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Annual Report on Vaccination in the
Madras Presidency 1914-15

DIGITIZED



ANNUAL REPORT

ON

VACCINATION IN THE MADRAS
PRESIDENCY

AND ON THE WORK OF THE

VACCINE SECTION OF THE KING INSTITUTE
OF PREVENTIVE MEDICINE, MADRAS

FOR THE YEAR

1914-15.

MADRAS:

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1915.

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D. No. 325/V.D.

1915

OFFICE OF SANITARY COMMISSIONER,
MADEAS, 17th August 1915.

From

LIEUT.-COL. H. THOMSON, M.B., D.P.H., I.M.S.,
Acting Sanitary Commissioner for Madras,

To

THE SECRETARY TO GOVERNMENT,
LOCAL AND MUNICIPAL DEPARTMENT.

Sir,

I have the honour to forward herewith the report of the Director, King Institute, Guindy, on the working of the Vaccine Section of the Institute, and that of the Deputy Sanitary Commissioner, Madras, on the progress of vaccination in the Madras Presidency during the official year 1914-15.

2. *Vaccine Section of the King Institute, Guindy.*—The working of this section of the Institute was satisfactory. The cost of the section fell by nearly Rs. 6,000, the chief heads of expenditure showing decreases being "cost of calves including transport" and "Establishment charges". This has resulted in a reduction of the price of a case of vaccine from 4.84 pies in 1913-14 to 4.26 pies in 1914-15. The short expenditure under "cost of calves including transport" is due to the present convenient method of obtaining calves through private contractors deliverable at the Institute; under "Establishment charges," to the reversion of Assistant Director Major W. S. Patton, I.M.S., to military duty and the appointment of an Assistant Surgeon. Extra indents for vaccine during the year again show an increase. The submission of such indents should be discouraged except on occasions of sudden outbreaks of small-pox. An unusual feature of the year was the increased success rate secured during the hot months of the year (Table V printed in paragraph 8 of the Director's report). The Director is unable to find a satisfactory solution for this result. This may be due to unreliable returns received from the vaccinators.

The percentage of success districtwar show considerable variations (Table VI printed in paragraph 10 of the Director's report). Coimbatore again returned the worst results with a minimum rate of 76.59. The Deputy Sanitary Commissioner has been requested to investigate the causes of this low percentage.

3. *Vaccination Department.*—I agree generally with the Deputy Sanitary Commissioner's remarks in regard to the present staff of vaccinators. In giving effect to the new scheme, deserving vaccinators should be dealt with in the manner indicated by Government in G.O. No. 149 L., dated 23rd November 1904, paragraph 8, sub-paragraph 2. The future recruitment of vaccinators should be from amongst the men qualified according to paragraph 7 of the same Government Order.

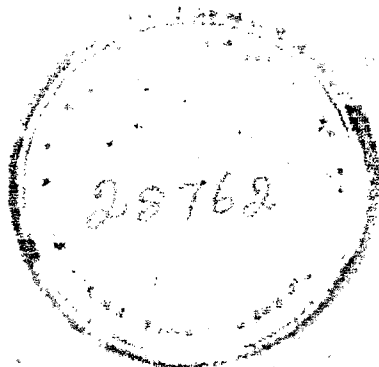
The delay in the submission of this report is explained in paragraph 5 by the Deputy Sanitary Commissioner. The Deputy Inspector of Vaccination of Ponneri on whose account the vaccination report of 1913-14 was delayed (*vide* last paragraph of the last year's report) has since been reduced in grade and transferred to another district.

I have the honour to be,

Sir,

Your most obedient servant,

H. THOMSON, Lieut.-Col., I.M.S.,
Ag. Sanitary Commissioner for Madras.



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B.S. சேகரநாதன்
செய்து வந்ததை எடுத்துக்
கொள்ளப்பட்ட
மாண்புமிகு மருத்துவ
செய்து வந்ததை எடுத்துக்
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செய்து வந்ததை எடுத்துக்
கொள்ளப்பட்ட

ANNEXURE I.

ANNUAL REPORT ON THE WORK OF THE VACCINE SECTION OF
THE KING INSTITUTE OF PREVENTIVE MEDICINE, GUINDY.
1914-15.

The total amount of vaccine supplied by the Institute during the year under report amounts to 1,983,417 cases. This is an increase over the previous year of 11,252 cases or 0.57 per cent. This figure of course constitutes a new record; but as noted in last year any increase is likely to be by small increments only.

2. Table I shows the quantity of vaccine issued to various bodies for the quinquennium 1910-11 to 1914-15.

TABLE I.

Statement showing the quantity of vaccine supplied to various bodies from 1910-11 to 1914-15.

To whom supplied.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
Government officers including jails ...	58,026	48,722	41,902	47,172	20,951
Agency Tracts ...	27,330	25,100	27,130	23,150	25,060
Military Department ...	13,369	15,517	12,883	27,587	25,971
District Boards ...	1,522,650	1,561,366	1,500,341	1,625,926	1,649,070
Municipalities ...	179,034	177,185	173,255	179,880	173,950
The Superintendent of Vaccination, Secunderabad ...	...	...	...	...	19,539
The Vaccinator, Bolarum ...	...	...	...	...	1,460
Private Bodies ...	52,688	47,151	72,678	69,000	62,695
Total ...	1,853,637	1,873,501	1,887,339	1,972,165	1,983,417

The most marked feature shown by the table is the great fall in the amount supplied to "Government officers including jails." This fall amounts to no less than 56 per cent., but the total quantities involved are small; slighter falls are shown under the headings, "Military Department," and "Private Bodies" amounting to 7 and 9 per cent., respectively. The falls under "Government officers including Jails" and "Military Department" are largely due to the fact that this year the amounts supplied to the Superintendent of Vaccination, Secunderabad, and to the Vaccinator, Bolarum, have been shown separately. In previous years these amounts were included among the cases supplied to "Government officers" and "Military Department." Had this custom been adhered to, these headings would have shown a fall of only 14.1 per cent., and 1.6 per cent., instead of a fall of 56 per cent. and 7 per cent., respectively.

The amount supplied to Municipalities remained practically stationary, a decrease of only 0.2 per cent. being recorded. Slight relative increases are shown under the headings, "Agency Tracts" and "District Boards." These amount to 8 and 1.4 per cent., respectively.

3. There was no change in the manufacture of the lymph. As usual the bulk was made up with lanoline, but a small quantity of glycerinated lymph was supplied to Madras City and to Colombo. The latter is chiefly used as seed lymph. To the great majority of mufassal Districts and Municipalities the usual fortnightly supplies were made, but three supplies per month were continued to Chingleput and to parts of North and South Arcot. As the whole of Chingleput is so supplied

The amount credited to Government under these heads shows a fall of 15·2 per cent.

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The resulting fall in the price of vaccine due to the decreased nett charges amounts to 11.4 per cent., the price per case being 4.289702 pies.

8. 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.
1914.				
1	April	110,817	4,897	95.76
2	May	297,464	8,276	92.85
3	June	166,332	8,151	92.87
4	July	104,934	7,672	93.19
5	August	109,843	8,708	92.65
6	September	109,789	9,361	92.14
7	October	103,311	10,669	90.64
8	November	110,645	11,842	90.33
9	December	104,820	15,910	86.82
1915.				
10	January	106,592	15,579	87.24
11	February	106,145	14,588	87.91
12	March	103,414	14,835	87.45
Total		1,254,167	139,476	90.77 % successful.

Table V shows the success rate obtained monthwar. There has been a slight fall of 0.86 per cent. over the whole year. The seasonal curve is quite different from what it usually has been, and we have the unusual spectacle of fair results being shown right through the hot weather and then the results falling off in October, when they usually are beginning to improve and remaining indifferent right through the cool weather. This is quite the most remarkable curve we have had to date, and it is difficult to account for. The drop becomes marked in October which is just about the time when the old stock of vaccine stored during the hot weather became exhausted, and freshly prepared vaccine was being issued. Stored vaccine accumulated again, and calf operations were stopped in the middle of November, and stored vaccine was used till the middle of February when fresh vaccine was again resorted to. These various changes were however without effect on the quality of the results obtained, which remained persistently indifferent. In 1913-14 the worst month was June and the best February. In 1914-15 the results of these months were, respectively, 13.8 per cent. better and 8.8 per cent. worse.

9. TABLE VI.

Returns recorded in the King Institute from the whole of the Madras Presidency, according to districts, 1914-15.

Serial number.	Districts.	Total successful.	Total unsuccessful.	Percentage of success.
1	Anantapur...	23,701	1,596	94.35
2	Bellary	33,130	1,091	96.81
3	Chingleput	29,113	4,989	85.37
4	Chittoor	32,480	1,809	94.72
5	Coimbatore	52,699	16,102	76.59
6	Cuddapah	30,004	2,832	91.37
7	Ganjām	73,336	4,350	94.40
8	Gōdāvari	61,517	13,998	81.46
9	Guntūr	58,255	5,304	91.65
10	Kistna	74,703	7,181	91.23
11	Kurnool	33,065	1,086	96.82
12	Madura	49,420	9,984	83.19
13	Malabar	127,909	13,982	90.14
14	Nellore	38,219	4,765	88.91
15	Nilgiris	5,434	167	96.86
16	North Arcot	60,078	5,993	90.92
17	Rāmnād	55,480	1,633	97.05
18	Salem	57,982	3,910	93.68
19	South Arcot	61,034	7,775	88.70
20	South Canara	36,540	3,664	91.11
21	Tanjore	57,530	2,573	95.72
22	Tinnevely	63,468	4,568	93.28
23	Trichinopoly	56,926	4,268	93.02
24	Vizagapatam	109,074	6,906	94.04
Total		1,284,167	139,476	90.77

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Table VI gives the results obtained districtwar. Coimbatore as usual is at the foot of the list and is again the only district which shows a success rate of under 80 per cent. Farther as the fall in its success rate is higher than that shown in any of the districts usually shown in comparison, its relative position is even worse than usual. Two districts show practically no change, less than 0.1 per cent. either way. Six districts show improvement and fifteen deterioration. Of the fifteen, nine show more than the overall fall, five less and one, the Nilgiris, has a fall practically identical with the general average. Rāmnād again holds pride of place, and is the only district showing a better success rate than the Nilgiris, though Kurnool and Bellary run it very close. Gōdāvari shows the biggest fall 3.18 per cent. and Chittoor the biggest rise 2.66 per cent.

10.

TABLE VII.

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

Serial number.	Districts.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	Average.
1	Bellary	96.51	97.65	96.48	97.59	96.81	97.00
2	Anantapur	94.86	95.23	95.45	94.41	94.35	94.86
3	Kurnool	96.20	96.16	93.95	96.65	93.82	96.55
4	Gōdāvari	71.29	78.13	79.04	84.64	81.46	78.91
5	Coimbatore	75.54	75.74	69.59	78.92	76.59	75.27

As noted above Coimbatore's relative position both for the year and for the quinquennium is worse than ever. Compared to Bellary its position for the year is 20.22 per cent. and for the quinquennium 21.73 per cent. worse. The corresponding figures for last year were 18.67 and 21.02.

11.

TABLE VIII.

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

Serial number.	Months.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	Average.
1	April	88.32	84.33	86.72	87.24	95.76	88.47
2	May	84.33	83.53	80.57	86.09	92.55	85.51
3	June	81.22	83.15	82.84	81.61	92.87	85.33
4	July	85.11	89.13	88.42	87.47	93.19	88.66
5	August	90.26	90.54	87.39	90.53	92.65	90.27
6	September	92.45	89.30	84.87	92.10	92.14	90.17
7	October	95.26	89.73	88.02	93.83	90.64	89.49
8	November	86.65	92.36	91.58	96.17	90.33	91.41
9	December	97.31	93.28	91.73	93.79	89.32	90.58
10	January	87.00	93.29	93.00	95.28	87.24	91.16
11	February	91.91	88.57	91.62	96.36	87.91	91.27
12	March	93.62	89.08	88.56	95.72	87.45	90.68

Table VIII shows that the great drop during the cold weather of the year under report has already affected the quinquennial average, but the figures are rendered irregular by the autumnal variation noticed in previous years which was however absent in the year 1913-14.

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TABLE IX.

Statement showing the duration of storage of 'Lanoline' paste during the official year 1914-15.

Name of month.	Duration of storage each month.	
	Minimum period.	Maximum period.
1914.		
April	6 days	4 weeks and 2 days.
May	4 weeks and 2 days.	12 " 3 "
June	12 " 3 "	18 weeks.
July	16 weeks	18 weeks and 2 days.
August	19 weeks and 2 days.	22 " 5 "
September	5 days	24 " 3 "
October	3 " "	3 weeks.
November	7 weeks and 3 days.	10 weeks and 2 days.
December	10 " 2 "	13 " 2 "
1915.		
January	13 " 2 "	16 weeks.
February	4 weeks	16 "
March	4 weeks and 2 days.	22 "

Table IX shows the maximum and minimum periods during which lanoline vaccine was stored for each month in the year. The maximum periods were much the same, but the minimum periods showed a considerable increase. On the average this increase was 16 days and the mean increase for the whole year was one week.

13.

TABLE X.

Statement showing the duration of storage of 'Glycerine' paste during the official year 1914-15.

Name of month.	Duration of storage each month.	
	Minimum period.	Maximum period.
1914.		
April	3 days	52 days.
May	52 "	82 "
June	86 "	102 "
July	11 "	112 "
August	24 "	52 "
September	1 day	22 "
October	9 days	25 "
November	15 "	45 "
December	45 "	78 "
1915.		
January	76 "	99 "
February	99 "	127 "
March	4 "	142 "

14. Glycerine paste was also stored longer this year than last, the average minimum and maximum periods being two weeks and three weeks longer. The mean period for the whole year was two weeks longer than 1913-14.

15. A number of experiments were carried out during the year to see whether a more robust product could be devised. These took the direction of attempting to check the propagation of extraneous micro-organisms present in the vaccine, with which the deterioration of lanoline vaccine is probably concerned. Glycerine of course does this; but at Indian temperatures it is also very injurious to the vaccine. Dessication was tried, the vaccine being first incorporated with five times its weight of milk sugar. The idea was to render the dried vaccine more readily soluble as well as to dilute it. A material was got which produced good but somewhat delayed vesication on calves. It did not however show any great keeping qualities and as its manipulation was definitely more complicated than that of lanoline vaccine, this attempt was abandoned. Farther experiments are in progress.

16. In an enclosure to the Report for 1913-14 Major Patton, I.M.S., found that better results were obtained on calves if the pulp were stored in the raw state and only ground and mixed as required. An attempt was made on a large scale to see if this held good and could be applied to children. It must be remembered that the conditions could not be made exactly parallel. With calves the seed lymph was ground, mixed and used. With children the lymph was ground, mixed and issued; but the period of use would vary with the distance of destination, and the habits of the vaccinator. Every alternate batch of vaccine was stored and ground and mixed as required for issue, while the remaining half was ground, mixed, and stored till required for issue. Half the issue for each day was made up of each of these two kinds of paste. The results up to the end of March were distinctly against the new procedure. 82,828 cases done with paste made in the revised method were reported on and showed a success rate of 85.8 per cent.; whereas 88.71 per cent. out of 88,407 cases done with standard paste were reported as successful. Both these figures are disappointingly low, but returns of 170,002 cases done with stored standard lymph received contemporaneously, show a success rate of 86.18 per cent. For some reason the cold weather of 1914-15 seems to have been unfavourable to vaccinators' work. Considering the copious rains and that the calves had fair grazing right up till the end of March the lymph should have been better than usual, but, if so, the vaccinators do not appear to have been able to profit by it. The yield per calf was certainly larger than in the previous year and in a special series of calves, the results from which are given below, the average yield during the latter half of March and the whole of April was nearly as great as the maximum yield for the corresponding period of 1914.

17.

TABLE XI.

Statement showing the average yield of pulp per calf according to the month of the year 1914.

Months.	Grammes.			Average yield of lymph per calf during 1914.
	Average.	Maximum.	Minimum.	
January	3.7	14.0	2.2	7.9 grammes.
February	7.9	17.0	2.0	
March	9.4	19.2	4.0	
April	8.0	18.0	2.3	
May	No work.			
June	6.2	8.0	3.2	
July	7.9	11.5	3.2	
August	3.3	3.3	3.3	
September	6.4	18.0	2.4	
October	8.3	17.4	2.0	
November	7.2	15.5	2.0	
December	5.9	8.5	2.4	

Table XI shows the maximum and minimum yield of any calf and the average yield per calf for each of the months of the year. The maxima, with two exceptions, are all greatly in excess this year and the minima run slightly higher too.

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TABLE XII.

Average yield of lymph per calf according to years.

Year.	Grammes.
1904	4.9*
1905	3.5
1906	No records.
1907	3.2
1908	2.8
1909	3.7
1910	5.1
1911	5.3
1912	5.9
1913	5.3
1914	7.9

* The records are incomplete; this figure would be lower.

Table XII gives the average yield per calf for the whole year and the large increase of 2.6 grammes or nearly 50 per cent. is seen.

An attempt was also made to find out why the results got with any particular batch of seed lymph were so variable in the case of calves. Table XI shows that the yield may vary from 19 to 2 grammes, besides which there are total failures amounting to about 6 per cent. The time of ripening varies also within wide limits 72—120 or more hours, and this with the same lymph applied in exactly the same way. From a certain date every calf admitted into the Institute was classified under the following headings:—Admission number, Serial number, Sex, Size, Colouration of skin, Texture of skin, and Surface feel of skin. On vaccination and pulping, the period, quality and appearance of the lines together with the yield per calf were noted in corresponding columns. Over 500 calves were so examined. The texture of the skin being considered as probably the most important the average yield per animal was calculated in the following groups:—

Thin and soft skin—that is having little subcutaneous tissue but the actual skin of loose texture.

Thin and hard—having little subcutaneous tissue but the skin of dense firm texture.

Thick and soft—Thick and hard—having subcutaneous tissue and with the actual skin of loose and dense texture, respectively.

19.

TABLE XIII.

	Animals.	Average yield* in grammes.	Failures.	Percentage of failure.
Skin thin and soft	169	6.98	6	3.55 per cent.
" hard	150	5.62	4	2.6 "
Skin thick and soft	186	6.06	17	9.1 "
" hard	20	6.82	0	0.0 "

The average yield over the whole series was 6.5 grammes. It must be admitted that these figures do not afford much support for a system of selection. Special features are the high percentage of failures in thick and soft skins; contrasting with no failures in thick and hard ones. The latter are however too few in number to compare with the others. It would almost appear as if a skin can be too soft as well as too hard. In group 2 the yield is definitely the lowest, while in group 3 the yield is also below the general average and the percentage of failure is high.

In group I with no subcutaneous tissue but a loose textured skin and in group IV with soft subcutaneous tissue but a loose textured skin the yields are approximately, the same, and well above the average.

20. Further analyses were made with regard to the varying points of the animals, but in these it was endeavoured to test the virtue or the reverse of any particular point by its effect on the percentage of animals showing—

(1) specially good vesiculation (that is selected for seed lymph). Quality good.

(2) Total failure of vesiculation.

(3) Yield more than three grammes above the average, i.e., good quantity.

(4) Yield more than three grammes below the average.

21. Table XIV gives these results:—

TABLE XIV.

		Specially good quality.	Failure.	Specially good quantity.	Yield small.
		PER CENT.	PER CENT.	PER CENT.	PER CENT.
Cow	...	5.4	5.0	13.0	4.2
Bull	...	7.7	7.7	3.85	0.0
Large	...	4.5	5.7	17.0	3.4
Medium	...	5.3	4.1	12.0	4.4
Small	...	10.7	18.0	7.1	0.0

TABLE XIV—cont.

		Specially good quality.	Failure.	Specially good quality.	Yield small.
		PER CENT.	PER CENT.	PER CENT.	PER CENT.
Skin sur- face. colour.	White	7.7	3.8	11.5	3.8
	Tinted	6.2	3.6	10.3	3.6
	Pale pigment	5.2	5.6	12.45	4.4
	Dark pigment	3.6	9.0	18.2	3.6
	Smooth	8.6	6.45	6.45	5.4
	Slightly rough	5.1	4.36	13.3	3.6
	Harsh	1.9	7.7	15.4	3.8

The number of bulls was so small, only 26, that much weight cannot be laid on the results got with them, and therefore a sex comparison cannot be made.

In the other groups however there appear to be fairly well defined relations, and for convenience of reference the various groups of figures have been bracketted in contrast to one another. A consideration of the table as a whole shows that the characters, which yield a specially good quality of lymph, are different and sometimes sharply contrasted to those which yield a good quantity.

(a) Size of animal, where good quality is concerned. Here we see that small animals are better than large, but where a large quantity is concerned the larger the animal the better.

(b) Size of animal in relation to failure. Here an exceptionally large percentage of small animals are found. Probably these were badly nourished animals, and the large number has something to do with an absence of small animals in the heading "small yield."

(c) The figures for pigmentation are very instructive. In relation to good quality and failure they are sharply contrasted and also in relation to good quality and good quantity.

(d) The same strong contrasts are shown when the surface of the skin is considered. Smooth skins give good quality but small quantity; harsh skins poor quality and large quantity.

A farther analysis of the table would probably yield other results and as time permits this will be carried out.

Where any selection on purchase is for practical reasons impossible the points elucidated may enable us to ensure a steady supply of lymph of fair quality. Fortunately the great majority of the animals brought to the Institute fall into the medium classes of the above classification, and it may be possible by grading prices to eliminate the less desirable ones altogether.

22. From April 1st to November 21st Major W. S. Patton, I.M.S., continued as Assistant Director, but on the latter date he reverted to Military duty.

Assistant Surgeon S. Ramakrishnan was appointed as Temporary Assistant to the Director on 9th December 1914 and was employed partly in the Vaccine and partly in the Bacteriological Sections.

23. The usual vaccination class was held during February and March. Twenty-one students attended and all obtained qualifying marks in the examination held at the end of the course.

24. The investigations carried out during the year have involved the staff in a lot of extra work which has been cheerfully and well done. I have great pleasure in putting on record my satisfaction with the way the staff have worked during the year.

THE KING INSTITUTE OF PREVENTIVE
MEDICINE, GUINDY,
17th June 1915.

F. MAITLAND GIBSON, M.B., B.S.C.,
Director.

REPORT ON VACCINATION IN THE MADRAS PRESIDENCY FOR THE YEAR 1914-1915.

From Dr. K. T. MATTHEW, D.M.T., D.P.H. (Cantab.), Inspector of Vaccination and Deputy Sanitary Commissioner for Madras, to the Sanitary Commissioner for Madras, No. 203-D., dated 23rd July 1915.

I have the honour to submit the Annual Report on Vaccination in the Madras Presidency for the year 1914-15.

2. *Staff.*—The three Deputy Sanitary Commissioners sanctioned for the Presidency have not yet been fully recruited. I was in charge of the Northern Range throughout the year, Captain M. J. Quirke, I.M.S., the other Deputy Sanitary Commissioner, on duty, was in charge of the Central and Southern Ranges till 18th September 1914 when he reverted to military duty. I was then placed in charge of all the three ranges with head-quarters at Madras and I continued to hold charge of these till the end of the year.

The subordinate vaccination staff employed in the Presidency during the past two years is shown in the following statement:—

	Deputy Inspectors.			First-class vaccinators Rs. 20-15.	Second-class vaccinators Rs. 12-10.	Third-class vaccinators Rs. 7-5.	Total number of vaccinators.
	First grade Rs. 70.	Second grade Rs. 60.	Third grade Rs. 40.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1913-14 ...	23	23	36	270	448	125	838
1914-15 ...	22	23	36	268	462	130	860

NOTE.—These figures include the staffs employed in Bangalore and Secunderabad Cantonments and exclude those on duty in the King Institute, Guindy. In the latter Institute there are three Deputy Inspectors of the first grade and two of the second grade.

3. *Inspections by Deputy Sanitary Commissioners.*—During the period Captain M. J. Quirke, I.M.S., held charge of the office of Inspector of Vaccination and Deputy Sanitary Commissioner, Central and Southern Ranges, he visited the Municipalities of Conjeeveram, Vellore, Gudiyattam, Vaniyambadi, Cuddalore, Tirupati, Kurnool, Nandyal, Mayavaram, Srivilliputtur, the village of Kaniyamattur in the Coimbatore district and vaccination work in the Ramanad district. As Deputy Sanitary Commissioner, Northern Range, I inspected the Municipalities of Berhampur, Guntur, Parlakimedi, Vizianagram, Tenali, Ongole, Chicacole and Masulipatam, and many rural towns and villages in Ganjam, Vizagapatam, Godavari, Kistna, Guntur and Nellore districts. Inspection of vaccination work was also conducted at places visited in all these districts. In the Central and Southern Ranges I inspected Udumalpet in the Coimbatore district, Alangayam and Vellore in the North Arcot District, Tinnevely and Tenkasi in the Tinnevely district and Tanjore and Mayavaram in the Tanjore district. Under orders of Government I accompanied Professor Geddes in connection with town-planning operations in this Presidency to the Municipalities of Vizagapatam, Cocanada, Bezwada, Guntur, Bellary, Salem, Bangalore, Madura, Trichinopoly, Srirangam, Coimbatore and Tanjore.

4. *Vaccination.*—(i) As in previous years, the "Trial scheme of vaccination" was in force in the whole of Chingleput district and in selected areas of North Arcot, South Arcot and Madura districts. The general extension of the scheme

to the other districts was abandoned during the year. The Government have, however, ordered that steps should be taken to improve the pay and prospects of the vaccination staffs throughout the rural areas in the hope of improving the quality of their work. There can be no doubt that the greatest defect in the present system of vaccination is the vaccinator himself. Many of the vaccinators are men of very little education who have no intelligent conception of their work and are consequently incapable of performing it satisfactorily. The large majority of them are men of the social level of peons and command little respect from the public. With a salary commencing at Rs. 7 per mensem and in a few cases even at Rs. 5, men of a better standard can hardly be expected. There is little to be gained by improving the pay and prospects of the present set of vaccinators. What is required for real improvement is a new set of vaccinators who are either Certificated Sanitary Inspectors with the necessary vaccination training or selected men of sufficient general education who are specially trained for the purpose at a Central Institution. Proposals for the improvement of the vaccination staff are being received from Presidents of District Boards and considered by Government. It would be a good thing indeed if these proposals are given effect to as they are approved instead of waiting until proposals for all the districts are received and sanctioned.

(ii) The total vaccination work performed during the last two years by all agencies throughout the Presidency is shown in the following table:—

	1913-14.	1914-15.
Primary vaccination	1,527,112	1,512,515
Re-vaccination	150,584	176,407
Total	1,677,696	1,688,922

The number of cases vaccinated during 1914-15 shows an increase of 11,226 over that of the previous year. Largest increases are noticeable in the districts of Gōdāvari (+ 18,384) and Vizagapatam (+ 12,498). The districts which showed a decrease were Coimbatore (— 8,387), Trichinopoly (— 6,073), Salem (— 4,320), South Canara (— 3,340), Chingleput (— 3,280) and South Arcot (— 3,001). The reasons assigned by the Deputy Inspectors of Vaccination for the decrease in the above named districts were (1) comparative freedom from small-pox during the year, (2) failure to appoint promptly suitable substitutes during absence on leave of vaccinators and (3) plague scare and prevalence of cholera.

(iii) The following table shows the total successful vaccination by all agencies and the percentage of successful cases including re-vaccination:—

Establishment.	Number of successful vaccinations.				Total of successful vaccinations.		Ratio per cent. of successful cases.				Ratio per cent. of total successful cases.	
	1913-14.		1914-15.		1913-14.	1914-15.	1913-14.		1914-15.		1913-14.	1914-15.
	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.			Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local Fund vaccinators ...	1,223,086	73,796	1,186,576	94,550	1,298,882	1,281,126	91.5	84.3	90.5	84.3	91.1	90.0
Government do. ...	17,015	1,597	17,892	891	18,612	18,783	91.2	91.5	90.5	87.6	91.2	90.3
Municipal do. ...	108,611	26,480	103,742	22,223	132,771	130,968	95.7	75.0	94.7	73.5	90.8	90.3
Cantonment do. ...	4,916	4,212	3,949	6,462	9,123	10,411	95.0	65.5	89.6	53.6	80.6	63.2
Dispensaries ...	6	10	1	15	16	16,100.0	90.9	100.0	90.0	75.0	91.1	75.2
Medical subordinates ...	114	5,863	117	4,985	5,477	5,102	85.7	69.6	22.9	65.0	85.9	65.4
Total ...	1,351,748	111,138	1,317,277	129,126	1,462,868	1,440,403	91.8	80.5	90.6	79.1	90.9	89.6

The percentage of total success both under primary and re-vaccinations during the year showed a slight decrease. The decrease was prominent under 'Cantonment Vaccinators' and 'Dispensaries,' over whom the Deputy Inspectors of Vaccination have little control.

When compared with the previous year, the following districts show largest increases in infantile vaccination:—

Malabar (+17.9 per cent.), Nilgiris (+13.4 per cent.), Bellary (+11.8 per cent.), Rāmnād (+9.8 per cent.) and Kurnool (+6.6 per cent.).

(iv) The cost of the various vaccination staffs and the average cost of each successful case are exhibited in the subjoined statement:—

Establishment.	Total expenditure.		Average cost of each successful case.	
	1913-14.	1914-15.	1913-14.	1914-15.
Government establishment ...	Rs. 7,392 12 3	Rs. 8,210 5 7	Rs. 0 6 4	Rs. 0 7 0
Local Fund ...	2,85,231 5 11	2,96,130 7 3	0 3 7	0 3 8
Municipal ...	22,088 13 11	40,574 3 5	0 4 8	0 4 11
Cantonments ...	2,992 12 7	3,144 14 5	0 5 3	0 4 10
Total ...	3,37,685 12 8	3,48,055 14 8	0 3 8	0 3 10

* Exclusive of the pay and allowances of the Inspectors of Vaccination and Deputy Sanitary Commissioners Central and Northern Ranges.

† Exclusive of the pay and allowances of the Inspectors of Vaccination and Deputy Sanitary Commissioners, Northern, Central and Southern Ranges.

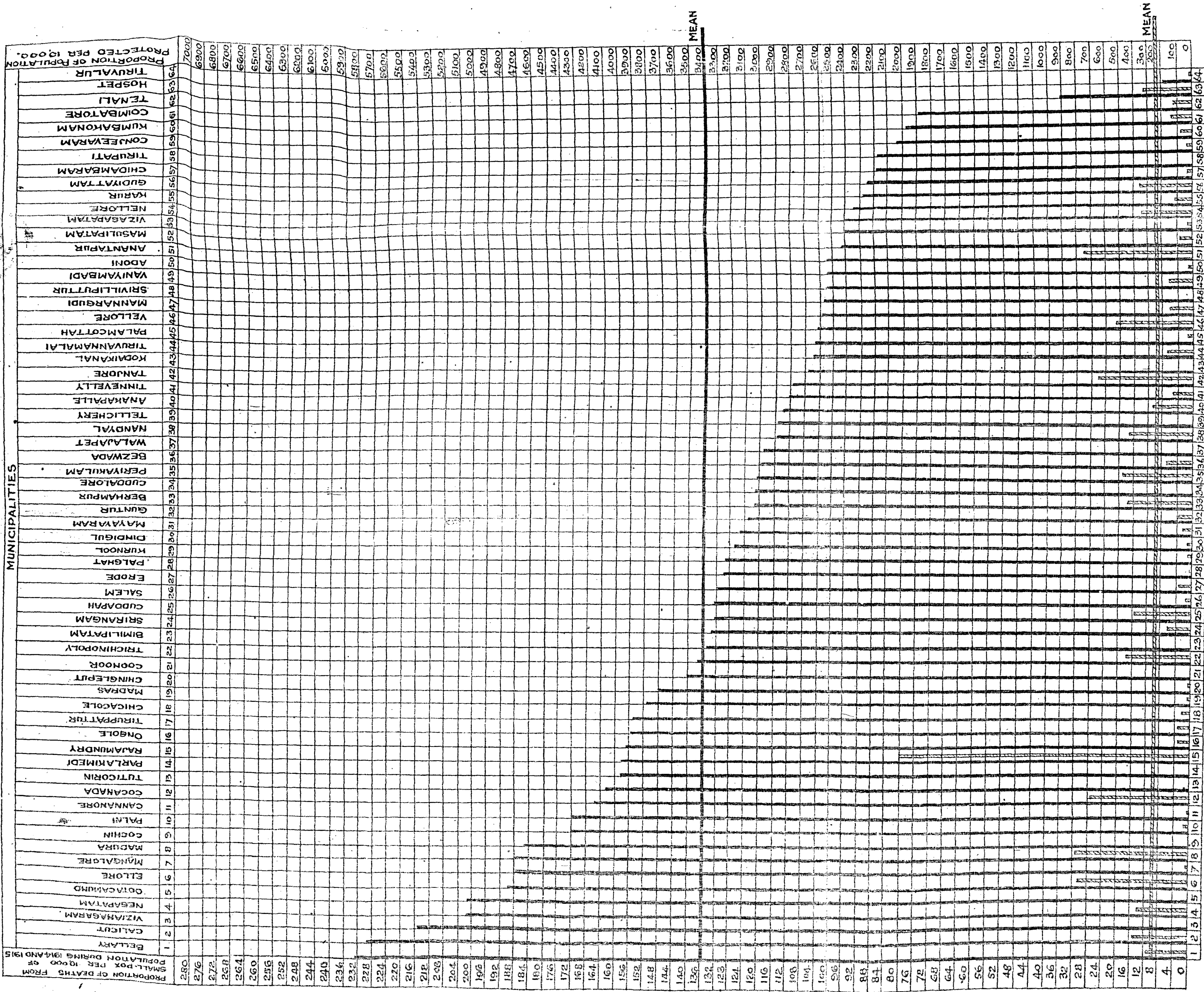
Establishment charges were high under each of the above mentioned heads the consequence being that the average cost of each successful case rose from As. 3-8 in 1913-14 to As. 3-10 in the year under report. In no district did this cost exceed As. 5-9. The district which showed this rate was Chingleput. The rate was above As. 7 in the municipalities of Bimlipatam, Coonoor, Karūr, Madras and Tiruvālūr.

(v) Vaccination is compulsory in all municipalities and 149,874 operations were performed in them during the year against 152,809 in 1913-14. Madras (+3,789) and Madras (+3,675) showed the largest increases. The towns which showed marked decreases were Guntūr (—7,533), Tuticorin (—1,365), Tanjore (—1,152), Bezwada (—710), Bellary (—677), Ongole (—532) and Vellore (—470). In Guntūr the decrease was due to less number of re-vaccination cases performed in the year than in 1913-14 when owing to a severe outbreak of small-pox an unusually large number of re-vaccinations was performed. In the remaining towns the decrease is attributed to one or other of the following causes:—less prevalence of small-pox, prevalence of plague, non-entertainment of temporary vaccinators and reduction in the minimum number of cases required to be done by vaccinators.

(vi) The following table exhibits the comparative success obtained by the use of different kinds of lymph in primary vaccination:—

Number of cases excluding unknown.	Area.	Kind of lymph.	Whence obtained.	Percentage of success.
1,331,212	Local Fund ...	Lanoline lymph ...	Supplied by the King Institute of Preventive Medicine, Guindy.	90.5
87,924	Do. ...	Glycerine " ...	Do.	94.0
26,875	Municipalities ...	Lanoline " ...	Do.	97.9
	Do. ...	Glycerine " ...	Do.	

The percentage of success from lanoline lymph was 90.5 in 1914-15 against 91.5 in 1913-14 in local fund areas and 94.0 and 95.2, respectively, in municipalities. Glycerinated lymph also showed a decreased success rate of 97.9 against 98.1 in the previous year.



THICK BLACK LINES REPRESENT THE PROPORTION OF POPULATION PER 10000 PROTECTED FROM SMALL-POX.
SHADED LINES REPRESENT THE PROPORTION OF DEATHS FROM SMALL-POX PER 10000 OF POPULATION.

ANNEXURE II.
VACCINATION STATEMENTS.

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	
						Males.	Females.	Total.		Total number of operations.	Under 1 year.
1	2	3	4	5	6	7			8	9	10
1	Anantapur.	Anantapur circle	441,221	185	7	6,718	6,802	12,920	1,846	12,078	7,859
2		Penukonda do.	510,545	119	11	7,493	6,853	14,346	1,304	14,194	7,306
		Total of district	951,766	142	18	14,211	13,655	27,266	1,515	26,873	15,165
3	Bellary.	Bellary circle	885,164	156	10	7,889	7,626	15,514	1,551	15,834	10,309
4		Hospet do.	885,164	156	10	8,093	6,641	14,734	1,473	13,374	9,436
		Total of district	*885,164	156	20	15,981	14,267	30,248	1,512	29,408	19,745
5	Chingleput.	Chingleput circle	1,340,518	438	4	8,511	8,310	16,821	4,205	17,170	8,854
6		Saidapet do.	1,340,518	438	4	7,984	7,702	15,686	3,921	15,146	8,309
7		Ponneri do.	1,340,518	438	4	6,680	6,414	13,100	3,275	13,159	4,715
		Total of district	1,340,518	438	12	23,181	22,426	45,607	3,801	45,475	21,878
8	Chittoor.	Chittoor circle	528,616	194	10	7,737	6,553	14,290	1,439	13,399	6,784
9		Karvetnagar do.	694,025	234	13	11,242	10,854	21,997	1,684	20,068	8,816
		Total of district	1,222,641	215	23	18,980	17,207	36,187	1,573	34,357	14,580
10	Coimbatore.	North Coimbatore circle.	482,392	163	8	7,739	7,584	15,323	1,915	15,531	5,232
11		East do.	554,719	383	8	10,831	10,275	21,106	2,638	20,300	7,472
12		South do.	667,884	211	6	6,228	6,096	12,324	2,054	11,699	5,122
13		Central do.	640,931	414	9	10,515	10,281	20,779	2,308	20,811	7,992
		Total of district	2,052,856	286	31	35,313	34,219	69,532	2,243	68,301	25,808
14	Cuddapah.	Cuddapah circle	303,660	137	8	5,960	5,231	11,191	1,399	11,134	4,866
15		Proddatur do.	267,072	198	7	5,166	4,395	9,561	1,326	10,113	4,606
16		Sidhout do.	305,459	131	8	6,858	5,432	12,290	1,530	11,703	5,586
		Total of district	876,191	148	23	17,984	15,058	33,042	1,437	32,950	15,078
17	Ganjam.	Berhampur circle	2,153,614	257	5	7,609	6,920	14,529	1,614	13,789	7,160
18		Chitacole do.	2,153,614	257	8	6,891	6,125	13,016	1,627	11,394	7,312
19		Ganjam Hill Tracts	2,153,614	257	14	7,772	7,460	15,232	1,088	14,366	4,157
20		Aska circle	2,153,614	257	8	7,232	6,150	13,372	1,671	12,269	4,111
21		Parlakimedi circle	2,153,614	257	7	7,081	6,279	13,410	1,923	11,489	5,380
22		Parushottapur circle	2,153,614	257	8	7,475	6,131	13,607	1,700	13,208	6,090
		Total of district	2,153,614	257	54	44,021	39,145	83,166	1,540	77,020	34,400
23	Godavari.	Cocanada circle	311,838	249	7	9,070	8,204	17,364	2,480	15,006	4,534
24		Rajahmundry do.	574,472	249	11	15,335	13,320	28,656	2,605	26,511	4,820
25		Polavarani do.	130,992	249	6	3,804	3,471	7,305	1,227	6,603	1,816
26		Peddapur do.	427,120	249	10	15,266	13,616	28,882	2,889	26,762	7,250
27		Bhadrachalam do.	75,910	249	5	2,454	2,242	4,696	939	4,830	1,378
		Total of district	1,550,332	249	39	46,020	40,913	86,963	2,230	80,808	19,838

* Excludes Sandur (13,526).

† Includes Hill Tracts.

DEPARTMENT.

Madras Presidency for the official year 1914-15.

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 number of persons successfully vaccinated during previous 5 years.		Average number of deaths from small pox during previous 5 years.	
Successful.		Total number of operations.	Successful.	Unknown.	Primary vaccination.	Re-vaccination.		Primary vaccination.	Re-vaccination.	Number.	Ratio.	Number.	Ratio.
1 and under 6 years.	Total of all ages.	Unknown.											
11	12	13	14	15	16	17	18	19	20	21	22	23	24
4,177	12,235	62	533	511	3	97.4	96.4	28.8	0.5	0.6	...	...	...
5,226	12,913	61	714	600	16	91.6	86.0	26.5	0.5	2.2	...	...	...
9,403	25,238	123	1,247	1,111	19	94.4	90.5	27.0	0.5	1.5	27,137	28.4	176
4,141	15,140	35	178	171	...	95.8	93.1	34.0	0.2	...	...	...	...
3,544	13,439	40	1,348	1,337	3	99.3	99.4	...	0.3	0.2	...	...	...
7,685	28,579	75	1,526	1,508	3	97.4	99.0	34.0	0.3	0.2	28,659	32.4	726
3,384	12,359	2,173	315	129	37	82.4	46.4	...	12.7	11.7	...	...	...
3,434	10,794	2,802	540	206	49	87.4	42.0	...	18.5	9.1	...	...	...
2,753	7,080	2,647	122	20	81	72.6	48.8	...	20.1	66.4	...	...	...
9,571	30,783	7,622	977	355	167	81.3	43.8	23.2	16.8	17.1	36,745	27.4	434
5,817	11,996	344	1,457	845	219	92.0	68.3	24.3	2.0	15.0	...	...	...
10,409	19,857	420	1,440	1,135	123	96.7	90.0	30.3	2.0	8.5	...	...	...
16,226	31,852	773	2,897	2,030	342	94.8	79.5	27.7	2.2	11.8	28,640	23.6	576
4,816	10,463	837	463	267	54	71.4	65.3	21.9	5.6	11.7	...	...	...
5,786	13,594	1,604	1,153	458	156	72.7	45.9	25.3	7.9	13.5	...	...	...
4,152	9,516	603	713	476	82	86.3	75.4	27.2	5.2	11.5	...	...	...
6,709	14,923	1,235	382	180	46	76.1	53.6	23.6	5.9	12.0	...	...	...
21,463	48,496	4,312	2,711	1,381	338	75.9	58.2	24.3	6.3	12.5	50,340	24.5	1,628
3,752	9,313	348	359	265	32	86.7	81.0	31.5	3.5	8.9	...	...	...
4,100	9,438	163	468	405	49	95.4	96.4	37.0	1.6	10.3	...	...	...
4,161	10,784	292	936	856	29	94.5	94.4	38.1	2.5	3.1	...	...	...
12,013	29,585	813	1,783	1,526	102	92.1	92.3	35.5	2.6	6.2	35,105	40.0	410
4,875	12,477	430	794	684	72	93.4	94.7	...	3.1	9.1	...	...	...
2,711	10,518	595	1,498	1,323	103	95.5	95.0	...	5.1	7.1	...	...	...
7,322	13,812	304	993	846	65	96.1	96.2	...	2.1	5.5	...	...	...
6,068	10,980	499	1,210	1,053	87	93.2	93.8	...	4.1	7.2	...	...	...
4,893	10,485	488	1,974	1,587	187	85.2	88.8	...	3.2	9.5	...	...	...
4,982	11,769	544	574	481	55	93.0	94.5	...	4.1	9.8	...	...	...
30,255	70,054	2,850	7,032	4,974	592	94.5	92.3	35.2	3.7	8.0	71,556	83.2	642
6,407	12,385	636	2,683	1,682	559	86.0	79.2	41.5	4.2	20.3	...	...	...
18,019	19,451	2,151	2,893	1,583	478	79.8	65.8	36.6	5.1	16.6	...	...	...
2,708	5,183	330	960	528	112	81.5	66.8	43.6	4.9	12.4	...	...	...
4,619	12,817	796	12,992	10,149	940	80.2	81.2	53.8	4.7	7.2	...	...	...
1,568	3,158	365	111	36	37	70.7	48.6	42.1	7.6	33.3	...	...	...
28,321	52,979	4,278	19,569	13,976	2,126	80.8	80.1	43.2	6.1	10.9	48,841	31.5	556

F

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	
						Average number of persons vaccinated by each vaccinator.			Total number of operations.	Under 1 year.
1	2	3	4	5	6	7			8	9
						Males.	Females.	Total.		
54	Salem.	Salem circle ...	500,811	262	6	8,746	8,455	17,201	2,867	17,717
55		Senkari do. ...	605,833	392	11	11,260	11,416	22,676	2,088	24,612
56		Hosur do. ...	601,883	213	8	9,861	9,929	19,790	2,473	18,222
		Total of district ...	1,707,527	256	25	30,167	29,800	59,967	2,399	61,151
57	South Arcot.	Cuddalore circle ...	494,072	737	4	7,493	8,128	15,616	3,804	15,155
58		Viduthachalam circle ...	481,882	393	6	7,113	6,840	13,953	2,325	14,416
59		Tirukkovilur do. ...	405,559	501	6	7,740	7,113	14,853	2,475	15,086
60		Tindivanam do. ...	395,243	485	5	6,850	6,416	13,266	2,553	13,682
61		Vilupuram do. ...	507,900	755	4	8,664	8,570	17,134	4,223	17,257
		Total of district ...	2,284,665	515	25	37,760	37,064	74,824	2,903	75,598
62	South Canara.	Northern circle ...	1,142,860	285	8	8,333	7,663	15,996	1,999	14,420
63		Central do. ...			8	6,795	6,477	13,272	1,659	11,675
64		Southern do. ...			9	7,346	6,748	14,094	1,566	13,448
		Total of district ...	* 1,142,860	285	25	22,474	20,888	43,362	1,734	39,543
65	Tanjore.	Tanjore circle ...	410,370	417	4	3,992	3,787	7,729	1,932	7,444
66		Negapatam do. ...	536,502	791	9	8,163	7,037	15,203	1,689	13,887
67		Pattukkottai do. ...	563,520	407	10	9,459	8,728	18,182	1,818	18,000
68		Kumbakonam do. ...	618,122	973	7	5,338	5,336	10,674	1,567	11,047
		Total of district ...	2,129,014	578	30	27,253	24,833	52,088	1,736	50,378
69	Tinnevely.	Shermadevi circle ...	1,660,720	381	8	11,371	10,216	21,587	2,698	21,289
70		Srivaikuntam do. ...			9	11,763	10,376	22,139	2,459	21,732
71		Kolpatti do. ...			8	10,973	9,894	20,867	2,608	20,607
		Total of district ...	1,660,720	381	25	34,107	30,486	64,593	2,584	63,088
72	Trichinopoly.	Trichinopoly circle ...	1,941,044	393	12	11,942	11,455	23,397	1,949	22,768
73		Ariyalur do. ...			8	7,629	7,528	15,157	1,894	15,308
74		Namakkal do. ...			9	9,983	9,642	19,580	2,175	19,789
		Total of district ...	† 1,941,044	393	29	29,509	28,625	58,134	2,005	57,865
75	Vizagapatam.	Gunupur circle ...	2,454,029	...	8	4,899	4,308	9,198	1,150	7,836
76		Vizagapatam circle ...			12	15,666	16,017	31,683	2,640	26,311
77		Government vaccinators (Gudem hills) ...			2	602	440	1,042	521	1,025
78		Vizianagram circle ...			13	21,477	22,322	43,799	3,361	27,565
		Pervatipuram do. ...			13	13,052	12,734	25,786	1,984	23,313
		Total of district ...	‡ 2,454,029	...	43	55,037	55,521	111,518	2,423	86,950
79	Koraput.	Jeypore circle ...	365,537	71	9	8,689	8,549	17,238	1,915	15,815
80		Koraput do. ...	229,353	77	7	5,403	5,118	10,521	1,563	9,722
		Total of district ...	624,890	74	10	14,092	13,667	27,759	1,735	25,537
		Total of circles and districts ...	38,771,253	201	680	767,394	708,323	1,475,717	2,170	1,391,810

* Excludes Amindivi islands (3,955). † Excludes Pudukkottai (411,886).
‡ Includes Hill Tracts.

DEPARTMENT.

Madras Presidency for the official year 1914-15—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
7,401	15,483	813	192	104	38	91.6	67.5	31.2	4.6	19.8	...	...	...
12,181	22,482	353	494	399	28	92.7	85.6	37.8	1.4	5.7	...	...	...
6,894	18,033	231	1,597	1,500	29	97.0	95.7	33.5	1.2	1.8	...	...	...
26,476	55,968	1,397	2,283	2,003	95	93.7	91.5	34.0	2.3	4.2	59,517	34.9	519
1,865	10,419	2,718	1,201	761	270	83.8	74.5	22.6	17.9	20.9	...	...	...
6,089	12,893	690	140	101	25	93.9	87.8	27.0	4.8	17.9	...	...	...
5,983	11,745	1,423	249	180	33	96.0	83.3	29.4	9.4	13.3	...	...	...
6,743	11,522	735	139	56	49	89.0	62.2	35.4	5.4	35.3	...	...	...
3,579	13,835	1,511	325	170	74	87.9	67.7	22.8	8.8	22.8	...	...	...
24,259	60,414	7,077	2,144	1,268	451	88.2	74.9	27.0	9.4	21.0	61,645	27.0	1,259
6,505	12,649	574	1,984	1,563	134	91.4	81.2	33.8	4.0	6.8	...	...	...
3,710	10,589	152	1,834	1,630	52	91.9	88.5	33.8	1.3	2.7	...	...	...
5,341	11,611	412	808	598	54	89.1	79.3	33.8	3.0	6.7	...	...	...
15,556	34,849	1,138	4,686	3,731	240	90.7	83.9	33.8	2.9	5.1	41,850	26.6	602
4,114	6,919	111	297	242	9	94.4	84.0	17.4	1.5	3.0	...	...	...
7,077	13,642	55	1,652	1,616	14	98.6	98.7	28.4	0.4	0.8	...	...	...
9,648	17,072	189	423	379	6	95.9	90.9	31.0	1.1	1.4	...	...	...
5,504	10,241	278	185	147	25	95.1	91.9	16.8	2.5	13.5	...	...	...
26,343	47,874	633	2,537	2,384	54	96.2	95.2	23.6	1.3	2.1	65,079	30.6	1,209
7,287	19,442	455	889	725	93	93.3	91.0	36.4	2.1	10.5	...	...	...
7,645	19,969	373	1,056	945	36	93.2	92.6	36.4	1.7	3.4	...	...	...
8,769	18,895	207	553	525	23	92.6	90.6	36.4	1.0	4.2	...	...	...
23,701	58,306	1,036	2,498	2,198	152	93.1	93.6	36.4	1.6	6.1	63,375	38.2	237
10,002	20,983	776	629	509	72	95.4	91.4	26.6	3.4	11.4	...	...	...
7,104	13,385	941	244	178	27	93.2	82.0	26.6	6.1	11.0	...	...	...
8,176	16,423	1,104	123	91	4	87.9	76.5	26.6	5.6	3.8	...	...	...
25,372	50,791	2,821	906	778	103	92.3	87.1	26.6	4.9	10.3	47,472	24.5	698
3,820	7,666	48	1,362	1,283	55	98.4	98.2	...	0.6	4.0	...	...	...
11,303	22,943	1,411	6,330	5,287	417	92.1	89.4	...	5.4	6.6	...	...	...
494	892	83	23	9	12	94.7	81.8	41.3	8.0	52.2	...	...	...
12,910	24,189	1,665	17,267	15,130	1,124	93.4	93.7	...	6.0	6.5	...	...	...
10,373	21,430	733	2,042	2,619	163	94.9	94.2	...	3.1	5.5	...	...	...
38,900	77,120	3,940	27,924	24,238	1,771	93.9	93.0	41.3	4.6	6.3	82,396	33.6	956
9,088	14,427	548	1,683	1,099	64	94.5	67.5	39.3	3.5	3.8	...	...	...
5,701	8,973	339	805	561	92	95.6	78.7	41.0	3.5	11.4	...	...	...
14,789	23,400	887	2,498	1,660	156	94.9	70.9	40.1	3.5	6.2	23,645	37.8	...
559,700	1,204,483	80,898	122,250	95,441	9,117	90.5	84.4	33.5	4.4	17.5	1,231,208	31.5	17,226

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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		
						Males.	Females.	Total.		Total number of operations.	Under 1 year.	
1	2	3	4	5	6	7			8	9	10	
47	Municipalities—cont.	Salem	59,153	13,984	12	1,738	1,412	3,150	1,573	2,899	2,835	
48		Srirangam	24,799	3,543	1	659	599	1,258	1,258	1,236	616	
49		Srivillipattur	29,666	20,761	1	594	518	1,112	1,112	1,004	926	
50		Tanjore	60,341	805	2	1,487	998	2,485	1,242	1,880	1,512	
51		Tellicherry	29,258	11,708	12	842	652	1,494	747	987	925	
52		Tenali	18,195	6,998	1	433	377	810	810	870	555	
53		Tinnevely	44,805	7,469	12	1,239	1,052	2,291	1,145	1,942	1,889	
54		Trichinopoly	123,512	14,899	3	3,753	2,523	6,276	2,092	5,340	4,394	
55		Tirupattur	10,470	4,188	1	300	202	502	502	445	405	
56		Tirupati	16,701	5,010	1	363	219	582	582	424	369	
57		Tiruvallur	21,000	...	1	214	193	407	407	411	243	
58		Tiruvannamalai	21,241	1,931	1	508	421	927	927	896	650	
59		Tuticorin	40,185	11,481	1	1,203	900	2,112	2,112	1,672	1,269	
60		Vaniyambadi	20,406	5,830	1	480	461	941	881	833	588	
61		Vellore	49,748	8,192	2	1,093	826	1,919	1,919	1,635	1,386	
62		Vizagapatam	43,413	8,319	2	1,110	953	2,063	1,081	1,324	928	
63		Vizianagaram	37,550	7,510	2	2,214	1,418	3,632	1,831	2,040	1,150	
64		Walajapet	9,962	9,962	1	281	145	426	426	321	265	
Total of Municipalities.			2,640,596	7,051	117	86,452	60,620	147,142	1,258	116,140	83,149	
Grand Total ' ...			*41,411,849	311	803	869,335	778,251	1,647,586	+ 2,042	1,512,514	636,268	

* Excludes the population of the Cantonnments of Bangalore and Secunderabad.
 † In finding out the average number of persons vaccinated, the total work of
 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.

	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which the 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.	Total cost of department.	Average cost of each successful case.
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under six years.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
By Special staff (statement No. I).	1,471,391	176,195	1,512,514	176,375	90.8	79.1	803	2,042	636,268	582,760	34.8	348,065	14.8
By Dispensary staff (statement No. III).	1	32	1	32	100.0	75.0	...	...	...	...	...	...	...
By other agencies, if any.	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	1,471,392	176,227	1,512,515	176,407	90.8	79.1	803	2,042	636,268	582,760	34.8	348,065	14.8

* Exclusive of the pay and allowances of the Inspector of Vaccination and Deputy Sanitary Commissioners, Northern, Central and Southern Ranges.

DEPARTMENT.

Madras Presidency for the official year 1914-15—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.			Total number of operations.	Successful.	Unknown.	Primary vaccinations.	Re-vaccination.		Primary vaccination.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
1 and under 6 years.	Total of all ages.	Unknown.												
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
41	2,878	...	252	189	...	99.3	75.0	51.8	...	...	2,771	46.8	9	0.2
637	1,199	19	22	17	5	98.5	100.0	49.0	1.5	23.7	1,158	46.7	28	1.1
93	1,041	1	47	32	3	95.2	72.7	36.9	0.09	6.4	1,052	36.2	...	...
269	1,834	...	620	592	20	97.6	78.4	38.7	3.0	3.0	2,487	41.2	83	1.4
25	966	...	516	236	41	97.9	49.5	41.0	...	7.9	1,226	41.9	34	1.2
163	745	17	34	23	1	87.3	75.8	42.3	1.9	2.9	671	36.9	7	0.4
160	1,885	5	381	325	33	97.3	93.4	49.3	0.3	8.7	1,756	39.2	27	0.6
829	5,206	59	936	637	171	98.6	83.3	47.3	1.1	18.3	6,035	48.6	115	0.9
...	442	...	57	52	...	99.3	91.2	47.2	...	...	560	53.5	14	1.3
45	406	1	168	116	28	95.0	89.2	31.3	0.2	17.7	525	31.4	1	0.06
131	380	...	5	4	...	92.5	80.0	18.3	...	...	...	...	...	...
95	822	2	70	58	4	91.9	87.9	41.4	0.2	5.7	787	37.0	20	0.9
309	1,651	2	448	270	137	98.9	86.8	47.8	0.1	30.6	2,577	61.1	32	0.8
125	721	62	76	27	27	93.5	56.2	36.7	7.4	36.0	716	35.1	8	0.4
247	1,635	...	284	106	178	100.0	100.0	35.0	...	62.7	1,896	38.1	21	0.4
259	1,121	6	833	445	118	85.0	62.2	36.1	0.6	14.2	1,390	32.0	19	0.4
337	1,692	21	1,705	1,323	78	83.8	81.3	80.3	1.0	4.6	2,704	72.0	14	0.4
24	302	5	110	64	25	95.6	75.3	36.7	...	22.7	416	41.8	4	0.4
22,608	108,742	1,341	33,734	22,223	3,480	94.7	73.5	50.0	1.2	10.3	131,162	50.1	1,748	0.7
582,760	1,317,276	81,968	176,375	129,111	13,250	90.8	70.1	34.9	4.1	7.5	1,359,177	32.7	19,115	0.5

medical subordinates is excluded.
 vaccinated, equals 41,308 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 1914-15—continued.

Number.	Districts.	Circles.	Expenditure—cont.			Paid from				Total.*	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
			Travelling allowance.	Contingencies.*	Total cost.*	Imperial funds.	Provincial funds.	Local funds.*	Municipal funds.			
			17	18	19	20	21	22	23	24	25	26
			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	Madras.	Anantapur circle	418 13 1	644 2 6	3,247 1 4	...	1,123 9 9	2,123 7 7	...	3,247 1 4	12,596	0 4 0
2	Madras.	Penakonda do.	375 15 0	658 1 0	3,228 10 3	...	1,083 5 9	2,135 4 6	...	3,228 10 3	13,543	0 3 10
3	Madras.	Total of district	794 12 1	1,322 3 6	6,475 11 7	...	2,206 15 6	4,258 12 1	...	6,475 11 7	26,139	0 3 11
4	Madras.	Bellary circle	1,016 11 9	705 14 10	4,131 2 8	...	972 18 6	3,158 5 2	...	4,103 2 8	15,311	0 4 0
5	Madras.	Uospat do.	331 2 10	690 13 9	3,840 13 4	...	1,051 7 8	2,789 5 8	...	3,840 13 4	14,770	0 4 2
6	Madras.	Total of district	1,347 14 7	1,396 12 7	7,972 0 0	...	2,024 5 2	5,947 10 10	...	7,972 0 0	30,087	0 4 3
7	Madras.	Chingleput circle	976 12 6	635 0 4	3,794 3 9	...	1,553 10 0	2,247 9 9	...	3,794 3 9	12,485	0 4 10
8	Madras.	Saidapet do.	1,000 4 9	553 5 5	3,706 0 5	...	1,554 7 7	2,211 8 10	...	3,706 0 5	11,800	0 5 0
9	Madras.	Ponnéri do.	798 5 0	613 1 1	3,627 14 10	...	1,578 8 0	2,219 6 10	...	3,627 14 10	7,650	0 7 7
10	Madras.	Total of district	2,775 6 3	1,801 6 10	11,188 3 6	...	4,689 9 7	6,488 9 5	...	11,188 3 6	31,133	0 5 9
11	Madras.	Chittoor circle	924 12 3	575 5 11	3,873 5 7	...	1,313 10 5	2,559 11 2	...	3,873 5 7	12,841	0 4 10
12	Madras.	Karimnagar circle	993 6 7	1,020 2 9	4,431 7 2	...	1,108 15 7	3,322 7 7	...	4,431 7 2	21,042	0 3 4
13	Madras.	Total of district	1,920 2 5	1,595 8 8	8,304 12 3	...	2,422 10 6	5,882 2 9	...	8,304 12 3	32,883	0 3 11
14	Madras.	North Coimbatore circle	563 7 2	1,119 10 0	3,549 6 8	...	1,088 9 0	2,460 13 8	...	3,549 6 8	10,730	0 5 3
15	Madras.	East do.	374 9 4	995 5 8	3,751 1 7	...	1,350 0 0	2,401 1 7	...	3,751 1 7	14,052	0 4 4
16	Madras.	South do.	335 11 7	455 10 7	2,699 1 6	...	1,303 9 11	1,385 7 7	...	2,699 1 6	9,932	0 4 8
17	Madras.	Central do.	418 16 0	931 10 7	2,878 14 8	...	1,552 3 1	2,126 11 7	...	3,678 14 8	15,103	0 3 10
18	Madras.	Total of district	1,932 11 1	3,052 4 10	13,703 8 5	...	5,654 6 0	8,054 2 5	...	13,703 8 5	49,877	0 4 5

14	Cuddapah.	Cuddapah circle	681 8 9	855 13 8	3,855 13 5	...	1,211 5 3	2,544 8 2	...	3,855 13 5	9,578	0 8 5
15	Cuddapah.	Proddutur do.	535 13 8	529 3 3	2,092 2 3	...	968 8 8	1,783 9 7	...	2,092 2 3	9,833	0 5 0
16	Cuddapah.	Etahad do.	731 12 6	548 14 3	3,563 12 9	...	1,167 11 11	2,402 0 10	...	3,563 12 9	11,940	0 4 10
17	Cuddapah.	Total of district	1,929 2 11	1,931 1 3	10,117 12 5	...	3,387 9 10	6,730 2 7	...	10,117 12 5	31,111	0 5 2
18	Ganjam.	Berhampur circle	492 11 6	594 10 0	3,053 3 6	...	1,223 8 3	1,855 11 2	...	3,053 3 6	13,161	0 3 9
19	Ganjam.	Chascole do.	395 8 0	459 3 8	2,996 15 11	...	1,165 10 6	1,801 5 5	...	2,996 15 11	11,841	0 4 0
20	Ganjam.	Ganjam Hill tracts	1,297 10 0	680 1 0	4,632 1 8	...	4,639 1 8	4,639 1 8	...	4,639 1 8	14,888	0 5 0
21	Ganjam.	Ashtole do.	325 6 0	712 9 3	2,787 13 1	...	1,009 13 4	1,777 13 9	...	2,787 13 1	12,033	0 3 9
22	Ganjam.	Purushamed circle	377 12 0	693 3 7	3,089 8 2	...	1,480 7 2	1,008 12 0	...	3,089 8 2	13,055	0 4 1
23	Ganjam.	Purushottapur do.	305 0 0	633 11 5	2,992 15 7	...	1,023 0 8	1,966 14 11	...	2,992 15 7	12,230	0 3 10
24	Ganjam.	Total of district	3,105 15 6	3,653 6 9	19,564 4 11	...	10,573 9 7	8,960 11 4	...	19,564 4 11	76,028	0 4 1
25	Godavari.	Cocanada circle	640 0 0	779 1 3	3,618 13 10	...	1,056 13 7	2,562 0 3	...	3,618 13 10	11,017	0 4 1
26	Godavari.	Rajahmundry do.	833 6 5	363 14 10	4,171 8 0	...	1,055 5 10	3,106 2 2	...	4,171 8 0	21,034	0 3 2
27	Godavari.	Polararam do.	912 4 2	532 8 11	3,189 7 6	...	1,288 12 9	1,900 10 0	...	3,189 7 6	5,714	0 8 11
28	Godavari.	Peddapur do.	503 10 7	1,132 8 6	4,452 7 9	...	940 12 9	3,431 11 0	...	4,452 7 9	22,905	0 3 1
29	Godavari.	Bhadrachalam do.	539 10 10	398 8 5	3,357 5 10	...	3,305 5 10	...	...	3,357 5 10	3,124	0 3 10
30	Guntur.	Guntur circle	4,185 0 0	3,676 9 11	18,727 10 11	...	7,707 2 9	11,020 6 2	...	18,727 10 11	69,555	0 4 6
31	Guntur.	Narasaraopet circle	725 13 4	1,450 5 10	4,570 0 1	...	1,418 0 6	3,151 13 7	...	4,570 0 1	23,203	0 2 9
32	Guntur.	Dajala circle	598 8 8	1,968 11 9	3,415 15 10	...	1,191 15 9	2,464 0 1	...	3,415 15 10	21,396	0 3 7
33	Guntur.	Total of district	738 19 1	787 9 11	4,910 8 1	...	1,119 15 9	2,890 9 4	...	4,910 8 1	23,901	0 3 1
34	Krishna.	Ellora circle	2,031 0 1	3,307 5 6	11,996 9 0	...	3,430 0 0	8,566 9 9	...	11,996 9 9	68,203	0 2 10
35	Krishna.	Masulipatnam circle	1,404 8 1	874 1 6	5,332 5 2	...	1,237 9 9	4,094 11 5	...	5,332 5 2	23,958	0 3 2
36	Krishna.	Narasapur do.	1,220 5 7	1,041 15 7	5,506 11 6	...	1,578 12 0	3,930 15 8	...	5,506 11 6	23,393	0 3 11
37	Krishna.	Total of district	3,842 12 9	2,832 7 3	16,084 8 10	...	4,164 11 9	11,929 13 1	...	16,084 8 10	74,043	0 3 6
38	Kurnool.	Cumbum circle	639 0 6	777 14 2	4,694 1 7	...	1,901 2 0	2,792 15 7	...	4,694 1 7	16,738	0 4 6
39	Kurnool.	Kurazol do.	225 15 10	833 7 10	3,681 7 8	...	938 13 4	2,743 10 4	...	3,681 7 8	18,592	0 3 2
40	Kurnool.	Total of district	926 9 4	1,611 6 0	8,375 9 3	...	2,839 15 4	5,475 9 11	...	8,375 9 3	35,327	0 3 10
41	Madras.	Diadigal circle	910 3 0	838 13 5	4,033 10 7	...	1,492 2 4	2,541 8 3	...	4,033 10 7	15,703	0 4 1
42	Madras.	Madura do.	840 4 2	716 3 8	3,716 10 0	...	1,560 14 6	2,155 11 6	...	3,716 10 0	10,292	0 5 10
43	Madras.	Udumalpet do.	971 8 9	914 15 11	4,362 9 1	...	1,137 5 4	2,875 5 4	...	4,362 9 1	15,546	0 4 5
44	Madras.	Total of district	2,721 15 11	3,470 1 0	12,632 13 8	...	4,180 4 7	7,972 9 1	...	12,632 13 8	41,458	0 4 6
45	Madras.	Madras Presidency.	3,543 8 0	...	16,149 14 1	...	16,149 14 1	...	...	16,149 14 1	...	...
46	Madras.	Total of district	3,543 8 0	...	16,149 14 1	...	16,149 14 1	...	...	16,149 14 1	...	...

* Includes cost of lymph supplied by King Institute of Preventive Medicine during 1914-15. † Includes the pay and allowances of the Dy. Sanitary Commissioners, Northern, Central and Southern Ranges.

A—VACCINE DEPARTMENT.

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1914-15—continued.

Expenditure.															
Circles—cont.		Total pay of establishment.													
Districts—cont.		Peons, etc.													
Number—cont.		Pay.													
1		16													
2		15													
3		14													
4		13													
5		12													
6		11													
7		10													
8		9													
9		8													
10		7													
11		6													
12		5													
13		4													
14		3													
15		2													
16		1													
17		0													
18		0													
19		0													
20		0													
21		0													
22		0													
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33		0													
34		0													
35		0													
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100		0													

* Includes two pupil vaccinators.

A—VACCINE DEPARTMENT.

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1914-15—continued

Number.	Districts.	Circles.	Expenditure—cont.				Paid from				Total.*	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
			Travelling allowance.	Congruencies.*	Total cost.*	RS. A. P.	Imperial funds.	Provincial funds.	Local funds.*	Municipal funds.			
			17	18	19	RS. A. P.	20	21	22	23	24	25	26
40	Malabar.	Tellicherry circle	1,074 9 9	1,356 12 1	5,170 2 1	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	5,130 2 1	25,576	0 3 2
41		Calicut do.	1,257 4 3	1,759 13 8	3,506 9 9	...	...	1,825 11 11	3,304 6 2	...	5,130 2 1	25,576	0 3 2
42		Palghat do.	1,347 6 3	2,066 3 1	6,511 4 2	...	...	1,304 6 2	4,202 3 7	...	6,511 4 2	24,989	0 3 6
43		Malappuram circle	1,176 11 3	1,447 4 11	4,955 1 3	...	...	1,557 9 2	4,553 11 0	...	4,955 1 3	24,410	0 2 4
44	Nellore.	Total of district	4,853 0 6	6,630 1 9	22,103 1 3	...	...	5,913 6 0	16,189 11 8	...	22,103 1 3	129,680	0 2 9
45		Kavali	278 10 3	683 5 7	3,401 13 5	...	...	1,261 1 6	2,240 11 11	...	3,401 13 5	15,084	0 3 8
46		Gudur	892 10 11	514 10 0	4,524 8 11	...	...	1,475 9 6	3,047 15 5	...	4,524 8 11	14,510	0 5 0
47	Nilgiris.	Kanigiri	532 4 1	580 9 11	3,274 5 0	...	...	386 5 0	2,888 6 0	...	3,274 5 0	14,166	0 3 8
48		Total of district	1,740 9 3	1,728 8 6	11,290 11 4	...	...	3,624 0 0	7,666 11 4	...	11,290 11 4	43,780	0 4 2
49		Nilgiris circle	894 0 0	648 0 4	8,484 8 7	...	...	2,168 3 6	1,316 5 1	...	3,484 8 7	4,601	0 12 1
50	North Arcot.	Total of district	894 0 0	648 0 4	8,484 8 7	...	...	2,168 3 6	1,316 5 1	...	3,484 8 7	4,601	0 12 1
51		Vellore circle	939 10 9	498 15 6	2,700 6 8	...	...	1,315 11 11	1,384 10 9	...	2,700 6 8	12,639	0 3 5
52		Ramanagudam do.	811 8 6	459 7 10	9,912 2 10	...	...	1,553 11 6	1,438 7 4	...	2,992 2 10	11,611	0 4 0
53	Ramanad.	Polur do.	803 9 3	532 13 0	2,763 6 3	...	...	1,110 0 1	1,364 6 2	...	2,783 6 3	11,711	0 3 10
54		Tirupattur do.	691 9 7	687 4 5	4,412 11 5	...	...	1,555 6 0	2,887 5 5	...	4,442 11 5	13,641	0 3 7
55		Total of district	3,246 6 1	2,178 8 9	12,868 11 2	...	...	5,493 13 6	7,374 13 8	...	12,868 11 2	55,602	0 3 4
56	South Arcot.	Sivillipattur circle	711 4 7	636 14 11	3,411 4 10	...	...	1,145 11 5	1,865 9 5	...	3,411 4 10	17,660	0 3 1
57		Paramagudi do.	313 14 6	697 15 11	3,898 5 0	...	...	1,335 2 6	2,563 2 6	...	3,898 5 0	19,005	0 3 3
58		Tirupattur do.	761 8 10	845 11 4	4,114 6 1	...	...	1,299 7 6	2,814 14 7	...	4,114 6 1	18,001	0 3 8
59	South Arcot.	Total of district	1,786 11 11	2,180 10 2	11,423 15 11	...	...	4,080 5 5	7,343 10 6	...	11,423 15 11	54,666	0 3 4
60	South Arcot.	Cuddalore circle	924 11 10	664 0 5	3,633 11 10	...	...	1,488 5 9	2,137 6 1	...	3,625 11 10	11,180	0 5 2
61		Virudhachalam do.	710 11 2	463 7 10	2,748 13 11	...	...	1,457 12 10	1,541 1 1	...	2,798 13 11	12,994	0 3 5
62		Tirukkoyilur do.	531 5 0	585 8 10	2,231 5 3	...	...	1,042 9 9	1,588 11 6	...	2,631 5 3	11,925	0 3 6
63	South Arcot.	Tindivanam do.	897 0 9	548 13 7	3,754 4 0	...	...	1,470 2 1	2,284 1 11	...	3,754 4 0	14,005	0 4 3
64		Villupuram do.	480 0 1	660 1 9	2,573 6 4	...	...	917 9 5	1,655 12 11	...	2,573 6 4	11,578	0 3 7
65		Total of district	3,672 12 10	2,862 0 5	15,383 9 4	...	...	6,176 7 10	9,207 1 6	...	15,383 9 4	61,682	0 4 0
66	South Arcot.	Northern circle	824 4 0	463 0 10	4,402 6 4	...	...	1,431 13 6	2,970 8 10	...	4,402 6 4	14,152	0 5 0
67		Central do.	834 3 8	398 9 4	3,883 7 1	...	...	1,242 15 10	2,646 7 3	...	3,889 7 1	12,219	0 5 1
68		Southern do.	1,153 12 8	553 6 10	4,363 13 1	...	...	1,349 2 6	3,014 10 7	...	4,363 13 1	12,509	0 5 9
69	Tanjore.	Total of district	2,812 4 4	1,385 1 0	12,655 10 6	...	...	4,023 15 10	8,631 10 8	...	12,655 10 6	38,680	0 5 3
70		Tanjore circle	274 15 0	325 7 1	2,163 10 0	...	...	1,227 9 4	923 0 8	...	2,163 11 0	7,161	0 4 10
71		Nagapattam do.	213 11 3	637 10 10	2,538 3 3	...	...	1,073 0 1	1,785 3 2	...	2,855 3 3	13,338	0 3 0
72	Tinnevely.	Palakkottai do.	283 4 0	707 2 1	2,901 2 2	...	...	1,054 13 0	1,936 5 2	...	2,991 2 2	17,451	0 2 9
73		Kumbakonam do.	226 2 0	556 12 5	2,981 2 9	...	...	876 10 2	1,904 8 7	...	2,691 2 9	10,888	0 3 3
74		Total of district	908 0 3	2,297 0 5	10,691 2 2	...	...	4,242 0 7	5,919 1 7	...	10,691 2 2	50,258	0 3 4
75	Tinnevely.	Sernadevi circle	278 3 0	632 15 8	3,187 15 2	...	...	1,139 14 0	2,048 1 2	...	3,187 15 2	10,107	0 2 6
76		Sivakuntam do.	695 12 2	632 2 8	3,736 8 9	...	...	1,286 15 2	2,449 9 7	...	3,736 8 9	20,914	0 2 10
77		Kollpatti do.	426 2 9	594 15 11	3,316 4 8	...	...	1,621 15 0	1,794 5 8	...	3,316 4 8	19,423	0 2 8
78	Tinnevely.	Total of district	1,302 1 11	1,850 2 3	10,240 12 7	...	...	3,948 12 2	6,292 0 5	...	10,240 12 7	60,504	0 2 8
79		Trichinopoly circle	822 6 10	1,229 7 6	5,323 4 0	...	...	1,477 3 6	3,816 0 6	...	5,323 4 0	21,492	0 4 0
80		Ariyalur do.	601 5 1	817 8 8	4,050 2 3	...	...	1,088 6 0	2,981 12 3	...	4,050 2 3	13,683	0 4 9
81	Tinnevely.	Nannakkal do.	650 3 5	994 9 11	3,926 3 11	...	...	1,073 8 1	2,852 11 10	...	3,926 3 11	16,514	0 3 10
82		Total of district	2,073 15 4	3,041 10 1	13,299 10 2	...	...	3,619 1 7	9,680 8 7	...	13,299 10 2	51,569	0 4 2
83		Ganapur circle	1,188 12 0	512 9 8	3,529 9 9	...	...	1,223 6 9	2,306 3 0	...	3,529 9 9	8,949	0 6 4
84	Vizagapatnam.	Vizagapatnam circle	837 14 1	1,314 2 9	4,840 10 0	...	...	1,308 13 11	3,391 12 1	...	4,840 10 0	28,230	0 2 8
85		Government vaccinators (Gudem hills).	104 5 7	116 10 7	461 14 1	...	...	431 14 1	3,706 11 10	...	431 14 1	901	0 8 7
86		Vizagapatnam circle	713 10 5	1,612 15 4	4,761 9 1	...	...	1,654 13 3	3,706 11 10	...	4,761 9 1	33,319	0 1 11
87	Vizagapatnam.	Pavattipuram do.	738 5 6	935 13 1	4,172 2 9	...	...	1,127 15 7	3,044 3 2	...	4,172 2 9	24,049	0 2 9
88		Total of district	3,582 15 7	4,582 3 5	17,585 13 8	...	...	5,136 15 7	13,448 14 1	...	17,585 13 8	1,01,448	0 2 9
89		Isipore circle	989 10 4	775 8 10	4,304 8 1	...	...	2,162 1 2	2,142 6 11	...	4,304 8 1	15,526	0 4 5
90	Koraput.	Koraput do.	1,030 13 9	761 14 8	4,200 9 5	...	...	1,533 0 5	2,367 9 0	...	4,200 9 5	9,534	0 7 0
91		Total of district	2,000 8 1	1,537 7 6	8,305 1 6	...	...	3,695 1 7	4,509 15 11	...	8,305 1 6	25,080	0 5 5
92		Grand total of districts	61,424 1 11	62,057 1 11	3,20,496 10 11	...	...	1,21,683 1 9	1,95,313 9 2	...	3,20,496 10 11	12,99,399	0 3 11

* Includes cost of lymph supplied by King Institute of Preventive Medicine during 1914-1915.

A—VACCINE DEPARTMENT.

Statement No. II showing the Cost of the Department in the Madras Presidency during the official year 1914-15—continued.

Expenditure.

Number.	Municipalities.	Inspector of Vaccination and Deputy Sanitary Commissioner.			Deputy Inspectors.			Vaccinators.				Fees, etc.		Total pay of establishment.
		Pay.	First grade.	Second grade.	Third grade.	Pay.	First class.	Second class.	Probationers.	Pay.	Number.	Pay.		
1		3	4	5	6	7	8	9	10	11	12	13	14	15
1	Municipalities.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
2	Adoni							1		5-3 5-4				803 5-4
3	Anantapur							1		75 0 0				75 0 0
4	Anakapalle							2		187 8-8				187 8-8
5	Bellary							1		623 15-9				623 15-9
6	Berhampur							1		260 0 0				260 0 0
7	Bozavada							1		266 2 0	1	92 0 0		358 2 0
8	Bimlipatam							1		287 11-7				287 11-7
9	Calicut							1		579 6-9				579 6-9
10	Cananore							1		240 0 0				240 0 0
11	Chitacole							1		240 0 0				240 0 0
12	Chidambaram							1		222 3-4				222 3-4
13	Chingleput							1		144 10 0				144 10 0
14	Cochin							1		228 0 0				228 0 0
15	Cocanada							1		449 8 0				449 8 0
16	Cotabatore							3		556 10-8				556 10-8
17	Conjeveram							2		329 8-9				329 8-9
18	Cumoor							1		240 0 0				240 0 0
19	Cuddalore							1		420 0 0				420 0 0
20	Cuddapah							1		156 0 0				156 0 0
21	Dindigul							1		185 0 0				185 0 0
22	Ellore							1		376 10-10				376 10-10
23	Erode							1		327 0 0				327 0 0
24	Gudiyatham							1		131 8-3				131 8-3
25	Guntur							1		214 2-1				214 2-1
26	Hospet							1		97 2-1				97 2-1
27	Karar							1		267 8-0				267 8-0
28	Kodakūnal							1		30 0 0				30 0 0
29	Kumbakonam							2		579 0 2				579 0 2
30	Kurnool							1		270 0 0				270 0 0
31	Madras							1		10,321 11-2				11,579 5-1
32	Madura							1		985 5-8				985 5-8
33	Mamargudi							1		141 0 0				141 0 0
34	Mangalore							1		623 0 0				623 0 0
35	Masulipatam							1		311 7-5				311 7-5
36	Mayavaram							1		283 0 0				283 0 0
37	Nandyal							1		160 0 0				160 0 0
38	Necapattam							1		547 8-2				547 8-2
39	Nellore							1		256 14-3				256 14-3
40	Ongole							1		187 0 0				187 0 0
41	Ootacamund							1		215 8-0				215 8-0
42	Palamcottah							1		403 5-8				403 5-8
43	Palghat							1		364 4-0				364 4-0
44	Parakkimedi							1		245 5-9				245 5-9
45	Periyakulam							1		141 11-9				141 11-9
46	Pohi							1		194 0 0				194 0 0
47	Rajahmundry							1		360 0 10				360 0 10
48	Salem							1		390 0 0				390 0 0
49	Sitragam							1		294 13-6				294 13-6
50	Situllipattar							1		138 0 0				138 0 0
51	Tanjore							1		290 8-6				290 8-6
52	Tellicherry							1		294 0 0				294 0 0
53	Tenali							1		189 0 0				189 0 0
54	Tinnevely							1		372 0 0				372 0 0
55	Trichinopoly							1		447 14-2				447 14-2
56	Tirupattur							1		192 0 0				192 0 0
57	Tirupati							1		180 0 0				180 0 0
58	Tiruvallur							1		165 0 0				165 0 0
59	Tiruvannamalai							1		196 0 0				196 0 0
60	Tuticorin							1		228 3-1				228 3-1
61	Vaniyambali							1		117 10-8				117 10-8
62	Vellore							1		438 1-6				438 1-6
63	Vizagapatam							1		408 0 0				408 0 0
64	Vizianagaram							1		382 0 0				382 0 0
65	Walaipet							1		116 8-3				116 8-3
66	Walaipet							1		30,577 8-4				30,577 8-4
67	Bangalore							1		336 0 0				336 0 0
68	Secunderabad							1		860 0 0				860 0 0
69	Total							4		360 0 0				360 0 0
70	Grand total							103		1,51,965 2-8				2,30,129 6-8

* Medical Vaccinators.
+ Assistant Vaccinators.
‡ Clerks.

§ Includes two Vaccinator employed for six months from February 1915.

A—VACCINE DEPARTMENT.

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1914-15—continued.

Number.	Municipalities.	Expenditure—cont.			Paid from			Total	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
		17	18	19	20	21	22			
		Travelling allowance.	Contingencies.	Total cost.	Imperial funds.	Provincial funds.	Local funds.	Municipal funds.		
		RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		
1	Adoni		98 2 1	401 7 5				401 7 5	1,293	0 5 0
2	Anantapur		19 13 7	94 13 7				94 13 7	221	0 6 10
3	Anakapalle		36 8 0	223 13 8				223 13 8	763	0 4 8
4	Bellary		96 11 3	720 11 0				720 11 0	3,048	0 3 9
5	Berhampur		42 0 0	302 0 0				302 0 0	1,562	0 2 4
6	Bezwada		64 11 0	422 13 0				422 13 0	1,615	0 4 1
7	Bimalpatam		20 9 6	256 5 1				256 5 1	497	0 8 3
8	Calicut		343 3 6	927 10 3				927 10 3	6,500	0 2 3
9	Cannanore		102 14 0	342 14 0				342 14 0	1,815	0 3 5
10	Chitacole		26 13 0	266 13 0				266 13 0	634	0 6 9
11	Chidambaram		47 9 7	269 12 11				269 12 11	740	0 5 3
12	Chingleput		63 6 0	208 0 0				208 0 0	818	0 5 7
13	Cochin		37 8 7	265 8 7				265 8 7	1,208	0 2 9
14	Cocanada		156 9 2	606 1 2				606 1 2	1,803	0 5 5
15	Colombatore		100 7 7	687 2 3				687 2 3	1,799	0 6 1
16	Conjeevaram		140 5 5	469 14 2				469 14 2	1,765	0 4 5
17	Coonor		22 14 0	282 14 0				282 14 0	575	0 7 4
18	Cuddalore		159 13 8	579 13 9				579 13 9	2,386	0 3 10
19	Cuddapah		53 14 8	209 14 8				209 14 8	809	0 4 2
20	Dindigul		29 0 9	214 0 9				214 0 9	1,164	0 2 11
21	Ellore		88 8 9	465 3 7				465 3 7	3,257	0 2 3
22	Erode		50 11 9	277 11 9				277 11 9	822	0 5 5
23	Gudiyattam		* 31 4 10	* 162 13 1				162 13 1	503	0 3 3
24	Guntur	33 4 16	† 167 4 9	† 477 12 8				477 12 8	1,629	0 4 11
25	Hospet		47 10 1	144 12 2				144 12 2	765	0 3 0
26	Karur		34 9 3	302 1 3				302 1 3	409	0 11 10

Number.	Municipalities.	Expenditure—cont.			Paid from			Total	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
		17	18	19	20	21	22			
		Travelling allowance.	Contingencies.	Total cost.	Imperial funds.	Provincial funds.	Local funds.	Municipal funds.		
		RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		
27	Kodakanal		5 5 10	95 5 10				95 5 10	89	1 1 2
28	Kumbakonam		49 6 0	628 6 2				628 6 2	1,953	0 3 6
29	Kurnool		27 13 11	397 13 11				397 13 11	1,078	0 4 5
30	Madras	3 8 6	3,807 10 9	15,436 8 4				15,436 8 4	23,623	0 10 4
31	Madura		825 0 11	1,810 6 7				1,810 6 7	11,533	0 2 8
32	Manargudi		42 12 11	186 12 11				186 12 11	795	0 3 9
33	Margalore		126 4 9	848 4 9				848 4 9	2,602	0 5 3
34	Masilupatam		154 5 7	470 13 0				470 13 0	1,604	0 4 8
35	Mavayaram		83 14 11	321 14 11				321 14 11	1,262	0 4 0
36	Medikal		24 2 0	184 2 0				184 2 0	739	0 4 0
37	Nagapattinam		313 4 5	860 12 7				860 12 7	4,443	0 3 1
38	Nellore		106 7 6	465 13 9				465 13 9	1,622	0 4 0
39	Ongole		62 1 4	249 1 4				249 1 4	800	0 5 0
40	Oolacund		† 91 14 2	† 337 6 2				337 6 2	1,460	0 3 4
41	Palacottah		71 0 1	546 5 9				546 5 9	2,172	0 4 0
42	Palghat		160 13 2	525 1 2				525 1 2	2,004	0 4 2
43	Parakkimedi		27 13 0	273 2 9				273 2 9	1,069	0 4 2
44	Periyakulam		21 7 2	163 2 11				163 2 11	809	0 3 3
45	Pohai		26 7 3	230 7 2				230 7 2	900	0 3 11
46	Rajahmundry		81 2 8	473 3 6				473 3 6	2,573	0 2 11
47	Salem		224 6 3	614 6 3				614 6 3	3,067	0 3 2
48	Sarangam		64 3 2	339 0 8				339 0 8	1,218	0 4 9
49	Shivilliputtur		36 4 2	169 4 2				169 4 2	1,672	0 2 6
50	Tanjore		132 11 7	423 3 7				423 3 7	2,336	0 2 10
51	Tellicherry		32 2 9	398 2 9				398 2 9	1,201	0 5 4
52	Tenali		37 9 0	236 9 0				236 9 0	770	0 4 8
53	Tinnevely		50 15 0	493 15 0				493 15 0	2,310	0 3 7
54	Trichinopoly		475 7 5	928 5 7				928 5 7	5,543	0 2 6
55	Tripattur		17 6 1	299 6 1				299 6 1	494	0 6 9
56	Tirupati		14 8 2	101 8 2				101 8 2	522	0 6 0
57	Tiruvallur	1 1 0	27 8 11	103 10 5				103 10 5	384	0 8 0
58	Tiruvannamalai		52 11 7	248 11 7				248 11 7	880	0 4 6
59	Tuticorin		88 1 5	311 4 6				311 4 6	1,921	0 2 7
60	Vaniyambudi		127 7 9	555 9 3				555 9 3	1,748	0 5 2
61	Vellore		88 8 10	496 8 10				496 8 10	1,760	0 5 1
62	Vizagapatam		1180 2 5	562 2 5				562 2 5	3,015	0 3 0
63	Vizianagaram		31 4 0	147 12 3				147 12 3	369	0 6 5
64	Wajahpet									
Total of Municipalities		23 14 6	9,972 12 7	40,574 3 5				40,574 3 5	180,965	0 4 11
Bengalore		240 0 0	188 7 2	576 0 0				576 0 0	589	0 15 8
Secunderabad		150 0 0		2,568 14 5				2,568 14 5	9,822	0 4 2
Total		420 0 0	188 7 2	3,144 14 5				3,144 14 5	10,411	0 4 10
Grand Total		61,868 0 5	72,218 5 8	94,215 12 9				94,215 12 9	144,412,985	0 4 0

* Includes Rs. 0-0-11 being the cost of lymph ordered to be recovered for 1912-13.
† Excludes Rs. 5-0-0 being the amount realized by vaccinating children at their houses.
‡ Rs. 35-0-0 being the amount realized for vaccinating children at their houses.
N.B.—The average cost of each successful case was calculated on the total number of successful vaccinations performed by the special staff only viz., Local Fund, Government, Municipal and Cantonment staffs (Vide G.O. No. 1153-L, Mis., dated 4th September 1911).

B—DISPENSARY VACCINATION.

STATEMENT No. III showing Dispensary Vaccination in the Madras Presidency for the official year 1914-1915.

Districts.	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.			Unknown.	Total number of operations.	Successful.	Unknown.		Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.
						Under one year.	Over one and under six years.	Total of all ages.									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Anantapur	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bellary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chittoor	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cuddapah	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ganjam	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Godavari	..	..	..	23	..	..	..	..	..	..	32	16	12	100.0	75.0	..	37
Guntur	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kistna	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kurnool	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Madras	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Madura	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Malabar	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nellore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nilgiris	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
North Arcot	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ramanud	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Salom	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Arcot	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Canara	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tanjore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tinnevely	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Trichinopoly	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Vizagapatam	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Koraput	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	32	..	1	..	..	1	..	32	15	12	100.0	75.0	..	37	

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

STATEMENT No. IV showing the number of persons primarily vaccinated and the number of those persons who were successfully vaccinated in the Madras Presidency in each of the undermentioned years.

Persons primarily vaccinated.																				
1905-1906.		1906-1907.		1907-1908.		1908-1909.		1909-1910.		1910-1911.		1911-1912.		1912-1913.		1913-1914.		1914-1915.		
Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	Total number.	Number success-fully vaccinated.	
29,645	24,797	19,058	18,054	12,948	11,557	12,478	11,819	12,448	11,758	11,244	10,270	11,897	10,546	15,946	13,254	17,492	17,915	19,849	17,892	
1,235,539	1,093,920	1,207,334	1,081,371	1,302,814	1,176,323	1,373,583	1,265,846	1,319,314	1,163,626	1,240,902	1,027,350	1,222,550	1,193,191	1,277,697	1,119,548	1,335,023	1,223,086	1,336,727	1,190,556	
4,832	4,602	5,041	4,892	4,667	4,542	5,164	5,072	4,154	4,028	4,187	3,993	3,606	3,421	4,821	4,681	5,021	4,916	4,282	3,249	
13,914	10,355	4,356	3,980	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
111,455	103,242	116,054	110,989	108,261	102,615	110,659	106,433	111,045	105,198	111,754	102,748	111,070	103,928	103,170	99,018	110,076	106,613	113,408	108,742	
8,984	7,014	1,304	1,024	83	78	129	120	18	18	5	6	65	60	17	11	6	6	1	...	
2,370	1,834	3,038	2,380	2,121	1,538	1,045	758	369	214	411	239	497	322	206	118	139	114	131	117	
1,406,989	1,191,393	1,457,745	1,292,901	1,437,924	1,290,473	1,503,368	1,289,511	1,447,338	1,284,539	1,363,172	1,144,638	1,467,446	1,240,527	1,401,547	1,233,625	1,467,757	1,331,745	1,471,862	1,317,277	
Total	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

* As per G.O. No. 1186 L, M.S., dated 4th September 1911.

STATEMENT No. V showing Particulars of Vaccination verified by Inspecting Officers during 1914-15.

Districts.	Total number inspected				Percentage of inspection to total number vaccinated.				Percentage of cases found successful to total number inspected.				Percentage of success as reported by Vaccinators.				
	By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.		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 District Medical and Sanitary Officers.		Primary vaccination.	Re-vaccination.			
	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.					
Anantapur ...	20,238	1,346	432	41	14,537	513	...	...	1-8	3-0	57-0	28-1	...	...	...	94-2	88-9
Bellary ...	32,367	4,157	8	1,301	24,219	433	...	...	0-02	32-7	73-5	10-4	...	...	...	97-1	81-1
Chingleput ...	46,985	1,435	808	76	37,253	760	...	...	1-8	5-3	79-3	54-4	...	...	...	81-8	61-7
Chittoor ...	23,714	3,555	322	76	22,278	1,154	...	...	1-0	6-1	68-1	37-8	...	...	...	94-9	79-9
Coimbatore ...	69,660	5,512	125	1,454	43,851	1,750	...	...	0-2	26-4	62-3	32-5	...	...	...	92-2	83-1
Cuddapah ...	31,831	2,161	853	1,125	23,935	469	...	...	2-7	5-8	75-4	23-1	...	...	...	92-2	83-1
Ganjam ...	78,351	9,076	1,095	839	60,382	5,393	...	...	1-4	9-2	77-0	59-4	...	...	...	94-5	92-0
Godavari ...	71,662	22,123	482	221	51,515	7,833	1,291	...	0-7	1-0	72-5	35-4	...	...	...	80-8	77-7
Guntur ...	61,402	15,753	29	...	44,155	11,182	2,877	...	0-04	...	71-9	71-0	...	...	...	91-0	81-5
Kistna ...	81,817	6,400	13	...	58,714	450	2,365	...	0-01	...	71-8	7-0	...	...	...	91-7	87-4
Kurnool ...	33,428	4,864	1,017	172	25,098	1,613	...	...	3-0	3-5	74-9	33-2	...	...	...	96-6	92-0
Madras ...	22,013	6,757	...	...	49,457	2,431	...	...	0-2	...	74-4	4-3	...	...	...	97-8	84-3
Madura ...	66,512	6,037	120	40	49,457	2,431	...	...	...	0-7	74-4	4-3	...	...	...	86-4	63-1
Malabar ...	1,55,312	8,821	2,455	1,366	79,166	1,837	...	...	1-6	1-6	61-0	21-6	...	...	...	90-0	66-1
Nellore ...	41,989	6,032	719	110	31,812	2,832	...	...	1-6	1-6	70-7	35-7	...	...	...	88-8	78-7
Nilgiris, The ...	5,750	1,223	1,167	816	3,867	196	...	...	21-0	66-7	68-6	16-0	...	...	...	97-3	85-9
North Arcot ...	67,131	1,736	820	4	54,513	674	2,327	...	0-8	0-3	81-2	43-5	...	...	...	90-9	85-6
Ramanad ...	56,358	1,801	425	88	40,299	298	...	...	0-8	6-8	71-5	17-5	...	...	...	97-4	95-0
Salem ...	60,352	4,459	2,822	933	44,472	1,427	1,509	...	2-6	5-7	69-0	24-6	...	...	...	94-0	89-8
South Arcot ...	75,007	2,452	1,332	139	69,855	1,622	...	...	...	...	...	...	...	...	...	88-6	76-7
South Canara ...	40,544	5,204	2,550	507	27,054	3,235	...	...	6-3	9-6	63-2	61-5	...	...	...	91-2	85-2
Tanjore ...	59,928	4,778	4,341	970	30,015	1,506	1,950	...	7-6	20-3	60-1	39-7	...	...	...	95-9	88-4
Tinnevely ...	67,433	3,949	1,633	339	40,512	1,240	...	...	2-4	8-8	60-1	32-2	...	...	...	93-4	82-8
Trichinopoly ...	64,125	2,161	3,032	574	47,110	843	...	...	4-8	20-6	73-5	43-6	...	...	...	93-0	85-5
Vizagapatam ...	67,774	31,432	82	...	47,907	13,444	...	...	0-09	...	54-7	42-8	...	...	...	93-5	81-4
Koraput ...	25,281	2,408	684	19	18,325	1,997	...	...	2-7	0-8	72-5	70-9	...	...	...	94-9	70-9
Total	1,103,952	1,103,952	27,812	10,194	991,207	65,203	12,319	415	1-8	6-2	77-0	39-8	0-8	0-8	94-4	95-6	85-2

* Information not available.

† Excludes cases performed in cantonments.

STATEMENT No. VI showing the Number of Vaccinations performed in Municipal Towns on children under one year of age (G. O. No. 1634 L., dated 6th December 1909.)

Municipalities.	Number of births available for vaccination during the year 1914-1915.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending March 1915.	Date of extension of compulsory vaccination to municipalities.
1	2	3	4	5
Adoni ...	1,611	253	664	1st Dec. 1886.
Anantapur ...	262	42	03	1st Jan. 1886.
Anakapalle ...	753	131	477	1st Nov. 1891.
Bellary ...	1,827	483	789	1st Jan. 1891.
Berhampur ...	1,057	242	514	15th April 1891.
Bezawada ...	1,242	362	649	1st May 1892.
Bimlipatam ...	317	34	146	1st Jan. 1894.
Calicut ...	3,512	504	2,207	1st Oct. 1891.
Cannanore ...	1,232	222	740	1st June 1891.
Chicacole ...	623	119	319	1st Dec. 1890.
Chidambaram ...	695	167	358	1st July 1891.
Chingleput ...	525	121	416	1st April 1897.
Cochin ...	729	179	711	1st Jan. 1894.
Cocanada ...	1,988	343	947	1st June 1890.
Coimbatore ...	1,936	544	671	1st Jan. 1889.
Conjeevaram ...	2,414	644	1,765	1st Jan. 1891.
Coonoor ...	328	42	96	1st April 1887.
Cuddalore ...	2,107	668	1,438	1st Aug. 1896.
Cuddapah ...	592	131	233	15th July 1888.
Dindigul ...	1,245	322	776	16th July 1886.
Elore ...	2,152	612	1,320	1st June 1888.
Erds ...	711	112	402	1st April 1891.
Gudiyattam ...	806	107	493	1st June 1889.
Guntur ...	1,545	513	720	1st Jan. 1914.
Hospet ...	494	62	281	1st April 1892.
Karur ...	647	91	212	1st Sept. 1900.
Kodaikanal ...	124	32	44	1st April 1889.
Kumbakonam ...	1,905	472	937	1st Aug. 1883.
Kurnool ...	1,128	256	547	1st July 1891.
Madurai ...	4,578	1,243	2,808	1st Jan. 1889.
Mannargudi ...	752	148	409	1st Dec. 1890.
Mangalore ...	1,848	369	1,219	1st Sept. 1891.
Masulipatam ...	1,473	338	784	1st May 1898.
Mayavaram ...	831	230	469	1st Oct. 1886.
Nandyal ...	660	134	353	1st Jan. 1890.
Negapatam ...	1,787	311	2,183	1st July 1885.
Nellore ...	1,146	228	380	1st Aug. 1886.
Onole ...	543	120	300	1st Dec. 1885.
Ootacamund ...	759	187	409	1st July 1887.
Palacottah ...	1,641	444	820	1st May 1886.
Palghat ...	2,027	483	1,237	1st Jan. 1884.
Parakkimedi ...	773	151	482	1st Dec. 1900.
Periyakulam ...	960	195	488	1st Feb. 1891.
Pulni ...	659	140	426	1st Dec. 1891.
Rajahmundry ...	1,513	509	802	1st Jan. 1893.
Salem ...	3,289	650	2,477	1st May 1891.
Srirangam ...	815	254	332	1st July 1888.
Sevilliputtur ...	1,800	245	854	1st Jan. 1886.
Tanjore ...	2,258	483	1,447	1st July 1893.
Tenali ...	715	173	314	1st April 1910.
Tellicherry ...	1,257	242	840	15th Jan. 1892.
Tinnevely ...	1,930	599	1,025	1st July 1886.
Trichinopoly ...	3,698	883	2,622	1st Aug. 1890.
Tirappattur ...	459	127	209	1st April 1891.
Tirupati ...	417	71	275	1st Mar. 1890.
Tiruvallur ...	230	45	81	...
Tiruvannamalai ...	875	143	661	15th Dec. 1897.
Tuticorin ...	1,551	423	915	1st May 1892.
Vaniyambadi ...	738	109	427	1st May 1889.
Vellore ...	2,224	401	1,276	1st Jan. 1897.
Vizagapatam ...	1,370	286	610	1st Aug. 1890.
Vizianagaram ...	1,338	362	702	1st Jan. 1891.
Watajapat ...	439	93	193	20th June 1892.
Total ...	81,836	18,465	47,115	

STATEMENT No. VII showing Inspection Work done by the Deputy Inspectors during the year 1914-15.

District.	Circle.	Number of inspecting officers.			Number of villages visited.				Total number of cases vaccinated.	Number of days spent on inspection duty.	Number of cases verified.				Total number of successful cases as reported by Deputy Inspectors.	Percentage of successful cases to the total number inspected as reported by Deputy Inspectors.	Proportion per cent. of inspection to total number vaccinated.		
		First-grade Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	First-grade Deputy Inspectors.			Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Anantapur.	Anantapur	...	...	1	...	...	226	13,212	236	...	...	7,760	7,760	7,060	91.0	...	...	58.7	
	Penakonda	...	...	1	...	...	567	14,908	250	...	...	7,710	7,710	5,066	73.5	...	...	51.7	
Ballary	Bellary	...	...	1	...	...	313	16,012	214	...	...	11,569	11,569	9,541	82.5	...	...	72.8	
	Hospet	...	...	1	...	...	803	14,922	266	...	...	13,083	13,083	12,238	93.5	...	...	87.7	
Chingleput	Chingleput	...	1	...	...	826	...	17,485	238	...	14,581	...	...	12,267	84.1	...	...	...	
	Satdapat	...	1	...	630	...	...	15,686	219	13,198	...	...	13,198	11,469	86.9	...	...	...	
Chittoor	Ponné	...	1	...	732	...	...	13,281	221	10,262	...	...	10,262	8,883	89.6	...	...	...	
	Chittoor	...	1	...	...	1,298	...	14,846	224	...	11,268	...	...	9,429	83.7	...	...	...	
Coimbatore.	Karvetnagar	...	...	1	...	...	...	22,408	223	...	...	12,164	12,164	11,914	93.0	...	...	...	
	North Coimbatore	...	1	...	...	...	289	15,994	304	...	...	12,341	12,341	9,301	75.3	...	...	...	
Cuddapah	South do.	...	...	...	...	221	...	12,342	197	...	8,232	...	...	7,420	90.1	...	...	...	
	East do.	...	1	...	1,221	...	...	21,453	272	13,307	...	...	13,307	9,719	73.0	...	...	...	
Ganjam	Central do.	...	1	...	332	...	...	21,223	215	11,258	...	...	...	9,487	84.3	...	...	...	
	Cuddapah	...	1	...	986	...	...	11,493	268	7,578	...	...	...	5,408	71.4	...	...	...	
Ganjam	Proddatur	...	...	1	...	...	245	10,561	230	...	...	7,742	7,742	6,124	89.4	...	...	...	
	Sidhout	...	1	...	...	241	...	12,639	238	...	9,174	...	...	8,204	89.4	...	...	...	
Ganjam	Berhampur	...	...	1	...	...	820	14,553	232	...	...	12,384	12,384	11,143	90.0	...	...	...	
	Chicacole	...	1	...	...	...	...	13,102	224	...	...	11,512	11,512	10,732	93.2	...	...	...	
Ganjam	Ganjam Hill Tracts	...	...	1	...	...	701	15,659	214	...	...	8,772	8,772	8,092	92.2	...	...	...	
	Aska	...	...	1	...	...	782	13,479	229	...	...	10,149	10,149	9,083	89.5	...	...	...	
Ganjam	Parlakimedi	...	...	1	...	...	...	13,463	254	11,540	...	...	...	10,474	90.8	...	...	...	
	Purushottapur	...	1	...	...	...	624	13,767	311	...	...	11,418	11,418	10,566	92.5	...	...	...	
Godavari	Cocanada	...	...	1	...	...	332	17,689	206	...	...	11,719	11,719	9,837	88.9	...	...	...	
	Rajahmundry	...	...	1	...	...	269	29,294	251	...	...	17,430	17,430	13,075	75.0	...	...	...	
Godavari	Polavaram	...	...	1	...	...	303	7,390	213	...	...	4,514	4,514	3,272	72.5	...	...	...	
	Peddapur	...	...	1	...	...	274	29,754	234	...	...	21,013	21,013	17,410	82.9	...	...	...	
Godavari	Bhadrachalam	...	...	1	...	...	343	4,941	189	...	...	4,672	4,672	3,356	71.8	...	...	...	
	Bhadrachalam	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

Guntur	Guntur	...	...	...	157	...	...	30,078	277	17,413	...	...	17,412	14,406	82.7	...	...	...
Kistna	Narasaraopet	...	...	...	...	...	...	23,475	252	...	...	...	19,512	15,816	81.0	...	...	...
	Bapatla	...	...	...	...	...	...	23,306	212	...	...	...	15,413	15,627	84.9	...	...	...
Kurnool	Ellore	...	...	...	...	...	...	29,009	286	...	...	...	...	20,599	87.7	...	...	...
	Masulipatam	...	...	...	...	...	...	25,048	257	20,200	...	...	...	17,111	84.7	...	...	...
Madras	Narasapur	...	...	...	...	...	...	28,635	242	...	15,478	...	...	13,496	87.8	...	...	...
	Guntur	...	...	...	...	...	...	17,584	262	12,943	...	...	...	11,019	85.1	...	...	...
Madura	Kuracol	...	...	...	...	...	...	19,838	278	...	...	...	...	10,982	80.2	...	...	...
	Madras	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madr	Dindigul	...	...	...	...	...	...	21,114	249	20,709	...	...	...	17,554	84.8	...	...	...
	Madura	...	...	...	...	...	...	17,218	264	...	...	...	...	10,010	75.4	...	...	...
Madr	Udampatti	...	...	...	...	...	...	20,773	228	17,909	...	...	...	16,536	86.7	...	...	...
	Tellicherry	...	...	...	...	...	...	30,034	280	14,906	...	...	...	14,998	83.3	...	...	...
Madr	Calicut	...	...	...	...	...	...	29,198	230	...	...	...	...	15,561	85.8	...	...	...
	Palghat	...	...	...	...	...	...	62,070	284	...	...	...	...	22,087	85.4	...	...	...
Nellore	Malappuram	...	...	...	...	...	...	38,067	242	...	...	...	...	18,773	89.0	...	...	...
	Kavali	...	...	...	...	...	...	17,529	285	...	...	...	...	10,208	85.3	...	...	...
Nigiris	Gudur	...	...	...	...	...	...	16,583	281	11,361	...	...	...	10,058	88.5	...	...	...
	Kanigiri	...	...	...	...	...	...	18,230	194	...	...	...	...	8,943	70.9	...	...	...
North Arcot.	The Nilgiris	...	...	...	...	...	...	4,715	256	...	...	...	...	3,880	96.7	...	...	...
	Vellore	...	...	...	...	...	...	14,617	289	...	...	...	...	13,015	92.5	...	...	...
North Arcot.	Ranipet	...	...	...	...	...	...	14,653	177	13,783	...	...	...	13,785	85.5	...	...	...
	Pohar	...	...	...	...	...	...	15,513	282	...	...	...	...	11,711	85.7	...	...	...
North Arcot.	Tirupattur	...	...	...	...	...	...	22,044	256	...	...	...	...	13,657	91.8	...	...	...
	Brillipattur	...	...	...	...	...	...	18,937	253	14,194	...	...	...	14,104	95.1	...	...	...
North Arcot.	Paramagudi	...	...	...	...	...	...	19,647	203	...	...	...	...	12,606	95.7	...	...	...
	Tirupattur	...	...	...	...	...	...	18,370	225	...	...	...	...	13,896	94.4	...	...	...
North Arcot.	Salem (Central)	...	...	...	...	...	...	17,909	216	12,882	...	...	...	13,882	87.4	...	...	...
	Sankari	...	...	...	...	...	...	25,106	214	...	...	...	...	20,009	88.6	...	...	...
North Arcot.	Hosur	...	...	...	...	...	...	29,410	325	...	...	...	...	13,008	86.9	...	...	...
	Cuddalore	...	...	...	...	...	...	16,446	185	...	...	...	...	13,675	85.8	...	...	...
North Arcot.	Viduthachalam	...	...	...	...	...	...	14,558	238	...	...	...	...	13,283	91.1	...	...	...
	Tirukkoyilar	...	...	...	...	...	...	15,335	219	...	...	...	...	12,410	93.1	...	...	...
North Arcot.	Tindivanam	...	...	...	...	...	...	13,831	232	...	...	...	...	11,112	87.3	...	...	...
	Villupuram	...	...	...	...	...	...	17,552	229	13,967	...	...	...	14,005	87.5	...	...	...
North Arcot.	North Arcot	...	...	...	...	...	...	16,404	261	10,583	...	...	...	10,583	90.0	...	...	...
	Central do.	...	...	...	...	...	...	13,569	228	8,460	...	...	...	7,801	88.2	...	...	...
North Arcot.	Southern do.	...	...	...	...	...	...	14,256	321	...	...	...	...	11,247	89.9	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Old cases were also inspected.

† Information could not be furnished as the post of Deputy Inspector of Vaccination has been abolished.

Government of Madras.

LOCAL AND MUNICIPAL DEPARTMENT.

District.	Circle.	Number of inspecting officers.						Total number of cases vaccinated.	Number of days spent on inspection duty.	Number of cases verified.			Total number of cases inspected by Deputy Inspectors of all sorts.	Total number of successful cases as reported by Deputy Inspectors.	Percentage of successful cases to the total number inspected as reported by Deputy Inspectors.	First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	Proportion per cent. of inspection to total number vaccinated.		
		First-grade Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.			First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.									
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	1	1	1	211	8,387	9,409	11,854	8,387	6,949	82.9	...	...	...	108.3*	...	...
Tanjore	Nagapattinam	1	1	1	1	1	1	1	238	...	...	...	9,409	8,697	92.4	...	...	...	64.3	...	...
Tanjore	Pattukkottai	1	1	1	1	1	1	1	258	...	...	...	11,854	11,854	96.9	...	...	...	64.3	...	...
Tanjore	Kumbakonam	1	1	1	1	1	1	1	250	...	...	...	8,261	6,629	80.2	...	...	...	73.5	...	...
Tanjore	Sermadurai	1	1	1	1	1	1	1	285	...	...	...	14,015	13,064	93.2	...	...	...	...	...	...
Tanjore	Sriekunkulam	1	1	1	1	1	1	1	251	...	...	...	15,423	13,038	84.5	...	...	...	...	...	...
Tanjore	Koilpatti	1	1	1	1	1	1	1	288	...	...	...	12,375	10,907	88.0	...	...	...	...	...	...
Tanjore	Trichinopoly	1	1	1	1	1	1	1	215	...	...	...	15,851	14,515	91.6	...	...	...	...	...	...
Tanjore	Ariyalur	1	1	1	1	1	1	1	223	...	...	...	15,605	12,804	82.2	...	...	...	...	...	...
Tanjore	Namakkal	1	1	1	1	1	1	1	283	...	...	...	16,627	14,886	89.8	...	...	...	...	...	...
Tanjore	Ganapuri	1	1	1	1	1	1	1	184	...	...	...	4,607	4,246	92.2	...	...	...	...	...	...
Tanjore	Vizagapatnam	1	1	1	1	1	1	1	339	...	...	...	18,640	15,484	83.0	...	...	...	...	...	...
Tanjore	Vizianagaram	1	1	1	1	1	1	1	205	...	...	...	21,308	18,321	77.5	...	...	...	...	...	...
Tanjore	Pervatipuram	1	1	1	1	1	1	1	229	...	...	...	16,787	13,625	81.1	...	...	...	...	...	...
Tanjore	Jeypore	1	1	1	1	1	1	1	245	...	...	...	12,004	9,825	81.8	...	...	...	...	...	...
Tanjore	Koraput	1	1	1	1	1	1	1	226	...	...	...	8,318	7,103	85.4	...	...	...	...	...	...
Tanjore		1	1	1	1	1	1	1	19,443	306,401	314,587	485,182	1,056,470	906,753	85.8	77.1	61.8	71.7	...	...	...

* Old cases were also inspected.

Recd.

Revd.

Enclosures

Spare copies

1915.

G.O. No. 1248 L., 6th September 1915.

Vaccination.

Reviewing the report on the working of the — Department in the Madras Presidency during the year 1914-15.

L: 5: 663. 21/10/1914
N 15

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following paper:—

Letter—from the Sanitary Commissioner for Madras.
To—the Secretary to Government, Local and Municipal Department.
Dated—the 17th August 1915.
No.—325-V.

ABSTRACT.—Submitting report on the working of the Vaccination Department in the Madras Presidency for the official year 1914-15.

Order—No. 1248 L., dated 6th September 1915.

The report on vaccination, which was due with the Government on the 1st July, was received on the 20th August. This delay is explained as due to the late receipt of returns from two deputy inspectors of vaccination, one of whom has been punished for default.

2. The chief features of the year were—

- (i) a slight increase of 0.6 per cent. in the total number of cases vaccinated;
- (ii) a rise of 27.1 per cent. under the head of re-vaccination in local fund areas, including the agency tracts and a fall of 15.8 per cent. in municipalities;
- (iii) a decline from 91.8 to 90.8 in the percentage of success under primary vaccinations and from 80.5 to 79.1 under re-vaccinations;
- (iv) a fall from 33.9 to 33.5 in local fund areas including agency tracts and a fall from 50.7 to 50 in municipal areas in the proportion of successful operations per mille of the population;
- (v) a further increase of 3.7 per cent. in the number of successful operations on children under one year of age;
- (vi) a rise from As. 3-8 to As. 3-10 in the average cost of each successful case; and
- (vii) an increase in the registered mortality from small-pox.

3. An unusual feature of the year was the increased rate of success secured during the hot months of the year. The Sanitary Commissioner suggests that this may be due to unreliable returns from the vaccinators. The Sanitary Commissioner will doubtless impress upon deputy inspectors of vaccination the necessity for checking the work of vaccinators more closely. The result of the experiments which are said to be in progress with a view to secure a more durable vaccine will be awaited. In paragraph 4 (1) of his report on vaccination the Inspector of Vaccination points out that the efficiency of vaccination and the consequent decrease in small-pox depend largely on improvement in the pay and prospects of vaccinators and therefore suggests that proposals for the improvement of the vaccination staff may be approved and given effect to as proposals are received from each district board, without waiting until proposals from all districts are received and sanctioned. The Government, however, are unable to accept this suggestion, as the scheme depends very largely on the

number of deputy inspectors of vaccination required for the efficient control of the work and as this establishment forms one cadre for the whole Presidency. The Government hope to be in a position to issue general orders in regard to the whole Presidency in the course of the current year.

(True Extract.)

J. P. BEDFORD,
Acting Secretary to Government.

To the Sanitary Commissioner.
 " the Sanitary Engineer.
 " the Surgeon-General.
 " the Public Department.
 " the Judicial Department.
 " the Revenue Department.
 " the Assistant Quartermaster-General, 6th (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.

தமிழ்நாடு ஆவணக்காப்பக நூலகம்,
எழும்பு, சென்னை-600 008.

தவணைத்தாள்.

சே. எண் :

ப. எண் :

வழங்கிய நாள். (1)	திருப்பிய நாள். (2)	வழங்கிய நாள். (1)	திருப்பிய நாள். (2)
22/6/20			