage of unknown cases to total operations.		
						Total number of operations.	Successful.		Re-vaccination.						
							Under one year.	One and under six years.	Total of all ages.	Unknown.					
Anantapur	125	...	14	...	...	...	11	2	111	50·7		
Bellary	92	...	3	...	...	...	2	89	34	14·3		
Chingleput	57	44	39·6		
Chittoor		
Coimbatore		
Cuddapah		
Ganjam		
Godavari		
Guntur		
Kista		
Kurnool		
Madras		
Madura		
Malabar		
Nellore		
Nilgiris		
North Arcot		
Ramnud		
Salem		
South Arcot	21	...	...	...	...	...	...	...	...	...
South Canara		
Tanjore		
Tinnevelly		
Trichinopoly		
Vizagapatam		
Koraput		
Total	288	...	17	...	...	11	4	221	72	108	84·6		
													63·7		
													23·5		
													48·9		

Difference between number of operations and number of persons vaccinated equals *nil*.

STATEMENT NO. IV showing the Number of Persons primarily vaccinated in each of the undermentioned years.

* As per G.O. No. 1158 L, Mis., dated 4th September 1911.

APPENDIX.

Districts.	Total number inspected.			Percentage of inspection to total number of persons vaccinated.					
	By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.	† By Sanitary Assistants to Director Medical and Sanitary Officers.			† By Sanitary Assistants to District Medical and Sanitary Officers.		
	By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.	† By Sanitary Assistants to Director Medical and Sanitary Officers.			† By Sanitary Assistants to District Medical and Sanitary Officers.		
Amritsar	29,481	1,187	782	208	26	111	175
Ballia	29,056	2,373	122	22,124	330	157	76	138	863
Bilaspur	47,166	5,243	1,246	4,014	...	27	845	735	100
Chhinglent	30,616	2,257	...	46,013	63,3	52,1	77,9
Chittoor	67,299	1,374	...	2,519	...	152	645	367	357
Coimbatore	23,158	482	1,213	45,364	2,372	16	725	153	80,2
Dindigul	71,296	4,563	1,733	21,072	1,86	104	749	127	82,7
Ganjam	67,718	2,232	1,083	68,133	2,097	24	615	59	93,7
Gudiyani	76,513	3,090	136	63,877	289	9	1,05	107	1,08
Kisima	51,257	3,402	1,171	43,355	1,371	4,330	6	0,7	100
Kurnool	31,402	2,489	580	22,154	1,043	37	70	42	94,4
Madura	62,234	4,012	78	16,196	1,245	...	73,9	23,5	100
Malabar	146,456	2,308	1,246	45,596	2,657	15	1,43	202	...
Nellore	44,628	2,042	466	32,874	1,122	1,0	2,8	78,9	63,4
Nilgiris	6,453	1,455	275	3,491	445	1	64	20,8	96,6
North Arcot	60,405	2,511	1,674	204	51,630	1,210	2,7	81	89,5
Nizamabad	51,658	1,463	303	32,03	1,02	0,5	65	20,7	95,0
South Arcot	60,512	4,488	2,011	37,934	1,746	4,4	22,6	40,0	89,5
South Canara	73,106	3,001	9	64,506	1,157	16	0,1	12,7	83,6
Tanjore	63,643	4,448	2,459	45,596	2,657	1,62	10,9	53,6	99,0
Trichinopoly	64,932	3,049	4,576	1,902	1,265	2,05	2,16	48,0	95,3
Trichinopoly	77,44	17,370	41	756	4,632	0,4	67,7	21,3	94,6
Virapattanam	23,335	2,751	...	5	42,722	11,774	0,02	67,7	94,6
Oraput
Total	41,386,726	112,911	28,888	19,497	98,844	47,642	13,290	85	83,5
Percentage of cases found successful.							17	8,5	88,4
to total number inspected.							707	387	80,1
† Percentage of unoculated as reported by Sanitary Officers to Inspector of Medical and Sanitary Officers.							9,9	0,06	74,1
Re-vaccination.							74,1	82,6	65,9
Primary vaccination.							0,06	972	80,1
Re-vaccination.							0,06	972	80,1
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Re-vaccination.							0,06	972	80,1
Primary vaccination.							0,06	972	80,1
Re-vaccination.							0,06	972	80,1
Primary vaccination.									

- * Altered under G.O. No. 1158 L., Mis., 4th September 1911.
- † The verification work done by the Sanitary Assistants to 11.11.
- ‡ Percentage of success as reported by vaccinator is calculated.
- § Information not available.
- || Excludes cases performed in the cantonments.

STATEMENT No. VI showing the Number of Vaccinations performed in Municipal Towns on children under one year of age. (G.O. Mis. No. 1534 L., dated 6th December 1909.)

Municipalities.

1	2	3	4	5
	Number of births available for vaccination during the year 1912-1913.	Number of deaths among children under one year during the year.	Number of successful vaccinations on children under one year during the year ending March 1913.	Date of extension of compulsory vaccination to municipalities.
Ādōni ...	2,061	172	551	1st Dec. 1886.
Anantapur ...	265	58	106	1st Jan. 1886.
Anākāpalē ...	656	76	521	1st Nov. 1891.
Bellary ...	1,702	342	908	1st Jan. 1881.
Berhampur ...	1,006	206	476	15th April 1891.
Bezwada ...	1,146	292	610	1st May 1892.
Bimlipatam ...	286	38	156	1st Jan. 1894.
Calicut ...	2,995	423	1,758	1st Oct. 1891.
Cānnanore ...	1,257	227	708	1st June 1891.
Chicacole ...	491	86	294	1st Dec. 1890.
Chidambaram ...	630	152	345	1st July 1887.
Chingleput ...	540	148	191	1st April 1897.
Cochin ...	707	207	575	1st Jan. 1894.
Cocanada ...	2,186	310	930	1st June 1890.
Coimbatore ...	1,589	322	719	1st Jan. 1889.
Conjeeveram ...	1,644	582	1,066	1st Jan. 1891.
Coomor ...	366	51	104	1st April 1887.
Cuddalore ...	2,025	569	1,024	1st Aug. 1890.
Cuddapah ...	575	131	228	15th July 1886.
Dindigul ...	1,175	275	683	16th July 1888.
Ellore ...	2,049	685	1,125	1st June 1886.
Erode ...	647	122	363	1st April 1888.
Gudiyāttam ...	577	111	278	1st June 1891.
Guntūr ...	1,449	411	544	1st Jan. 1889.
Karūr ...	576	113	310	1st Sept. 1892.
Kodaikānal ...	115	21	84	1st April 1900.
Kumbakōnam ...	1,962	476	959	1st Aug. 1889.
Kurnool ...	1,152	255	660	1st July 1889.
Madura ...	5,406	1,215	3,919	1st Jan. 1891.
Mannārgudi ...	743	143	386	1st Dec. 1890.
Mangalore ...	1,624	268	1,130	1st Sept. 1891.
Masulipatam ...	1,477	365	611	1st May 1888.
Māyāvaram ...	918	206	474	1st Oct. 1886.
Nandyāl ...	557	122	239	1st Jan. 1900.
Negapatam ...	1,548	445	2,312	1st July 1886.
Nellore ...	1,020	180	400	1st Aug. 1886.
Ongole ...	487	102	242	1st Dec. 1885.
Ootāgamund ...	757	122	396	1st July 1887.
Palamcottah ...	1,646	408	952	1st May 1886.
Palghat ...	1,770	416	1,077	1st Jan. 1883.
Parlākimedi ...	626	126	376	1st Dec. 1890.
Periyakulam ...	794	197	489	1st Feb. 1891.
Palni ...	680	125	238	1st Dec. 1891.
Rajahmundry ...	1,439	412	796	1st Jan. 1886.
Salem ...	2,973	633	2,151	1st May 1891.
Srirangam ...	686	172	328	1st July 1888.
Srivilliputtūr ...	1,186	207	827	1st Jan. 1896.
Tanjore ...	2,098	469	1,295	1st July 1893.
Temali ...	624	172	242	1st April 1910.
Tellicherry ...	1,188	222	784	15th Jan. 1892.
Tinnevelly ...	1,682	547	876	1st July 1886.
Trichinopoly ...	4,097	943	2,517	1st Aug. 1890.
Tiruppattar ...	628	162	276	1st April 1891.
Tirupati ...	454	80	274	1st Mar. 1890.
Tiruvannāmalai ...	1,525	754	528	15th Dec. 1897.
Tuticorin ...	1,310	346	786	1st May 1892.
Vāniyambādi ...	605	74	259	1st May 1889.
Vellore ...	2,022	382	1,203	1st Jan. 1897.
Vizagapatam ...	1,890	299	635	1st Aug. 1890.
Vizianagaram ...	1,472	338	774	1st Jan. 1891.
Walajapet ...	414	96	105	20th June 1892.
Total ...	77,675	17,609	44,183	

STATEMENT No. VII showing Inspection Work done by the Deputy Inspectors during the year 1912-1913.

APPENDIX.

* Old cases were also inspected.

+ Assistant Deputy Inspectors

STATEMENT No. VII showing Inspection Work done by the Deputy Inspectors during the year 1912-1913—continued.

District.	Circle—cont.	Number of inspecting officers.	Number of villages visited.	Number of cases verified.						Proportion per cent. of inspection to total number vaccinated.										
				First-grade Inspectors, Deputy	Second-grade Inspectors, Deputy	Third-grade Inspectors, Deputy	First-grade Inspectors, Deputy	Second-grade Inspectors, Deputy	Third-grade Inspectors, Deputy	First-grade Inspectors, Deputy	Second-grade Inspectors, Deputy	Third-grade Inspectors, Deputy	First-grade Inspectors, Deputy	Second-grade Inspectors, Deputy	Third-grade Inspectors, Deputy					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Tanjore	{	Tanjore ...	... 1	... 1	... 1	... 1	211	12,397	264	11,126	... 12,445	11,811	94·9	... 100·3	... 100·3	... 100·3	... 100·3	... 100·3	
		Negapatam ...	... 1	... 1	... 1	... 1	399	... 399	267	20,013	250	11,126	10,153	91·2	... 100·3	... 100·3	... 100·3	... 100·3	
		Pattinikkottai ...	... 1	... 1	... 1	... 1	542	20,742	250	21,195	268	... 13,680	11,456	88·8	... 65·8	... 65·8	... 65·8	... 65·8	
		Kumbakonam ...	... 1	... 1	... 1	... 1	381	... 381	... 381	... 381	... 381	14,649	14,287	97·5	... 69·1	... 69·1	... 69·1	... 69·1	
Sivagangai	{	Sermadevi ...	... 1	... 1	... 1	... 1	278	21,527	242	240	22,360	248	21,283	19,442	91·3	... 97·0	... 97·0	... 97·0	... 97·0
		Srivilliputthur ...	... 1	... 1	... 1	... 1	287	... 287	240	19,032	256	... 13,484	17,623	95·2	... 79·1	... 79·1	... 79·1	... 79·1	
Trichinopoly	{	Koilpatti ...	... 1	... 1	... 1	... 1	1,040	... 1,040	... 1,040	... 1,040	... 1,040	... 1,040	18,348	12,318	91·3	... 70·8	... 70·8	... 70·8	... 70·8
		Trichinopoly ...	1	1	1	1	112	16,131	177	633	20,653	248	15,529	11,574	86·1	63·9	63·9	63·9	63·9	
		Ariyalur ...	... 1	... 1	... 1	... 1	... 1	... 1	... 1	... 1	... 1	... 1	18,241	18,241	87·7	... 87·7	... 87·7	... 87·7	... 87·7
		Namakkal ...	... 1	... 1	... 1	... 1	... 1	... 1	... 1	... 1	... 1	... 1	15,249	15,249	83·5	... 87·4	... 87·4	... 87·4	... 87·4
Vizianapatnam	{	Gumuruppi ...	... 1	... 1	... 1	... 1	... 1	... 1	... 1	310	9,806	298	... 6,485	6,485	93·1	... 69·6	... 69·6	... 69·6	... 69·6
		Vizianapatnam ...	... 1	... 1	... 1	... 1	... 1	... 1	... 1	292	25,697	217	... 15,301	15,301	10,370	67·7	67·7	67·7	67·7
		Vizianapatnam ...	... 1	... 1	... 1	... 1	323	32,512	247	323	22,407	263	17,442	13,442	77·0	... 53·6	... 53·6	... 53·6	... 53·6
		Vizianapatnam ...	... 1	... 1	... 1	... 1	343	... 343	22,407	524	... 14,281	284	15,246	15,246	13,740	... 68·1	... 68·1	... 68·1	... 68·1
Koraput	{	Jaypore ...	... 1	... 1	... 1	... 1	1,086	... 1,086	11,876	11,876	11,876	232	8,905	8,905	75·2	... 62·3	... 62·3	... 62·3	... 62·3
		Koraput ...	... 1	... 1	... 1	... 1	... 1	... 1	... 1	... 1	... 1	11,335	11,335	11,335	9,696	85·5	... 95·4	... 95·4	... 95·4
		Total ...	20	23	23	23	41	11,680	11,873	15,476	1,453,200	223	231,927	309,110	496,349	848,707	81·9	71·3	71·2	71·2

* Old cases were also inspected.

† In working out those percentages the figures relating to Madras have not been taken into account.

Includes three Assistant Deputy Inspectors employed in the Corporation of Madras.

Government of Madras.

LOCAL AND MUNICIPAL DEPARTMENT.

Recd.

} 1913.

Enclosures

Regd.

Spare copies

G.O. No. 1438 L., 5th September 1913.

Vaccination.

Reviewing the reports on — in the Madras Presidency and the work of the King Institute of Preventive Medicine for the year 1912-13.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following paper:—

Letter—from Captain M. J. QUIRKE, I.M.S., Acting Sanitary Commissioner for Madras.

To—the Secretary to Government, Local and Municipal Department.

Dated—Madras, the 19th August 1913.

No.—D. 207-V.

I have the honour to forward herewith the report of the Director, the King Institute, Guindy, on the working of the Vaccine Section and that of the Inspector of Vaccination and Deputy Sanitary Commissioner on the progress of vaccination in the Madras Presidency during the official year 1912-13.

2. *Vaccine Section of the King Institute, Guindy.*—In two of the "Trial Scheme" districts (North Arcot and South Arcot) a system providing for more frequent supply of vaccine has been introduced as an experimental measure. Its results are awaited. If the system shows beneficial results, the question of its general extension will be considered.

The cost of the department rose from Rs. 43,520 in 1911-12 to Rs. 45,968 in the year under report, and this has resulted in an enhanced price of the vaccine manufactured at the rate of nearly 0·3 pies per case. The increased cost was mainly due to the installation of a refrigerating plant at the institute.

The percentage rate of success was, as usual, higher in the colder months of the year, and as observed by the Director "the result is in greater part the effect of the temperature on the vaccine." Comparing the success rate in districts as a whole, the Nilgiri district showed the highest rate (98.30). The lowest (69.59) was returned by Coimbatore and this was the lowest on record. Coimbatore has of late years been showing bad results in regard to vaccination as will be seen from the following figures :—

This downward tendency indicates the existence of some local factor. The whole vaccination staff working in the district needs re-organizing. The question is at present engaging attention.

3. *Vaccination.*—The “Trial Scheme” of vaccination was in force in the whole of the Chingleput district and in portions of North Arcot, South Arcot and Madura districts. The submission of proposals for its general extension in accordance with G.O. No. 1435 L., dated 27th October 1911, is awaiting receipt of further orders of

Government on this office D. No. 1801/S., dated 19th July 1913. The average cost of each successful case of vaccination rose from As. 3-9 in 1911-12 to As. 3-11 in the year under report. The cost was highest in the Nilgiri district (As. 9-2) as in last year (As. 8-9). It was lowest in Tinnevelly (As. 2-5). Among municipalities the cost was very high in Kodaikanal—Rs. 1-0-10 against As. 12-5 in the previous year. It was lowest in Calicut (As. 1-11 per case).

The opening of the "reserve calf depot" in the Salem district is delayed pending the construction of quarters for the depot overseer ordered in G.O. Mis. No. 1065 L., dated 24th June 1913.

Order—No. 1438 L., dated 5th September 1913.

The report on vaccination, which was due with Government on the 1st July, was received only on the 20th August—a delay for which no explanation has been offered by the Sanitary Commissioner.

2. The chief features of the year were:—

- (i) a decrease of a little over one *per cent.* in the total number of cases vaccinated;
- (ii) a decline under re-vaccinations of 8·9 *per cent.* in local fund areas including Agency tracts and of 21·2 *per cent.* in municipalities;
- (iii) a slight fall from 89·7 to 88·4 in the percentage of success under primary vaccinations which was only partially counterbalanced by an advance from 77·2 to 79·0 in the percentage of success under re-vaccinations;
- (iv) an advance from 31·1 to 37·9 in local fund areas including Agency tracts and a further decline from 50·5 to 47·1 in municipal areas in the number of successful operations per mille of the population;
- (v) an increase of 5,268 in the number of successful operations on children under one year of age;
- (vi) a rise from As. 3-9 to As. 3-11 in the average cost of each successful case;
- (vii) a rise from 4·5 to 4·8 pies in the cost of vaccine per case mainly due to the cost of running and maintaining the refrigerating plant which has made it possible to keep large reserves of vaccine in hand;
- (viii) a marked fall from 19,198 to 13,535 in the registered mortality from small-pox.

3. Infantile vaccination is by law obligatory in all areas included in municipalities. It is also compulsory in a number of the more important villages in the Presidency, and the "Trial Scheme" of vaccination, under which both the registration of births and infantile vaccination are compulsory, continued to be in force in the whole of the Chingleput district and in selected areas in Madura, South Arcot and North Arcot. The working of this scheme since its inception and the question of employing better staffs and introducing improved administrative arrangements throughout the Presidency generally are now under the consideration of the Government.

4. In Ganjam the large decline in the total number of cases vaccinated is ascribed in part to the absence of vaccinators on leave without substitutes. The attention of the President of the District Board will be drawn to paragraph 2 of G.O. No. 1086 L., dated 1st August 1908, and he will be requested to report why arrangements have not been made for the maintenance of an adequate reserve staff. In Cuddapah the diminished turnout is explained as in part due to a reduction of the minimum number of operations which vaccinators have to perform. The adequacy of the minimum now prescribed should be carefully examined. The results of the investigation into the continued low percentage of success in the Coimbatore district should be reported to Government.

No. 1438 L., 5TH SEPTEMBER 1913.

5. Excluding the hill tracts where conditions are special, the average cost of each successful case exceeded five annas in the districts of Cuddapah, Gôdâvari and South Canara, while in the municipalities of Bimlipatam, Madras and Ongole the rate exceeded seven annas.

6. Infantile vaccination improved generally in rural areas, the rise being especially marked in the districts of Ganjam, South Arcot, Madura and Salem. But there was a serious fall in Anantapur, Cuddapah and North Arcot, to which the attention of the District Boards concerned is drawn.

7. The Government are glad to observe that the new refrigerating plant and cold store at the King Institute are working satisfactorily.

(True Extract.)

W. FRANCIS,
Ag. Secretary to Government.

To the Sanitary Commissioner.
,, the Sanitary Engineer (through the Public Works Department).
,, the Surgeon-General.
,, the Public Department.
,, the Judicial Department.
,, the Revenue Department.
,, the Assistant Quartermaster-General, 9th (Secunderabad) Division (with C.L.).
,, the Director of Public Instruction.
,, the Accountant-General.
,, the President, Corporation of Madras.
,, all Collectors.
,, all Presidents of District Boards.
,, all Chairmen of Municipal Councils.

Editors' Table.

Government of Madras.

LOCAL AND MUNICIPAL DEPARTMENT.

G.O. No. 1299 L., 22nd September 1916

Vaccination

Report on the working of the — department in the Madras Presidency during the year 1915-16, reviewed.

No. 1299 L., 22ND SEPTEMBER 1916.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following paper:—

Letter—from Major W. A. JUSTICE, M.B., C.M., D.P.H., I.M.S., Sanitary Commissioner, Madras.

To—the Secretary to Government, Local and Municipal Department.

Dated—the 2nd August 1916.

No.—D. 431/V.

ABSTRACT.—Submitting report on the working of the Vaccination Department in the Madras Presidency for 1915–16.

Order—No. 1299 L., dated 22nd September 1916.

The report on vaccination, which was due with the Government on the 1st July, was received on the 5th August. This was due to the absence of the Deputy Sanitary Commissioner on privilege leave in consequence of ill-health.

2. The total number of vaccine operations performed during the year exceeded that for 1914–15 by 112,248, or 6·6 per cent. This result is attributed to the prevalence of small-pox in several parts of the Presidency and to better work on the part of the vaccination staff. Large increases occurred in the districts of Vizagapatam, Malabar and Tanjore. The districts which showed marked decreases were Guntur, Salem and Kurnool. The fall in Guntur is attributed to the large number of operations performed in the two previous years, when the district was in the throes of a severe small-pox epidemic. The fall in Salem is partly accounted for by the prevalence of plague, while in Kurnool there appear to have been difficulties in recruiting vaccinators.

3. The outturn of work in the municipalities showed an increase of 49,515 cases, or 33·0 per cent, over the figure for the previous year. Madras, Parlakimedi and Tuticorin showed marked increases, while Salem, Ellore, Palni, Ootacamund and Calicut showed comparatively large decreases. The chief causes assigned for the decreases are prevalence of plague, absence of small-pox and a fall in the birth-rate.

4. In the case of re-vaccinations alone there was an increase of 52·5 per cent. The increase in local fund areas amounted to 45,770 cases and in municipalities to 49,584, the City of Madras contributing as many as 36,881. Large increases occurred in the districts of Vizagapatam, Gödävari, Ganjam and Nellore, and in the case of municipalities the increases in Parlakimedi and Tuticorin are noteworthy. Small-pox accounted for 21,463 deaths. This is 5,160 less than in 1914–15, but the prevalence of small-pox in the two years is undoubtedly the main cause of the increased resort to re-vaccination.

5. The reported percentage of success fell from 90·8 to 87·7 in the case of primary and secondary vaccination and from 79·1 to 75·7 per cent in the case of re-vaccination. This is attributable in a small measure to an experiment (initiated in the previous year and since discontinued) in storing vaccine pulp in the raw condition and grinding and mixing it with lanoline as required for issue; but mainly to bad work on the part of the vaccinators and especially to their inveterate habit of keeping the paste till it is no longer fit for use. In the three districts of Chingleput, Coimbatore and Gödävari the results were especially bad. The Presidents of the District Boards concerned will be requested to make a searching enquiry into the causes of this matter and to submit special reports on the causes of the bad results. The total number of successful operations per mille of the population was returned at 33·3 in local fund areas and 58·7 in municipalities against 33·5 and 50·0, respectively, in 1914–15.

6. The average cost of each successful operation in the case of local fund vaccinators was the same as in the last year, viz., As. 3-8. In the case of the municipal vaccinators it fell from As. 4-11 to As. 4-4, in spite of a slight increase in the cost of establishment. There appears to be room for further reduction since it should be cheaper to carry out these operations within the limits of a single town than it is when the vaccinators have to cover the whole area of a district. The cost was in excess of As. 5 in the districts of Chingleput, Koraput, Gōdāvari and Cuddapah and in excess of As. 8 in the municipalities of Anantapur, Karur, Coonoor, Chicacole and Peddapuram. The local authorities concerned should analyse these high figures and see whether a reduction is not feasible.

7. The number of children under one year of age successfully vaccinated fell by 27,867. The districts in which a large decrease was noticeable were Gōdāvari, Kurnool, Ganjam and Vizagapatam. Similar decreases occurred in Madras and in the Calicut, Salem and Trichinopoly municipalities. The Government note with regret that in Nellore and Palni less than one-half of the children available for vaccination according to the registers of births were protected against small-pox, which is one of the common causes of infant mortality.

8. The Deputy Inspectors of Vaccination showed 68.1 per cent of the total number of primary and secondary vaccinations in all areas except the cantonments as having been verified by them, and 32.7 per cent of the number of cases re-vaccinated. The District Medical and Sanitary Officers verified a small percentage of primary and secondary operations. In Bellary, Coimbatore, Guntūr, Madura and Rāmuād the total number of cases verified by them was less than 1 per cent of the total number of operations. The verification work done by the Sanitary Assistants to the District Medical and Sanitary Officers was less than 2 per cent in Gōdāvari and Guntūr and less than 1 per cent in North Arcot, Kistna and Tanjore. The attention of the President, District Board, Gōdāvari, will be called to the coincidence of neglect of control by the Sanitary Assistant with the extraordinarily bad results above commented on.

9. The proposals of the district boards for the re-organization of the vaccination staff continued to be received throughout the year, those from Guntūr being still due. The scrutiny of the remainder is in progress and it is hoped that it will be possible to issue orders at an early date.

(True Extract.)

C. G. TODHUNTER,
Acting Secretary to Government.

To the Sanitary Commissioner.
 , " the Sanitary Engineer.
 , " the Surgeon-General.
 , " Medical Section.
 , " Home Department (Judicial).
 , " Revenue Department.
 , " Assistant Quartermaster-General. 9th (Secunderabad) Division (with C.L.).
 , Director of Public Instruction.
 , Accountant-General.
 , President, Corporation of Madras.
 , all Collectors.
 , all Presidents of District Boards.
 , all Chairmen of Municipal Councils.
 Editors' Table.

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