

REPORT

(250)

ON

VACCINATION IN THE MADRAS
PRESIDENCY

FOR THE YEAR

1923-24

MADRAS

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS

1924

D. No. 245-P.H.

OFFICE OF THE DIRECTOR OF PUBLIC HEALTH,
MADRAS, 28th June 1924.

From

DR. K. T. MATTHEW, D.Hy. (Durham), D.P.H. (Cantab),
Officiating Director of Public Health, Madras,

To

THE SECRETARY TO GOVERNMENT,

LOCAL SELF-GOVERNMENT (PUBLIC HEALTH) DEPARTMENT, MADRAS.

SIR,

I have the honour to submit the Report on Vaccination in the Madras Presidency for the year 1923-24.

1. The District Health Scheme, which had been in force in the districts of Kistna, Kurnool, Tanjore, Trichinopoly and Vizagapatam, was on 1st April 1923 extended to the remaining districts of the Presidency with the exception of the Nilgiris and the Agency portions of Ganjam, Gōdāvari and Vizagapatam. Consequent on this extension, Government in their Order No. 555-P.H., dated 30th March 1923, sanctioned 205 posts of Health Inspectors (including the old Deputy Inspectors of Vaccination). There being however 219 taluks in the Presidency, the distribution of Health Inspectors, one to every taluk, could not be effected on the principle laid down by Government that a Health Inspector should be in charge of each taluk. Requests from certain local bodies for additional hands were also subsequently received and so on my recommendation, Government in G.O. No. 1719-P.H., dated 16th October 1923, sanctioned 14 additional appointments to complete the required number.

2. The administration and control of vaccination in rural areas continued to be vested in the Taluk Boards during the year. But in the case of the Nilgiris, the control is vested in the District Board—there being no taluk boards in the district. The question of the centralization of this control in the District Boards is under the consideration of Government and orders thereon are awaited.

During the year, the Agency Division which was under the control of the Agency Commissioner was abolished and Government in G.O. No. 52-P.H., dated 10th January 1924, transferred the control of vaccination and sanitation in the Agency areas to the District Medical Officers and the Agents to the Governor in Ganjam and Vizagapatam and the Government Agent, Gōdāvari.

3. During the year, glycerine lymph was used in all local board areas and municipalities and a set of clear instructions for its use was drawn up by the Director, King Institute of Preventive Medicine, Guindy, and forwarded to all officers in the Public Health Department for information and guidance.

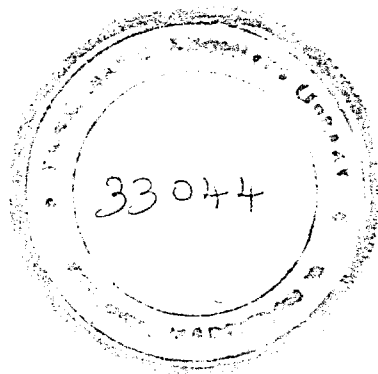
4. The Vaccination Code was revised and published during the year under the name, the Public Health Code—Vaccination section—and copies thereof were distributed to all officers responsible for the administration of vaccination in the Presidency.

5. Routine vaccination work was suspended in the hot-weather months during the year in all districts and municipalities except the Nilgiris. The off-season was specially utilized by the Health staff in detecting a large number of births and unprotected children which had escaped registration. Proposals have been received from a few District Health Officers for effecting certain alterations in the hot-weather period of cessation of vaccination obtaining in their districts for special reasons, and these are receiving my separate consideration.

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6. Captain N. R. Ubhaya was Assistant Director of Public Health in charge of Southern Range and Dr. B. Ethirajulu Nayudu of Central Range, till 1st October 1923, when their duties were re-allocated on a functional basis. Under this arrangement, Captain Ubhaya was in charge of vaccination throughout the Presidency for the remaining period. Captain R. B. Subrahmanyam was in charge of Northern Range till 16th August 1923, when he was reverted to his permanent appointment as Health Officer, Ootacamund Municipality, owing to reduction in the number of Assistant Directors of Public Health.

7. The subjoined statement shows the inspection work of the Assistant Directors of Public Health:—

Range.	Name.	Date.	Places inspected.	Purpose.
Northern Range.	Captain R. Subrahmanyam.	1923. 7th to 9th Apr. ...	Bezwada	Attended Pushkaram Committee meetings.
		21st Apr.	Do.	Do.
		28th June and 4th to 7th July.	Nellore district	Vaccination inspection of the district and anti-malarial investigation at Dugrazapattam.
		8th July	Narasaraopet	To concert measures for the relief of congestion.
		17th Apr.	Chittoor	Investigation into the cause of low death-rate.
		18th and 19th Apr.	Puttalapattu	Do.
		20th Apr.	Tirupati	Investigation into the abnormally high death-rate under respiratory diseases.
		21st to 23rd Apr. ...	Kūlahasti	Do.
		24th and 25th Apr.	Puttūr	Do.
		26th to 28th Apr. ...	Tiruttani	Do.
Central Range.	Dr. B. Ethirajulu Nayudu.	23rd and 24th May.	Chidambaram	Inspection of Vital Statistics.
		25th May	Vāniyambūdi	Do.
		27th and 28th May.	Walajapet	Routine Sanitary inspection.
		22nd to 24th June.	Nandyal	Do.
		25th and 26th June.	Bellary	Investigation regarding the influence of railways on the spread of plague in the town.
		26th and 27th June.	Hospet	Do.
		29th July to 1st Aug.	Coonoor	Relapsing fever investigation.
		6th and 7th Aug. ...	Māyavaram	Vital statistics investigation.
		10th Aug.	Mannārgudi	Do.
		12th Aug.	Sivakāsi	Do.
Southern Range.	Capt. N. R. Ubhaya.	14th Aug.	Srivilliputtūr	Do.
		17th Aug.	Bōdmayakkanūr	Do.
		18th and 19th Aug.	Sīrangam	Selection of a site for a public latrine.
		20th and 21st Aug.	Erode	Inspection of vital statistics and vaccination.
		22nd to 24th Aug.	Calicut	Vital statistics investigation.
		29th to 31st Aug. ...	Dhūrāpūram	Routine sanitary inspection and vital statistics investigation.
		11th to 18th Sep. ...	Coimbatore	Routine sanitary inspection.
		27th to 29th Oct. ...	Proddatūr taluk	Inspection of smallpox in rural areas.
		30th and 31st Oct.	Proddatūr	Routine sanitary inspection.
		2nd to 4th Nov. ...	Bellary	Do.
Assistant Director of Public Health (Vaccination).	Capt. N. R. Ubhaya.	14th to 16th Dec. ...	Hindupur and Penukonda taluks.	Relapsing fever investigation.
		15th Dec.	Hindupur	Detailed inspection of vaccination and registration of births and deaths.

Range.	Name.	Date.	Places inspected.	Purpose.
Assistant Director of Public Health (Vaccination)—cont.	Capt. N. R. Ubhaya—cont.	1923. 17th and 18th Dec.	Markapur taluk	Relapsing fever investigation.
		19th and 20th Dec.	Bellary	Inspection of smallpox in the municipality.
		1924. 11th to 14th Jan. ...	Tuticorin	Plague investigation in the municipality.
		15th and 16th Jan.	Do.	Routine sanitary inspection.
		17th and 18th Jan.	Madura	Inspection of National Health and Baby Week arrangements in the district.
		18th Jan.	Rāmnaḍ	Do.
		19th Jan.	Trichinopoly	Do.
		21st Jan.	Tanjore	Do.
		22nd Jan.	Māyavaram	Inspection of a tank.
		23rd Jan.	Cuddalore	Inspection of National Health and Baby Week arrangements in the district and water-supply scheme.
		3rd Feb.	Ranipet	Plague investigation.
		17th and 18th Feb.	Chingleput	Inspection of a rice mill.

Reports of these inspections were received by me and necessary action taken.

8. The following table exhibits the subordinate vaccination staffs employed in the Presidency during 1923-24 as compared with the previous year:—

Years.	Health Inspectors.	Vaccinators.			
		First.	Second	Probationary.	Total.
1922-23 *	119	165	380	191	736
1923-24 ...	229 †	155	400	169	724

* Deputy Inspectors of Vaccination (old designation).

† This includes 1 Health Inspector in the Nilgiris district and 9 Health Inspectors in the Agency districts but excludes 16 Local Fund Sanitary Inspectors who were also given range work.

The increase noticed in the strength of Health Inspectors is due to the additional hands entertained as a result of the introduction of the District Health Scheme in the Presidency during the year. The slight decrease in the total number of vaccinators may be attributed to the non-entertainment of extra vaccinators owing to smallpox being less prevalent as compared with the previous year.

9. At the beginning of the year, there were in all 25 Local Fund Sanitary Inspectors who were nominally working in the District Health Scheme, though only 16 of them were actually doing range work. The other 9 Local Fund Sanitary Inspectors were really attending to Local Fund work. A few of the Taluk Boards have since dispensed with the services of the Local Fund Sanitary Inspectors and some others are attempting to follow suit. This action has dislocated work to a certain extent and to make up for it, it is proposed to reshuffle the Provincial Health Inspectors throughout the Presidency.

Owing to the existence of special circumstances, such as epidemics, fairs and festivals, etc., and also in consideration of the wide extent of the taluks in some districts, requests for additional Health Inspectors have been made to me by the District Health Officers of Ganjām, Trichinopoly, Tanjore, Madura, Chittoor and Salem. This matter is being enquired into and will form the subject of a separate communication to Government.

10. The full complement of vaccinators qualified in accordance with G.O. No. 963 L., dated 4th July 1917, was not employed in a large majority of the

districts, because attempts to secure properly qualified men were not made by the Taluk Boards. Special stress was laid on the subject by this department in previous vaccination reports but with no tangible result. Presidents of local boards should be required to appoint the full number with the least possible delay. There is no dearth of qualified hands now, and if only the local boards would offer adequate pay and allowances, any number of qualified men will be readily forthcoming. The district of North Arcot gives a more adequate pay to its vaccinators and it would be well for the other districts to follow its example.

Here it may be mentioned that only in a few districts in the Presidency the posts of vaccinators are pensionable. As an important step towards improving the efficiency of this branch of administration, the other District Boards would be well advised to make the posts of vaccinators pensionable at as early a date as possible.

11. The new scheme of vaccination was in force during the year throughout the Presidency and the rules for working the scheme were revised and re-issued in G.O. No. 832-P.H., dated 23rd May 1923. The quality of vaccination in general showed a distinct improvement over the results recorded last year. The obstacles to the progress of vaccination alluded to in paragraph 13 of the last year's report remain much the same as before and any attempt at improvement is not possible until the revenue authorities and magistracy evince a more genuine interest in the progress of vaccination. The District Health Officer, Ganjam, brings to notice, in this connexion, an instance, reported by a Health Inspector, where two villages were badly infected with smallpox, and where all efforts made by the Inspector to improve vaccination proved futile. He then applied to the Taluk Officer for help. That officer wrote back to say that he visited the villages, spoke to the people on the efficacy of vaccination, but they turned a deaf ear to him. He also said that they thought that smallpox was due to the influence of a Goddess and that vaccination would only incense her. The Assistant Director of Public Health (Vaccination) brings to notice another instance in which the Village Munsif of Madakasira, who is also the President of the Union Board, stoutly refused in writing to render any help to the Health Inspector on inspection duty or to produce the vaccination register for his inspection.

12. The instructions regarding vaccination in rural areas are still being honoured more in the breach than in their observance and unless the village officers are made to realize their responsibilities in the matter of vaccination, all the efforts of the Public Health Department will not be of much avail. Generally, the Village Munsifs are also very indifferent in making prompt reports about outbreaks of smallpox, so much so, the disease is often widespread before the Health staff get any information. This is a serious obstacle to effective action. In certain cases, the outbreaks are not reported at all, and the Health staff come to hear about them during their usual visits to the affected villages. In all these cases, all that is possible is to report the delinquent Village Munsifs to the Revenue Divisional Officers or Collectors concerned for necessary action. This matter has also been the subject of a separate correspondence with the Government. The Revenue authorities should be requested to co-operate with the officers of the Public Health Department by awarding exemplary punishments to defaulters when these are brought to their notice by the Health staff.

13. The practice of assembling children either for vaccination or for inspection at a central place although required under the rules is seldom observed anywhere in the Presidency, even in the areas where vaccination is compulsory. The Health staff in consequence are much handicapped in their vaccination and verification work by their having to go from door to door. Instances of gross neglect of duty on the part of the Village Munsifs when reported are lightly disposed of.

14. Another factor of great importance for the successful conduct of vaccination is the introduction of compulsory vaccination throughout the Presidency, except perhaps in such very backward parts as the Agency. Already the introduction of this important measure is engaging the serious attention of a few District Boards and it is hoped that other District Boards will follow suit.

15. The indifference of the village officers in the proper maintenance of the village vaccination registers is another great obstacle to the progress of vaccination. The record of work done by the District Health staff in this direction during the last vaccination off-season shows how numerous are the omissions of unprotected cases in the registers. Complaints preferred by the Health staff on this account are often taken no notice of. The instructions laid down in regard to the maintenance of these registers by Presidents of Union Boards in union areas, are in some instances not given effect to. The District Health Officer, Trichinopoly, reports that the Lalgudi Union Board has refused to undertake this duty and has formally passed a resolution to that effect.

16. The kits of vaccinators in certain districts were either not promptly supplied or were very unsatisfactory. A circular detailing the list of articles to be supplied to vaccinators was issued to all local bodies during the year and they were requested to see that the supply was made promptly. It has been suggested that it would conduce to greater efficiency if the supplies and renewals of equipments are undertaken by the District Boards themselves, recovering the cost thereof from the Taluk Boards in due course. This is worth consideration.

17. In regard to the enforcement of the compulsory provisions of vaccination there seems to be wide variations between one district and another. The great majority of the Taluk Boards show disinclination to sanction prosecutions. This hampered the work of vaccination a good deal and afforded every convenience to the villagers to slight the rules and render the compulsory system practically a misnomer. Until more of the Taluk Boards realize the necessity for enforcing the compulsory rules, not much benefit will result from "Compulsory Vaccination." In one district—North Arcot—although Government in their Order No. 1257-P.H., dated 9th August 1922, approved of the introduction of compulsory vaccination, the required notification was not published in the District Gazette by the District Board, with the result that the District Health Staff could take no action against defaulters.

18. Correct registration of births goes hand in hand with vaccination and unless birth registers are maintained properly, the lists of unprotected children cannot be maintained accurately. The question of introduction of compulsory registration of births and deaths has therefore to be considered side by side with compulsory vaccination.

19. A steady and continuous propaganda is another important factor needed for the progress of vaccination. In many districts, opposition of the villagers to vaccination is due to gross ignorance and propaganda affords the only effective means to dispel it. Lectures illustrated by magic lantern slides and charts delivered by the District Health Staff have accomplished much in this direction, but it is regrettable to note that in several cases Taluk Boards have failed to provide the lanterns and slides. In this connexion, it may be stated that the efforts of the local health committees formed in a few districts in accordance with G.O. No. 765-A-P.H., dated 1st June 1922, have already been crowned with success and it is hoped that this will serve as an eye-opener to the other Taluk Boards.

20. The bifurcation of the Agency ranges in the districts of Gōdāvari and Vizagapatam, referred to in the last year's report, is still under the consideration of Government.

21. The total vaccination work done during the past two years by all Agencies throughout the Presidency is shown in the following table:—

	1922-23.	1923-24.
Primary vaccination (including secondary) ...	1,436,041	1,565,708
Re-vaccination	325,583	346,859
Total ...	1,761,624	1,912,565

Compared with the previous year, the total number of operations during the year under review shows a satisfactory increase. The increase noticed may be attributed to the following causes:—

(i) Better organization, and better supervision over the work of vaccinators consequent on the introduction of the District Health Scheme in the Presidency.

(ii) The increase in the minimum prescribed for the vaccinators.

(iii) A large number of births and out-births which were detected by the health staff as a result of the intensive inquiries conducted from door to door during the vaccination off-season.

(iv) The growing popularity of vaccination and re-vaccination in rural areas in consequence of the extensive propaganda work carried on by the health staff.

(v) Widespread prevalence of smallpox in certain districts partly owing to past neglect of vaccination and partly to failure on the part of the village officers in making prompt reports about the outbreaks.

22. How far the introduction of the District Health Scheme in the Presidency was responsible for the immense improvement both in quality and quantity of vaccination is evidenced from the subjoined table:—

Districts.	No.	Particulars of vaccination.	No. District Health Scheme, 1921-22.	Partial introduction of District Health Scheme, 1922-23.	Full District Health Scheme, 1923-24.	Increase over 1921-22.	Increase over 1922-23.
Tanjore	1	Total number of cases vaccinated.	53,571	65,140	88,274	34,703	23,134
	2	Re-vaccination ...	936	4,594	8,167	7,231	3,573
	3	Number successfully vaccinated under one year.	12,497	11,456	20,284	7,787	8,828
	4	Number of persons successfully vaccinated per 1,000 of population.	16.7	20.6	32.3	15.6	11.7
	5	(a) Primary vaccination (percentage of success). (b) Re-vaccination (do.)	79.1 38.1	79.1 50.9	90.1 51.1	11.0 13.0	11.0 0.2
Trichinopoly	1	Total number of cases vaccinated.	46,714	66,556	79,740	33,026	13,184
	2	Re-vaccination ...	1,020	5,319	9,471	8,451	4,152
	3	Number successfully vaccinated under one year.	10,953	13,921	18,511	7,558	4,590
	4	Number of persons successfully vaccinated per 1,000 of population.	17.7	25.5	34.4	16.7	8.9
	5	(a) Primary vaccination (percentage of success). (b) Re-vaccination (do.)	78.4 28.8	79.6 43.9	89.2 46.8	10.8 18.0	9.6 2.9
Vizagapatam.	1	Total number of cases vaccinated.	81,515	1,01,249	1,00,525	19,010	— 724
	2	Re-vaccination ...	7,777	21,378	17,135	9,358	— 4,243
	3	Number successfully vaccinated under one year.	16,115	16,806	26,175	10,060	9,369
	4	Number of persons successfully vaccinated per 1,000 of population.	21.3	23.5	30.9	9.6	7.4
	5	(a) Primary vaccination (percentage of success). (b) Re-vaccination (do.)	66.2 21.6	69.9 18.4	83.3 24.2	17.1 2.6	13.4 5.8
Kistna	1	Total number of cases vaccinated.	59,663	69,700	89,722	30,059	20,022
	2	Re-vaccination ...	2,100	8,541	15,690	13,590	7,149
	3	Number successfully vaccinated under one year.	16,783	13,957	21,623	4,840	7,668
	4	Number of persons successfully vaccinated per 1,000 of population.	20.2	22.4	33.03	12.8	10.6
	5	(a) Primary vaccination (percentage of success). (b) Re-vaccination (do.)	76.3 36.0	77.8 34.1	92.1 35.2	15.8 — 0.8	14.3 1.1
Kurnool	1	Total number of cases vaccinated.	37,908	37,135	43,507	5,599	6,372
	2	Re-vaccination ...	3,366	4,350	6,422	3,056	2,072

Districts.	No.	Particulars of vaccination.	No. District Health Scheme, 1921-22.	Partial introduction of District Health Scheme, 1922-23.	Full District Health Scheme, 1923-24.	Increase over 1921-22.	Increase over 1922-23.
Kurnool - cont.	3	Number successfully vaccinated under one year.	10,912	8,993	13,764	2,852	4,771
	4	Number of persons successfully vaccinated per 1,000 of population.	25.2	23.5	36.3	11.1	12.8
	5	(a) Primary vaccination (percentage of success). (b) Re-vaccination (do.)	62.7 15.5	67.9 22.7	82.9 27.7	20.2 12.2	15.0 5.0

23. It is gratifying to observe that all the districts with the exception of Vizagapatam, the Nilgiris, Chingleput and the Agency show considerable increase in the total operations performed during the year as compared with the previous year.

The districts which showed the largest increases were Guntūr (+28,443), Tanjore (+23,134), Malabar (+22,461), Kistna (+20,022), Trichinopoly (+13,184), North Arcot (+11,806), Cuddapah (+11,666) and Salem (+10,553).

The slight fall in the district of Vizagapatam (—724) was attributed to the diminished prevalence of smallpox and the consequent reduction in the number under re-vaccination as also to the damaging effects of cyclone during the latter part of last year which affected adversely the activities of the department. The decrease in the Nilgiris (—41) where the District Health Scheme was not in force is very small and almost negligible. In the case of Chingleput, the decrease (—2,724) was due to the long cessation of routine vaccination work for 4 months against 2 months during the previous year and to the utilization of first-class vaccinators for a time in the district for cholera work. The total number of operations performed in the Agency areas was 66,271 against 75,311 during the previous year, there being a decrease of 9,040 cases. This is explained by the fact that in Vizagapatam Agency, where the decrease was 8,160 there was 4 months' cessation of routine vaccination work as against 2 months in the last official year and in Gōdāvari Agency, which showed a fall (—2,082) 2 posts of vaccinators out of 3 were vacant during the year under report for 2 and 3 months, respectively.

24. The subjoined table shows the results of primary and secondary vaccinations and re-vaccinations performed by all agencies:—

Establishment.	Number of successful vaccinations.				Total number of successful vaccinations.		Ratio per cent of successful cases.				Ratio per cent of total successful cases.	
	1922-23.		1923-24.				1922-23.		1923-24.			
	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	1922-23.	1923-24.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	1922-23.	1923-24.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local Fund vaccinators.	896,474	54,165	1,149,187	83,627	950,639	1,232,814	78.5	31.3	89.7	39.7	72.1	82.6
Government vaccinators.	14,981	544	16,852	561	15,525	17,413	70.7	36.6	83.7	22.2	60.0	76.8
Municipal vaccinators.	96,948	41,794	109,620	33,283	138,742	142,903	89.0	52.6	94.4	55.1	73.7	80.9
Cantonment vaccinators.	5,245	1,598	5,850	2,611	6,841	8,461	84.1	24.5	93.3	29.8	53.7	56.3
Dispensaries ...	140	26	143	47	166	190	94.0	57.8	99.6	96.0	85.6	96.4
Medical subordinates.	1,232	12,581	842	7,256	13,813	8,098	72.2	63.2	73.0	43.3	64.0	45.2
Total ...	1,015,020	110,706	1,282,494	127,355	1,125,728	1,409,879	79.2	39.5	90.0	42.6	78.2	81.7

The percentage of success under primary vaccination and re-vaccination showed an increase during the year under report. Compared with the previous year, the increase under primary vaccination amounts to 10.8 per cent and under re-vaccination 3.0 per cent. The supply of glycerine lymph, the suspension of routine vaccination work during the hot-weather months and the better interest taken by the vaccinating staff as a result of the introduction of the District Health Scheme, all combined, brought about this increase.

25. Persons successfully vaccinated per 1,000 of population varied from 20.7 in Salem district to 52.0 in the Nilgiris district. The most prominent feature during the year under report is the steady and distinct increase over last year in the ratio per cent of successful cases in all the districts in the Presidency. The largest increases were noticed in the districts of Guntūr (+16.2), Cuddapah (+13.9), Kurnool (+12.8), Tanjore (+11.7) and Malabar (+11.2).

Among municipalities, the following show a decrease of over 10 per cent in the number of persons successfully vaccinated per 1,000 of population as compared with last year:—Cochin (—82.5), Vāniyambādi (—26.9), Conjeeveram (—21.1), Kurnool (—17.1), Ootacamund (—14.9), Negapatam (—14.8), Tinnevely (—14.4) and Rajahmundry (—13.7).

26. The cost of the various vaccination establishments and the average of each successful case during the past two years are shown below:—

Establishment.	Total expenditure.			Average cost of each successful case.		
	1922-23.			1923-24.		
	RS.	A.	P.	RS.	A.	P.
Government establishment	25,220	10	4	17,206	6	6
Local Fund do.	4,47,972	0	9	6,46,728	7	7
Municipal do.	65,883	13	7	93,956	13	10
Cantonment do.	5,230	2	6	6,091	10	4
Total	5,43,816	11	2	7,63,983	6	3

The average cost of each successful case rose from As. 7-10 in 1922-23 to As. 8-9 in the year under report. The increased cost per case is mainly attributable to the inclusion of the pay, travelling allowance, etc., of the additional health inspectors employed owing to the extension of the District Health Scheme to the remaining districts in the Presidency. The cost varied from As. 5-11 in Malabar to As. 15-4 in the Agency districts; whilst in municipalities excluding Madras the variations were from 1 anna in Cannanore to as high as Rs. 1-9-3 in Palacole. The average cost in the Madras Corporation was Rs. 2-2-8 per case.

27. *Infantile Vaccination.*—When compared with the previous year there was a marked increase of 113,632 in the number of children under one year of age successfully vaccinated. This increase was due to (i) better registration of births and detection of a large number of out-births and other unprotected children by the health staff and (ii) the good effect of propaganda by the health staff to popularize primary vaccination.

Increases of over 5 per cent were noticeable in the following districts:—Tanjore (+15.3), Nellore (+14.6), Guntūr (+13.3), Cuddapah (+10.1), Malabar (+9.6), Trichinopoly (+8.6), Vizagapatam (+8.4), Kistna (+6.3), Anantapur and Rāmnād (+5.5 each). The only district which showed a large decrease under this head was Chingleput (—11.7). In other districts, the fall was very slight.

28. *Vaccination in Municipalities.*—The total number of vaccine operations performed in all the municipalities in the Presidency fell from 203,115 in 1922-23 to 185,967 in the year under report, a decrease of 17,148. There were large falls in the municipalities of Madras (—10,020), Calicut (—5,100), Cochin (—4,661), Kurnool (—3,205), Madura (—2,369), Conjeeveram (—1,912), Rajahmundry (—1,613), Negapatam (—1,438), Tinnevely (—1,118), Tuticorin (—1,117), Nellore (—1,052), Ootacamund (—947), Trichinopoly (—872), Palamcottah (—766),

Vizianagram (—686), Tellicherry (—577), Palghat (—554), Vizagapatam (—537), Vāniyambādi (—499) and Māyavaram (—425).

The decrease in almost all the towns referred to above is attributed to the diminished prevalence of smallpox and the consequent reduction in the number of re-vaccinations done during the year.

The municipalities which showed appreciable increases were Cannanore (+4,371), Mangalore (+3,213) and Bellary (+2,133).

Although vaccination is compulsory in all municipalities, marked decreases of over 20 per cent occurred in Tiruppūr (—48.2), Vāniyambādi (—47.2), Bodināyakkanūr (—25.6), Chidambaram (—24.4), Parlākimedi (—22.8) Proddatūr (—22.2), and Cannanore (—21.4).

Much has been said already regarding the unsatisfactory state of vaccination in municipalities in the vaccination reports of previous years, and the several defects existing in them were pointed out to the municipal councils, in special reports. Unless the councils evince greater interest in this matter and do away with the services of the unqualified vaccinators existing in most of them and appoint qualified vaccinators in their places, progress will be difficult. No proper supervision of any kind over the vaccinators exists at present in almost all the municipalities. Government have already taken up this subject and have in their order No. 516, P.H., dated 1st April 1924, provincialized the posts of health officers in municipalities. Government were further pleased to bear 75 per cent of the cost on account of these health officers and to address all municipal councils to ascertain their willingness for employing trained health officers. It is hoped that every municipal council will take advantage of this opportunity and resolve in favour of the entertainment of a health officer and thus place the health administration of the municipality on a more satisfactory basis.

29. With reference to paragraph 4 of G.O. No. 152-P.H., dated 31st January 1924, regarding fixing of the minimum outturn for the vaccinators in municipalities, I have to report as follows:—

Only 7 municipalities have fixed a minimum of 200 cases per month for the vaccinators, 7 at 150, 4 at 125, 13 at 100 and the rest below 100. This is not satisfactory.

The suggestion of Government in the administration report of several municipalities for 1922-23 regarding prescribing a minimum of 200 cases per month, was presumably based upon the fact that routine vaccination work was conducted only during 8 months in each year as well as upon the available accumulated unprotected children. The universal application of this minimum has been found impossible in many cases on account of the smallness of population with the consequent small number of births available for vaccination in several municipalities. There are several ways of arriving at a proper minimum for a municipality. The formula below gives one method. A minimum thus arrived at may have to be modified in the light of special local conditions.

Name of municipality.	Population as per last census.	Population living under one year of age, as per last census.	Population living between 1 and 5 years of age, as per last census.	Population living between 10 and 15 years of age, as per last census.	Population living between 20 and 25 years of age, as per last census.	Total number of primary cases calculated at 80 per cent of col. 3 and 20 per cent of col. 4.	Total number of re-vaccinations calculated at 2 per cent of cols. 5 and 4 per mille of col. 6.	Total number of primary and re-vaccination cases.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

A second method is to calculate on the basis of presidency average birth-rate the probable number of births available in a year and determine from it the number of cases likely to be available for vaccination, after making due allowances for

infantile mortality, secondary vaccinations and out-births. None of these calculations however hold good for a municipality where vaccination has been systematically neglected for years. In such cases the fixing of an arbitrary minimum as proposed by Government till the arrears are worked up is the only right course.

30. The percentage of success obtained by the use of the different kinds of lymph in primary vaccination (including secondary) in Local Fund and Municipal areas is compared in the sub-joined statement:—

Number of cases excluding unknown.	Area.	Kind of lymph.	Whence obtained.	Percentage of success.
20,138	Government ...	Glycerine ...	King Institute, Guindy ...	83.7
1,281,897	Local Fund ...	Do. ...	Do. ...	89.7
116,164	Municipal ...	Do. ...	Do. ...	94.4
7	Do. ...	Lanoline ...	Do. ...	71.4

The percentage of success obtained with glycerine lymph in local fund areas and the municipalities was 89.7 and 94.4, respectively, whilst that obtained with lanoline lymph in the municipalities was 71.4. It is satisfactory to note that with the supply of glycerine lymph the percentage of success has considerably increased.

31. The total number of deaths from smallpox was 22,626 against 26,526 in the previous year. The proportion of population protected in the districts and municipalities during the year is shown in the annexed diagrams.

The districts which returned a very large number of deaths were Malabar, South Arcot, Kistna, Ganjam, North Arcot, and Tanjore. In some districts, due to want of prompt intimation of the outbreak of smallpox from the village officers, the disease was allowed to spread. It is, however, satisfactory to note that timely measures were, as far as possible, taken to arrest the progress of the disease by active propaganda work done in all the infected villages and by increased attention paid to vaccination of the unprotected cases and to re-vaccination. The increase in the death-rate from smallpox in a few districts was also attributed to the indifference of the local boards in the matter of appointment of additional vaccination staff recommended by the District Health Officers concerned.

Amongst municipalities, Cannanore, Calicut, and Tellicherry were badly affected.

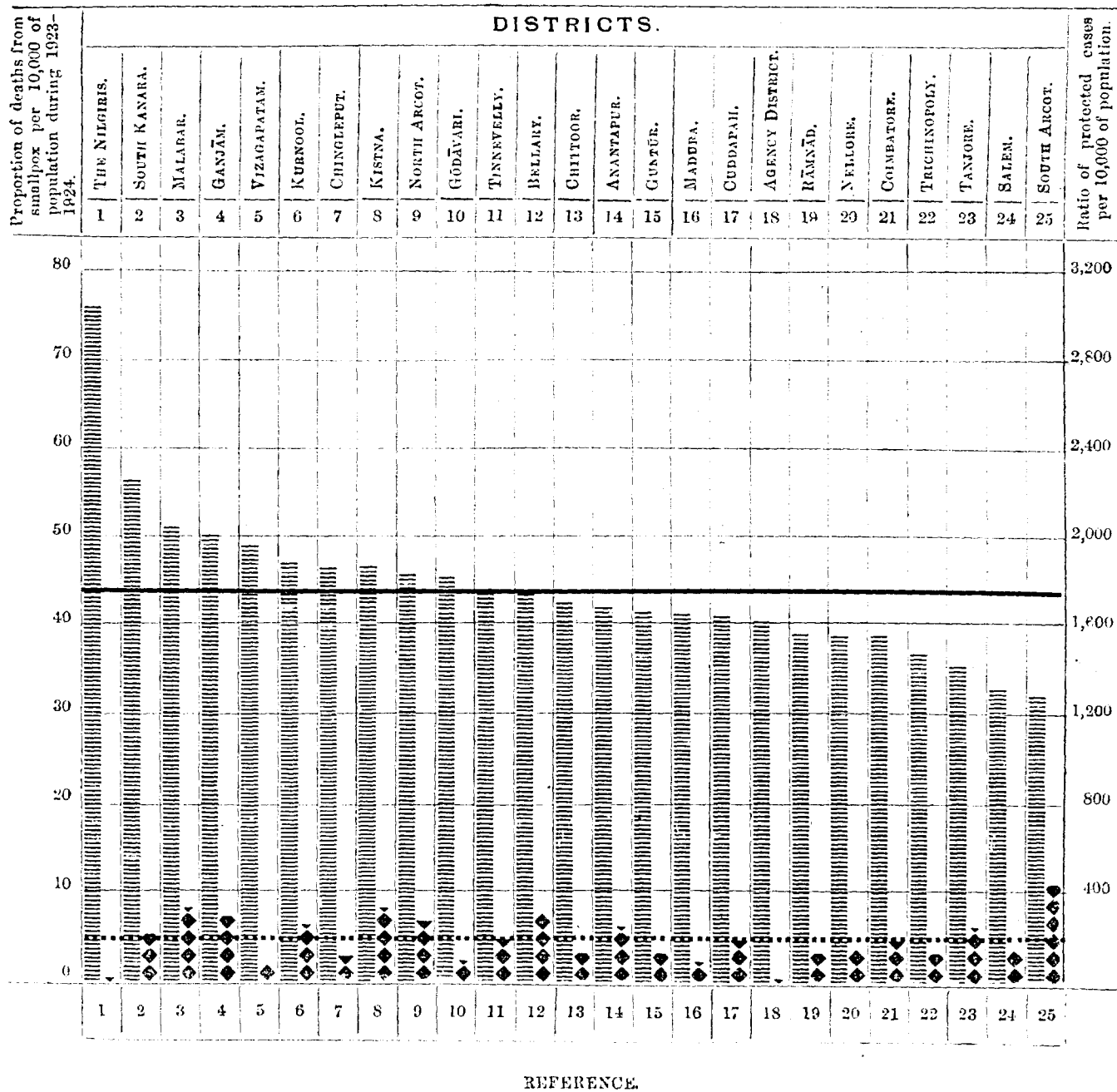
32. The conduct and work of all the Health Inspectors with a few exceptions have been generally satisfactory during the year under report. Inspection of vaccinated cases by Health Inspectors was not wholly satisfactory. 113 Health Inspectors verified more than 85 per cent of the cases vaccinated and 116 below 85 per cent. Suitable notice has, wherever necessary, been taken of the Health Inspectors whose work was below the standard. The large percentage of Health Inspectors who failed to verify the required percentage was partly due to the formation of additional ranges of Health Inspectors towards the close of the year and partly to the manifold duties other than vaccination performed by Health Inspectors under the District Health Scheme.

33. During the year under report, one Health Inspector's probationary period was terminated, one was suspended, two were dismissed from service and two died.

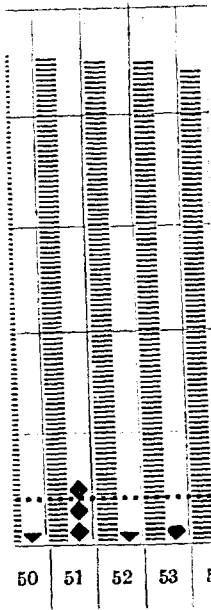
34. The service registers of all the Health Inspectors are being verified in my office.

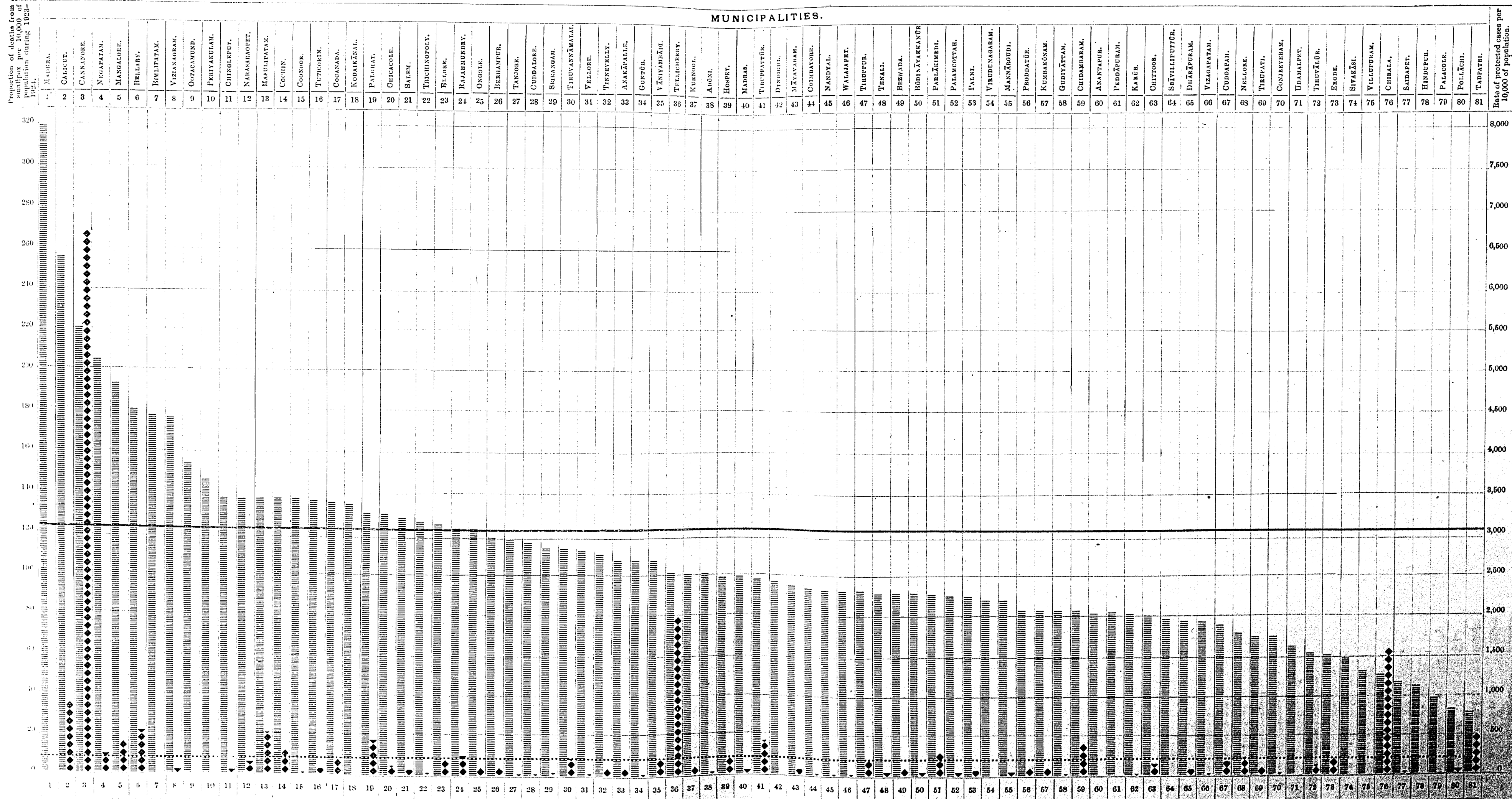
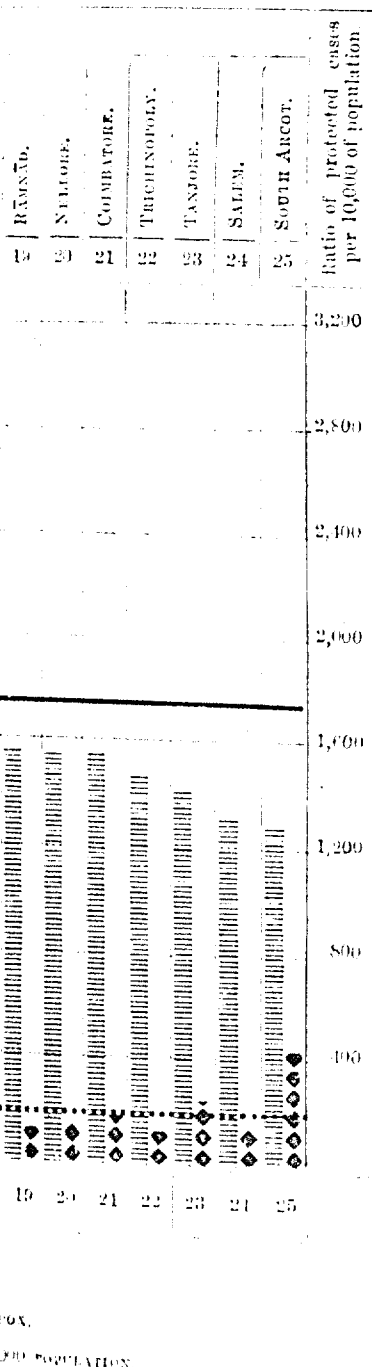
35. It is obvious from this report that the introduction of the District Health Scheme in the Presidency and that within the short period of its working, has given an impetus to vaccination and that the progress has been satisfactory both in quality and quantity. While the progress will be kept up in the years to come, I am

11A
11A-graph)
(Dist
graph)
only,



51	PALAKKOTTA.
52	PALAKKOTTA.
53	PALAKKOTTA.
54	PALAKKOTTA.

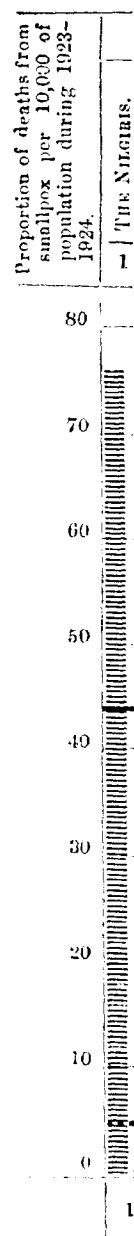




REFERENCE.

■■■■■■■■■■ REPRESENT THE PROPORTION OF POPULATION PER 10,000 PROTECTED FROM SMALLPOX.

◆◆◆◆◆◆◆◆ REPRESENT THE PROPORTION OF DEATHS FROM SMALLPOX PER 10,000 OF POPULATION.



disposed to think that an extension of the scheme to areas where it is not applicable at present, and the appointment of Health Officers in at least all the larger municipalities in the Presidency would enable still further progress being made in this direction. It should be noted that vaccination is particularly backward in the Agency tracts where owing to unhealthy conditions and difficulty of communication, supervision over vaccinators' work is at a very low level.

36. For the preparation of this report, the consolidated annual returns of vaccination received from the several districts were found incorrect and I had therefore to call for the individual returns of Health Inspectors. The checking of these returns and the compilation of the figures for the Presidency took time. Besides, the returns from the District Medical Officer, Ganjam, and the District Health Officer, Ganjam, were received in my office only so late as 20th and 26th June 1924, respectively.

37. I should like to take this opportunity of expressing my heartfelt thanks to the Presidents of Local Boards and the Chairmen of Municipal Councils to whose sincere co-operation with the Public Health Department the satisfactory results obtained during the year under report is largely due.

I have the honour to be,

Sir,

Your most obedient servant,

K. T. MATTHEW, D.M. (Durham), D.P.H. (Cantab),

Officiating Director of Public Health, Madras.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1921.	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.	Total number of operations.	Primary	
						Males.	Females.	Total.			Under 1 year.	
1	2	3	4	5	6	7			8	9	10	
1	Agency districts.	Godavari.	Bhadrachalam ...	...	...	6	2,470	2,301	4,771	795	4,564	952
2			Polavaram ...	...	...	3	3,597	3,209	6,806	2,269	4,789	1,128
3			Total ...	...	...	9	6,067	5,510	11,577	1,296	9,353	2,080
4		Ganjam.	Ganjam Hill Tracts, North ...	...	...	9	4,210	3,919	8,129	903	8,121	1,060
5			Ganjam Hill Tracts, South ...	...	...	5	2,477	2,404	4,881	976	4,434	2,272
6			Total ...	...	...	14	6,687	6,323	13,010	929	12,555	3,332
7		Vizagapatnam.	Gunupur ...	...	...	6	4,794	4,068	8,862	1,477	6,128	1,411
8			Hill Madgole ...	...	...	5	2,168	2,095	4,263	853	3,690	723
9			Jeypore ...	...	...	5	2,132	2,227	4,359	872	7,140	1,521
10			Koraput ...	...	...	5	4,721	4,629	9,350	1,870	8,872	3,196
11			Nowrangpur ...	...	...	4	4,977	4,580	9,557	2,389	9,424	2,659
12			Total ...	...	...	25	18,792	17,599	36,391	1,456	35,254	9,510
13			Total of Agency districts ...	...	...	48	31,546	29,432	60,978	3,671	57,162	14,922
14	Anantapur.	Anantapur ...	920,716	137	3	2,667	1,938	4,605	1,535	3,918	1,780	
15		Dharmavaram ...			2	2,192	1,795	3,987	1,993	3,874	1,463	
16		Gooty ...			2	2,755	2,089	4,844	2,422	4,570	1,567	
17		Hindupur ...			1	1,750	1,253	3,003	3,003	2,608	1,213	
18		Kadiri ...			2	3,257	2,469	5,726	2,863	4,955	2,677	
19		Kalyandrug ...			2	1,717	1,259	2,976	1,488	2,726	1,206	
20		Madakasira ...			1	1,595	1,463	3,358	3,358	2,991	993	
21		Penukonda ...			1	3,021	1,272	3,293	3,293	2,445	1,175	
22		Tadpatri ...			2	3,077	2,140	5,217	2,608	4,735	942	
23					Total of district ...	920,716	137	16	21,331	16,678	37,009	2,313
24	Arcot (North).	Arkonom ...	1,914,291	389	2	3,118	2,911	6,029	3,014	6,027	2,877	
25		Arni ...			2	2,959	2,811	5,770	2,885	5,671	2,291	
26		Cheyyar ...			2	2,810	2,719	5,528	2,764	6,016	2,980	
27		Gudiyattam ...			2	4,007	3,601	7,608	3,804	7,125	2,602	
28		Polur ...			2	3,587	3,341	6,928	3,464	6,645	3,311	
29		Ranipet ...			2	3,731	3,337	7,068	3,534	6,812	3,254	
30		Tirupattur ...			2	5,030	4,817	9,847	3,282	9,406	3,699	
31		Tiravannamalai ...			3	6,389	5,877	12,266	4,088	13,199	3,505	
32		Vellore ...			2	3,677	3,275	6,952	3,476	6,855	3,659	
33		Wandiavash ...			2	3,723	3,521	7,247	3,623	6,968	2,786	
34		Total of district ...	1,914,291	389	22	39,031	36,212	75,243	3,420	74,624	30,777	
35	Arcot (South).	Chidambaram ...	2,229,634	530	2	2,973	3,017	5,990	2,995	5,756	2,892	
36		Cuddalore ...			2	4,145	4,191	8,336	4,168	8,212	4,237	
37		Gingee ...			2	3,111	3,047	6,158	3,079	6,067	1,754	
38		Kallakurahi ...			2	2,626	2,243	4,869	2,435	5,856	1,578	
39		Tindivanam ...			2	3,555	3,089	6,644	3,322	6,491	2,060	
40		Tirukkoyilar ...			2	2,785	2,693	5,478	2,739	5,867	1,256	
41		Tittagudi ...			1	1,316	1,241	2,557	2,557	2,583	1,007	
42		Villupuram ...			2	4,420	4,334	8,754	4,377	8,453	3,415	
43		Vridhbachalam ...			1	2,924	2,870	5,794	5,794	5,966	2,505	
44		Ulundurpet ...			2	2,539	2,072	4,611	2,306	4,854	980	
45		Total of district ...	2,229,634	530	18	30,394	28,797	59,191	3,288	60,105	21,194	
46	Bellary.	Adoni ...	785,624	138	2	2,618	2,561	5,179	2,590	5,318	3,007	
47		Alur ...			2	2,506	2,101	4,607	2,304	4,474	1,944	
48		Bellary ...			3	1,855	1,501	3,359	1,120	3,976	1,693	
49		Hadagalli ...			1	1,320	952	2,281	2,281	2,598	1,210	
50		Harpanahalli ...			2	1,800	1,352	3,152	1,576	3,329	1,596	
51		Hospat ...			2	1,459	1,353	2,812	1,406	3,686	1,212	
52		Kudligi ...			2	1,943	1,854	3,800	1,900	4,221	1,004	
53		Rayadrug ...			1	1,857	1,414	3,271	3,271	3,103	1,511	
54		Siruguppa ...			1	1,498	1,350	2,848	2,848	3,167	820	
55		Total of district ...	785,624	138	16	16,868	14,441	31,369	1,957	33,772	14,100	

* Excludes Sandur (3,526).

STATEMENTS.
DEPARTMENT.

Madras Presidency for the official year 1923-24.

Vaccination.			Re-vaccination.			Percentage of successful cases in which the results were known.		Percentage of cases unknown to total cases.	Average annual number of persons successfully vaccinated during previous 5 years.	Average number of deaths from smallpox 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.	Persons successfully vaccinated per 1,000 of population.	Primary vaccination.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1,548	2,831	370	409	30	14	67.5	7.6	...	8.1	3.4	...	...	...	...
1,975	3,450	492	2,489	978	235	80.7	43.4	...	10.3	9.4	...	...	...	...
3,523	6,281	862	2,888	1,002	249	73.9	38.1	...	9.2	8.6	...	...	...	...
4,873	6,570	718	464	186	53	88.7	40.4	...	8.8	11.4	...	...	...	...
1,391	3,821	186	568	242	71	90.9	48.7	...	4.2	12.5	...	...	...	...
6,264	10,391	904	1,032	408	124	89.2	44.9	...	7.2	12.0	...	...	...	...
2,512	4,517	280	3,275	1,429	190	77.2	46.3	...	4.5	5.8	...	...	...	...
1,623	3,018	270	585	125	54	88.2	23.5	...	7.3	9.2	...	...	...	...
2,694	5,350	466	377	148	76	80.2	49.2	...	6.6	20.1	...	...	...	...
4,360	8,135	397	491	191	135	95.9	53.6	...	4.5	27.5	...	...	...	...
3,801	7,153	747	451	119	68	82.5	30.8	...	7.9	15.1	...	...	...	...
14,099	28,178	2,160	5,179	2,011	523	85.1	43.2	...	6.1	10.1	...	...	...	...
24,786	44,850	3,926	9,109	3,427	896	84.2	41.7	32.1	6.8	9.8	26,038	17.3	128	0.1
1,377	3,176	401	1,311	193	182	90.3	17.1	}	10.2	13.9	}	...	...	...
1,856	3,470	236	829	138	82	95.4	18.5		6.1	9.9				
1,517	3,534	447	1,091	190	90	85.7	19.0		9.8	8.2				
1,161	2,391	129	520	207	36	96.4	42.8		4.9	6.9				
1,614	4,446	335	1,161	270	201	96.2	27.5		6.8	17.02				
968	2,267	258	623	182	49	91.8	31.7		9.5	7.9				
1,451	2,512	309	513	161	65	93.7	35.9		10.3	12.7				
802	2,050	225	1,057	308	136	92.3	33.4		9.2	12.9				
2,102	3,485	446	864	151	148	81.2	21.1		9.4	17.1				
12,748	27,331	2,786	7,969	1,800	939	91.0	25.8	31.6	8.5	12.5	19,923	21.6	635	0.7
2,063	5,054	602	987	413	170	93.2	50.5	}	10.0	17.2	}	...	...	...
2,241	4,812	509	845	132	77	95.0	23.2		9.1	11.9				
2,070	5,252	587	221	75	32	96.7	39.7	}	9.8	14.5	}	...	...	...
3,974	6,498	308	510	198	167	95.3	57.7		4.3	32.7				
2,530	6,021	481	698	198	96	87.7	32.6	}	7.2	13.8	}	...	...	...
2,298	5,750	748	974	288	252	91.8	39.2		11.0	25.9				
4,535	8,325	703	508	163	74	95.7	37.6	}	7.5	14.6	}	...	...	...
7,161	11,375	1,175	802	140	207	94.6	23.5		8.9	25.8				
2,388	6,091	648	654	180	112	93.1	33.2	}	9.5	17.1	}	...	...	...
2,881	5,706	964	500	229	191	96.0	73.5		13.8	38.2				
32,144	64,942	6,730	6,489	2,009	1,378	95.7	39.2	34.0	9.0	21.2	46,314	24.2	1,604	0.9
2,276	4,700	742	428	154	66	93.7	42.5	}	12.9	15.6	}	...	...	...
2,718	7,041	817	557	226	89	95.2	48.3		9.9	15.9				
3,248	5,087	646	342	125	92	93.8	50.0	}	10.6	26.9	}	...	...	...
2,221	3,927	892	473	57	149	79.1	17.6		15.2	31.5				
2,850	5,125	836	589	95	75	90.6	18.5	}	12.9	12.7	}	...	...	...
3,681	5,088	227	213	50	...	90.2	23.9		3.8	...				
1,032	2,060	232	94	37	9	90.7	43.8	}	10.9	9.6	}	...	...	...
3,028	6,580	1,386	856	108	350	93.1	21.3		16.4	40.9				
2,355	4,885	695	160	36	24	92.7	26.5	}	11.5	15.0	}	...	...	...
2,518	3,637	640	382	48	101	86.3	82.9		13.2	26.4				
25,927	48,130	7,163	4,094	936	955	90.9	29.8	22.0	11.9	23.3	36,255	16.3	1,652	0.7
1,414	4,460	598	101	16	19	94.5	19.5	}	11.2	18.8	}	...	...	...
1,584	3,708	396	412	115	106	90.9	37.6		8.8	25.7				
1,503	3,294	258	820	215	122	82.8	26.2	}	6.5	14.9	}	...	...	...
994	2,150	174	381	169	11	88.7	45.7		6.7	2.9				
1,016	2,661	209	606	161	44	85.3	28.6	}	6.3	7.3	}	...	...	...
1,285	2,614	299	271	51	8	80.4	19.4		8.3	2.9				
2,939	3,211	466	255	69	46	85.5	38.0	}	11.04	18.04	}	...	...	...
916	2,484	237	614	96	116	86.7	19.3		7.6	18.9				
1,631	2,607	209	461	109	41	88.1	25.9	}	6.6	8.9	}	...	...	...
12,291	27,219	2,846	3,921	1,001	513	88.0	29.4		35.9	8.4				

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 1921.	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
70	Municipalities - cont.	Tirappur ...	10,851	2,894	1	368	252	620	620	585	270
71		Tiruvalur ...	24,124	5,079	1	408	239	647	647	480	333
72		Tiruvannamalai ...	21,912	1,992	1	831	428	1,259	1,259	863	602
73		Tuticorin ...	44,522	24,734	2	1,334	1,367	2,701	1,350	1,971	971
74		Udamalpet ...	10,236	5,000	1	242	171	413	413	405	249
75		Vaniyambadi ...	20,090	5,740	1	181	201	382	382	393	318
76		Vellore ...	50,210	12,553	2	1,310	831	2,141	1,071	1,687	1,884
77		Villupuram ...	17,423	4,311	1	379	270	649	649	496	343
78		Virudhansgar ...	21,821	9,698	1	483	358	841	841	708	547
79		Vizagapatam ...	45,018	8,657	2	661	705	1,366	1,374	906	632
80		Vizianagaram ...	39,328	7,866	2	1,147	1,028	2,175	1,088	2,111	1,376
81		Walajapet ...	10,013	10,013	1	265	173	438	438	307	251
		Total of Municipalities.	3,028,844	...	174	107,058	78,381	180,439	1,037	118,552	76,198
1	Military Cantonments.	Bangalore ...	118,940	8,792	2	1,402	974	2,376	1,188	408	207
2		Secunderabad ...	95,121	5,006	6	5,004	7,387	12,391	2,065	5,913	3,686
		Total of Cantonments ...	214,061	6,899	8	6,406	8,361	14,767	1,846	6,319	3,893
		Total of Medical Subordinates.	...	...	...	17,973	251	18,224	...	1,188	97
		Grand Total ...	* 42,227,551	...	720	953,501	805,126	1,758,627	† 2,441	1,565,558	572,830

* Excluding the populations of Bangalore and Secunderabad cantonments.

† In finding out the average number of persons vaccinated the total work of Medical Subordinates is excluded.

‡ Excluding the cantonments of Bangalore and Secunderabad.

NOTE.—(1) Difference between number of operations and number of persons vaccinated equals 153,741 which represents secondary operations.

(2) This statement does not include the statistics of dispensary vaccination which are exhibited separately in Statement No. III.

N.B.—In calculating the percentage of success shown in this statement and Statement No. III unknown cases have not been taken into account.

DEPARTMENT—cont.

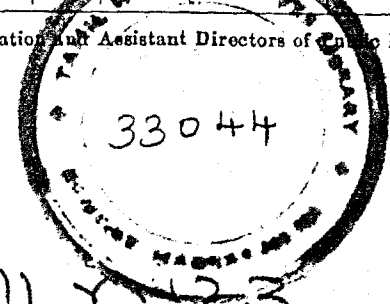
Madras Presidency for the official year 1923-24—cont.

vaccination.			Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of cases unknown to total cases.		Average annual number of persons successfully vaccinated during previous 5 years.		Average number of deaths from smallpox during previous 5 years.	
Successful.			Total number of operations.	Successful.	Unknown.	Primary vaccination.	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
186	505	14	57	25	4	88.4	47.2	48.5	2.4	7.0	400	36.9	17	1.6
110	465	5	167	117	38	97.9	90.7	24.1	1.04	22.8	503	20.9	14	0.6
178	844	...	403	251	...	97.8	62.3	50.0	...	...	817	37.3	17	0.8
611	1,642	22	925	438	100	84.2	53.1	46.7	1.1	10.8	2,176	48.9	25	0.6
76	342	1	8	2	2	84.7	33.3	33.6	0.02	25.0	257	25.1	25	2.4
48	366	11	1	1	...	96.1	100.0	13.3	2.8	...	837	41.7	5	0.2
290	1,678	1	464	285	88	99.4	75.8	39.1	0.1	18.9	1,967	39.2	43	0.9
126	480	...	164	46	28	96.8	33.8	30.2	...	17.0	358	20.5	7	0.4
107	654	20	136	93	11	95.1	74.4	34.2	2.8	8.1	546	25.0	43	1.9
262	1,192	...	111	7	9	86.8	6.9	26.6	...	8.1	1,180	26.2	32	0.7
368	1,867	73	269	75	24	91.6	30.6	49.4	3.5	8.9	2,410	61.3	34	0.8
33	288	3	138	16	...	94.7	11.6	30.4	1.0	...	334	33.4	...	...
28,732	109,620	2,381	67,218	33,233	6,840	94.4	55.1	47.2	2.0	10.2	128,562	42.4	3,020	0.9
171	378	...	1,970	1,174	...	93.1	59.6	13.04	...	...	1,008	8.4	85	0.7
1,417	5,472	51	6,938	1,437	150	93.3	21.2	72.6	0.9	2.2	5,630	59.2	6	0.1
1,588	5,850	51	8,908	2,611	150	93.3	29.8	39.5	0.8	1.7	6,636	31.0	91	0.4
74	842	36	17,048	7,256	288	73.1	43.3	...	30.3	1.7	...	...	...	...
632,254	1,282,351	140,022	346,810	127,338	47,523	90.0	42.6	† 33.4	8.9	13.8	† 982,843	† 23.3	† 29,831	† 0.7

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 vaccination per 1,000 of population.	Total cost of department.	Average cost of each successful case.
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.		Under one year.	One and under six years.			
By Special staff (statement No. I).	1,411,881	348,746	1,565,558	348,810	90.0	42.6	720	2,441	572,830	632,254	RS. A. P. 7,03,803 6 3	RS. A. P. 0 8 9
By Dispensary staff (statement No. III).	148	49	148	49	96.6	95.9	...	...	138	2	...	...
By other agencies, if any.	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	1,412,029	348,795	1,565,706	348,859	90.0	42.6	720	2,441	572,968	632,256	7,03,803 6 3	0 8 9

* Exclusive of the pay and allowances of the Inspectors of Vaccination and Assistant Directors of Public Health.



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N24

A.—VACCINE DEPARTMENT—cont.

Statement No. II showing the Cost of the Department

Number.	Districts.	Circles.	Expenditure.											
			Inspector of Vaccination and Assistant Director of Public Health.	Pay.	Number.	Health Inspectors.	Vaccinators.			Peons, etc.				
							Pay.	First-class.	Second-class.	Probationers.	Pay.	Number.	Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
				RS. A. P.		RS. A. P.				RS. A. P.		RS. A. P.	RS. A. P.	
65	Municipalities—cont.	Tenali	...	...	...	...	...	1	...	405 9 6	...	...	405 9 6	
66		Tinnevely	...	...	...	...	1	1	...	555 12 5	1	144 0 0	699 12 5	
67		Trichinopoly	...	...	...	...	...	4	...	1,389 9 8	...	...	1,389 9 8	
68		Tirupati	...	...	...	...	...	1	...	418 10 8	...	...	418 10 8	
69		Tiruppattar	...	...	...	...	...	1	...	330 0 0	...	...	330 0 0	
70		Tiruppur	...	...	...	...	...	1	...	494 13 2	...	...	494 13 2	
71		Tiruvālar	...	...	...	...	...	1	...	241 0 0	...	...	241 0 0	
72		Tiruvannāmalai	...	...	...	...	...	1	...	442 0 0	...	...	442 0 0	
73		Tuticorin	...	...	...	...	...	1	1	...	708 8 10	1	143 0 0	851 8 10
74		Udamalpet	...	...	...	...	...	...	1	...	311 13 9	...	...	311 13 9
75		Vāniyambādi	...	...	...	...	...	...	1	...	253 14 2	...	...	253 14 2
76		Vellore	...	...	...	...	...	2	...	588 7 3	...	...	588 7 3	
77		Villupuram	...	...	...	...	...	1	...	300 0 0	...	...	300 0 0	
78		Virudhunagar	...	...	...	...	...	...	1	...	440 14 9	...	...	440 14 9
79		Vizagapatam	...	...	...	...	...	1	1	...	780 0 0	1	120 0 0	900 0 0
80		Vizianagram	...	...	...	...	...	1	1	...	484 13 5	...	...	484 13 5
81		Walajapet	...	...	...	...	...	...	1	...	350 0 0	...	...	350 0 0
		Total of Municipalities ...	...	...	...	...	57	112	7	74,726 7 1	38	7,653 3 5	82,379 10 6	
	Military Cantonment.	Bangalore	...	...	...	...	1	1	...	660 0 0	...	...	660 0 0	
		Secunderabad	...	...	1	950 8 3	1	4	1	1,850 8 7	5	621 2 8	3,422 3 6	
		Total of Cantonments ...	...	...	1	950 8 3	2	5	1	2,510 8 7	5	621 2 8	4,082 3 6	
		Assistant Directors of Public Health.	3	17,040 14 0	...	...	...	...	...	...	...	...	17,040 14 0	
		Grand Total ...	3	17,040 14 0	246	2,33,127 1 3	157	405	170	2,78,726 10 0	288	40,364 1 2	5,69,253 10 5	

DEPARTMENT—cont.

the Madras Presidency for the official year 1923-24—cont.

			Paid from							Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
Travelling allowance.	Contin- gencies.	Total cost.	Imperial funds.	Provincial funds.	Local funds.	Municipal funds.	Total.				
15	16	17	18	19	20	21	22				
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.		
...	18 7 0	424 0 6	...	...	...	424 0 6	424 0 6	931	0 7 3		
60 0 0	82 9 4	842 5 9	...	...	...	842 5 9	842 5 9	1,803	0 7 6		
...	97 5 6	1,496 15 2	...	...	...	1,496 15 2	1,496 15 2	5,726	0 4 2		
...	16 4 0	434 14 8	...	...	...	434 14 8	434 14 8	504	0 13 10		
...	76 5 6	406 5 6	...	...	...	406 5 6	406 5 6	694	0 9 4		
...	57 3 10	552 1 0	...	...	...	552 1 0	552 1 0	530	1 0 8		
...	131 0 11	372 0 11	...	...	...	372 0 11	372 0 11	582	0 10 3		
...	12 2 6	454 2 6	...	...	...	454 2 6	454 2 6	1,095	0 6 8		
...	152 8 9	1,004 1 7	...	...	...	1,004 1 7	1,004 1 7	2,080	0 7 8		
...	115 7 0	427 4 9	...	...	...	427 4 9	427 4 9	344	1 3 1		
...	...	253 14 2	...	...	...	253 14 2	253 14 2	387	0 11 1		
...	53 8 0	639 15 3	...	...	...	639 15 3	639 15 3	1,961	0 5 2		
...	19 15 3	319 15 3	...	...	...	319 15 3	319 15 3	526	0 9 9		
...	26 15 6	467 14 3	...	...	...	467 14 3	467 14 3	747	0 10 0		
...	32 9 0	932 9 0	...	...	...	932 9 0	932 9 0	1,189	0 12 7		
9 6 9	2 2 0	496 6 2	...	...	...	496 6 2	496 6 2	1,942	0 3 8		
...	70 5 0	420 5 0	...	...	...	420 5 0	420 5 0	304	1 6 1		
304 9 11	11,272 9 5	93,956 13 10	...	...	...	93,956 13 10	93,956 13 10	1,43,093	0 10 6		
240 0 0	...	900 0 0	900 0 0	...	...	...	900 0 0	1,552	0 9 3		
180 0 0	1,589 6 10	5,191 10 4	...	...	4,545 10 4	646 0 0	5,191 10 4	6,909	0 12 0		
420 0 0	1,589 6 10	6,091 10 4	900 0 0	...	4,545 10 4	646 0 0	6,091 10 4	8,461	0 11 6		
2,836 2 0	...	19,877 0 0	...	19,877 0 0	...	...	19,877 0 0	...	...		
1,64,441 6 8	50,160 5 2	7,83,860 6 3	900 0 0	3,87,755 7 7	3,00,602 0 10	94,602 13 10	7,83,860 6 3	1,401,781	0 8 9		

* 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 and Municipal staff (vide G.O. No. 1158 L., dated 4th September 1911).

N.B.—In calculating the average cost of each successful case the pay and allowances of the Assistant Directors of Public Health have been excluded.

B.—DISPENSARY VACCINATION.

Statement No. III showing Dispensary Vaccination in the Madras Presidency for the official year 1923-24.

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.	Total number of operations.	Primary vaccination.				Re-vaccination.			Percentage of successful cases in which the results were known.	Percentage of unknown cases total operation.			
						Successful.			Unknown.	Total number of operations.	Successf	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	
Agency Districts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anantapur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arcot, North	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arcot, South	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bellary	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chingleput	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittoor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coimbatore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cuddapah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ganjūm	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Godāvāri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Guntūr	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kistna	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kurnool	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madura (Municipal hospital, Kodaikānal).	...	...	197	...	148	138	2	143	...	49	47	...	96.6	95.9	...	...	...
Malabar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nellore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nilgiris, The	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rāmnād	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Salem	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Kanara	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tanjore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tinnevely	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trichinopoly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Vizagapatam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	197	...	148	138	2	143	...	49	47	...	96.6	95.9	...	...	...

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.

In the Madras Presidency.

	1914-1915.		1915-1916.		1916-1917.		1917-1918.		1918-1919.		1919-1920.		1920-1921.		1921-1922.		1922-1923.		1923-1924.	
	Total number.	Number vaccinated.	Total number.	Number vaccinated.	Total number.	Number vaccinated.	Total number.	Number vaccinated.	Total number.	Number vaccinated.	Total number.	Number vaccinated.	Total number.	Number vaccinated.	Total number.	Number vaccinated.	Total number.	Number vaccinated.	Total number.	Number vaccinated.
Government vaccinators ...	19,843	17,892	16,052	14,283	17,276	13,900	17,765	15,037	18,540	14,158	16,082	14,875	14,625	10,616	15,745	11,860	11,997	14,681	20,959	16,852
Local Fund do. ...	1,833,727	1,180,576	1,332,471	1,153,861	1,275,205	1,000,029	1,194,558	989,157	1,161,772	787,222	1,157,703	833,655	1,107,117	651,154	1,037,517	796,007	1,149,698	856,474	1,270,638	1,149,187
Cantonment do. ...	4,282	3,919	4,354	4,152	3,218	2,950	3,710	3,457	3,185	2,667	4,757	4,012	4,105	3,024	5,218	4,354	5,436	5,245	5,859	5,850
Zamindari do. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Municipal do. ...	113,408	108,742	112,146	106,830	114,172	107,326	121,439	113,652	116,193	105,156	103,653	96,188	105,564	88,536	99,480	50,518	105,203	96,948	113,237	109,620
Dispensaries ...	1	...	69	96	148	145	191	186	157	155	131	129	115	113	124	115	152	140	148	143
Medical Subordinates ...	131	177	1,681	1,464	250	218	197	103	550	312	610	345	680	492	1,764	1,402	1,766	1,232	1,188	842
Total ...	1,471,392	1,317,576	1,469,803	1,282,076	1,410,269	1,214,577	1,337,860	1,121,655	1,300,397	909,670	1,283,026	949,004	1,232,146	753,936	1,179,852	904,256	1,273,628	1,015,026	1,412,629	1,282,194

Statement No. V showing particulars of Vaccination verified by Inspecting Officers in the Madras Presidency during 1923-24.

Districts.	Total number of persons vaccinated.		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 Officer, District Surgeons, and District Health Officers.		By Health Inspectors.		By District Medical Officer, District Surgeons, and District Health Officers.		By Health Inspectors.		By District Medical Officer, District Surgeons, and District Health Officers.		By Health Inspectors.					
	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.				
Agency Districts	51,988	9,436	...	...	48,807	7,985	...	...	93.9	84.6	...	...	80.7	39.1	84.2	41.7
Anantapur	30,505	8,476	...	142	29,413	6,516	...	0.03	93.4	75.9	...	100.0	89.4	25.3	90.7	26.0
Arcon (North)	73,558	7,641	...	303	64,103	4,382	...	0.4	87.2	57.3	...	...	93.9	39.1	95.8	42.7
Arcon (South)	57,811	4,583	...	534	46,186	2,717	...	0.9	78.9	58.3	...	...	89.8	28.5	91.3	32.8
Bellary	32,223	14,761	...	3,794	26,684	2,883	1,963	13.3	82.8	19.5	...	...	87.4	29.6	88.8	42.8
Chingleput	45,458	9,723	...	377	40,477	7,082	...	0.8	89.01	72.8	...	...	91.5	47.1	92.6	49.01
Chittoor	39,627	6,329	...	1,415	36,696	4,312	70	3.6	92.6	68.6	...	...	84.2	33.7	95.3	34.8
Coimbatore	81,170	12,412	...	1,396	83,651	7,786	1,074	1.7	78.3	62.7	...	...	86.9	24.2	88.6	25.2
Cuddapah	33,550	5,709	...	2,285	34,301	3,819	...	6.8	102.2	67.4	...	...	83.7	32.1	86.2	33.4
Godavari	46,060	13,163	...	1,987	40,778	8,307	...	4.2	86.8	63.1	...	...	89.1	39.8	90.6	44.2
Guntur	48,088	14,292	...	921	42,677	7,312	...	1.9	87.6	51.2	...	...	87.7	45.4	88.7	48.9
Kistna	62,021	17,883	...	3,730	58,871	9,408	...	4.0	84.2	59.6	...	...	89.7	34.5	92.4	41.5
Kurnool	68,806	18,694	...	1,894	57,909	11,135	...	2.7	91.2	65.9	...	...	80.5	25.9	83.4	30.0
Madras	32,643	6,964	...	799	30,747	4,592	...	2.4	...	...	...	...	...	...	...	...
Madras	18,191	16,284	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madura	68,011	20,034	...	...	54,307	7,031	...	...	80.7	35.1	...	...	86.4	36.3	89.3	56.8
Malabar	121,407	56,814	...	1,122	112,763	42,318	...	0.5	92.9	74.5	...	...	94.8	45.8	95.5	49.8
Nellore	42,344	7,756	...	911	41,474	6,055	...	2.1	97.9	78.1	...	...	85.9	31.9	87.5	33.6
Nilgiris, The	5,415	3,228	...	168	3,330	2,331	...	3.1	61.6	72.2	...	...	56.1	80.5	96.1	54.9
Ramanad	53,746	7,470	...	204	49,672	6,209	...	0.4	92.4	88.1	...	...	84.4	30.1	86.2	32.4
Salem	61,856	7,416	...	1,074	53,619	5,089	...	1.7	87.4	68.6	...	...	85.4	41.8	88.1	41.8
South Kanara	40,912	17,781	...	2,942	32,008	8,769	...	0.3	79.0	49.3	...	...	94.2	49.9	95.2	55.04
Tanjore	81,070	10,969	...	691	69,846	6,548	...	7.2	86.1	59.7	...	...	88.3	50.2	90.8	55.7
Tinnevely	58,405	11,138	...	1,602	59,509	6,874	...	0.8	101.9	61.7	...	...	84.1	40.3	85.3	45.3
Trichinopoly	71,687	10,858	...	1,549	61,527	7,716	...	2.2	93.1	71.1	...	...	87.1	47.0	89.9	46.1
Vizagapatam	78,638	18,088	...	1,476	73,201	15,889	...	1.9	...	87.8	...	...	81.8	21.6	83.7	24.8
Total	1,406,170	337,887	...	31,206	1,233,106	203,185	...	2.2	87.7	60.1	...	...	88.0	38.1	90.4	49.3

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

Municipalities.	Number of births available for vaccination during the year 1923-24.	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 1924.	Date of extension of compulsory vaccination to municipalities.	Municipalities.	Number of births available for vaccination during the year 1923-24.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations under one year ending March 1924.	Date of extension of compulsory vaccination to municipalities.
Adoni	1,209	206	763	1st Dec. 1886	Ootacamund	873	158	318	1st July 1887.
Anakāpalle	596	126	332	1st Nov. 1891.	Palacole	379	78	113	1st Sep. 1919.
Anantapur	378	64	208	1st Jan. 1886.	Palamecottah	1,513	472	724	1st May 1886.
Bellary	1,288	190	496	1st Jan. 1891.	Palghat	2,441	373	1,668	1st Jan. 1883.
Berhampur	1,067	193	570	15th April 1891.	Palni	712	184	317	1st Dec. 1891.
Bezavada	1,673	447	764	1st May 1892.	Parlakimedi	618	111	192	1st Dec. 1890.
Bimlipatam	339	51	225	1st Jan. 1894.	Peddapur	393	48	194	1st April 1916.
Bodinayakkanūr	902	187	380	19th Feb. 1916.	Periyakulam	838	190	575	1st Feb. 1891.
Calicut	3,301	528	1,825	1st Oct. 1891.	Pollachi	518	109	289	Govt. have not yet declared vaccination compulsory in the town.
Cannanore	982	175	701	1st June 1891.	Proddatur	509	109	153	1st Sep. 1915.
Chicacole	551	105	284	1st Dec. 1890.	Rajahmundry	2,035	539	974	1st Jan. 1886.
Chidambaram	518	65	238	1st July 1887.	Saidapet	804	157	678	1st April 1921.
Chingleput	687	156	288	1st April 1897.	Salem	2,173	294	1,283	1st May 1891.
Chirala	382	51	214	9th May 1920.	Sivakāsi	383	51	279	Govt. have not yet declared vaccination compulsory in the town.
Chittoor	714	112	344	9th Jan. 1917.	Srirangam	639	116	329	1st July 1888.
Cocanada	1,649	303	705	1st June 1890.	Srivilliputtār	1,836	342	740	1st Jan. 1896.
Cochin	692	149	389	1st Jan. 1894.	Tadpatri	364	75	95	1st Oct. 1921.
Coimbatore	2,213	443	1,066	1st Jan. 1889.	Tanjore	2,256	532	983	1st July 1893.
Conjeeveram	2,094	535	1,015	1st Jan. 1891.	Tellicherry	1,386	355	572	15th June 1892.
Coonoor	396	42	40	1st April 1887.	Tenali	768	215	371	1st April 1910.
Cuddalore	2,178	527	1,289	1st Aug. 1896.	Tinnevely	2,209	712	822	1st July 1896.
Cuddapah	647	147	229	15th July 1888.	Trichinopoly	5,110	1,136	2,483	1st Aug. 1890.
Dhārmapuram	604	92	115	1st Feb. 1916.	Tirupati	529	98	279	1st Mar. 1890.
Dindigul	1,174	271	637	16th July 1896.	Tirupattūr	775	163	339	1st July 1891.
Ellore	1,527	556	477	1st June 1888.	Tiruppur	309	54	98	1st Apr. 1918.
Erode	531	111	223	1st April 1891.	Tiruvallūr	410	94	177	1st Oct. 1913.
Gudiyāttam	712	135	306	1st June 1889.	Tiruvannāmalai	1,116	178	547	15th Dec. 1897.
Guntūr	2,114	484	736	1st Jan. 1914.	Tuticorin	1,953	428	624	1st May 1892.
Hindupur	737	46	370	1st May 1920.	Udamalpet	408	86	155	1st Apr. 1918.
Hospet	900	167	441	1st April 1892.	Vāniyambādi	700	95	254	1st May 1889.
Karūr	519	95	154	1st Sep. 1900.	Vellore	1,955	345	1,139	1st Jan. 1897.
Kodaikānal	195	24	131	1st April 1889.	Villupuram	475	67	343	1st Sep. 1919.
Kumbakōnam	1,952	544	762	1st Aug. 1889.	Virudonagar	809	227	154	1st Sep. 1915.
Kurnool	665	140	317	1st July 1891.	Vizagapatam	1,885	330	713	1st Aug. 1890.
Madras	22,803	4,175	11,403	1st June 1884.	Vizianagram	1,350	259	763	1st Jan. 1891.
Madura	6,073	1,256	3,555	1st Jan. 1890.	Walajapet	435	80	204	20th May 1892.
Mangalore	2,000	262	1,156	1st Sep. 1891.	Total	116,433	23,510	58,570	
Mannārgudi	560	133	298	1st Dec. 1890.					
Masulipatam	1,724	334	724	1st May 1888.					
Māyavaram	1,140	278	601	1st Oct. 1886.					
Nandyal	464	65	245	1st Jan. 1900.					
Narasaraopet	292	35	130	1st April 1916.					
Negapatam	1,834	358	1,009	1st July 1886.					
Nellore	1,132	185	342	1st Aug. 1886.					
Ongole	448	98	119	1st Dec. 1855.					

Statement No. VII showing inspection work done by the Health Inspectors during the year 1923-24—cont.

Districts.	Circles.	Number of Health Inspectors.	Number of villages inspected by Health Inspectors.	Total number of cases vaccinated.	Number of days spent on inspection duty.	Number of cases verified by Health Inspectors.	Total number of successful cases as reported by Health Inspectors.	Percentage of successful cases to the total number inspected as reported by Health Inspectors.	Proportion per cent of inspection by Health Inspectors to total number vaccinated.
1	2	3	4	5	6	7	8	9	10
Kurnool	Dhone ...	1	75	5,295	200	4,441	3,161	73.4	83.9
	Giddalore ...	1	158	4,683	218	4,040	3,191	78.9	86.2
	Koilkuntla ...	1	156	8,309	120	5,351	4,010	74.9	64.4
	Kurnool ...	1	146	6,233	102	5,001	3,624	72.4	80.2
	Markapur ...	1	198	5,263	213	4,391	3,382	77.0	84.4
	Nandikotkur ...	1	126	6,085	189	5,024	2,967	59.1	83.2
	Nandyal ...	1	204	2,255	227	2,103	1,721	78.3	97.5
	Pattikonda ...	1	165	5,494	194	4,893	3,883	79.3	89.0
Madura	Dindigul ...	1	216	9,194	235	8,527	7,275	85.3	92.7
	Kodaikanal ...	1	20	1,713	128	1,341	1,216	90.7	78.3
	Madura ...	1	210	6,227	252	4,345	3,391	78.0	62.7
	Melur ...	1	100	7,346	221	5,636	3,945	70.0	76.7
	Nilakkottai ...	1	113	8,161	180	5,078	3,921	77.3	62.2
	Palni ...	1	113	8,282	187	8,464	6,194	73.2	91.2
	Periyakulam ...	1	68	12,356	199	10,768	9,478	88.0	87.1
	Tirumangalam ...	1	315	14,644	183	11,540	9,426	81.7	78.8
Malabar	Vedasandur ...	1	142	7,163	179	6,239	5,178	83.0	87.1
	Alattur ...	1	46	3,285	74	2,761	2,261	81.9	84.0
	Badagara ...	1	48	9,034	93	7,063	5,763	81.6	78.2
	Calicut ...	1	138	11,246	180	12,088	9,249	76.5	107.5
	Chirakkal ...	1	112	15,297	95	13,377	11,658	87.2	87.4
	Chowghat ...	1	87	11,226	272	10,389	8,834	85.0	92.5
	Manjeri ...	1	202	17,034	132	17,206	13,500	78.5	101.0
	Ottapalem ...	1	60	11,493	181	9,884	8,304	84.0	86.0
Nellore	Palghat ...	1	154	11,181	180	12,181	9,168	75.2	109.2
	Perintalmanna ...	1	55	9,141	223	10,745	8,787	81.8	117.5
	Ponnani ...	1	26	3,068	60	2,137	1,773	83.0	69.7
	Quilandi ...	1	99	8,618	113	7,249	6,776	93.5	84.1
	Tellicherry ...	1	131	13,982	182	15,153	10,428	68.8	108.4
	Tirur ...	1	118	17,365	211	16,336	13,722	84.0	94.0
	Tirurangadi ...	1	204	15,693	108	13,418	11,800	87.9	85.5
	Wynaad ...	1	30	6,588	109	5,120	4,310	84.2	77.7
The Nilgiris	Atmakur ...	1	145	4,417	103	3,148	2,239	71.1	71.3
	Gudur ...	1	146	4,130	136	3,550	3,029	85.3	85.9
	Kandukur ...	1	132	6,743	156	6,050	4,583	75.7	80.7
	Kanigiri ...	1	125	4,748	178	4,800	3,638	75.7	101.1
	Kavali ...	1	304	5,289	192	4,381	3,274	74.7	82.8
	Kovvur ...	1	138	4,889	158	5,087	3,956	73.4	110.2
	Nellore ...	1	253	4,949	130	4,813	3,979	82.6	97.2
	Podili ...	1	115	2,991	79	3,235	2,745	84.8	108.1
Ramanad	Rapur ...	1	182	3,013	71	3,154	2,600	82.4	103.6
	Udayagiri ...	1	260	3,563	104	3,195	2,649	82.9	89.6
	Venkatagiri ...	1	254	5,657	160	4,484	3,736	83.3	79.2
	Darsi ...	1	56	2,769	31	1,332	1,159	87.0	48.1
	The Nilgiris ...	1	2,684	6,821	190	5,661	4,560	80.5	83.0
	Aruppukottai ...	1	229	7,628	163	5,866	5,185	88.4	76.9
	Mudakulattur ...	1	242	7,316	194	6,140	5,299	86.3	83.9
	Ramanad ...	1	272	12,893	128	10,303	7,200	69.9	79.9
Salem	Sivaganga ...	1	495	7,336	131	5,763	5,025	87.1	78.6
	Sattur ...	1	592	7,559	151	9,528	7,521	78.9	126.6
	Srivilliputtur ...	1	210	8,300	111	7,825	6,281	80.3	94.1
	Tirupattur ...	1	380	6,025	214	7,140	5,076	71.0	107.5
	Tiruvadanai ...	1	183	4,523	151	3,316	2,171	65.5	73.2
	Atur ...	1	86	6,364	92	5,216	4,676	89.6	82.0
	Dharmapuri ...	1	113	7,994	126	6,149	5,164	84.0	76.9
	Harur ...	1	119	5,227	194	4,240	3,127	73.7	81.1
Salem	Hosur ...	1	225	5,697	186	3,722	3,376	90.7	65.3
	Krishnagiri ...	1	160	6,396	233	5,331	4,040	75.8	83.7
	Namakkal ...	1	109	6,337	200	5,056	3,690	73.0	79.8
	Omair ...	1	46	8,922	223	5,773	4,711	81.6	64.7
	Rasipur ...	1	67	6,142	244	5,964	4,711	79.0	81.4
	Salem ...	1	179	7,350	218	7,683	6,728	87.6	104.5
	Sankari ...	1	78	11,717	131	9,804	7,720	80.4	82.0

Statement No. VII showing inspection work done by the Health Inspectors during the year 1923-24—cont.

Districts.	Circles.	Number of Health Inspectors.	Number of villages inspected by Health Inspectors.	Total number of cases vaccinated.	Number of days spent on inspection duty.	Number of cases verified by Health Inspectors.	Total number of successful cases as reported by Health Inspectors.	Percentage of successful cases to the total number inspected as reported by Health Inspectors.	Proportion per cent of inspection by Health Inspectors to total number vaccinated.
1	2	3	4	5	6	7	8	9	10
South Kanara	Coondapur ...	1	96	6,308	239	5,694	4,882	85.7	90.2
	Karkal ...	1	102	6,815	137	5,604	5,093	90.8	82.2
	Kasaragod ...	1	63	7,793	71	4,668	3,276	70.1	59.8
	Mangalore ...	1	90	10,340	130	8,993	7,116	78.1	86.9
	Pattur ...	1	123	6,769	146	5,418	4,731	87.3	90.0
	Udipi ...	1	116	10,117	233	7,086	6,913	97.3	70.0
	Uppinangadi ...	1	76	6,374	48	3,314	2,518	76.0	52.0
Tanjore	Arantangi ...	1	52	4,778	209	5,281	4,467	84.6	110.5
	Mannargudi ...	1	215	7,316	210	5,514	4,837	87.7	71.3
	Kumbakonam ...	1	171	7,329	122	5,576	4,495	80.6	76.0
	Mayavaram, East ...	1	89	5,310	205	5,839	4,902	84.0	109.9
	Do. West ...	1	100	5,126	161	4,654	3,651	78.4	90.8
	Nannilam, North ...	1	257	3,753	204	3,914	2,903	74.2	104.3
	Do. South ...	1	113	3,788	77	2,516	2,164	85.0	67.2
	Papanasam ...	1	179	7,660	214	7,384	6,339	85.8	96.4
Tinnevely	Tirutturaiundi ...	1	150	9,019	220	7,537	6,846	90.8	83.6
	Pattakkottai ...	1	202	7,264	165	6,289	5,747	91.4	86.6
	Negapatam ...	1	216	6,078	240	5,136	4,760	92.7	84.5
	Shiyali ...	1	86	6,830	139	5,054	4,192	82.9	74.0
	Tanjore, North ...	1	346	6,859	221	5,727	4,807	83.9	83.5
	Do. South ...	1	154	7,166	151	5,943	4,812	80.9	82.9
	Ambasamudram ...	1	101	7,550	224	6,830	5,631	82.4	90.4
	Kovilpatti ...	1	99	7,857	145	7,944	6,262	79.0	101.0
Trichinopoly	Nanguneri ...	1	240	10,578	248	8,302	6,818	82.1	78.5
	Sankarankoil ...	1	156	9,200	175	7,675	6,940	90.4	83.4
	Srivaikuntam ...	1	95	6,572	251	7,146	6,435	90.0	108.0
	Tenkasi ...	1	121	12,041	184	8,719	7,152	82.0	72.4
	Tinnevely ...	1	110	5,844	96	5,128	4,048	78.9	87.7
	Tiruchendur ...	1	94	10,873	118	8,548	6,414	75.0	78.7
	Vilattikulam ...	1	146	9,539	208	6,091	5,107	83.8	63.9
	Ariyalur ...	1	98	6,419	106	6,369	4,771	74.9	99.2
Vizagapatam	Jayankondam ...	1	89	8,524	118	7,169	6,052	84.2	84.3
	Karur ...	1	133	8,839	202	8,742	7,536	86.2	98.9
	Kulittalai ...	1	78	9,157	128	7,890	6,394	81.0	86.2
	Lalgudi ...	1	88	8,295	162	6,234	5,412	86.8	75.2
	Manapparai ...	1	96	7,252	80	5,361	4,370	81.5	73.9
	Musiri ...	1	83	7,408	131	6,950	5,612	80.7	93.8
	Perambalur ...	1	100	8,963	98	8,462	6,968	82.3	94.4
	Trichinopoly ...	1	93	6,801	66	4,875	3,989	81.8	71.7
Vizagapatam	Turaiyur ...	1	85	8,082	170	7,171	6,091	84.9	88.7
	Anakapalle ...	1	106	4,878	183	4,236	3,343	78.9	86.8
	Bobbili ...	1	251	7,497	246	8,304	4,464	53.7	110.7
	Chipurupalle ...	1	270	8,587	139	8,507	5,593	65.7	99.3
	Gajapatinagaram ...	1	261	8,371	231	7,728	5,263	68.1	78.8
	Narasapatam ...	1	128	6,881	144	7,254	6,165	85.0	105.4
	Palkonda ...	1	175	5,701	213	4,325	3,051	70.5	63.9
	Razam ...	1	279	6,531	141	6,122	4,709	76.9	90.4
Vizagapatam	Salur ...	1	162	4,689	267	4,601	2,910	63.2	82.0
	Yellamanchili ...	1	291	9,028	109	8,057	6,172	76.6	78.9
	Vizagapatam ...	1	120	4,251	175	3,781	2,861	75.1	78.2
	Vizianagaram ...	1	216	9,043	192	8,038	5,608	70.5	75.9
	Bimlipatam ...	1	114	6,401	103	5,441	4,220	77.5	85.0
	Chodavaram ...	1	207	8,704	113	5,791	4,628	79.9	59.2
	Paravatipurm ...	1	132	4,396	270	3,663	2,235	62.7	68.2
	Jami ...	1	119	5,587	50	3,292	2,052	62.3	47.1
Grand Total ...		244	47,202	1,693,135	38,882	1,436,291	1,162,429	80.9	84.8

Government of Madras

LOCAL SELF-GOVERNMENT (PUBLIC HEALTH) DEPARTMENT.

G.O. No. 1681-P.H., 18th November 1924

Vaccination—Report of the Director of Public Health for 1923-24—Reviewed.

READ—*Letter from Dr. K. T. MATTHEW, D.Hy. (Durham), D.P.H. (Cantab),
Officiating Director of Public Health, Madras, to the Secretary to Government,
Local Self-Government (Public Health) Department, dated Madras, the 28th
June 1924, D. No. 245-P.H.*

Order—No. 1681-P.H., dated 18th November 1924.

Recorded.

2. The Government are glad to note that as a result of the extension of the District Health Scheme throughout the Presidency there has been a distinct advance in the progress of vaccination in the rural areas. The report for the year (1923-24) under review shows—

(a) an increase of 150,941 (from 1,761,624 to 1,912,565) in the total number of operations in all districts;

(b) an increase in the percentage of total successful cases (from 78.2 to 81.7)—90 per cent of successful cases under primary vaccination (including secondary) and 42.6 under re-vaccination against 79.2 and 39.5 in the previous year;

(c) an increase in the number of successful infantile vaccination cases by 113,632 and

(d) a decrease in smallpox mortality by 3,900 (from 26,526 to 22,626).
The average cost of successful cases, however, showed an increase (from annas 10 pias to 8 annas 9 pias).

The work in the municipal areas was disappointing, operations having fallen by 17,148 from 203,115 in spite of the fact that vaccination is compulsory in the

4. The principal defects noticed in the administration

(a) the absence of a full complement of qualified

(b) the comparative absence of pensionary provision

(c) the failure of local bodies to provide vaccination suitable equipment;

(d) the failure of local revenue officers to report of epidemics and to maintain properly the birth and death registers.
Government hope that local bodies will soon take steps pointed out in clauses (a) to (c) above.

As regards the defect noticed in clause (d) Government have already, with reference to G.O. No. 652 of 1924, taken action and issued strict instructions to the District Public Health Officers of prompt reports, in future, to the Government of epidemics in the areas subject to the District Health Scheme.

Health is requested to report to the Government all cases of remissness in this direction on the part of the local Revenue officers, to enable the Collectors to take necessary action in the matter.

5. The formula proposed by the Director of Public Health for fixing the minimum outturn of vaccination in municipalities is commended to Chairmen of Municipal Councils for adoption. The Government trust that all Municipal Councils will realize the importance of employing *trained Health Officers* to guard public health. By taking advantage of the scheme of provincialization of municipal health officers, the cost incurred by the Councils will be very little when compared with the manifold advantages which they will derive from the services of trained health officers.

[By order of the Government, Ministry of Local Self-Government (Public Health) Department]

P. L. MOORE,
Secretary to Government.

To the Surgeon-General.
 „ the Director of Public Health.
 „ the Law (General) Department.
 „ the Revenue Department.
 „ the Board of Revenue, Land Revenue and Settlement.
 „ 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.
 „ the Inspector of Municipal Councils and Local Boards.
 „ the Examiner of Local Fund Accounts.
 „ the Assistant Quartermaster-General, 9th (Secunderabad) Division (with C.L.).
 „ the Consul-General for Netherlands, Calcutta (with C.L.).
 Editors' Table.

