Report of the Director of Public Health, Madras 1929, including Administration of Vaccination in 1929-30

REPORT OF THE DIRECTOR OF PUBLIC HEALTH, MADRAS, 1929, INCLUDING ADMINISTRATION OF VACCINATION IN 1929-30.

RAINFALL.

The average district rainfall of the Presidency during 1929 was 47·98 inches which is an increase of 3·53 inches and 5·87 inches over the corresponding figures in 1928 and 1927, respectively. The seasonal distribution was as follows :—

	INCHES.
Inter-monsoon period, January to May	6·79
South-west monsoon, June to September	26·18
North-east monsoon, October to December	15·01
Total ...	47·98

2. Compared with 1928, eleven districts registered increased rainfall which was most marked in Malabar (+ 41·62), and South Kanara (+ 37·44). Among the fifteen districts in which a decreased rainfall was recorded, the most important instances were Vizagapatam (— 44·84), South Arcot (— 12·83), Guntūr (— 10·83) and Tanjore (— 10·75).

3. The average rainfall in the inter-monsoon period was 6·79 against 5·99 inches in 1928, increases being recorded in fourteen districts and decreases in the rest. Instances of the former group were Madras (+6·20), South Kanara (+5·33) and Malabar (+4·04). In no district was the decrease very pronounced.

4. The south-west monsoon which contributes the largest share towards the total rainfall in this Presidency was generally favourable as a whole, the average district figure being 26·18 against 21·88 inches in 1928 and the quinquennial average of 26·02. Twelve districts recorded an increase over the previous year, this being most marked in Malabar (+ 35·69), South Kanara (+ 28·68) and the Nilgiris (+ 11·09). The maximum decrease over the preceding year amounting to about 4 inches was recorded in Kurnool, North Arcot and Salem districts.

5. The rainfall of 15·01 inches during the north-east monsoon, though slightly less than in 1928 and the average, may be considered to have been fairly satisfactory throughout the Presidency. Marked increases over the 1928 figures were registered in Tinnevelly (+ 4·58), Rāmnād (+ 3·48), South Kanara (+ 3·43) and Chingleput (+ 3·12). Compared with the average, Kistna (— 5·67), Guntūr (— 4·59), and the Nilgiris (— 3·05) registered decreases.

PRICES OF FOOD-GRAINS.

6. The favourable monsoonal conditions during the year under review were reflected in the prices of the staple food grains details of which are shown in the subjoined statement:—

Grain.	Seers available per rupee in			Percentage rise or fall in price above 10 years average 1919–1928		
	1929.	1928.	Average for the previous 10 years 1919—1928.	1929.	1928.	1927.
Rice	6·1	5·7	5·7	− 6·6	− 3·5	+ 5·5
Ragi	10·5	9·7	9·0	− 14·3	− 5·2	+ 6·6
Cholam	10·1	9·2	8·5	− 15·8	+ 2·2	+ 15·3
Cumbu	9·7	8·9	8·2	− 15·5	− 6·7	+ 7·3

Economic conditions in the Presidency as judged from the prices of food grains may be considered as more favourable than in the two preceding years.

GENERAL POPULATION.

7. The aggregate population of the Presidency according to the census of 1921 is 42·79 millions. The present report relates however to a population of only 41·00 millions on account of the exclusion from the former figure of Europeans and Anglo-Indians, and the population of the Laccadives, the Banganapalle and the Pudukottah States and of a large extent of the Agency Tracts, the exclusion in the last case being due to the non-registration of Vital Statistics.

8. The population for 1929 calculated on the rate of growth during the previous inter-censal periods is 43·59 millions. Against this figure, an estimate of 46·57 millions is arrived at when the excess of births over deaths in the interval 1921—1929 is added to the population at the 1921 census. The large disparity of 2·98 millions between these two figures is to be ascribed to several causes, chief among them being the defects still continuing in the registration of vital statistics, migration of population and the possibility of errors in the census enumeration.

9. As in previous years, emigration of unskilled labour was restricted to the Straits Settlements and Ceylon. Statistics of emigration for the last five years are given below:—

1925	154,584	1928	163,856
1926	215,783	1929	192,400
1927	304,023		

The large increase of about 28,500 emigrants in 1929 compared with the previous year is attributed by the Protectors of Emigrants to the withdrawal of the restrictions on the output of rubber from 1st November 1928, the opening of about 24 new estates in Malaya which created an increased demand for labour and the relaxation in the sex ratio of the emigrants.

With the exception of Bellary, Anantapur and the Nilgiris, every other district contributed emigrants, the largest numbers being derived from Trichinopoly (32,485), Salem (21,467), Tanjore (14,190), South Arcot (10,830) and North Arcot (10,631). Less than 500 of the total emigrants were skilled labourers.

The number of immigrants from Ceylon and Straits Settlements was 133,973. Such of the emigrants returning independently at their own expense are merged in the general passenger list and their number cannot be accurately estimated.

VITAL STATISTICS.

REGISTRATION AND COMPILATION.

10. The most important purposes of Preventive Medicine are the prevention of such diseases as are preventible and the preservation of the life and the health of the individual even from the time of intra-uterine existence. For the fulfilment of these purposes, correct vital statistics are of supreme importance, and it is no exaggeration to state that they constitute the very foundation of practically all public health activities; furthermore, vital statistics have their use in the administration of several branches of law as inheritance and so forth.

11. Commencing from 1923, the year in which the Public Health Department was reorganized, a progressive and definite improvement has been effected in the registration of vital statistics and the compilation of returns. There are, however, several defects, not in any way negligible, that still continue to exist though not to the same extent as before. Although the goal of reaching the standard obtaining in other countries may be remote, it is quite practicable even with the present agency for registration to rectify many of the defects which detract from the accuracy of the records.

12. In spite of the constant vigilance and perseverance of the subordinate staffs of the Public Health Department, enumeration of births and deaths is far from complete. Evidence of this is found in the discovery during the year under review of approximately 73,000 unregistered births and 23,000 deaths in the rural areas alone. Approximately 5 per cent of the births and 2·5 per cent of the deaths reported in the returns comprise the detections made by the Health Staff and to the above extent at least, village officers are at default in registration.

13. In the year under report, Act III of 1899 (compulsory notification of births and deaths in non-municipal areas), was extended to the whole of Anantapur district and selected localities in a few other districts. The Act is in operation throughout or to a large extent in some districts, e.g., Madura and South Arcot and no administrative difficulties of any kind have been experienced in its enforcement. It has been urged year after year that this Act should be extended to all the rural areas of the Presidency and this is again emphasized in the present report; apart from purposes relating to vital statistics, this proposal has now gained an additional argument in its favour, viz., that in the enforcement of the Marriage Restriction Act which has come into operation this year, certificates of entries from properly maintained birth registers would, in course of time, constitute the best proof of the ages of the contracting parties.

14. As registration of vital statistics in the rural towns especially those with large populations could not be generally carried out satisfactorily by the village headmen in addition to their other duties, its transference to union authorities was tried some years ago as an experimental measure in a few towns but was found to be a hopeless failure. On the recommendation of the District Health Officers, the suggestion was made to the Government in the Annual Report for 1928 that there should be full-timed Birth and Death Registrars for rural towns having a population of over 10,000. Unfortunately this proposal has not found acceptance as Government have stated that Act III of 1899 as it stands at present does not warrant such appointments, and that amendments to the Act to carry out the above proposal are unnecessary. This subject came up again for consideration at the Health Officers' Conference of 1930 and the Health Officers were unanimously of opinion that registration in these towns was impossible of improvement unless full-timed registrars were appointed: this deserves serious consideration in view of the fact that in 1929, the birth-rates in 54 out of 213 rural towns were below 30 per mille; also the population of several minor towns is much greater than in many municipalities which have full-time Birth and Death Registrars. If the Government are unable to reconsider their order on the proposal regarding the appointment of registrars for the larger union towns, either of the two following alternatives is suggested, viz., the extension to these towns of the provisions of law relating to registration of vital statistics in

municipalities, or insisting on the Boards of the larger unions the employment of fully qualified Sanitary Inspectors who, in addition to the supervision of sanitation which is at present very unsatisfactory in the great majority of cases, could attend to the functions of Birth and Death Registrars.

15. The system introduced three years ago for the checking of the monthly vital statistics returns by the District Health Officers has been working satisfactorily and has contributed in no small share to greater accuracy and to the recognition or the suspicion of the presence of infectious diseases in villages from which reports had not been received.

Thanks to the co-operation of the Revenue Department, instances of delay and failure in the reporting of infectious diseases are far less numerous than in previous years. Irregularities in this respect are brought to the notice of Revenue authorities then and there by the Health Officers.

16. The average birth-rate in the 82 municipal towns was 38·9 per mille in 1929 as compared with 40·1 in 1928. Judged from these figures, it has to be inferred that there has been a distinct decline in the efficiency of registration of vital statistics in municipalities. The birth-rates in as many as 13 towns were less than 30 per mille and in two towns, viz., Erode and Tiruvārūr, the rates were as low as 14·2 and 16·8 respectively. Also, six towns—all of which are in the group of towns with low birth rates returned incredibly low death rates of less than 20 per mille. Neither peculiarities in the age and sex constitution of the population nor the sanitation of these towns warrant such ridiculously low rates which cannot but be attributed to grossly defective enumeration of births and deaths. Government are requested to take serious notice of the indifference of the municipal councils concerned, the worst among which are those of Erode and Tiruvarur.

Apart from these defects, irregularities of commission and omission in the maintenance of registers and in the preparation of returns are still far too common. During the year under review, the rules prescribing the minimum qualifications of Municipal Registrars of Births and Deaths were confirmed (in G.O. No. 1710, P.H., dated 9th July 1929) and on the completion of the training of the whole personnel, it may be reasonably expected that most of the irregularities mentioned above will disappear. Incidentally, it has to be pointed out to the Government in this connexion that there is a tendency on the part of a few municipal councils to circumvent the restrictions imposed in the above Government Order by showing in the establishment schedules, certain men as Birth and Death Registrars whose services are however utilized in the other departments of municipal administration, registration work being done by incompetent persons as maistris, bill-collectors and so forth. It is hardly necessary to say that such subterfuges are not very creditable.

17. In the preparation of the annual Public Health reports, it has all along been the practice to calculate the birth and death rates with reference to the population at the immediately preceding census. Whilst this may be practically correct in the census year, it cannot be so in the succeeding years as the population is not stationary but is increasing every year by the excess of births over deaths and is also affected by the balance between emigration and immigration; whilst the latter feature may be not a serious one for consideration except probably in circumscribed localities, the former factor cannot be ignored. Taking the present report for example, the birth and death rates for the Presidency determined on the 41·00 millions population at the 1921 census are 37·9 and 25·3 respectively per mille, whereas the correct rates are 34·5 and 23·1 which are derived when calculated with reference to the estimated population of about 45 millions in 1929. In order to avoid the fallacies in the rates as worked out under the present system and to be in consistence with the practice adopted in other countries, it was proposed more than five years ago that the estimated population for each year should be used in the Annual reports, but the proposal did not however materialize. This has again been recently revived and Government have recommended its acceptance by the Public Health Commissioner.

18. The salient features in the vital statistics of the year under review as compared with 1928 are—

(*a*) Increase in the recorded birth-rate from 37·4 to 37·9;

(*b*) Decrease in death-rate from 26·3 to 25·3;

(*c*) A marked decrease in the mortality from cholera, plague, fevers and "Other causes," an increase in the mortality from smallpox and a more or less stationary death-rate under the other important heads of death causation;

(*d*) A slight decrease in the infant mortality rate.

These subjects are dealt with in detail in the succeeding portions of the report.

BIRTHS IN DISTRICTS.

19. The total number of births registered in the Presidency during the year under report was 1,555,661 which represents a rate of 37·9 per mille, the rates for 1928 and the quinquennial average being 37·4 and 35·7 respectively. The birth-rate in 1929 is the highest on record during the last decade; it is however below the estimated rate of 42·5 per mille.

20. The birth-rate of 37·9 in the year is composed of 19·3 males and 18·6 females; to state it otherwise, for every 100 female children, there were 104·3 male children. The sex ratio in births has, excepting in a year or two, been remarkably constant varying from 104 to 105. Individual districts exhibit however somewhat wide variations, the minimum and maximum being 100 : 101·9 in Anantapur and 100 : 106·6 in Kistna.

21. As regards seasonal distribution of births, it was as in previous years at its maximum in the third quarter of the year, the actual figures being as follows :—

	Number of births registered.	Percentage of total.
First quarter	307,034	19·74
Second quarter	374,489	24·08
Third quarter	451,041	28·99
Fourth quarter	423,097	27·19
Total ...	1,555,661	100·00

22. The incidence of births was as usual highest in the Muhammadan community. The birth-rate therein was 39·7, the rates for Hindus and Christians being 38·0 and 32·0 respectively per mille.

23. The birth-rates recorded in the different provinces in India are compared in the following table :—

Punjab	44·45	Bombay	38·18
Central Provinces ...	43·96	Bengal	29·26
Bihar and Orissa ...	35·6	United Provinces	34·33
Burma	26·43	**Madras**	**37·9**
Assam	32·77		

24. Eleven districts registered birth-rates above 40 per mille, the maximum rates being 51·6 in the Nilgiris and 47·2 in Bellary; in the intermediary group with rates ranging from 35 to 40, there were 10 districts; in the remaining 5 districts, viz., Rāmnād, Tanjore, Trichinopoly, South Arcot and Cuddapah, the rates were between 30 and 32 per mille. As pointed out in the report for 1928, the low birth-rates which have been persistently registered in recent years in some of the districts in the last group are due partly to the comparatively large number of emigrants therefrom. Individual district figures are given in Appendix A.

Compared with 1928, increase in birth-rates occurred in 14 districts and it was most marked in the Nilgiris (+ 12·1), Ganjām (+ 4·8) and Nellore (+ 4·7). The maximum decrease of (— 4·5) was recorded in Gōdāvari East.

The birth-rate exceeded the death-rate in all the districts, the difference ranging from the minimum of 1·2 in Kurnool to a maximum of 20·3 in Malabar.

STILL-BIRTHS.

25. Out of 23,435 still-births registered in the year, 12,696 were in males and 10,739 in females, the proportion of still-births to 1,000 live-births being 15·1 against 14 in the previous year. The district ratios varied from 6·0 in South Arcot to 30·0 and 56·1 in Malabar and Madras respectively. Registration of still-births is grossly defective in several districts which may be recognized from the fact that in the following six districts alone, viz., Malabar, Tanjore, South Kanara, Tinnevelly, Madras and Chingleput, 50·4 per cent of still-births in the Presidency was recorded.

BIRTHS IN MUNICIPALITIES.

26. In the population of 3·03 millions in the 82 municipalities in the Presidency, 118,103 births were registered during the year representing a rate of 38·9 per mille of population against 40·1 in the previous year. There has therefore been a distinct deterioration in the registration of vital statistics in municipalities. Whereas seven towns recorded birth-rates below 30 per mille in 1928, the corresponding number in the year under review was 13. It is a matter for extreme regret that in spite of the ample facilities existing in municipalities for the enforcement of the laws relating to registration of vital statistics, a large proportion of the municipal councils are hopelessly irresponsible or indifferent to this important branch of Public Health administration; it has also to be pointed out that some of these municipal councils, notably among them those of Tiruvārūr, Erode and Nandyal, have not in spite of definite directions contained in paragraph 10 of G.O. No. 2045, P.H., dated 19th August 1929, taken any steps for the improvement of registration. Reference has already been made in paragraph 16 supra to the irregularities of omission and commission in the maintenance of birth and death registers and in the compilation of returns.

27. The birth-rates recorded in 1929 were highest in Salem (69·8), Kodaikānal (57·5) and Bodinayakkanūr, Chingleput, Tiruppattur and Guntūr where the registered birth-rates were approximately 50 per mille. As pointed out in the report for 1928, the rate for Salem Town is abnormal and is explained by its being based on the inaccurate census population which was enumerated when the town was evacuated during an epidemic of plague. In contrast with these, Erode and Tiruvārūr returned birth-rates less than 20 per mille, and Nandyal, Tadpatri and Kāraikkudi, less than 25 per mille; the rates in these towns (excepting Kāraikkudi, a recently constituted municipality) have for several years past, been persistently low and the municipal councils concerned do not seem to have paid the slightest attention to the criticisms either of this office or of the Government.

28. Compared with 1928, increases in birth-rates were recorded in 28 municipalities, decreases in 43, and the rate was stationary in one town, namely, Parlākimedi. The maximum increase of 11·7 was recorded in Adōni and the maximum decrease of 11·5 was in Sivakāsi. It may be generally stated that registration of vital statistics is satisfactory in municipalities having Health Officers, and as a rule, it is otherwise in the other municipalities.

Appendix A gives details of the birth-rates for the several municipalities.

The death-rate exceeded the birth-rate in 14 municipalities, the difference varying from 0·2 in Tellicherry to 9·8 in Kāraikkudi. It should be pointed out however, that, in many instances, this excess of deaths over births is due to defective registration.

29. The total number of still-births registered in the municipalities during the year was 4,960, the ratio to live-births being 4·2 per cent. The rate varied from zero in Tadpatri and Virudhunagar municipalities to a maximum of 12·03 in Chingleput. The failure to record even a single still-birth in some municipalities and the enormous variations noted above are evidence of the extremely defective registration of still-births.

BIRTHS IN RURAL TOWNS.

30. The number of rural towns (213) remained the same as in 1928, the population of these according to the last census being 2·09 millions. The total number of births registered in this population was 74,213 representing a rate of 35·5 per mille against 36·4 in the previous year. As in the case of municipalities, there has been a deterioration in registration in rural towns. This is further illustrated in the following statement:—

Registered birth-rates.	Number of towns. 1928.	1929.
Below 10 per mille	...	2
„ 10—20 „	10	8
„ 20—30 „	44	44
„ 30—40 „	84	99
„ 40 and above	75	60
	213	213

It is a feature to be extremely regretted that in about 25 per cent of the rural towns, registration of vital statistics is extremely unsatisfactory and in the marginally-noted ten towns which are comprised in the first two groups in the above table, it is deplorably bad. Incidentally, it is significant that five out of these ten towns are in a single district, viz., Rāmnād. The attention of the Collectors concerned should be drawn to the serious defects in registration in these towns.

Ayyampēttai	7·9	Kottaiyūr	14·1
Dēvakōttai	9·3	Tiruppattūr	15·1
Pallāvaram	12·5	Kamudi	18·2
Kandanūr	13·8	Vallūru	19·0
Wellington	14·1	Tirukkāttuppalli.	19·7

Twelve towns recorded birth-rates above 50 per mille, the maximum of 62·6 being registered in Bhavāni. The high birth-rates in at least one-half of these towns are probably due to the preponderance of Muhammadans in the population, in whom the birth-rate is higher than in other communities.

Compared with the previous year, 96 rural towns registered increases in birth-rates which were most marked in Kārkala (+ 19·0), Nāyudupet (+ 17·7), Buvanagiri (+ 15·8) and Kadiri and Kulluru (+ 14 to + 15). The maximum decrease of 19·0, 17·6 and 17·5 were registered in Jammalamadugu in Cuddapah district, Sattankulam in Tinnevelly district and Vallūru in Kistna district.

The birth-rates of the different rural towns in 1929 are given in Appendix B.

DEATHS IN DISTRICTS.

31. As already stated elsewhere, one of the salient characteristics in the vital statistics of 1929 is the large decrease (nearly 43,300) in the mortality from all causes as compared with 1928, the actual figures for the two years being 1,037,452 and 1,080,744 which correspond to rates of 25·3 and 26·3 per mille of population, the quinquennial average being 25·0. The crude death-rate of 25·3 in 1929 which refers to the census population is 2·2 more per mille than the rate (23·1) derived with reference to the estimated population of the year. Nearly 75 per cent of the dimunition in deaths from all causes is contributed by the decrease in cholera and about another 15 per cent under "all other causes".

The sex ratio in deaths in all ages was 100 females: 103·3 males.

32. The incidence of mortality was highest in the last quarter, the quarters of the year next in order being the first, third and second:—

Quarters.	Deaths in 1929.	Per cent of total deaths.
January—March	260,659	25·12
April—June	223,868	21·58
July—September	250,496	24·14
October—December	302,429	29·16
Total ...	1,037,452	100·00

33. The death-rates registered in the chief communities are as follows :—

Community.	Death-rate per 1,000 population in each community. 1929.	Community.	Death-rate per 1,000 population in each community. 1929.
Christians	24·41	Muhammadans ...	24·58
Hindus	25·47	All communities ...	25·3

34. The death-rates during the last quinquennium in the different provinces in India are compared in the following table :—

Provinces.	Death-rate per 1,000 population.				
	1925.	1926.	1927.	1928.	1929.
Punjab	30·00	36·52	27·46	24·72	28·75
Central Provinces	27·27	34·33	31·31	33·68	34·13
Bihar and Orissa	23·69	25·71	25·08	25·29	26·90
Burma	18·75	20·92	19·55	21·28	22·06
Assam	22·52	23·02	23·47	22·16	20·91
Bombay	23·67	28·53	25·72	27·28	30·53
Bengal	24·90	24·74	...	...	23·52
United Provinces	24·78	25·10	22·59	24·15	24·26
Madras	24·40	25·06	21·30	26·40	25·30

35. Excluding Madras which recorded a death-rate of 42·8, the rates ranged from 37·5 in the Nilgiris to 21·0 in Coimbatore ; four districts (Nilgiris, Kurnool, Bellary and Tinnevelly) registered death-rates above 30, nine districts between 25 to 30 and twelve between 20 to 25 per mille.

Individual district rates are given in Appendix C.

Compared with 1928, death-rates declined in 18 districts (the maximum decrease of 7·0 to 8·5 being in Kistna, Kurnool and Cuddapah), and increases (6·8 in the Nilgiris and 4·8 in Ganjām) occurred in eight districts.

DEATHS IN MUNICIPALITIES.

36. The number of deaths registered in the municipalities during 1929 was 97,226 representing a death-rate of 32·0 per mille as compared with 33·7 in 1928 and 32·3, the quinquennial average.

Comparative death-rates in the several municipalities in 1929 and 1928 are given in Appendix C.

In seven towns, viz., Erode, Chittoor, Tadpatri, Ellore, Vāniyambādi, Palakole and Tiruvārūr, the death-rates ranged from 15·5 to 19·8 per mille ; none of these places are health resorts, whilst on the other hand the majority of them are notorious for their unhealthiness and the incredibly low death-rates recorded in these towns are to be ascribed only to defective registration of deaths. The remaining towns may be grouped as follows :—

Death-rates.	Number of towns.	Death-rates.	Number of towns.
20—25	15	35—40	9
25—30	24	40—45	4
30—35	22	Above 45	1 (Salem)

The very high death-rate in Salem is only an apparent feature as it is reduced by more than one-third if calculated with reference to the census taken recently. As regards the four towns in the last but one group in the above table, Madras is proverbially reputed for its persistently high death-rate and in the case of the remaining three towns, viz, Periyakulam, Tuticorin and

Virudhunagar, the high mortality is due to the prevalence of plague in the first of these places and to the epidemic of cholera in the two remaining towns.

DEATHS IN RURAL TOWNS.

37. The deaths reported from rural towns during the year amounted to 52,835 which is a small decrease of about 100 compared with 1928. The death-rates per mille of population are 25·3 in 1929 and 25·2 in 1928.

Four towns—Pallāvaram, Ayyampēttai, Biccavole, and Vallūru—registered death-rates below 10 per mille, figures which it is impossible to believe as correct. Although not so bad as these four instances, there are 56 towns which returned death-rates between 10 and 20. It may be stated in this connexion that the birth-rates in most of the towns are also very low further supporting the view that defective registration is the cause of such low rates.

The rural towns are classified in the following table according to the death-rates :—

Death-rate in 1929.	Number of towns.	Death-rate in 1929.	Number of towns.
Under 10 per mille	4	Under 30–40 per mille ...	40
Do. 10–20 per mille	56	Do. 40 and above per mille.	6
Do. 20–30 „	107		

The high death-rates in the last two groups are generally due to epidemics of smallpox or of cholera and in three instances to plague.

Death-rates for individual towns are given in Appendix D.

AGE AND SEX SPECIFIC DEATH-RATES.

38. Among the various important factors which influence mortality, age and sex are of particular significance. The following table gives the sex and age specific death-rates in the population during 1929 :—

Ages.	Death-rates in 1929 per 1,000 population in each age-group.		
	Males.	Females.	Both sexes.
Under 1 year	190·34*	169·45*	179·54*
1—4 years	43·10	41·02	42·06
5—9 „	8·75	8·45	8·50
10—14 „	5·23	5·40	5·31
15—19 „	7·96	11·64	9·80
20—29 „	10·15	11·96	11·05
30—39 „	12·83	12·63	12·73
40—49 „	18·70	14·73	16·71
50—59 „	28·92	24·06	26·49
60 and upwards	76·34	74·35	75·34
All ages ...	26·10	24·50	25·30

* Calculated on births registered during the year.

The figures in this table demonstrate clearly the differences in the effects of the forces of mortality in the different age-groups ; the death-rate which is the highest in the first year of life shows a marked decrease in the next two quinquennia of life, a much smaller one in the age-group 10—14 at which the lowest rate is recorded ; this is followed by a gradual increase up to the age of 50 after which the rise in the rate is more pronounced, the second highest rate being recorded above the age of 60.

As regards the influence of sex on the mortality, the feature present in the vital statistics of most Western countries, viz., the incidence of death-rate being higher in males than in females in practically every age period, does not apply in this Presidency to the ages 10—30 wherein the female death-rate is in excess which is very marked in the age-group 20—29. This is an indirect proof of the much greater risks in maternity run by women in this country than those in Western countries.

The above two observations are generally applicable to the majority of the districts although wide variations exist in the individual district rates; Madras, however, presents a peculiar characteristic, viz., a greater mortality in females in most age periods. This has been referred to on more than one occasion in the past when reviewing the annual reports of the Health Officer of the Corporation.

The subject of infant mortality being of particular importance in Public Health administration, the statistics in connexion therewith are discussed below in detail.

39. The subjoined statement shows the infant mortality rates recorded during the last ten years:—

	Infant mortality rate per 1,000 births.		Infant mortality rate per 1,000 births.
1920	161·3	1925	180·9
1921	160·9	1926	189·5
1922	166·4	1927	175·4
1923	173·7	1928	184·2
1924	179·2	1929	179·5

Although the infant death-rate registered in 1929 is slightly less than in the previous year and the quinquennial average of 181·8, there is no definite trend of the decline in the mortality. This is in striking contrast with the results achieved in Western countries where intensive attention devoted in recent years to maternity and infant welfare has brought about a progressive and steady decline in the infant mortality rate which at the present time is one-third to one-half of what it is in Madras Presidency.

40. Sub-classification of the infant mortality figures gives the following results:—

Age of death.	Proportion to total deaths in infants. 1929.	Age of death.	Proportion to total deaths in infants. 1929.
Under 1 week... ...	37·53	One month to 6 months ...	24·83
One week to 1 month.	16·81	Six months to 12 months.	20·83

The mortality ratios in the different periods of the first year of life show a remarkable uniformity during the last three years.

41. Excluding Madras, the infant mortality rates in districts ranged from 146·1 in Malabar to 214·5 in Kistna; besides the latter district, Ganjām, Gōdāvari West, Guntūr and Kurnool registered infant death-rates above 200; it is curious that four out of the five districts with excessive rates are in the Northern Circars.

Compared with 1928, 17 districts recorded decreases in infant death-rates which were most marked in Kurnool (—25·4), and Chingleput (—17·3). The greatest increase was recorded in Trichinopoly (from 143·4 to 183·2).

Details for the different districts are given in Annexure E.

42. The infant mortality rate during the year in the municipalities of the Presidency was 197·6 which is slightly less than the rates of 202·5 in 1928 and 203·7, the quinquennial average. Twenty-six municipalities, nearly a third of the total number, registered rates above 200; the rates exceeded 250 in seven municipalities, viz., Vizagapatam (295·6), Kāraikkudi (278·0), Madras (259·2), Tuticorin (256·1), Walajapet (255·0), and Tinnevelly and Guntūr (253·2 and 253·5); the conditions affecting public health in these municipalities to cause such high infant death-rates should be really appalling and are hardly creditable to the councils concerned. The excessive rate in Kāraikkudi is probably to some extent only an apparent one on account of defective registration of births. The lowest infant death-rates varying from 77 to 93·6 were recorded in Coonoor, Tadpatri, Chittoor and Sivakāsi, but little value can be attached to the figures excepting perhaps in Coonoor for the reasons mentioned under Kāraikkudi. Infant mortality rates for individual municipalities are given in Appendix E.

GENERAL HISTORY OF CHIEF DISEASES.

43. In the report for 1928, reference was made to the important researches in preventive medicine that had been made up to date in this Presidency under the auspices of the Public Health Department and the numerous problems which awaited investigation; and in emphasizing the importance of this subject, the employment of a sufficient number of permanent units commensurate with the magnitude of the work to be done was strongly urged on the Government. Although the proposals submitted in this connexion have not been accepted in full, it is gratifying that at least one unit has been sanctioned this year enabling a beginning, however modest it may be, to be made. The subjects requiring investigation are however too many to be attended to by a single unit and it is hoped that the Government will recognize the necessity of augmenting this staff at an early date.

The problems with respect to which research was done during the year were the immunity conferred by bili vaccine against cholera, rat-flea survey in connexion with plague, and maternal mortality survey.

44. In the previous section of the report, the vital statistics of the population were discussed in broad lines without however any reference to the causes of death. This subject will now be taken up for consideration.

The following statement shows the mortality reported under the important heads of death-causation during the years 1925—29:—

Diseases.	Deaths in 1925.	1926.	1927.	1928.	1929.	Increase or decrease in 1929 as compared with 1928.
Cholera	44,815	24,407	35,334	57,677	25,846	— 31,831
Dysentery and diarrhœa ...	78,935	91,758	72,707	76,836	75,587	— 1,249
Smallpox ...	20,478	10,957	7,781	7,618	9,708	+ 2,090
Plague	2,014	2,143	2,457	2,106	1,801	— 305
Fevers	316,406	337,945	321,995	344,683	339,052	— 5,631
Respiratory diseases ...	74,591	85,602	81,277	90,012	90,159	+ 147
Deaths from child-birth ...	3,788	7,142	7,902	11,150	11,087	— 63
Other causes ...	459,531	488,575	468,289	490,662	484,212	— 6,450
Total ...	1,000,588	1,048,529	997,742	1,080,744	1,037,452	— 43,292

Judged from these figures, the state of Public Health may be considered to have been more favourable in 1929 than in the previous year:—

CHOLERA.

45. Comparative mortality statistics of cholera for the last ten years are given in the following statement and are further illustrated in Graph I (*a*) and the seasonal incidence is shown in Graph I (*b*).

Year.	Deaths from cholera.	Year.	Deaths from cholera.
1920	31,139	1925	44,815
1921	27,064	1926	24,407
1922	16,502	1927	35,334
1923	5,169	1928	57,677
1924	51,971	1929	25,846

It will be seen from these figures that the mortality from cholera in 1929 decreased by nearly 55 per cent as compared with the previous year and that, also, the year under review is one of the five years in the decade when the incidence of this disease was comparatively low. Although these are somewhat gratifying, the fact that cholera which is one of the most well-known preventible

diseases looms as one of the important causes of death in the vital statistics records costing year after year thousands of human lives should be considered as a stigma on the administration of Public Health. Provision of reasonably safe drinking water-supplies constitutes the only permanent solution of the problem of prevention of cholera, but unfortunately, progress in this direction even in the case of recognized endemic foci of infection and centres of fairs and festivals is very slow, and the reports of the Health Officers on the subject are most depressing. Unless Government and local bodies appreciate the seriousness of the problem and give their earnest attention to the recommendations of the Public Health Department, the measures adopted by the latter for the prevention and control of cholera have to be necessarily temporary expedients.

46. An important aspect for consideration in the causation of cholera epidemics is the part played by the hydrogenion concentration of the waters and the preventive properties of bacteriophage. It is reported that the Pasteur Institute authorities at Coonoor have taken samples of water before and after the outbreak of cholera in Papanāsam taluk in Tanjore district which is one of the worst endemic areas in the Presidency and the results of the investigation are awaited with interest. Again, the King Institute authorities have found that the bacteriophage propagated on the cultures of virulent cholera bacilli isolated from the samples of fæces of suspected cases of cholera in Sankaranayinarkoyil taluk in Tinnevelly district is a separate entity from the strains got from Northern India. The ultimate consequences from the standpoint of prevention of such differences in strains remain to be seen.

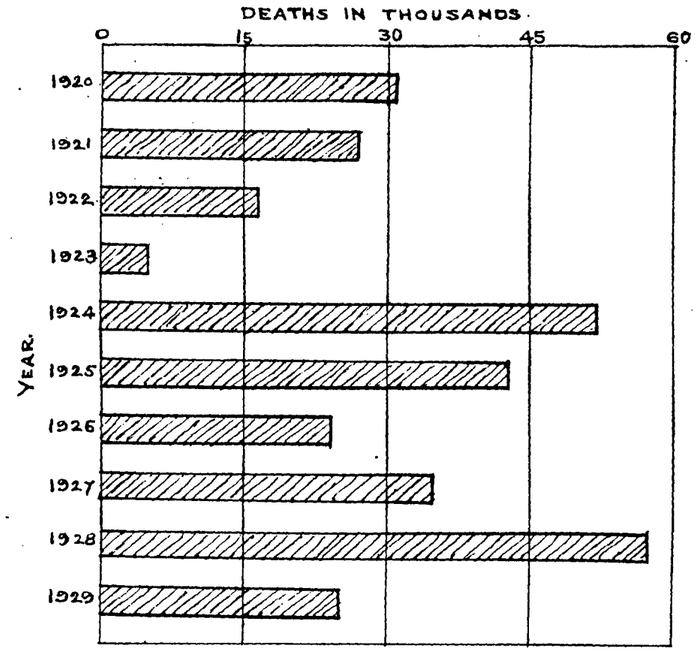
47. It is a recognized epidemiological feature that the immunisation of a large proportion of the communities against a particular infectious disease minimizes the chances of an epidemic of that disease in the locality. In order to demonstrate whether cholera bili-vaccine which is vaunted as conferring immunity for a period of two years is useful in averting such epidemics and also to confirm the experimental work done by Colonel Russell, I.M.S., in connexion with the protection value of this vaccine after the occurrence of cholera outbreaks, about 24,000 doses out of the total stock of 37,000 sanctioned by the Government in G.Os. Mis., No. 955, P.H., dated 8th April 1929, and No. 2294, P.H., dated 18th September 1929, were distributed in known endemic foci of infection in some of the Southern districts; the results of the survey will be submitted on the receipt of the final reports from the District Health Officers concerned. Incidentally, it may be mentioned in this connexion that the complete absence of cholera in the Cauvery-Mettur Project area during the year may possibly have been due to the wholesale inoculation of the population of Sampalli village which was the focus of infection in the epidemics of previous years.

48. Another epidemiological feature of cholera which is however limited to a small number of districts is the concurrence of epidemics with the groundnut harvest season and the use of certain kinds of fish for food. This requires investigation.

49. It was of course to be expected that the large decrease in the incidence of cholera during the year would be accompanied by a diminution in the number of anti-cholera inoculations. During the year under review, a total of approximately 151,000 persons were inoculated with the ordinary anti-cholera vaccine (subcutaneous); in addition about 21,000 persons (inclusive of those in the experimental survey) were protected with bili-vaccine. More than one-half of the former figure was made up in Tinnevelly, Madura and Rāmnād districts, the numbers reported from these districts ranging from 21,000 to 28,000; over 10,000 inoculations were done in Ganjām district. Among municipalities, Mangalore stood first with 16,000 inoculations. These large numbers are due to the comparative severity of the cholera epidemics. The use of bili-vaccine was confined to about half a dozen districts and similar number of municipalities. Chief among the former are Tanjore, Tinnevelly, South Arcot and Trichinopoly; among municipalities, Bodinayakkanūr, Kumbakōnam and Dhārāpuram used large quantities of bili-vaccine—approximately 3,150, 900 and 400 doses respectively.

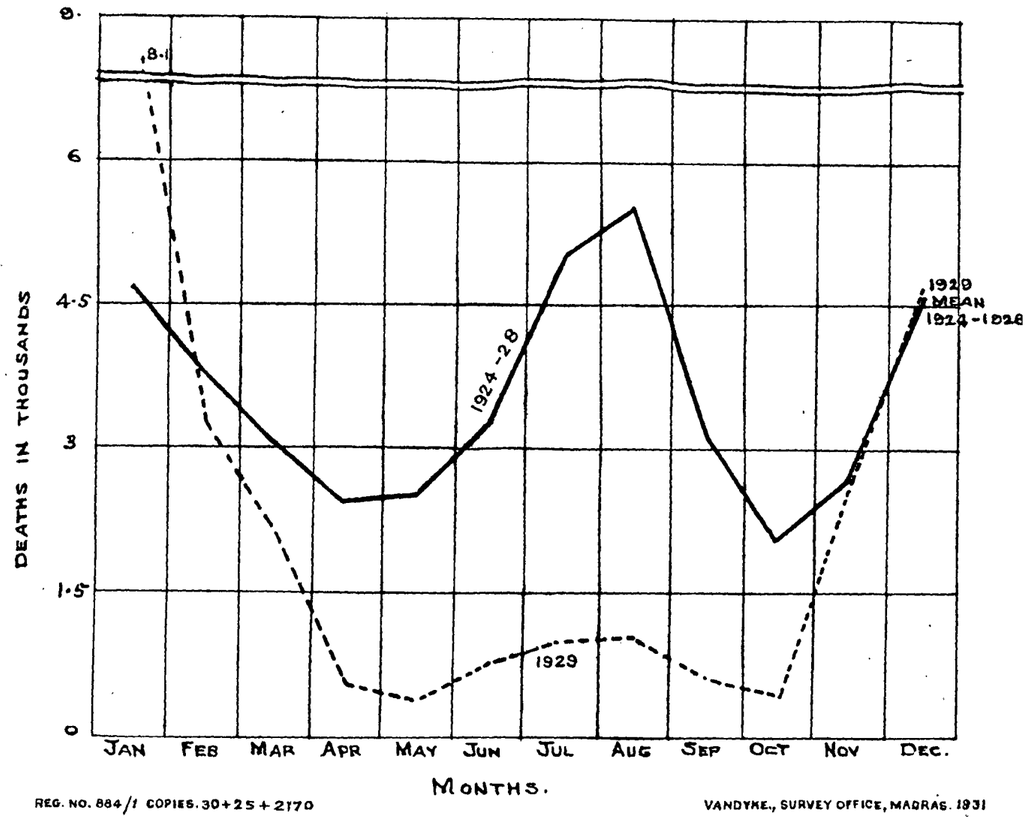
GRAPH I A.

DEATHS FROM CHOLERA IN THE MADRAS PRESIDENCY DURING THE YEARS 1920 TO 1929.



GRAPH I B.

MEAN MONTHLY DEATHS FROM CHOLERA IN 1924-1928 AND MONTHLY DEATHS IN 1929.



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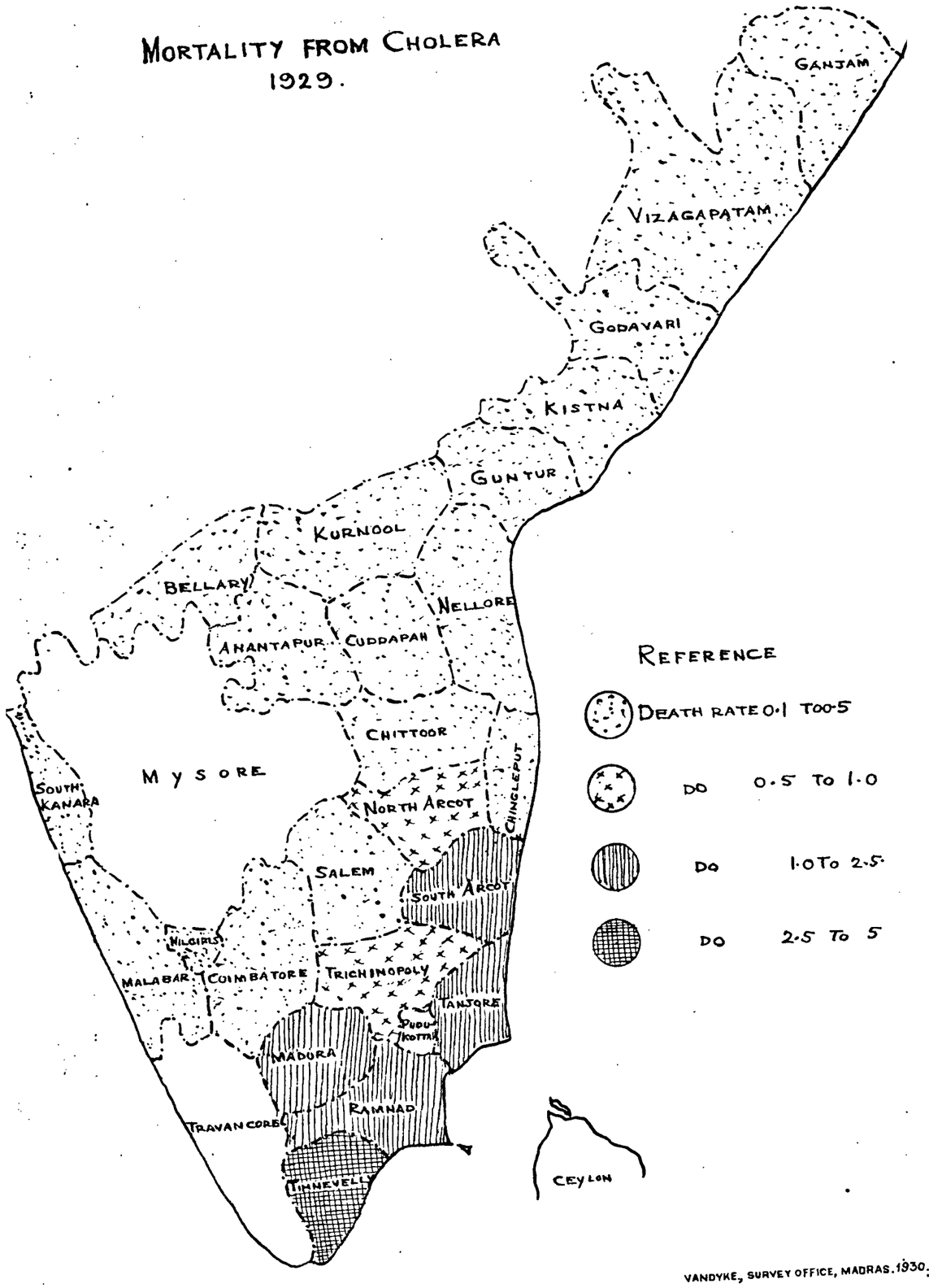
MORTALITY FROM CHOLERA
1929.



REFERENCE

- DEATH RATE 0·1 TO 0·5
- DO 0·5 TO 1·0
- DO 1·0 TO 2·5
- DO 2·5 TO 5

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The reports of the Health Officers on the dependability of vaccines—both the ordinary vaccine and the bili-vaccine—as a preventive measure, are favourable.

50. The disinfectant for water-supplies adopted in by far the great majority of cases was chlorine mostly in the form of bleaching powder ; in a few instances, per-chloron and electrolytic chlorine were used with successful results.

51. The seasonal distribution of deaths from cholera during the last five years is shown in the following statement :—

——	1925.	1926.	1927.	1928.	1929.
First quarter	18,478	11,593	8,104	8 212	13,566
Second quarter ...	8,348	2,558	7,584	7,453	1,747
Third quarter	5,685	4,853	13,609	29,086	2,736
Fourth quarter ...	12,304	5,403	6,037	12,926	7,797
Total ...	44,815	24,407	35,334	57,677	25,846

The seasonal incidence of mortality during the year conforms with that in 1926 and differs from the distribution in the other years.

52. The proportional mortality in the two sexes was 100 females : 102·3 males.

53. Five districts were either entirely free or practically so from cholera in 1929—Guntūr (nil), Nilgiris (nil) and Gōdāvari East and West and Kistna in which the number of deaths from cholera was less than 10. Five other districts, viz., Anantapur, Bellary, Kurnool, and Malabar follow with a mortality of less than 100 in each. In the districts of Nellore, South Kanara, Cuddapah, Chingleput, Vizagapatam and Chittoor, the mortality ranged from 100—500. In contrast with these may be mentioned Tinnevelly, Madura, Tanjore, Rāmnād and South Arcot, in which mortality varied from 3,000 to nearly 5,000, these five districts alone contributing 80 per cent of the total deaths from cholera in the Presidency during 1929. Judged from the population basis, the districts which registered high death-rates from cholera were Tinnevelly (2·5), Madura (2·0), Rāmnād (1·9) and Tanjore (1·7). The average rate for the Presidency was ·63 per mille against 1·4 in 1928, and 0·9, the quinquennial average. Compared with 1928, with the exception of Madura, Rāmnād and Tinnevelly districts, the rest registered a decrease in mortality from cholera, which was most marked in the districts of Cuddapah, Nellore, Kurnool, Gōdāvari East and Chingleput. In the first of these districts, the decrease amounted to nearly 6,000 deaths and in the rest it ranged from 3,000 to 3,500. Details for the different districts are given in Annexure F.

The epidemic of cholera, which ranged during the first quarter, accounting for more than 50 per cent of the total deaths during 1929 may be considered to be a continuation of the outbreak in the last quarter of the previous year. The Presidency may be considered to have been comparatively free from the epidemic during the second quarter nearly one-half of the districts being completely free from infection. It is noteworthy that the summer epidemics which usually break out in several districts, notably Tanjore, were absent. Even during the last quarter, the infection which is of a severe character in Tanjore and Trichinopoly deltas was comparatively mild in the year under review.

54. The total number of deaths from cholera registered in the 82 municipalities in the Presidency was 2,047 during the year under report, which is a decrease of nearly 1,700, compared with the previous year, the rates per mille of population being 0·67 and 1·2 respectively. Thirty-two municipalities were entirely free from cholera. Seven municipalities, viz., Bodinayakkanūr, Madura, Tinnevelly, Dindigul, Tuticorin, Virudhunagar, Dhārāpuram,were responsible for about one-half of the total mortality from this cause. Calculaed with reference

to the population, very high rates were recorded in Bodinayakkanūr (15·6), Dhārāpuram (6·7), Virudhunagar (5·6), Dindigul (4·6), and Tuticorin (3·2) and Sivakāsi (3·0). Figures for individual municipalities are given in Annexure F.

The mortality from cholera in the 213 rural towns in the Presidency was 2,674 during the year as compared with 3,141 in 1928, these figures corresponding to rates of 1·28 and 1·5 respectively per mille. The death-rate from these causes was very high in the towns of Vasudevanallūr, Sivagiri and Seithūr (between 12 and 16 per mille), Kamudi, Sompēta (about 8), Adirampatnam, Sāttur, Alwārtirunagari, Ambāsamudram, Sōlavandān, and Sālūru (between 6 and 7).

55. The number of towns and villages infected with cholera during the year was 4,081 against 6,081 in 1928.

DYSENTERY AND DIARRHŒA.

56. The total number of deaths registered in the Presidency during 1929 under this group of causes was 75,587 against 76,836 in 1928. These figures correspond to rates of 1·84 and 1·87 per mille of population in the two years, the quinquennial average being 1·9. Excluding Madras, which for purposes of vital statistics, should be considered more as a municipality than as a district, the death-rate was highest in the Nilgiris (5·7) followed by Coimbatore (3·4) and Chittoor (3·0). The lowest rates ranging from 0·7 to 0·9 were reported from Gōdāvari East and Gōdāvari West, and Nellore. Individual district figures are given in Annexure G.

57. The mortality statistics from dysentery and diarrhœa for the last five years are shown in the following statement, and are further illustrated in Graph II (A):—

Year.	Deaths.	Year.	Deaths.
1925	78,935	1928	76,836
1926	91,758	1929	75,587
1927	72,707		

58. Variations in the seasonal incidence of mortality in dysentery and diarrhœa are shown in Graph II (B). An analysis of the figures shows that the seasonal distribution of mortality varies in the different districts and is not in consonance with the belief usually held that the prevalence of diarrhœa is at its maximum during the summer months. The peak of the mortality from this group of causes is at its highest in the great majority of the districts during the last quarter of the year, especially in the month of December. In a few districts, viz., Tanjore, South Kanara and South Arcot, the maximum incidence has been in the month of January. In the north-eastern group of districts and in the district of Kurnool, the mortality is at its highest in the months of July and August. The variations in the seasonal distribution which, it may be incidentally stated, do not in all cases correspond with those of cholera, require further investigation. It may, however, be stated that the high incidence of mortality from this group of causes in the great majority of districts during the colder months is strongly suggestive of outbreaks of Enteric fevers, a large proportion of which is probably masked under dysentery and diarrhœa.

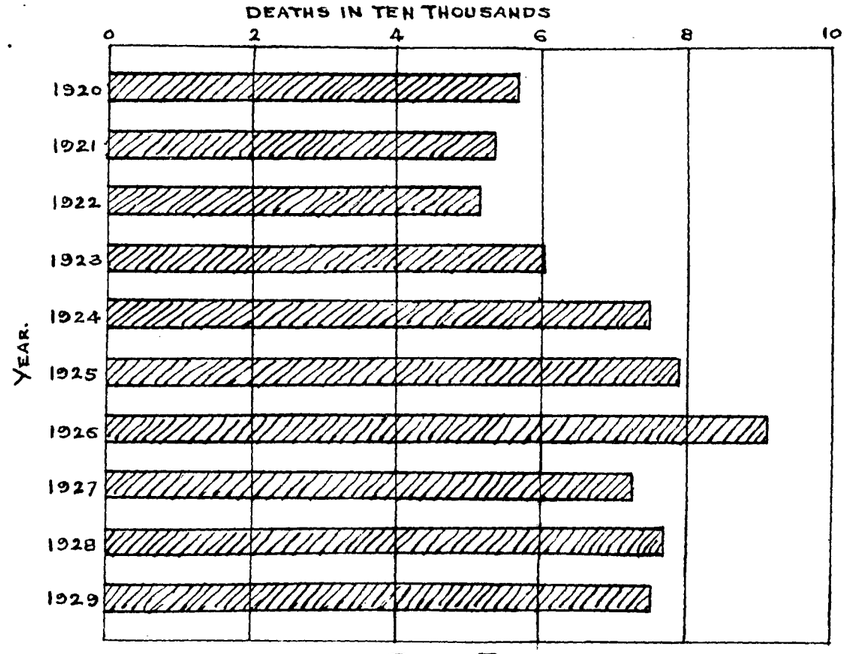
59. The mortality from dysentery and diarrhœa registered in 1929 in the municipal towns was 11,414 against 12,124 in the previous year, the rates for the two years being 3·6 and 4·0 respectively per mille of population, the quinquennial average being 4·1. The rates were very high in Dindigul and Dhārāpuram (7·0), Chicacole (6·6), Palni (6·2) and Madras and Vizagapatam (6·0). It may be stated that most of these towns returned high rates in previous years. Registration under this cause cannot be said to be correct as nearly half a dozen towns returned rates less than 1·0 per mille—figures, which it is impossible to believe as correct.

Annexure G gives details for individual municipalities.

60. In the rural towns of the Presidency, 4,100 deaths—1·96 per mille—were recorded showing very little difference from the figures of the previous year. Rates varying from 8 to 10 per mille were reported from Mēttupālaiyam, Kōttūr and Sivagiri.

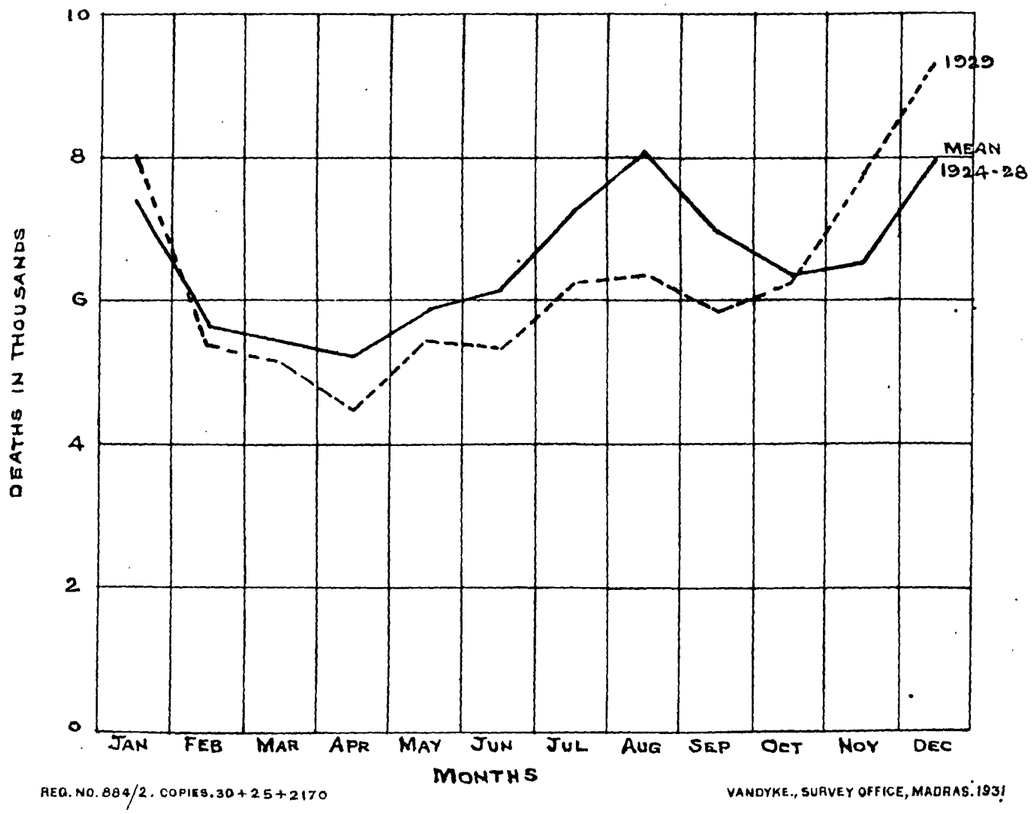
GRAPH II A

DEATHS FROM DYSENTERY AND DIARRHOEA IN THE MADRAS PRESIDENCY DURING THE YEARS 1920-1929.



GRAPH II B.

MEAN MONTHLY DEATHS FROM DYSENTERY AND DIARRHOEA IN 1924-1928 AND MONTHLY DEATHS IN 1929.



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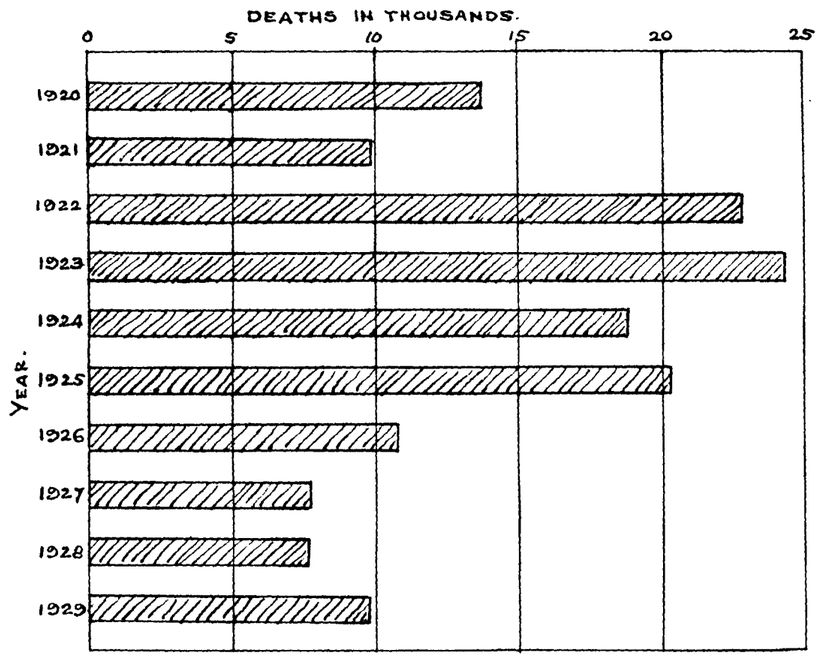
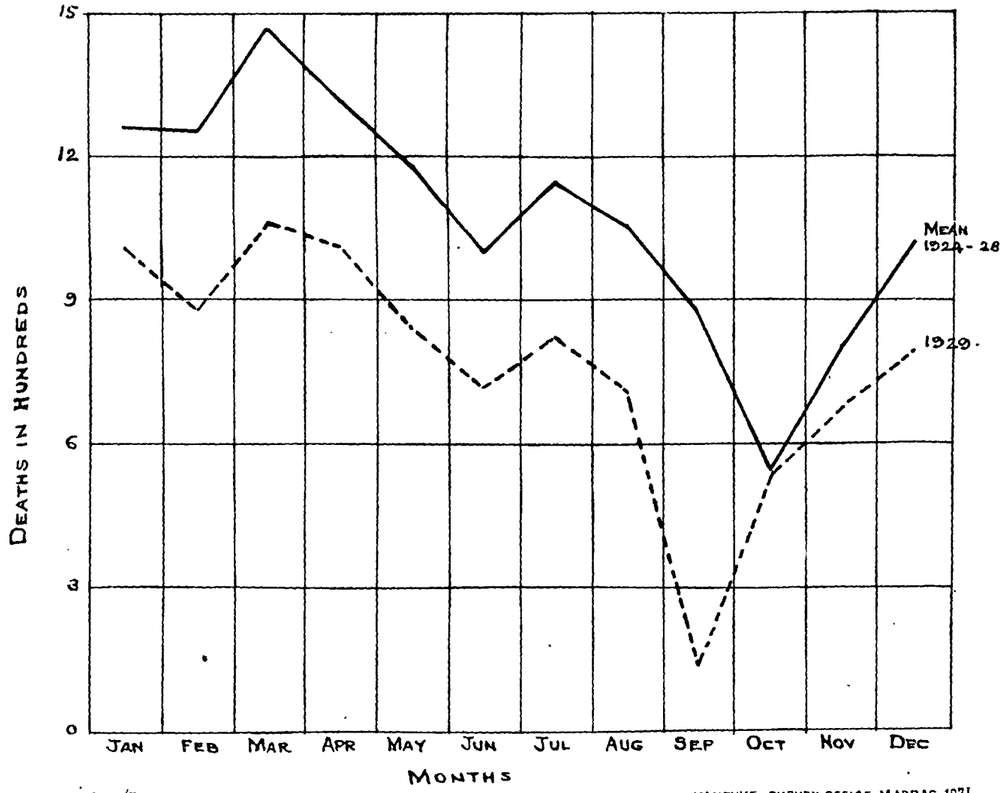
GRAPH III A.

DEATHS FROM SMALL-POX IN THE MADRAS PRESIDENCY DURING THE YEARS 1920-1929.



GRAPH III.B.

MEAN MONTHLY DEATHS FROM SMALL-POX IN 1924-1928 AND MONTHLY DEATHS IN 1929.



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61. The total number of villages and towns from which deaths from dysentery and diarrhœa were reported during the year was 13,169 out of a total of 40,850.

SMALLPOX.

62. Mortality statistics alone are briefly discussed here. The other features in connexion with this subject are dealt with in the chapter on vaccination which in accordance with G.O. No. Mis. 1299, P.H., dated 22nd May 1929, has been embodied in the Annual Public Health Report.

63. Deaths registered under smallpox during the year under report, amounted to 9,708 as compared with 7,618 in 1928; the rates for the two years are 0·24 and 0·19 respectively and the quinquennial average is 0·4.

The accompanying statement shows the mortality from smallpox during the decade 1920 to 1929. These figures and the seasonal distribution of the mortality are illustrated in graph III.

Year.	Death from smallpox.	Year.	Death from smallpox.
1920	13,697	1925	20,478
1921	9,792	1926	10,957
1922	22,801	1927	7,781
1923	24,434	1928	7,618
1924	18,810	1929	9,708

64. If Madras is excluded, the highest death-rates from smallpox among districts were 0·6 and 0·5; the former rate was recorded in South Arcot and the latter in North Arcot, Chingleput, Malabar and Tanjore. The lowest rate of 0·04 was registered in Rāmnād and Anantapur districts.

Compared with previous year, 12 districts returned an increased mortality from smallpox; in the rest, the death-rate was either stationary or showed a decrease.

65. Nearly 1,900 deaths from smallpox were registered in municipalities. This is an increase of 820 compared with 1928; the rates for the two years are 0·04 and 0·04 per mille of population, 0·05 being the quinquennial average. Twenty-seven municipalities were free from smallpox. In 32 other towns, less than 10 deaths in each were recorded. The highest rates of 5·3 and 5·0 were registered in Tellicherry and Tinnevelly municipalities respectively. Cannanore and Calicut also returned high death-rates (between 3 and 4 per mille). The epidemic seems to have been particularly severe in the municipalities in Malabar district.

Statistics of individual districts and municipalities for 1929 as compared with 1928 are given in Annexure H.

66. The mortality from smallpox in the rural towns of the Presidency was 480 against 306 in 1928; these figures correspond to 0·23 and 0·15 respectively. The mortality was very high in Kulasēkharapatnam, Peranampatti and Parvatipūr which registered a rate of 12·1, 8·6 and 6·1 respectively.

67. The total number of towns and villages which reported smallpox mortality was 2,580 against 2,215 in 1928.

PLAGUE.

68. The total number of deaths from plague reported during the year under review was 1,801 which is a decrease of 305 compared with the previous year, the rates per mille of population for the two years being 0·04 in 1929 and 0·05 in 1928, the quinquennial average being 0·08. Comparative statistics for the last five years classified according to seasonal distribution are given below and are also illustrated in graph IV:—

Period.	1925.	1926.	1927.	1928.	1929.
First quarter	1,360	883	602	678	657
Second quarter	79	182	121	89	85
Third quarter	126	388	742	423	373
Fourth quarter	449	690	992	916	686
Total ...	2,014	2,143	2,457	2,106	1,801

The mortality from plague in 1929 is the lowest on record during the last decade. The seasonal distribution in the year is more or less in conformity with that of the previous year.

69. The epidemic was particularly severe in the districts of Bellary (610 deaths), Salem (574) and Madura (461), the mortality in these three districts being nearly 92 per cent of the total deaths in the Presidency during the year. Next in order were Anantapur which recorded 86 deaths, Malabar (25), Coimbatore (19) the Nilgiris (11) and North Arcot (10).

Compared with 1928, an increase in mortality amounting to nearly 140 was recorded in Salem district. As regards decrease, it was markedly noticeable in Madura where the mortality fell from 796 in 1928 to 461 in 1929.

Chittoor and Kurnool districts reported a few sporadic cases, the deaths being 4 and 1 respectively. If these isolated cases are ignored, it may be stated that sixteen districts were free from plague.

70. In the case of municipalities, 7 of them were affected, the total mortality being 148 during the year which is exactly one half of the corresponding figure in 1928, the rates per mille of population for the two years being 0·05 and 0·1. Excepting a sporadic death in each of the three towns, Vellore, Tiruppattūr and Kurnool, the rest of the mortality was registered in Periyakulam, where there were 70 deaths, Hindupur and Hospet, 27 deaths in each and 21 in Calicut. Annexure I gives figures for the individual districts and municipalities.

71. As regards rural towns, the mortality from plague was 251 representing a rate of 0·12 per mille, the corresponding figure for 1928 being 0·05. More than a fourth of the mortality was reported from a single town, viz., Kōttūr in Bellary district. The remaining towns, where the death-rate from this cause was high, were Cumbum (6·18) and Uttamapalaiyam (3·85).

72. The total number of inoculations done during the year against plague was 112,492.

73. The total number of towns and villages which reported deaths from plague was 292.

74. The important plague preventive measures that were adopted during the year consisted of inoculation, evacuation of infected areas, rat-trapping, breaking up of consignments of grains and sun disinfection and social boycott of people coming from infected areas. It is curious that the several measures enumerated above meet with varying success in the different districts where plague is epidemic.

75. One important feature about plague in 1929 was the occurrence of an epidemic of pneumonic type of the disease in the village of Lalaikkal, a hamlet of Hooganapalli in Hosūr taluk in Salem district. In the short space of under two weeks, as many as 29 deaths occurred in a small population of about 150 in this hamlet. No other reports of this dangerous type of plague were received from any other part of the Presidency.

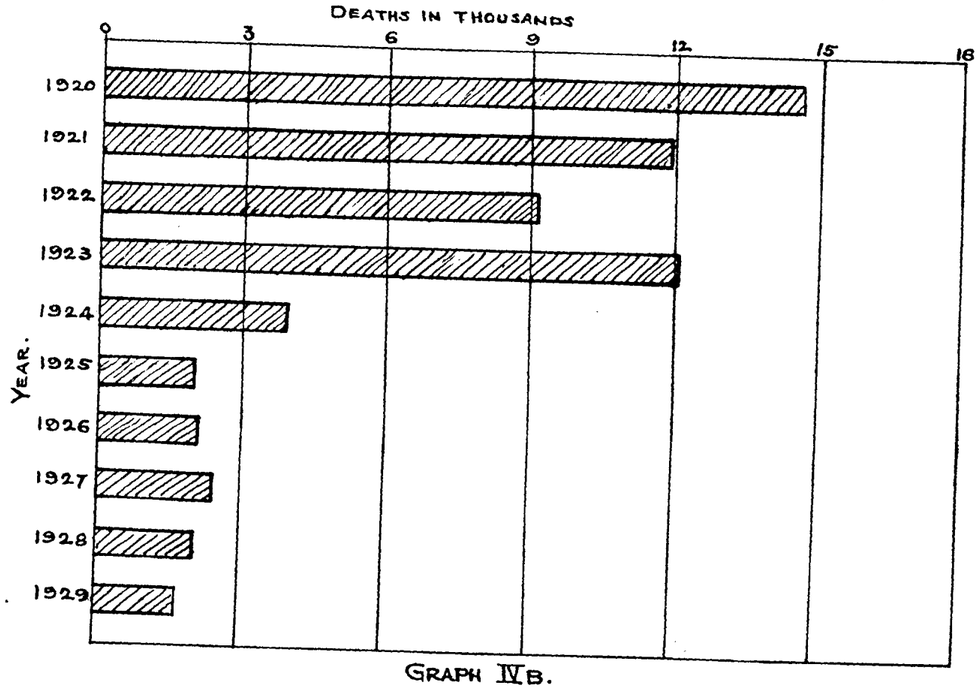
76. A rat-flea survey which was carried on during the year under the auspices of the Indian Research Fund Association and under the supervision of Lieutant-Colonel. King, I.M.S., Director, King Institute, Guindy, has since been concluded and the publication of the results of this survey is awaited.

One of the marked characteristics of plague is its peculiar tenacity to certain areas, the epidemics appearing every now and then for reasons that are not definitely known. Research work on this recrudescence problem has now been taken up, the work being conducted under the supervision of this Department.

77. According to the reports of the Health Officers, Mysore State was the focus of infection for plague in Salem, North Arcot, the Nilgiris, Malabar, Anantapur and Bellary districts; as regards Anantapur, Bellary was an additional source of infection. In addition to Mysore State, Bellary district is exposed to plague from two other directions, viz, Bombay and Nizam's Dominions; as regards the importation of infection from the latter source into Adoni taluk, it is rather peculiar that the epidemics are of short duration and it would be

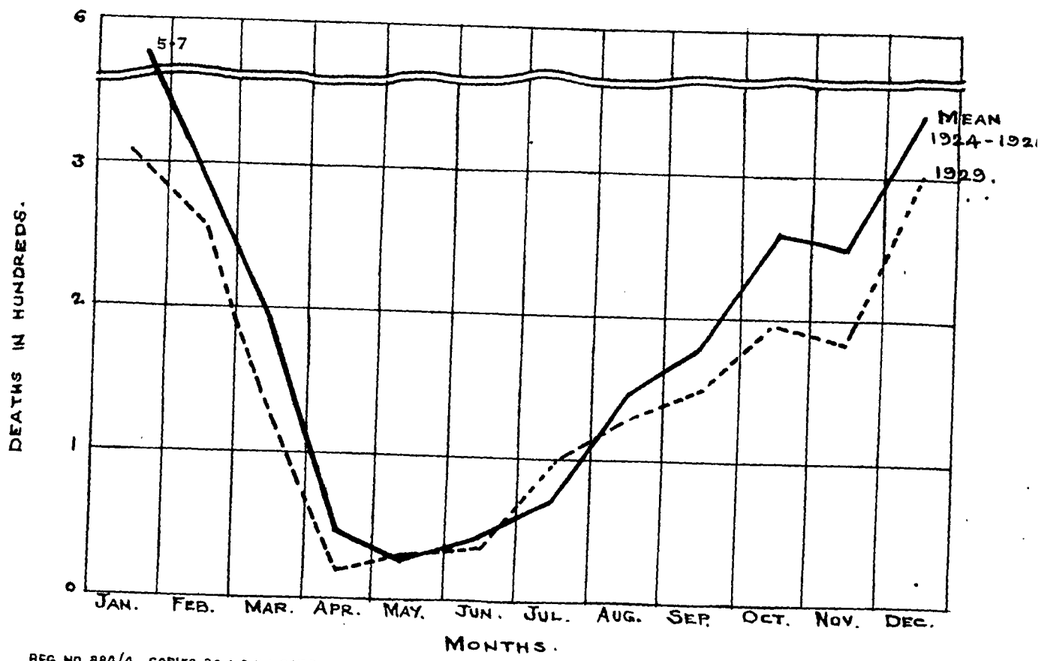
GRAPH IV A.

DEATHS FROM PLAGUE IN THE MADRAS PRESIDENCY DURING THE YEARS 1920-1929.



GRAPH IV B.

MEAN MONTHLY DEATHS FROM PLAGUE IN 1924-1928 AND MONTHLY DEATHS IN 1929.



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interesting to find out if this has any relation to any particular species of rat fleas. Infection in the small outbreak in the Kangundi division in Chittoor district was imported from Salem. The sources of infection in Rāmnād district were Ceylon (in one case) and Periyakulam (in the remaining three cases).

FEVERS.

78. The mortality from this group of causes was 339,052, a decrease of about 5,600 over the previous year's figure ; the death rates per mille of population are 8·37 in 1929 and 8·41 in 1928, the quinquennial average being 7·9. As has been pointed out in the previous reports, the term "Fevers" under which this large number of deaths has been registered is not a specific cause of death, but comprises various diseases, the predominant symptom of which is fever. Malaria, tuberculosis, influenza, pneumonia and enteric fevers are a few of the important diseases, a large proportion of the deaths from which are returned under the present group :—

79. The comparative mortality under this head for the last five years is given in the following statement and is also shown in graphs :—

Years.	Deaths from fevers.	Rate per mille.	Years.	Deaths from fevers.	Rate per mille.
1925 ...	316,406	7·7	1928 ...	344,683	8·4
1926 ...	337,945	8·3	1929 ...	339,052	8·37
1927 ...	321,995	7·9			

80. The seasonal distribution of the mortality from fevers during the year was as follows :—

Year.	Deaths from fevers.	Year.	Deaths from fevers.
First quarter ...	85,819	Third quarter ...	81,197
Second quarter ...	75,624	Fourth quarter ...	96,412

In the great majority of the districts, the peak of mortality from fevers is reached either in the month of January or in the last two months of the year. This is as it is to be expected from the meteorological conditions. In the case however of Ganjām, Kistna, Malabar and the Nilgiris, the maximum mortality from fevers is reached in the second or the third quarters. This feature is rather peculiar and requires investigation.

81. The districts where extraordinary high death-rates from fevers were registered during the year were Kurnool, Ganjām, Vizagapatam and Cuddapah in which the rates per mille ranged from 16 to 20; large areas in these districts are reputed to be highly malarious and there is no doubt that a great proportion of the fever mortality is due to the inclusion under this group of deaths from malaria. Other districts in which the mortality from fevers was comparatively high are Gōdāvari East and West, Nellore, the Nilgiris and Guntūr. Even in these cases, there is reason to suspect that malaria is one of the chief causes of the high fever death-rate. The districts in which the lowest mortality rates were recorded were Tanjore and Madura recording rates between two and three per mille. The variations in fever mortality are illustrated in the accompanying map.

Compared with 1928, the districts which registered increases in mortality from fevers were Ganjām, Coimbatore and Tinnevelly. As regards the other districts, the death-rates were either more or less stationary or was marked by decrease.

82. The mortality from fevers in the municipalities in the Presidency was 13,045 corresponding to a death-rate of 4·3, the corresponding figure for the previous year being 14,911 and 4·9, respectively; the quinquennial average is 4·4. Fever death-rates were very high in Nandyal (19·0), Tadpatri (10·7) and Tiruvannamalai (10·0) ; incidentally, it may be mentioned that all these three towns recorded similarly high rates in the previous year. The lowest death-rates of 1·0 per mille were registered in Ootacamund, Dindigul, Adōni, Mannargudi, and

Vaniyambadi municipalities. Annexure J gives detailed figures for the individual districts and municipal towns.

83. The number of deaths registered from fevers in the rural towns of the Presidency was 14,756 which is a decrease of about 600 compared with 1928; the rates for the two years are 7·1 and 6·8, respectively, per mille of population. In the undermentioned thirteen towns, the death-rates from fevers were very high ranging from 15 to 27 per mille :—

Saluru.	Russellkonda.	Palkonda.
Sitturu.	Viraghattam.	Siruguppa.
Chodavaram.	Rajapalaiyam.	Razampetta.
Narasapatnam.	Kayalpatnam.	
Tirumangalam.	Tuni.	

Nine of these thirteen towns are situated in malarious tracts and there is no doubt that the high fever death-rates in these places are to be ascribed to the inclusion of deaths from malaria.

84. Approximately 30,000 out of 40,000 towns and villages have reported deaths from fevers.

MALARIA.

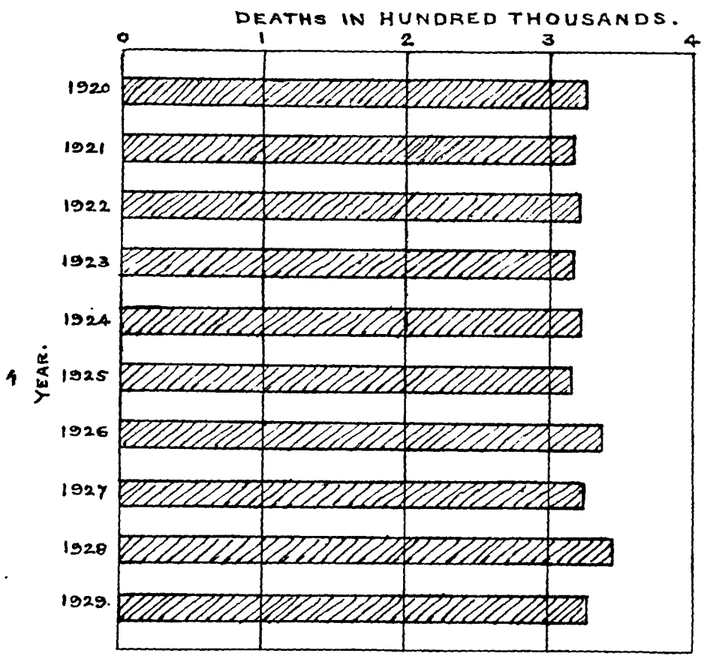
85. It is no exaggeration to state that this disease overshadows in importance any other individual disease in this Presidency. In the first place, it is present practically in all the districts although the extent of its prevalence and the severity of the infection might vary in different places. Secondly, though actual statistics on the subject are not available, it may be stated that, at the most modest estimate, a third of the mortality classified under "fevers," i.e., about 2·5 per mille of population is due to malaria. But more import than this, however, is the indeterminable but very large extent of invalidism and suffering and the consequent economic loss caused by the morbidity. Malaria ranks therefore foremost among the preventible diseases in this Presidency.

86. It has been recognized by most malariologists all over the world that the problem of prevention and control of malaria in different places is so complex that no hard and fast rule can be laid down in this respect for universal adoption. For the study of the preventive measures most suited for different geographical areas, the establishment of at least four research stations in selected centres is of urgent necessity. Incidentally, it may be stated in this connexion that, in the adjoining Province of Mysore which has an area of less than 30,000 square miles and a population of about six millions only, three malaria research stations have been established recently on the initiative of the Rockefeller Foundation. The suggestion made in this respect cannot therefore be considered to be in any way extravagant. For the prosecution of this research, for the survey of the incidence and nature of malaria prevalent in the several districts—which alone will take some years to come, on account of the widespread distribution of the disease, but a knowledge of which is essential before prevention is undertaken—and lastly, for the guidance, supervision and co-ordination of the activities of the organizations engaged in prevention and control, a well-defined and continuous policy is of fundamental importance. The existing conditions do not, however, permit this, as the malarial establishment including the Special Malaria Officer which was sanctioned in the first instance is only a temporary one being renewed yearly from 1929. In view of the circumstances pointed out above, the permanent retention of the establishment is once again strongly urged on the Government.

87. During the year under review, the Special Malaria Officer carried out anti-malarial investigations in three municipalities, viz., Nandyal, Kurnool and Anantapur, six union towns, viz., Rameswaram, Pamban, Dhanushkodi, Tiruvottiyur, Koraput and Parvatipur, certain villages in Nandyal, Sirvel, Kurnool and Ponneri taluks and, at the instance of the Agent to the Governor, in Rayaghada, Bissamcuttak and Pottanghi in Vizagapatam Agency. Reports on these investigations have been submitted then and there to the Government. In connexion

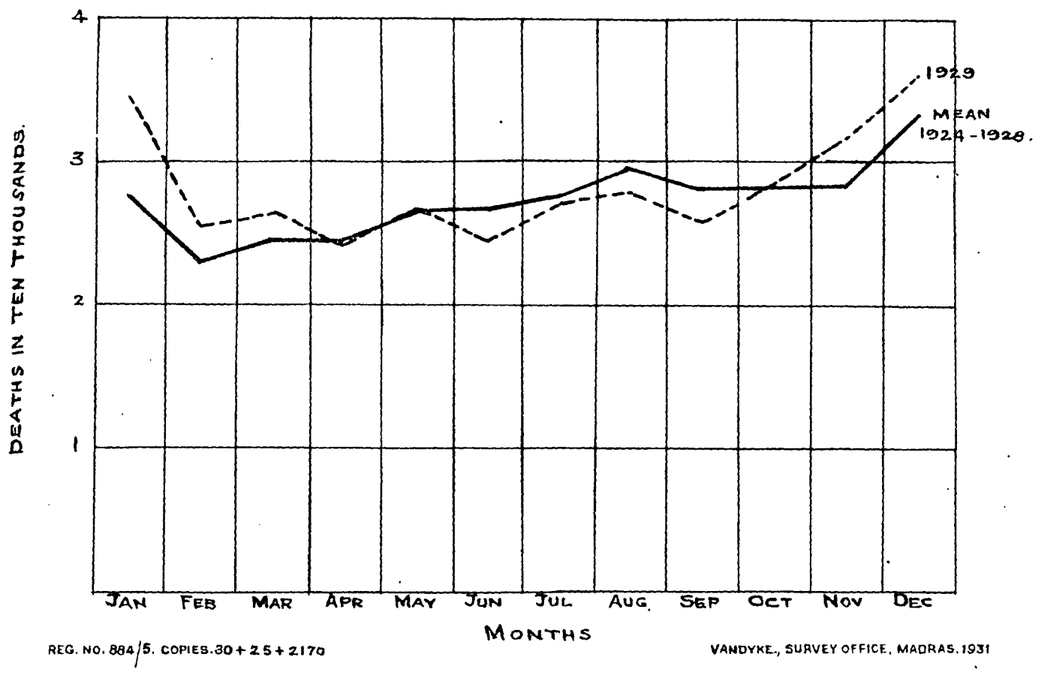
GRAPH V A.

DEATHS FROM FEVERS IN THE MADRAS PRESIDENCY DURING THE YEARS 1920-1929.



GRAPH V B.

MEAN MONTHLY DEATHS FROM FEVERS IN 1924-1928 AND MONTHLY DEATHS IN 1929.



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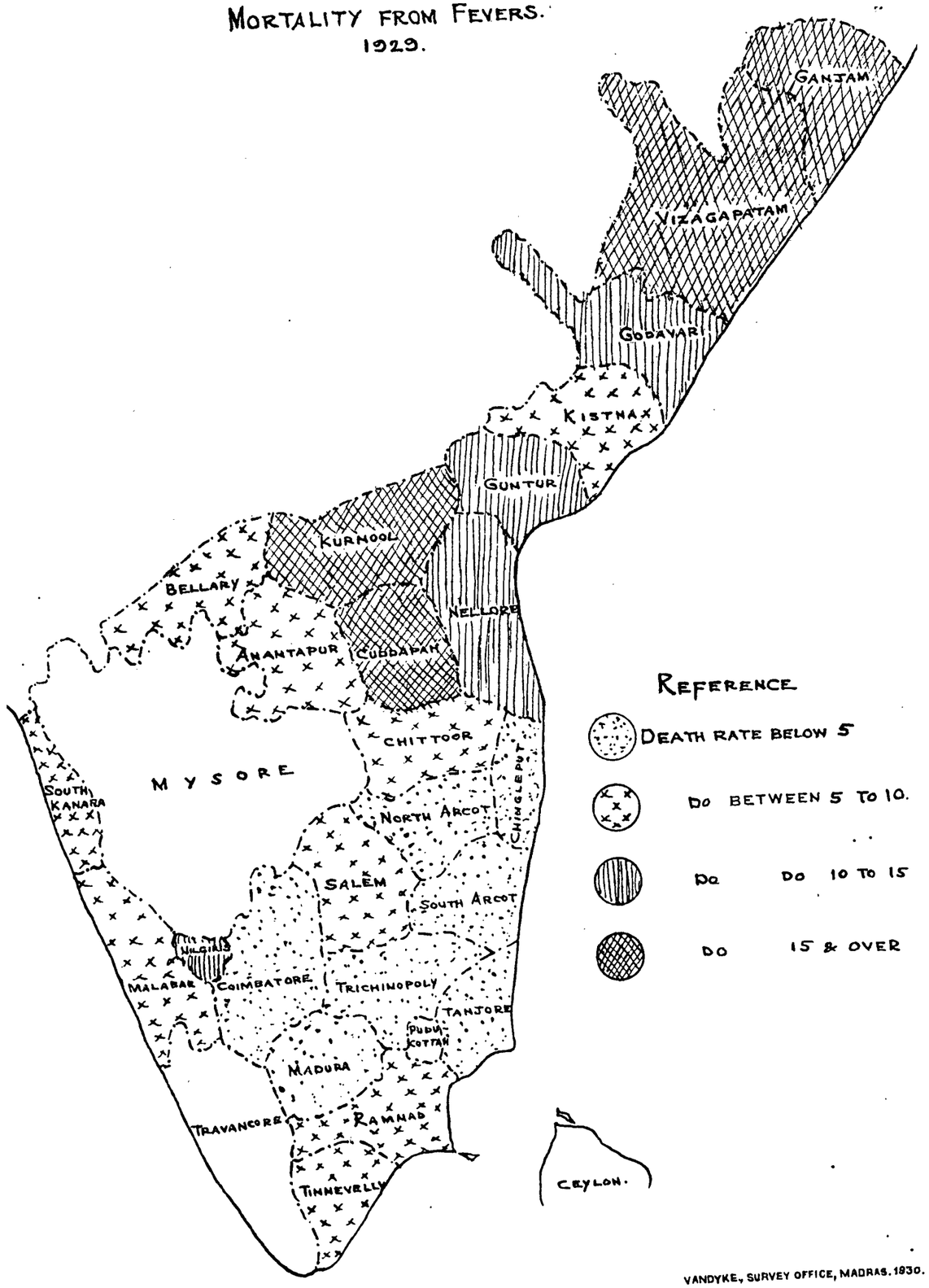
MORTALITY FROM FEVERS.
1929.



REFERENCE

- DEATH RATE BELOW 5
- DO BETWEEN 5 TO 10.
- DO DO 10 TO 15
- DO 15 & OVER

VANDYKE, SURVEY OFFICE, MADRAS. 1930.

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with the free distribution of quinine, he visited Kollegal, Kanigiri, Udayagiri, Cuddapah and Rayachoti taluks and incidentally carried out spelenic surveys in some villages in these taluks. He also visited Manganahalli and Mercara for the collection of mosquito specimens for the Central Malaria Bureau at Kasauli, and Bolampatti reserve in Coimbatore district for the selection of sites for the housing of coolies employed in the head-works of Coimbatore Water-supply Scheme.

88. The important factors which contribute to the prevalence of malaria, many localities being hyper-endemic, may be briefly summarized as follows :—In several places, it is due to man's carelessness ; as examples, may be mentioned Nandyal municipality and Rameswaram and Pamban; in these places, indiscriminate quarrying and excavation of pits—whether it be by private individuals or public bodies as railway companies—foster the prolific breeding of malaria-bearing mosquitoes : in certain localities, as for instance between the Buckingham Canal and the sea coast (Saidapet and Ponneri taluks) where casuarina cultivation in connexion with which shallow pits for water-supply are excavated, is extensively carried on, economic considerations come into play. In a second type of cases, the presence of tanks and streams and irrigation channels either sluggish in their flow or permitting stagnation of water in pools, permits breeding of mosquitoes, examples of this group being Kurnool and Anantapur. There is still another type of cases where the peculiarities of the geographical situation of the localities and the presence of jungles foster the prevalence of malaria ; as examples, may be mentioned the Agency, Wynaad and large areas of the Ceded districts, planting areas, etc. There are instances in which more than one group of the causes mentioned above are in operation, a large proportion of the rural areas coming in this category. These facts illustrate the extremely complex nature of the problem of malaria.

A. Culicifacies—and in Kurnool A. Listoni in addition—is the species of mosquitoes which is the important vector of infection in the majority of the places.

89. Experimental anti-malarial work which had been started in Gudem Agency was continued during the year under the supervision of a separate Health Officer ; the activities were in the main confined to four centres and the control measures consisted chiefly of drainage, canalization of streams, paris-greening and jungle-clearing. The decided decline in the incidence of malaria in these places is proof that the disease is possible of control.

The cost of prevention of malaria in different localities presents extraordinary differences. For instances, it involves an almost fabulous expenditure in Bissamcuttak and in Satikona ; in the latter place which is about $1\frac{1}{2}$ square miles in area, a sum of about Rs. 1,000 (exclusive of the Malariologist's salary) is spent by the Bengal-Nagpur Railway Company every month for the purpose. On the other hand, the cost of the control measures carried out by the same agency in Rayagada is reasonable. The same may be said of Koraput where the work can be carried out at a comparatively small cost.

90. The localities in which anti-malaria measures are carried out under Governmental auspices are Vriddhachalam and Mettur. In the former, a sum of about Rs. 2,680 was spent, the staff consisting of two maistris and twenty coolies in the first five months of the year and one-half of these in the later seven months. In Mettur, as a result of the retrenchment in staff, the preventive measures had to be considerably curtailed and as a result there was a large increase in the incidence of malaria ; further reference to this subject is made in paragraph 166.

A few local bodies are also reported to have carried out anti-malarial work in their areas. Instances of such places are Rameswaram, portion of the Pennar river zone in Cuddapah district and Vizagapatam Municipality. Unless concerted and sustained action is taken by local bodies and liberal financial assistance extended by Government, the permanent eradication of malaria is well-nigh impossible.

91. The scheme of free distribution of quinine sanctioned by the Government was continued in ten taluks in Nellore, Cuddapah, Bellary, Kurnool, Coimbatore and Chingleput districts—and also in villages in Kollimalai in Salem district. Again, out of the discretionary grants given by the Collector, quinine was distributed free in Gudalur taluk and Wynaad villages in the Nilgiris. The reports on the working of the scheme are very favourable; for instance, the marked decline in the incidence of fever mortality in Puttur, Karkal and Koilkuntla taluks in the year under review is attributed to the distribution of quinine. In fact, this scheme has been recognized to be so important a measure in the control of malaria that there is an insistent demand from the great majority of the Health Officers for its extension. It is earnestly hoped that the proposals made in this connexion will be accepted by the Government. The total quantity of quinine (Government stock) issued during the year was 2,500 lb. and 60 per cent of this was actually spent. The reason for the rather large unspent balance is the restriction of the areas of free distribution and the decrease in the incidence of fever in these areas.

A large number of local bodies undertook free distribution of quinine in the worst affected localities in their jurisdictions. Most important among these are four taluk boards in Anantapur district, Bellary and Rāmnād district Boards, the Taluk Boards of Adōni, Proddatur, Jammalamadugu, Kurnool, Nandyal, Rāmnād and Parvatipur.

92. In the course of its tour in the Presidency in December 1929, the Malaria Commission of the League of Nations visited Vizagapatam, Koraput, Ennore, Mettur, Coonoor, Nadivattam and Ootacamund, and some hyper-endemic centres on Vizianagram-Raipur Railway extension between Parvatipur and Satikona and Bissamcuttak. Although the Commission was not prepared to express definitely its opinion on the work done in some of these places, the members seemed to have been well impressed especially with the measures adopted in Mettur.

ENTERIC FEVER.

93. Under the conditions of water-supply and conservancy obtaining at present, there is not the least doubt that enteric fevers prevail to varying extent in the several districts and towns in the Presidency. On account of the present system of registration, however, it is impossible to get statistics of the morbidity and mortality from this group of causes, most of the deaths occurring therefrom being classified either under fevers or dysentery and diarrhœa or all other causes.

In the year under review, specific instances of outbreaks of typhoid fever were reported from two villages in the Nilgiris district and in Coonoor and Hindupur municipalities. In the first of these instances, it is stated that 90 per cent of the population were vaccinated with T.A.B. vaccine and the water-supply chlorinated, the epidemic subsiding immediately as a result of these measures. In Coonoor Municipality, the disease was epidemic from February to September, the total number of attacks and deaths being 63 and 13, respectively, the peak of the epidemic being reached in July. T.A.B. vaccine was administered as a prophylactic measure to nearly 1,050 persons. This epidemic was investigated by a unit from the King Institute. In Hindupur Municipality, 16 deaths were reported from typhoid during the year.

It is the consensus of opinion of the Health Officers that the supply of T.A.B. vaccine made to the local bodies by the King Institute should be free of cost as in the case of anti-cholera vaccine. There is no apparent reason for any differentiation in the two cases and the proposal of the Health Officers in this connexion is very strongly commended for Government's acceptance. The demands from local bodies are not likely to be so great as to necessitate the creation of additional establishment for the purpose; the use of the prophylactic vaccine will be encouraged only if the supply is made free.

INFLUENZA.

94. Outbreaks of epidemics of this disease occurred in Bellary district, Tiruvallur taluk in Chingleput, Chittoor and Coimbatore districts and Mettur and Ootacamund and Coonoor municipalities. The statistics available on the subject are as follows:—

	Cases.
Bellary	4,600
Mettur	1,944
Coonoor	2,533

It is stated that in Chingleput district, the free distribution of medicines for the treatment of influenza was arranged through schoolmasters.

RELAPSING FEVER.

95. The only district from which relapsing fever was reported was Madura. It is stated that the infection was first imported in 1926 into Upper Palnis and that it has been persistently endemic in the locality ever since. The brunt of the mortality seems to have fallen on certain communities. The total attacks and deaths in the year were 905 and 180, respectively. The infection seems to be dormant during certain seasons of the year breaking out when meteorological conditions are favourable. Mass disinfection was found to be attended with great difficulties during the cold months. The total number of persons in whom de-lousing was carried out was 1,530. It is understood that in a small proportion of the cases, post-dysenteric complications of a severe and fulminating type supervened; it is reported that this dysentery was not amenable for treatment with arsenic.

KALA AZAR.

96. Reference to this disease has been made only by the District Health Officer of Rāmnād who reports that it is co-existent with malaria in Kilakarai, Pamban, Periyapatnam and Tangachimadam. The proportion of cases is largest in the Muhammadan community. The peculiar geographical distribution and the predilection of the disease to a particular community require investigation. It is understood that facilities for treatment have been provided in Kilakarai.

RESPIRATORY DISEASES.

97. The total mortality registered under respiratory diseases in 1929 was 90,159 which is practically the same as in the previous year, the death-rate per mille being 2·2 in the two years against the quinquennial average of 1·5. It is a gratifying feature that the death-rate from this group of causes which, with the exception of 1927, has been progressively on the ascent from the year 1921, was practically stationary in 1929.

98. The mortality statistics of respiratory diseases during the last ten years are given in the following statement and are also shown in graph VI(A):—

Year.	Deaths from respiratory diseases.	Year.	Deaths from respiratory diseases.
1920	46,987	1925	74,591
1921	45,180	1926	85,602
1922	48,166	1927	81,277
1923	55,951	1928	90,012
1924	64,782	1929	90,159

In accordance with G.O. No. 2045, P.H., dated 19th August 1929, Health Officers were asked to investigate in selected areas the causes of the increase in mortality from respiratory diseases during the last decade. The reports received from them are somewhat conflicting. A few Health Officers especially those of some municipal towns state that the increase noticed in some cases is only apparent and is to be attributed to better registration; in a small number of instances, the increase is stated to be a real one and is to be ascribed to defective housing

insanitary conditions noticed in certain trades, especially those with dusty occupations, and to occasional outbreaks of influenza. As regards districts, the consensus of opinion is that on account of vagaries in registration, little value can be attached to the increase noticed in the mortality from this group of causes. One Health Officer states that some village headmen admitted their ignorance and confessed that they were registering under "respiratory diseases" deaths in which swelling of the legs was a symptom-beri-beri, Bright's disease, etc. The District Health Officer, Salem, states that out of 231 deaths from respiratory diseases verified by the Health Inspectors, only 59 were to be legitimately classified under that group. It is stated by the District Health Officer, Kistna, that out of 100 deaths from respiratory diseases investigated by him, only 47 per cent were to be allotted to that head, 12·3 per cent were due to beri-beri and the rest to other causes. These instances can be multiplied. Probably, there is a certain element of truth in each of these explanations; it may also be that waves of influenza in the different parts of the Presidency might be a contributory factor for the increase. It is, however, difficult to assess exactly the share of each of these factors in the increase.

99. The subjoined statement shows the distribution of mortality in the different quarters of the year. This is also shown in graph VI (B) :—

	Mortality from respiratory diseases.
First quarter	21,994
Second quarter	19,487
Third quarter	22,272
Fourth quarter	26,406
Total ...	90,159

The high incidence in the first and the last quarters is to be attributed to the meteorological variations.

100. The highest district death-rate of 7·2 was registered in the Nilgiris; this is only to be expected from the peculiarity of the climatic conditions. Other districts which registered comparatively high rates were Gōdāvari West, Bellary, Chittoor and Kistna (rates ranging between 3 and 4 per mille). The lowest rate, viz, 0·6, an incredibly low figure, was registered in Ganjām.

101. Compared with 1928, with the exception of the Nilgiris which recorded an increase of 2·2, no significant differences in the respiratory death-rates occurred in the district rates.

102. Deaths from respiratory diseases reported in 1929 from municipalities amounted to 17,452, a decrease of about 1,200 compared with 1928. The rates per mille of population for the two years are 5·75 and 6·2, respectively, the quinquennial average being 5·0. The death-rate was highest in Madras, Anantapur and Bellary (between 12 and 13 per mille). The rates were also high (about 10 per mille) in Coonoor, Ootacamund, Kodaikānal—all hill municipalities—and Hospet. Tiruvannāmalai and Tadpatri reported ridiculously low rates of 0·2 and 0·8 respectively. Details for the individual districts and municipal towns will be found in Annexure K.

103. The mortality from respiratory diseases in rural towns was 3,978 which is slightly in excess of the 1928 figure; the rates for the two years are 2·0 and 1·9 respectively. Ghooty and Bhavani registered very high rates (15·9 and 13·2 respectively).

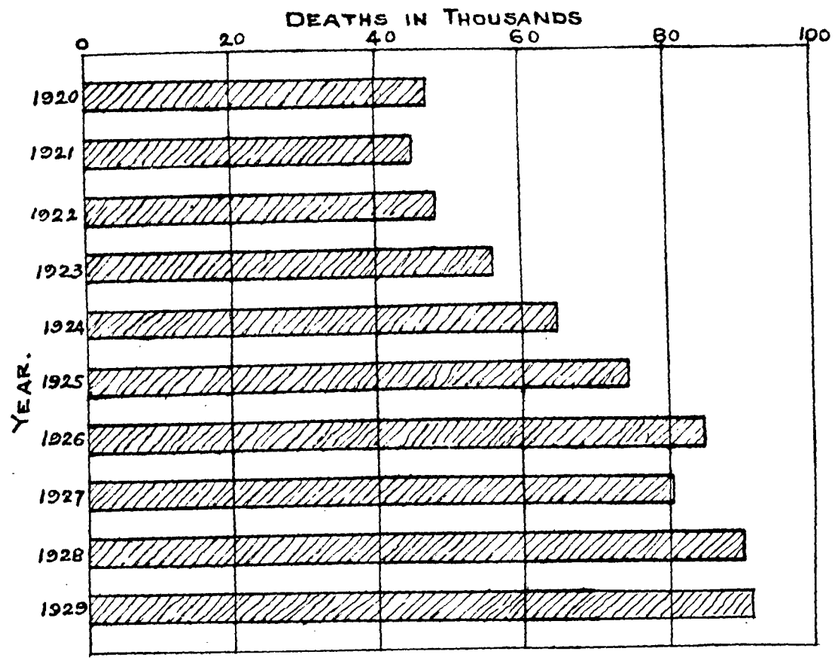
104. The number of villages from which deaths from respiratory diseases were reported was 12,417 against 13,747 in 1928.

RABIES.

105. The mortality registered under this cause during the year under report was 419 as compared with 564 during 1928. The proportion of deaths to total

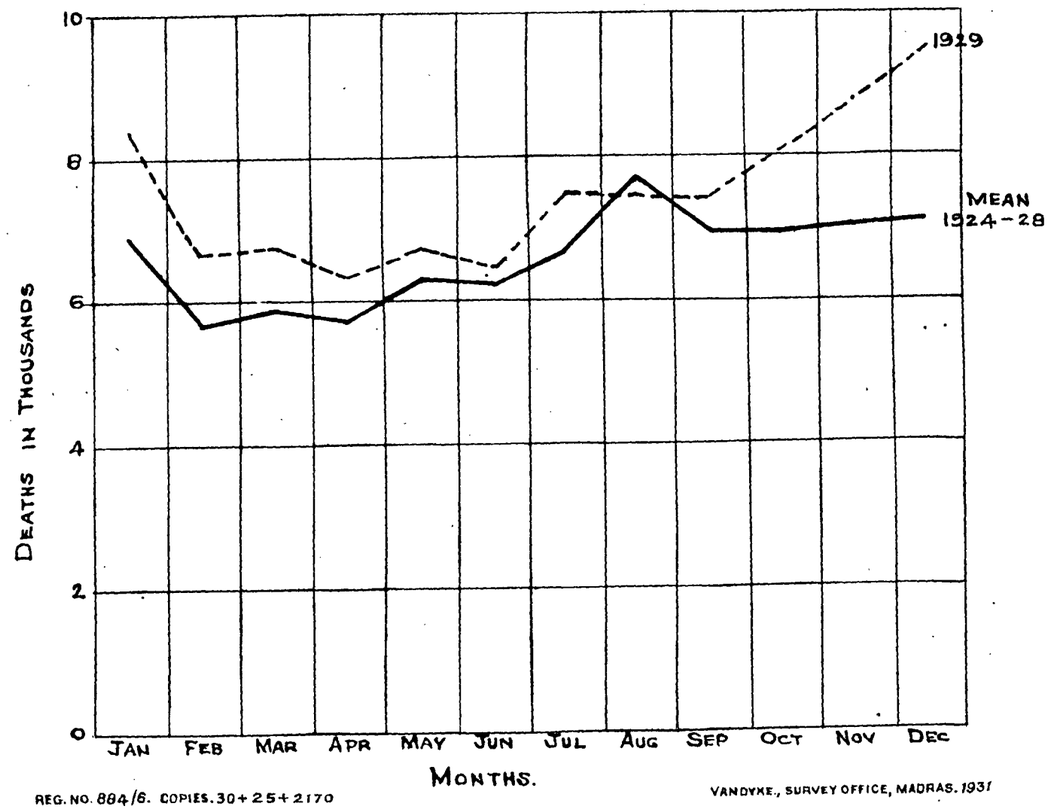
GRAPH VI A

DEATHS FROM RESPIRATORY DISEASES IN THE MADRAS PRESIDENCY DURING THE YEARS 1920-1929.



GRAPH VI B.

MEAN MONTHLY DEATHS FROM RESPIRATORY DISEASES IN 1924-1928 AND MONTHLY DEATHS IN 1929.



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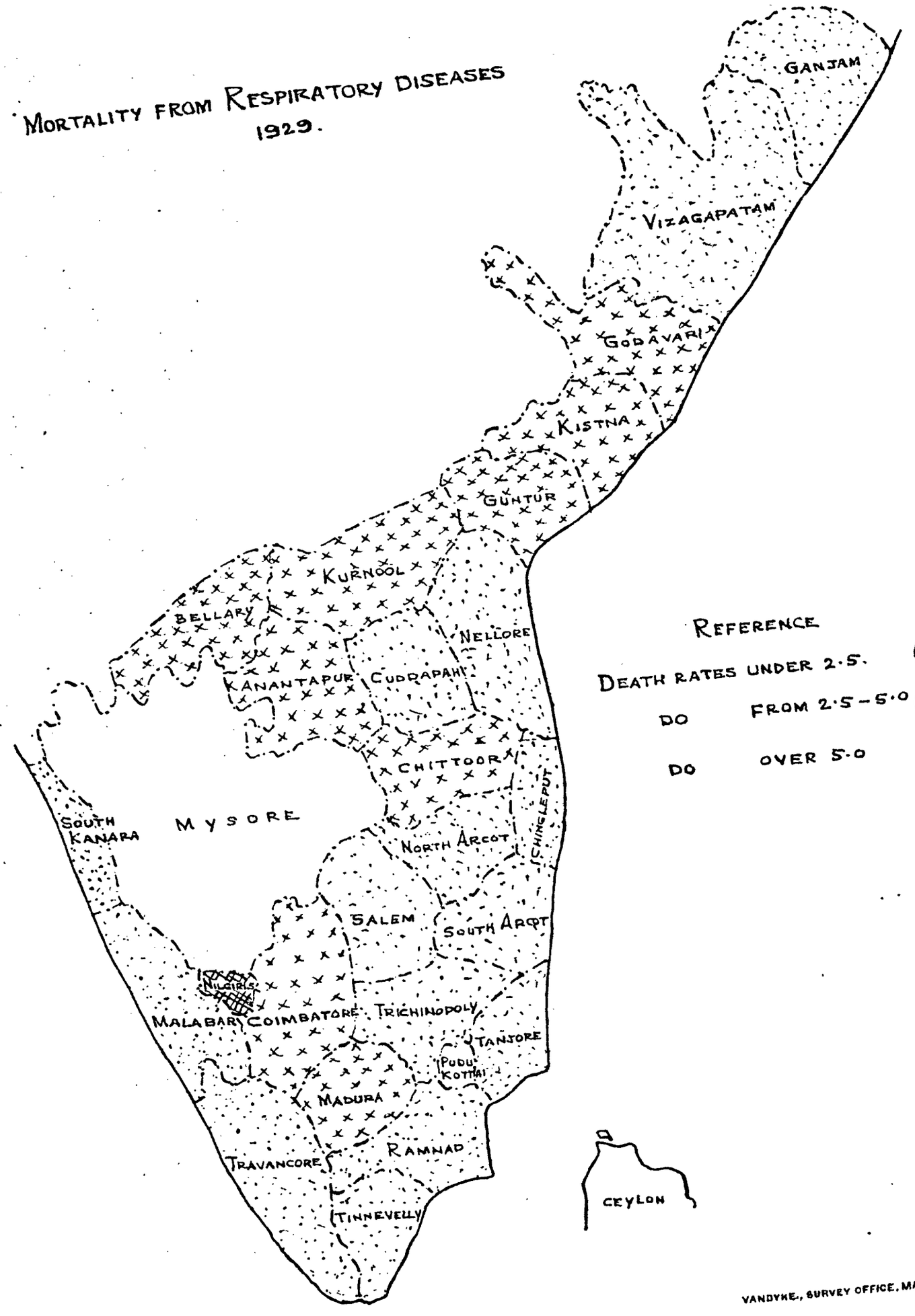
MORTALITY FROM RESPIRATORY DISEASES
1929.



REFERENCE

DEATH RATES UNDER 2·5.

DO FROM 2·5 – 5·0

DO OVER 5·0

VANDYKE., SURVEY OFFICE, MADRAS. 1930.

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from this cause was 0·04 per mille in the rural areas and 0·08 per mille in the municipalities.

It is rather curious that beginning from 1921, there was a progressive increase up to 1927 in the mortality from this cause and there has been a decrease in the last two years. This may be seen from the following statement:—

Year.	Deaths from rabies.	Year.	Deaths from rabies.
1921	89	1926	488
1922	220	1927	636
1923	282	1928	564
1924	264	1929	419
1925	485		

It is difficult to say whether this peculiarity in the statistics is an actual fact or is the result of vagaries in registration; probably, it is due to the latter cause. With few exceptions, the measures taken by local bodies for the prevention of rabies cannot be said to be satisfactory.

INJURIES.

106. The total number of deaths registered under this group excluding rabies was 10,723; about 15 per cent of the deaths were due to suicide.

GUINEA-WORM.

107. Guinea-worm disease is prevalent to a varying extent in several districts in the Presidency. It is very widespread in Kurnool, Guntūr (5 taluks), Nellore (6 taluks), North Arcot (4 taluks), Rāmnād (4 taluks) and Salem districts. In Trichinopoly, it is prevalent in several interior villages: it is reported that two villages in Chittoor district were affected in 1929. There are several aspects of the disease which require investigation, viz., geographical distribution, the reasons for its being confined mainly to areas where step wells are the sources of water-supply whilst it is more or less absent in areas having water-supplies which are as much open to pollution as step wells, the composition of the waters favourable for the propagation of guinea-worm and cylops, the seasonal prevalence of the disease, periodical recrudescence and so forth.

This disease, although not as a rule fatal except in cases with severe complications, causes an intense amount of suffering. All this is avoidable as guinea-worm disease is one of the most easily preventible diseases. The conversion of the step wells into draw wells will alone bring about a considerable reduction of infection in a short time. But in spite of the fact that the preventive measures involve comparatively small expenditure, it is represented by the Health Officers that local bodies are very lethargic. In this connexion, it may be pointed out that, notwithstanding the instructions in G.O. No. 2352, P.H., dated 26th September 1929, the Municipal Council of Tiruvannāmalai has not taken any steps in regard to the Brahmathirtham tank. Government are requested to draw the attention of local bodies to the urgency of guinea-worm control measures.

FILARIASIS.

108. Although there is reason to suspect that this disease is prevalent in several places, reference has been made only by the District Health Officers of Malabar and Nellore and Gōdāvari West. In the first district, filariasis is reported to be present in Ponnāni taluk and also other seaside villages; as regards Nellore, it is stated that the disease is prevalent in Sriharikota range in Sulurpet division. In the case of this disease also, a proper survey is necessary so that organized preventive measures could be taken.

BERI-BERI.

109. As has been pointed out in the reports of previous years, the disease is confined so far as is known, only to the north-eastern group of districts, Guntūr,

Kistna, Gōdāvari East and Gōdāvari West and Vizagapatam. The Research Unit which has been sanctioned from this year will start investigation of the disease very shortly.

Epidemic dropsy which till now been reported in certain areas in Ganjām district was absent during the year under review.

VENEREAL DISEASES.

110. Under existing conditions, it is almost impossible to state even approximately the extent of the prevalence of venereal diseases among the population. From the statistics of medical institutions, it is found that the proportion of cases treated for veneral diseases to the total number of admissions ranges from a minimum of ·02 per cent in Kodaikānal to a maximum of 23·66 per cent in Guntūr. According to the Administration Report of the Madras Branch of the British Social Hygiene Council, a certain amount of propaganda seems to have been conducted during the year under review.

YAWS.

111. This is another disease the epidemiology of which requires investigation. It is reported to be prevalent in certain parts of Malabar (in and around Chowghat), in Bhadrachalam taluk where it is known by the name of Koyâ disease and in several taluks in the Vizagapatam Agency, especially in Malkanagiri taluk where it is reported to prevail in rather an extensive form.

LEPROSY.

112. Whereas this disease was until a short time ago considered as one of the most dreaded, loathsome, infectious and incurable diseases, the conception of the epidemiology, prevention, control and treatment of leprosy has completely changed in recent years. It is only during the year under report that to a large extent under the stimulus given by the British Empire Leprosy Association the seriousness of the problem was recognized. The intensive survey carried out by Doctor Santra and latterly by Doctor Joseph in selected areas in South Arcot, Ganjām, East Gōdāvari and Madura districts, has revealed that the census statistics relating to the incidence of leprosy in this Presidency are a very great under-estimate. The disease is prevalent to a disconcerting extent in certain parts of these four districts as also Salem district, six large rural towns and surroundings in Rāmnād district (chief among them being Paramagudi, Sivaganga and Seithur) and certain areas in Malabar, the festival centre at Guruvayur being specially mentioned in this connexion. It prevails in the other districts also but to a much smaller extent.

113. The disease being so widespread, sporadic activities here and there towards prevention are not likely to be attended with much benefit. The preventive measures should be inaugurated on properly organized lines throughout the Presidency. A preliminary knowledge of the incidence of leprosy in the different districts is, however, for obvious reasons essential for this purpose. The census statistics in this respect are, as has already been stated, inaccurate. It has therefore been arranged to conduct a survey during the vaccination off-season of 1930 in order to get a census of the leper population. All the District Health Officers and a few municipal Health Officers underwent a short training under Doctor Santra and Doctor Joseph in the survey, diagnosis, control and treatment of the disease. In so far as the survey and spotting out of leprosy cases are concerned, the Health Officers have given instructions to Health Inspectors and Vaccinators and the survey is now in progress. It may also be mentioned in this connexion that, periodic surveys of this kind being impracticable, and that the information now collected may be kept up to date, the Board of Revenue has been requested to issue instructions for the maintenance of permanent leprosy registers by village headmen. Similar action will be taken shortly in the case of municipalities.

114. There are several institutions for either the segregation or treatment or both for leprosy. Chief among these are the Settlement at Tirumani the largest

in the Presidency, Bapatla in Guntur (for practically isolation only, facilities for latest methods of treatment being not available), the Danish Mission Institutions in Kallidaikurichi and Nazareth in Tinnevelly district. It is reported that a second asylum exists in the last of these districts in Nanguneri; the work done here consists however more of faith cure than any scientific method.

115. Several local bodies, e.g., the District Boards of Salem, Madura, West and East Gōdāvari have already taken action in the year under review for the control or treatment of leprosy. The Government are maintaining a clinic in Villupuram. That these institutions are extremely popular and fulfil a real necessity may be recognized from their attendance; for example, it is reported that the attendance in the clinic in Attur taluk in Salem district is about 4,000. A few other district boards either by themselves or in collaboration with taluk boards have sanctioned the appointment of medical officers and the establishment of clinics in 1930–31. Among them may be mentioned Chingleput, Ganjām, Malabar and Ramnad district boards. It is hoped that, within a short time, every district will have facilities for the treatment of leprosy.

ANTHRAX.

116. A small localized outbreak of anthrax (wool sorters' disease) of 4 cases with 2 deaths is reported to have occurred in February 1930 in a small village near Tirupporur in Chingleput taluk.

OTHER CAUSES.

117. The mortality reported under this vague and omnibus group was 473,070 during 1929 against 479,867 in the previous year; these represent rates of 11·54 and 11·70 respectively. In proportion to the total mortality, deaths under this group amounted to about 45 per cent, practically the same figure as in 1928.

118. The inclusion of such a high percentage of deaths in this ill-defined group masks the mortality from several important causes as heart disease, venereal diseases, beri-beri, enteric, etc. Still another defect in the present vital statistical returns is that the causes of deaths are not classified according to ages; this is a serious defect as the risks of mortality from several diseases especially the infectious diseases vary considerably in the different age-periods. In order to get a reasonably correct idea on these subjects, the death-rates of 14 large municipal towns, the population of which is nearly a million, have been tabulated in Annexure O and are discussed below.

(1) *Acute infectious diseases.*—The total mortality under this cause was 2·1 per mille.

(*a*) *Cholera.*—The death-rate from this disease was 0·8 per 1,000. Fifty per cent of the deaths occurred in the ages 20—50 and nearly 35 per cent under 20 years of age.

(*b*) *Plague.*—There were 22 deaths from this cause (0·02 per mille) and 20 of these occurred under the age of 30.

(*c*) *Smallpox.*—The death-rate was 0·6, 60 per cent of the mortality was under the age of 10.

(*d*) *Measles.*—According to the characteristic of this disease, 85 per cent of the deaths occurred under the age of 5.

(*e*) *Enteric fevers.*—The mortality from this group of causes was 0·34 per mille. Nearly 50 per cent of the mortality occurred under the age of 20.

(2) *Fevers.*—The death-rate under this group was 3·1, malaria contributing to an extent of 0·25 and influenza 0·09.

(3) *Respiratory diseases.*—The mortality from these was 5·32 per mille of population, pulmonary tuberculosis accounting for 2·02, and pneumonia for 1·87. The very high incidence of pulmonary tuberculosis, the mortality from which is twice the corresponding rate in other countries, is a matter of very grave concern and requires the immediate and earnest attention of the municipal councils.

(4) *Alimentary system.*—Diseases of the alimentary tract caused a mortality-rate of 3·72 per mille which is more than twice the presidency rate;

dysenteries accounted for 48 per cent of the deaths and diarrhœas for 37 per cent. The incidence of mortality from these causes was highest in the age-period 1—5 and next under 1 year of age. This is to be attributed largely to ignorance in the care and feeding of infants and children.

(5) *Diseases of the liver.*—The mortality registered from this cause was 0·46 per mille, cirrhosis being responsible for more than one-half. As regards the latter disease, it is extremely disconcerting to find that more than 45 per cent of the deaths caused by it were in children under 5 years. Comparatively little is known of the etiology of this disease in infants and children and very early investigation is needed.

(6) *Circulatory system.*—The mortality from all diseases of the circulatory organs was 0·8 per mille which corresponds fairly closely with the rates in other countries. Heart disease accounted for nearly 60 per cent of the deaths under this group.

(7) *Genito-urinary tract.*—The death-rate from diseases of genito-urinary organs was 0·6 per mille, about one-half of the mortality occurring above 40 years of age.

(8) *Venereal diseases.*—An incredible low mortality rate of 0·1 was registered under these causes.

(9) *Diseases of the nervous system.*—The death-rate under this group was 3·85 per mille, by far the major portion of it being ascribed to infantile convulsions.

(10) *Accidents of pregnancy and child birth.*—The proportion of deaths from these causes per 1,000 births was 19 as compared with the rate of 7·13 for the Presidency and is evidence of the extremely defective registration of deaths from maternal causes. The incidence of mortality was highest (50 per cent) in the age-period 20—30. Three per cent of the deaths occurred under 15 years of age.

(11) *Deficiency diseases.*—The mortality from these was 0·5 per mille, the great majority of the deaths being ascribed to rickets and a small fraction to beri-beri.

(12) *Malignant disease.*—The death-rate from cancer was 0·08 which is about one-twelfth of the rate in western countries. It is very difficult to say how far this low rate is due to defective registration and how far to low prevalence of cancer.

(13) *Hook-worm disease.*—The death-rate from this helminthic infection was 0·19 per mille. It is rather curious that the mortality was very low under the age of 20.

(14) *Diabetes.*—This caused 129 deaths (·14 per mille), over 72 per cent of the deaths occurring in ages above 40.

(15) *Leprosy.*—One hundred and twelve deaths were ascribed to this disease.

(16) *Congenital debility, malformations and premature birth.*—The death-rate from these causes when calculated with reference to the total population in all ages was 2·27. This method is however fallacious as over 99 per cent of the deaths occurred in children under one year.

(17) *Rabies.*—Thirty deaths were reported from this cause.

(18) *Wounds and accidents including snake-bite.*—The last of these caused 27 deaths in the total mortality of 397 recorded under this group.

(19) *Suicides and poisons.*—Sixty and 16 deaths respectively were reported.

(20) *Old age.*—The death-rate per mille was 5·28, the majority of the deaths being of course registered in the ages 60 and above.

(21) *All other causes.*—After an analysis of the deaths under the foregoing causes, the death-rate under "other causes" is 2·38 against 11·54 per mille arrived at for the Presidency by the ordinary mode of tabulation. This analysis also serves as a guide in estimating the state of public health in the Presidency.

MATERNITY RELIEF AND CHILD WELFARE.

119. In the report for 1928, mention was made of the preliminary survey of maternal mortality carried out during the year and the results of the survey were published in the report for that year. As promised in that report, the enquiries were extended during 1929 to sixteen municipalities and about 30,000 confinements have been investigated. The various items of information that have been collected are being analysed and the results will be published in due course.

120. One of the important findings in the 1928 survey was that the earlier the age of the mother and the birth order, the greater is the incidence of the maternal mortality, the maximum death-rate being reached when the mother's age was under 15 ; also the infant mortality rate in the children of mothers confined below this age was higher than in the children born of mothers at higher ages, and, the still birth rate among children of mothers at younger ages was comparatively high. Furthermore, the strain caused by premature pregnancy and mother-hood has serious after-effects, a large proportion of such mothers becoming chronic invalids or physical wrecks. The Marriage Restriction Act which has come into force in the current year, although it is somewhat conservative in its scope, should be considered as a very important public health legislation as it will, in course of time, be a means of checking the evils mentioned above and also safeguarding the health of boy husbands.

For the proper enforcement of this Act, the first requirement is proof of age ; reference to this has already been made in paragraph 13 supra. The second requirement is registration of marriages. Legislation on this subject is urgently needed.

121. The total mortality from maternal causes reported during 1929 was 11,087 which is practically the same as in the previous year, the rate per 1,000 births being 7·13. This figure does not however represent the true state of affairs as registration and classification of deaths under this group are grossly defective. Apart from the fact that omissions to an extent of about 30 per cent occur on account of the present restriction in classification that only those deaths happening during or within 14 days after confinement should be assigned to child birth, ignorance and carelessness in registration and preparation of returns are responsible for inaccuracies in the statistics. The extraordinary variations in the individual district and municipal rates—for details, vide Annexure N—afford ample proof in this respect. The district rates ranged from 3·2 and 3·4 in the Nilgiris and Chingleput to 16·5 in Tanjore. The range in the variations in the municipal rates was from 0·0 in Karaikudi and Erode to 33·21 and 38·55 in Tadpatri and Anantapur. Such variations which cannot be explained by facilities by way of medical or maternity relief, are undoubtedly due to defective registration and incorrect returns. It is requested that the attention of all Collectors and Municipal Councils may be drawn to these irregularities.

122. At the most modest estimate, the maternal mortality rate in this Presidency may be taken at 20·0 per 1,000 births which is about four times the corresponding figures recorded in Great Britain and several other countries. Provision of sufficient skilled aid for attendance during confinements is the first and foremost measure for bringing about a decrease in this high death-rate. In spite of repeated advice in this matter, the extent of midwifery aid provided at present by local bodies is generally very inadequate. In the case of municipalities which in the above respect should necessarily be better than rural areas, the proportion of confinements to total births which were attended by qualified midwives or doctors was 38 per cent which, if allowance is made for defective registration, will become further reduced. The rate for individual towns ranged from 1·84 (! !) in Bodinayakkanur to about 75 per cent in Chingleput and Chittoor. In as many as 32 municipal towns (40 per cent of total), the proportion was less than 30 per cent. Apart from these, as a result of want of proper supervision or for other reasons, the work turned out by midwives is in several cases of a very low standard. Under these conditions, the high maternal death-rates in municipalities are not at all surprising. The employment of an adequate and competent staff of midwives is the only solution.

The district figures are much gloomier. The proportion of confinements in rural areas which were attended by qualified midwives was 3·87 per cent. The minimum and maximum ratios were 1·6 per cent (in Kurnool and Malabar) and 7·0 per cent in the Nilgiris. The formulation of a definite programme by every local body for the expansion of maternal relief is of the greatest importance. It has been suggested to the Government that the scheme adopted in the United Provinces might with certain modifications be tried in this Presidency; in so far as the rural areas are concerned this seems to be the most feasible under existing circumstances.

123. Apart from the risks at confinement, there are several diseases and disorders, which are incidental to pregnancy; early attention to these is necessary if the pregnancy and confinement are to run their normal course. The importance of ante-natal care of the mother has been recognized only in recent years, and clinics are maintained for this purpose in practically every country in the West. Such clinics are of no less importance to this Presidency where the mortality and morbidity from causes associated with pregnancy are more rampant. A movement in this direction has been started in Madras City under the joint auspices of the Corporation and the Government Hospital for Women and Children; it is not however possible to furnish any information of the activities as the Director of Public Health has not been consulted and is not associated with it. A few Child Welfare Centres in the Presidency also seem to be engaging in this work.

124. In spite of constant reiteration by the Government, the progress in the establishment of centres for Maternity Relief and Child Welfare is very slow. The total number of these centres at the end of the year maintained by all agencies was 98; of these 17 were opened in 1929. It does not need much of argument to show that this number is hopelessly disproportionate to the requirements. The chief impediment to the progress is the failure of the local bodies to recognize the importance of these centres in the promotion of the health and welfare of the mother and child. Provided that the local bodies appreciate this importance, the other obstacles can be largely overcome. The initiative taken by the District Board of Salem and a few other districts deserves special mention in this connexion; they have consented to pay liberal contributions towards the maintenance of child welfare centres by taluk and union boards.

125. Difficulties have been frequently expressed in getting trained health visitors for maternity relief and child welfare institutions. Now that arrangements have been made under the auspices of the Indian Red Cross Society for the training of health visitors, it is expected that the above difficulties will be overcome to large extent.

126. It is gratifying to record that the Government have accepted the proposal for the establishment of a separate section in this office for Maternity and Child Welfare under the charge of an Assistant Director of Public Health. It is hoped that the appointment will be made in the near future.

PROPAGANDA.

127. The reputation which this Presidency has had in the field of Public Health Education was maintained during the year under review. In this connection, it is gratifying to record that four out of the seven places commended in the Imperial Challenge Shield Competition for the best Health Week Celebration in the British Empire, were in Madras Presidency; these places were Bezwada, Tuticorin, Tanjore and Chingleput. A separate report on the Health Week celebrations in 1929 has been already submitted to the Government.

128. Lectures and talks formed the most important means of propaganda. Exclusive of lantern demonstrations and cinema shows, nearly 125,000 lectures

were delivered during the year to audiences totalling nearly 78 lakhs—about one-sixth of the population in the Presidency. These figures represent increases of approximately 16,500 lectures and 11 lakhs of audience as compared with the corresponding figures of the previous year.

129. As regards lantern demonstrations which form the next important means of propaganda, nearly 13,000 demonstrations were given an increase of nearly 4,000 as compared with 1928. It is to be regretted that in spite of repeated advice, several local bodies have not yet equipped their health staffs with lantern outfits. The lanterns and slides available in the Propaganda section were in circulation practically throughout the year.

130. In some places in the Presidency, the magic lantern demonstrations have become somewhat stale and the lantern seems to have outlived its usefulness. Four district boards, viz., Vizagapatam, Kistna, Chingleput and Bellary have already recognized this and have provided portable outfits for the exhibition of motion pictures on public health subjects. There is no doubt that this is the best and most popular means of conducting propaganda and other district boards and local bodies will eventually have to provide such outfits if publicity work is to be popular.

There are several municipal towns in the Presidency where there are permanent cinema houses, and it would be a great advantage if the municipal councils concerned provide films of their own on health subjects which might be exhibited in the picture houses by arrangements with the proprietors.

The Propaganda section had during the year films on five subjects and orders for five additional films were placed. Provision had been made in the budget of 1929–30 for the preparation of films locally on Child Welfare and on Venereal Diseases; the joint arrangements made with the Agricultural and the Veterinary departments to prepare the reels along with those required by the above two departments under the supervision of the Film Officer of the Railway Board of the Government of India did not however materialize during the year.

The total number of motion picture demonstrations given during the year was 500.

131. Habits and practices which are firmly implanted are very difficult to eradicate; also, especially in the case of the older individuals, it is not an easy task to effect a change in their conceptions and outlook. The influence of health propaganda on such people is therefore either nil or, at best, only transient. For these reasons, this department has always focussed its attention on educational institutions.

The training of teachers in hygiene and the compulsory inclusion of this subject in the curricula of studies in the elementary and secondary schools will supplement the efforts of the Public Health Department in the inculcation of proper hygienic habits in the school children.

132. The other directions in which, as in previous years, health propaganda was conducted comprised kalakshepams and bulletins to Press.

133. Occasions at which the public congregate especially fairs and festivals have invariably been availed of for health propaganda as the maximum advantage is gained with the minimum of effort. During the year under review, 1,355 demonstrations, exhibitions and lectures were given on these occasions.

134. In contrast with the above activities which relate mainly to rural areas, the progress in municipal towns is disappointing. Whilst in 1928, three municipalities sent "nil" propaganda reports, the number of such towns in the year under report was ten; these are mentioned in the margin *, the first two in the list are chronic defaulters. These towns are in no way reputed for ideal health conditions whereas, some of them are notorious as hot-beds of epidemics. Government are requested to take notice of the neglect of the municipal councils concerned to this important branch of public health administration. It may be noted that none of these have Health Officers.

* Tenali.
Tiruvannāmalai.
Nandyal.
Tadpatri.
Vaniyambadi.
Mannargudi.
Chirala.
Palamcottah.
Chicacole.
Tiruvarur.

135. As regards the work done in the Propaganda Section of this office, a large number of leaflets and several lantern slides were revised during the year. Leaflets were prepared for the first time on the important subject of nutrition. Pictorial exhibits suitable for demonstrations in Exhibitions were also prepared. Also the Propaganda Officer who was unofficially in charge of Temperance Propaganda, prepared lantern slides, leaflets and posters. These additional duties have increased a good deal the work of the Propaganda Officer.

The Propaganda Officer took a prominent part in the Park Fair Health Exhibition, and it is pleasing to record that the exhibits arranged by this Department won a gold medal: again, in the Health Week Celebrations in Madras City organized under the auspices of the National Health Association of Southern India, a cup and medals were awarded for the excellence of the exhibits from this office.

136. As indicated in the report for 1928, the immediate improvements on which the success of Health Propaganda largely depends include the provision of a fleet of itinerating motor vans for health exhibition and the establishment of a Public Health Museum. Proposals regarding the latter are under Government's consideration. As regards the former, Government have declined to sanction the scheme on financial grounds; it should, however, be pointed out that health publicity is in no way less important than temperance publicity for which a van for practically every district has been sanctioned.

The proposal to depute an officer to study the latest methods of health publicity is also one which deserves favourable consideration.

137. The financial statement required in G.O. Mis. No. 748, P.H., dated 20th March 1929, is given in Appendix P.

FAIRS AND FESTIVALS.

138. The influence of fairs and festivals on epidemics especially cholera lies in the fact that it is not limited to the localities in which they are held but might extend even to remote Provinces. In a recent publication on the subject, Sir Leonard Rogers forecasted that the recent Kumba Mela in Allahabad would be accompanied in its wake by cholera throughout India. Fortunately, the effects of the Mela on this Presidency have almost been negligible probably as the result of the small number of visitors from this Province. But there is, however, a festival in the adjoining province, viz., Puri in Bihar and Orissa which is a perpetual source of anxiety to this Presidency especially Ganjām district and to some extent Vizagapatam. Almost every year, the Ratha Jatra and Karthika Panchika festivals at Puri are followed by cholera in Ganjām. The year under review was no exception to this experience. The object in mentioning these incidents is to emphasize the necessity and importance of the provision of sanitary arrangements at fairs and festivals.

139. There are altogether 419 scheduled festivals in this Presidency in connexion with which local bodies are expected to provide sanitary arrangements; about 60 per cent of these festivals come off during the first half of the year.

As in previous years, the sanitation at the larger festivals was supervised personally by the District Health Officers and in the remaining cases by the health inspectors. Those in municipalities were under the charge of the municipal authorities concerned; the latter were assisted or advised in some cases, e.g., Palni by the District Health Officers. The festivals at Chidambaram, Nagore and Srirangam were attended by one of the Assistant Directors of Public Health. In G.O. Mis. No. 3084, P.H., dated 20th December 1929, the Government deputed Dr. B. Ethirajulu to attend the Kumba Mela at Allahabad.

140. Small outbreaks of cholera which were however limited to the concerned districts followed the festival in the Tarani Hills in Chatrapur taluk in Ganjām district, Tiruvannamalai festival (near Srivilliputtur) in Ramnad district, and Kondapalaiyam festival in Sholinghur in North Arcot district. Apart from these

three instances, and the one mentioned in paragraph 138 above (cholera in Ganjām imported from Puri), no untoward consequences were reported during the year in connexion with the other festivals in the Presidency.

141. Speaking generally, local bodies carry out, though not in full, the major part of the recommendations made by the Public Health Department. One or two drawbacks are however reported in the procedure adopted in these cases. The first is that in a few instances, the execution of the sanitary arrangements, the cost of which is defrayed by local bodies, is entrusted to the managing authorities of the temple; there has not been a single example in which the latter discharged this function satisfactorily. Government are requested to advise the local bodies to stop this practice as the full value for the amount spent is not derived. Secondly, in a few cases, the sums sanctioned for the festival sanitary arrangements reach the health officer in the eleventh hour of the festival rendering any expenditure impossible. It is advisable that the allotments are placed at the very beginning of the year at the disposal of the Health Officers as this will give sufficient time to the latter to have the work carried out efficiently.

The most notable exceptions to the general observations made at the beginning of the previous sub-paragraph are the taluk boards of Pattukottai and Tanjore, Dharmapuri and Gobichettipalaiyam, Koilkuntla and Hospet. The first of these allots a ridiculously low sum of Rs. 50 for the sanitary arrangements at seven festivals in which the floating population varies from 7,000 to 20,000; although not so bad as this, Tanjore Taluk Board sanction about Rs. 350 for five festivals attracting a pilgrim population ranging from 15,000 to 20,000; as regards Dharmapuri Taluk Board, Hogainakal festival is mentioned as the specific instance of its default almost every year. It is reported that Gobichettipalaiyam Taluk Board is neglectful in the case of almost every festival. Koilkuntla Taluk Board did not make any provision for the sanitary arrangements during the Ahobilam festival where there was a congregation of about 20,000 pilgrims. Lastly, as regards Hospet, its invariable plea is lack of funds. Government are requested to take suitable notice of the specific instances mentioned above.

142. It is gratifying that several district boards have recognized that the importance of fairs and festivals is more than parochial. Coimbatore District Board is more or less the pioneer in this respect as it has been the first to provide a motor lorry with water-tank and a motor pumping plant for festival use. It is however to be regretted that the imposition—quite a legitimate one—of a daily hiring charge has reduced the demands from the taluk boards for the lorry. It is hoped that an early solution will be found for this difficulty. Vizagapatam District Board has also provided a lorry for use at festivals. Chittoor District Board has purchased pumps for Rs. 600 and sanctioned the purchase of a motor lorry. Chingleput District Board has also decided to go in for a motor lorry and collapsible steel tanks. The District Board of Salem has addressed the Government for grants for a lorry. The remaining district boards have not yet come to a decision on the subject. In the case of Bhadrachalam, the Government sanctioned a sum of Rs. 2,400 for the festival arrangements and this was supplemented by a contribution of Rs. 800 from the district boards of Kistna and West and East Gōdāvari.

143. It is reported by the Health Officers that the schemes drawn up in accordance with G.O. No. 312, P.H., dated 9th February 1928, for the permanent sanitary improvements of the more important among the festival centres are pending with local bodies and that in practically no case has any action been taken.

The action taken by local bodies with reference to G.O. No. 1148, P.H., dated 2nd May 1929, regarding the provision of public buckets and ropes for wells at festival centres on the occasion of fairs and festivals has generally been satisfactory.

144. The excuse which is most frequently made by the local bodies for failure to carry out the sanitary arrangements at fairs and festivals is lack of finance. It is the standing complaint of several health officers that the majority of local

bodies fail—in spite of its being repeatedly pointed out to them—to exploit the various sources of revenue as licence fees and so forth, and secondly that full advantage is not taken of the provisions contained in sections 128 of the Local Boards Act and 156 of the District Municipalities Act, regarding the levying of contributions from the managing authorities of temples. Under these circumstances, the plea of financial difficulty cannot be said to hold good at any rate in the great majority of cases.

145. The instructions issued from time to time by the Inspector-General of Police regarding the deputing of a sufficient police force for public health purposes at fairs and festivals have been considerably helpful and this opportunity is availed of in thanking him and the District Police authorities.

146. Excepting the few occasions where the number of special trains was insufficient to cope with the demands created by extra pilgrim traffic—which at least on one occasion was so great that passengers were seen to cling to footboards of compartments as an unfortunate result of which there was a serious accident of fracture of the skull—the co-operation extended by the railway companies in other respects is greatly appreciated and is thankfully acknowledged.

147. As regards the provision of infectious diseases hospitals at pilgrim centres, preliminary steps have been taken by the municipal councils of Kumbakonam and Srirangam and by the Vizagapatam District Board. In the first of these places, the site has also been selected. The Surgeon-General has been asked by the Government to arrange for the carrying out of the necessary improvements to the infectious hospital in Bezwada Municipality. In the case of Conjeeveram, the Government have ordered that the equipment, etc., to be provided out of provincial funds. As regards the remaining places, local bodies have been advised by Government to make the necessary arrangements.

RURAL SANITATION CAMPAIGN.

148. During the year under review, the establishment in this branch was strengthened by the three units sanctioned in G.O. Mis. No. 911, P.H., dated 5th April 1929.

149. The four units in charge of Second-class Health Officers were engaged on soil sanitation work in the districts of Madura, Malabar, Chingleput and Ganjām, and the two school units were utilized mainly for propaganda and treatment in educational institutions in the districts of Nellore and North Arcot, respectively. The Health Officer, Planters' District, visited the estates in Malabar, Wynaad, Shevaroys, Madura and Nilgiri-Wynaad for treatment and postcampaign work. In the Hook-worm Laboratory in the Madras Penitentiary, investigation work on the longevity of hook-worm and the efficacy of tetrachlorethylene in the treatment of this helminthic infection was continued.

150. Educational propaganda by means of lectures, lantern demonstrations, exhibitions of motion picture films and charts and the distribution of pamphlets was carried on an intensive scale as in previous years in the districts of Madura, Malabar, Chingleput, Nellore, North Arcot, Ganjām and in the estates in the Planters' districts. In many instances, the instruction was emphasized by demonstrations of the hook-worm in the adult and other stages of development. The cinema film "Unhooking the Hook-worm" was lent to several local bodies for exhibition. Altogether about 2,200 lectures and 237 motion picture demonstrations were given to audiences of nearly five lakhs and approximately 42,000 pamphlets were distributed.

151. For obvious reasons, the effects of propaganda and treatment in the educational institutions are more lasting than in the other sections of the population. With this object and also in order to enable Medical Inspectors of schools to familiarise themselves with the technique of hook-worm treatment, the

Government sanctioned on the initiative of Dr. Kendrick, a staff consisting of 2 Sub-Assistant Surgeons, 2 compounders and 2 peons. These two units were deputed to work in North Arcot and Nellore districts. In the former district, 55 schools were visited, 64 lectures were delivered, and 5,599 treatments were administered; the corresponding figures for Nellore are 122 schools, 141 lectures and 8,251 treatments.

Most of the elementary schools visited by the Sub-Assistant Surgeons had no latrines and the few latrines that were present were maintained badly. Also, the general sanitary conditions of the majority of these schools were far from satisfactory, the chief defects being overcrowding, lack of ventilation or the dirtiness of the premises and surroundings. It is hoped that the recommendations made for the remedy of these defects will receive the early attention of the local bodies concerned.

152. An important phase of the activities of the Rural Sanitation Branch is the treatment of hookworm infection in the general population. The importance of treatment of this infection has also been emphasized on medical institutions maintained by Government and local bodies. The total number of treatments given during the year was nearly 266,000, of which 16,100 were in schools and 3,660 in estates.

153. The research work done at the Penitentiary is summarized below:—

(*a*) Routine examination of all new admissions; out of 816 persons examined, 506 or 62 per cent were found to be infected with hookworm.

(*b*) Treatment of the infected convicts, 102 of the treated cases were kept under special observation to determine the correlation between egg-counts and the number of worms.

(*c*) Research on the comparative efficacy of the various drugs advocated in the treatment of hookworm with specific reference to tetra chlorethylene. The number of treatments (36) with this drug is however too small to warrant any definite conclusions being drawn at present.

(*d*) Study of the life-history of the hookworm—The work is still in progress.

154. *Soil sanitation.*—Permanent control of hookworm infection depends upon the provision and use of a sufficient number of latrines of suitable types. Through the efforts of the Rural Sanitation staff, latrine accommodation to the extent of 1,026 seats was provided during the year under report.

(*a*) *Madura.*—A sum of Rs. 20,000 was contributed by the Madura District Board and Rs. 1,000 by five union boards for soil sanitation work. Two hundred and fifty latrines (mostly bore-hole type) with 829 seats were constructed during the year.

The advantages of the bore-hole type of latrines are their cheapness and their suitability for rural areas consistent with the facilities regarding scavenging, etc., obtaining therein. The appreciation of these latrines by the public during demonstrations at fairs and festivals, the large number of requisitions received from co-operative organizations and local bodies seem to be evidences of the popularity of this type of latrines. It is hoped that the progress attained in Madura district will be an incentive to all local bodies.

(*b*) *Chingleput district.*—A total sum of Rs. 3,335 was contributed by seven union boards and the Chingleput Municipality and 112 latrines were constructed. It may be mentioned in this connexion that the Rockefeller Foundation gave a contribution of Rs. 200 to the Poonamallee Union Board for anti-hookworm work.

(*c*) *Malabar district.*—The Malabar District Board gave a contribution of Rs. 3,000 for soil sanitation work and four other local bodies a sum of Rs. 1,350. It was possible to construct only 14 latrines during the year.

(*d*) *Gānjām district.*—Apart from the district board which contributed Rs. 500, only two local bodies, viz., Berhampur Taluk Board and Ichchapur Union sanctioned Rs. 500 and Rs. 50, respectively, for soil sanitation work. Five villages in Berhampur Taluk Board were selected for the purpose and the construction of latrines has been taken on hand.

(*e*) *Planting estates.*—The Health Officer visited 50 estates, administered 3,659 treatm nts and delivered 300 lectures (including cinema and magic lantern shows) to audiences aggregating 21,000.

Treatment and control of hookworm infection are not by themselves sufficient to produce any tangible results in the health of the labourers unless the environments in which they live are reasonably sanitary. For this reason, the majority of the estates that were visited were inspected in detail and proposals regarding housing, water-supply, etc., were sent up to the Managers of the estates. Although there has been generally an improvement in the condition of the estates as a result of the advice given by the Health Officers of the campaign, the progress is rather very slow; excepting the large Planting companies, the rest try to evade on some pretext or other the execution of the works suggested by the Public Health Department, even if the financial outlay is not large. This difficulty would be overcome to a large extent if the proposals of the Health staff are backed by legal sanction. There are however no laws on the subject, but provision has been made in the draft Public Health Bill.

MEDICAL INSPECTION OF SCHOOLS.

155. The anomaly in the existing practice of restricting medical inspection to secondary schools and colleges and to elementary schools in areas where elementary education is compulsory and the necessity for extending the inspection to all recognized elementary schools have been discussed in the reports of previous years and are once again emphasized.

156. The reports of the medical inspectors contain a mine of information on the sanitary conditions of the institutions and their environments, the physical condition of the pupils and the infectious disorders and other illnesses which they suffer from. Unfortunately, however, these reports are shelved and the advantages of the inspection are lost. In order that the various items of information might be utilized to the fullest possible extent by way of compilation of the reports, comparative study of the physical conditions and morbidity among the pupils in the schools in the different districts and initiating action for the improvement of the sanitary condition of school buildings and environment—all of which come within the realm of preventive medicine—and co-ordination of the work done by the medical inspectors, a central establishment in the office of the Director of Public Health working in collaboration with the Educational and Medical departments is of paramount necessity; otherwise, it is inevitable that the expenditure now incurred on school medical inspections will continue to be largely a waste. Whatever may be the schemes for the expansion and improvement of the activities in other directions, the proposal regarding the central establishment should receive the earnest consideration of the Government.

157. Reference was made in the previous year's report to the experimental scheme in contemplation for the appointment of full-timed medical inspectors of schools in two districts. The Government have stated that the scheme, commendable though it might be, will, if it is ultimately extended to all the districts, involve an expenditure which the financial conditions of the Presidency will not permit and the Director of Public Instruction has been requested to evolve a cheaper scheme.

INDUSTRIAL HYGIENE.

158. As additional inspectors of factories, the defects noticed by the District Health officers during their inspections of factories have been reported then and there through this office to the Chief Inspector of Factories. The proposal to appoint the Health officers of the Rural Sanitation campaign as additional Inspectors of factories is pending consideration with the Government.

In spite of the instructions of the Government, it is only a small proportion of the local bodies that have availed themselves of the powers conferred by the Local Boards and District Municipalities Acts regarding the reservation of industrial areas. Secondly, applications for the construction of factories and the installation of machinery are not in all cases referred to the Public Health Department for opinion, nor are these applications properly scrutinized in all cases nor licences refused or issued within the time limit prescribed under the above Acts. Under these circumstances, factories are constructed and machinery installed in unsuitable localities, e.g., residential quarters or congested areas. Government are requested to take necessary action in the matter.

Very little information is available regarding statistics on industrial mortality and morbidity in this Presidency. Difficulty in this respect was very keenly felt when attempts were made to collect information on this subject before the visit of the Royal Commissioner on Labour to this Presidency. The establishment of a separate Bureau for Industrial Hygiene should have to be considered in the near future.

PREVENTION OF FOOD ADULTERATION ACT.

159. This Act was brought into force in the following 13 municipalities and Mr. Hawley was appointed as Public Analyst for all these towns:

Calicut.	Madras.	Tellicherry.
Coimbatore.	Madura.	Trichinopoly.
Guntur.	Nellore.	Vizagapatam.
Karaikudi.	Ootacamund.	
Kumbakonam.	Rajahmundry.	

The actual working of the Act was not however commenced during the year in the Corporation of Madras, as the Council had not provided necessary funds in the budget. Even in the case of the other municipalities, the Act could not be fully enforced as the rules under section 20 (*a*) of the Act have not yet been framed.

The preliminary arrangements necessary for the working of the Act were all completed during the year and a few municipalities sent samples to the Public Analyst for examination.

It is hoped that a more effective working of the Act would be possible soon after the rules referred to above are issued.

PORT HEALTH ADMINISTRATION.

160. The existing arrangements in this connexion are that the Director of Public Health controls the Port Health Budget and is in charge of the administration of Madras Port. In so far as the other ports are concerned, even including Cuddalore where the Municipal Health Officer is the Port Health Officer, the appointments and control are vested in the Surgeon-General. The lack of uniformity in the system of administration and the dual control which is hardly conducive to efficiency are serious anomalies. Port Health administration being purely in the region of Preventive Medicine, it is but appropriate that it should be vested completely in the Director of Public Health as is the practice obtaining in most other countries. It is earnestly hoped that the proposals on this subject which have been set forth in detail in this office letter No. 452–1, dated 25th March 1930, in reply to Government Memorandum No. 33,700–3, Marine, dated 6th February 1930, will be approved.

DEPARTMENT OF HYGIENE AND TRAINING OF PUBLIC HEALTH OFFICIALS AND SUBORDINATES.

161. The Hygiene department in the Government Medical College, Madras, is in immediate charge of the Professor of Hygiene who is a whole-time Assistant Director of Public Health. For the other auxiliary subjects, there are full-time Professors for Bacteriology and Sanitary Engineering—for the latter subject from 1929—and part-time lecturers for other subjects as Epidemiology, Vital Statistics, Vaccination, etc.

162. This department gives training in hygiene and allied subjects to candidates for Medical degrees and the degree of B.S.Sc. and Diploma in Public Health, and Sanitary Inspectors; also, the quinquennial training of Sanitary Inspectors employed under the Government and local bodies is undertaken.

(1) *Under-Graduates in the Medical College.*—Unlike in previous years when hygiene was taught to under-graduates in the third year of their studies, this is now done in the fourth year and the hours of training have been prescribed at 70, three-fourths of which are for lectures and the rest for laboratory work. This change from the 3rd to the 4th year has a twofold advantage. In the first place, the students have a preliminary knowledge of medicine and pathology which is so essential for the study of preventive medicine; it also enables the training in this subject to be carried out more rationally and effectively than before. In the second place, the change is a great advantage to the students themselves as the examinations closely follow the period of training in hygiene, whereas in previous years an interval of from 12 to 18 months elapsed.

(2) *Diplomas in Public Health.*—Until recently, these diplomas were of two grades, one for medical graduates and the other for licensed medical practitioners. As this differentiation involved differences in standards of training, the standard was raised and made uniform in all cases, and there will be no distinction in future in the training of medical graduates and licensed medical practioners for the diploma. The examinations which were formerly more or less of the nature of a class examination are now no longer so and are conducted by a Board of Examiners of which the Director of Public Health is the Chairman, the examiners for the several subjects being selected in the same manner as for University degrees. These changes have naturally raised the value of the diploma.

(3) *Candidates for the B.S Sc. Degree.*—The changes made last year in the curricula by the University have further enhanced the value of the B.S.Sc. degree. It appears that a suggestion has been made that the activities of the Hygiene department in the training of Health officers should be wound up and that candidates should in future be sent to Calcutta. Colonel Russell, I.M.S., who has had extensive knowledge of the comparative systems of training of public health officials not only in the universities in India, but also in the important Western and American institutions, remarked on a recent occasion when he visited Madras as the Medical Assessor of the Royal Commission on Labour that the B.S.Sc. degree of this University is admittedly the best of its kind in the whole of India and, with the improvements recently effected in the course of studies, it should compare very favourably with the public health qualifications of even the best universities in other countries. His views, at any rate as far as the Indian Universities are concerned, have also been confirmed by the Hon'ble Minister for Public Health. Incidentally, it may be mentioned in this connexion that enquiries have been received from more than one Native State regarding the feasibility of training of candidates for Health officers' appointments in these States. Under these circumstances, it would be nothing short of a tragedy if the suggestion regarding the suspension or the stoppage of the training is to be seriously considered. On the other hand, facilities should be provided in Madras for research and post-graduate training of public health officials in order to obviate the necessity of sending them elsewhere for this purpose.

(4) The curriculum of studies for Sanitary Inspectors was also revised during the year, the important changes being that, in the first place, training in vaccination has been made compulsory, and secondly, the examinations are now conducted under the supervision of a Board, the chairman of which is the Director of Public Health.

These changes involved alterations in the courses of studies prescribed for the quinquennial training of Sanitary Inspectors; the period of training was increased from 2 to 3 months and the subjects of First Aid and Practical Vaccination were included in the curriculum.

CAUVERY-METTUR PROJECT.

163. The Project area, which until recently was a separate district, was included in Salem district during the year under review.

164. Unlike in previous years, the Project area was free from cholera during the year under report although the adjoining taluks in Coimbatore and Salem districts were affected. Even Sampalli village, situated at a few miles from the Head Works, which was the focus of infection in every former epidemic, completely escaped the infection this year; this is probably due to the mass inoculations carried out in the great majority of the population in this village before the advent of the cholera season.

165 The new water filtration plant was brought into use and the water-supply to the camps, both permanent and temporary, is satisfactory. The flush-out latrines provided during the year are reported to be very popular.

166. The freedom of Mettur from malaria in 1927 and 1928 probably led the Public Works Department to come to the conclusion that the place was not malarious; it did not take into consideration that this immunity was the result of the intensive campaign against malaria in these years. Without consulting this office and in the teeth of the opposition of the District Health Officer, the Public Works Department went even so far as to throw doubts on the accuracy of his records and findings and reduced by one-half the staff of 60 coolies. On account of this retrenchment, the work had necessarily to be curtailed to a proportionate extent, the inevitable result being a huge increase in mosquitoes within a short time. The situation was aggravated by the creation of new breeding places in the excavations made by the Railway authorities and Public Works Department, and it was rendered still worse by the stagnations caused by unexpected rains. The ultimate result of all this was the outbreak of an epidemic of malaria (malignant tertian type) in Salem camp. The intensity of the infection may be recognized from the fact that, out of 360 blood specimens from this camp which were examined by the Health Officer, 279 (nearly 80 per cent) contained malignant tertian parasites. It is hoped that the occurrence of this epidemic will serve as a lesson for the future guidance of the Public Works Department.

167. The proposal made in the report for 1928 for constituting Mettur as a municipality is once again urged on the Government.

MINES.

168. The following extract from the report of the Director of Industries is added with reference to G.O. No. 886, P.H., dated 27th July 1921:—

Mining operations continued to be carried on in the districts of Bellary, Cuddapah, Kurnool, Nellore, the Nilgiris, Salem and Vizagapatam.

In Nellore district, the industry showed some slight signs of improvement during the year under review, but the market continued to be dull.

In Bellary district, although only 4 of the 10 manganese mines worked during the year, the output of manganese was nearly double that of the preceding year.

The mining of mica continued to be carried on in the Nilgiris where there was one mine at work during the year.

In Salem district, the magnesite mines in Suramangalam and Kanjamalai in Salem taluk continued to work during the year.

(*a*) *Inspection of Mines by District Health Officers.*—All the mines in Salem district were inspected by the District Health Officer. In Vizagapatam, the District Health Officer inspected only one mine. The District Health Officer, Nellore, visited several mines and has suggested improvements. Three mines in Kurnool district and all the mines in Cuddapah district were inspected by the District Health Officers concerned.

(*b*) *General health of the employees.*—All the mining areas were free from epidemics during the year and the general health of the employees was satisfactory. In the Nilgiri district, quinine was distributed free to the employees and those for whom hospital treatment was necessary were sent to Mango Range hospital near by. The health of the labourers employed in the mines of Cuddapah district was generally good and the Mysore Asbestos Mines, Limited, are taking steps to improve it. In Bellary, malaria prevailed in the mines of Tummaragudi throughout the year and, as a preventive measure, the mine owners distributed quinine to the labourers twice a week; it is also reported that, during the rainy season, the cold winds from the Sandur Hills affect the health of the labourers in the mines of Tonasigiri; the general health of the labourers employed in the rest of the mines is reported to be fair.

Seven accidents were reported during the year, one in Nilgiris, two in Nellore, two in Vizagapatam and two in Salem districts. Those in the first two districts and one of the accidents in Vizagapatam district proved fatal, and those which occurred in Salem district were of a serious nature.

(*c*) *Water-supply.*—Wholesome drinking water is generally stored at the mines for the use of the labourers. The District Health Officers' recommendations regarding the storage of drinking water and for the construction of sanitary draw wells at certain mines have been acted on in several cases and, where this has not been done, notices have been issued by the Collector to the mine owners to construct them by the end of May 1930.

(*d*) *Conservancy.*—The sanitary and conservancy arrangements in almost all the mining centres are reported to be adequate. The District Health Officer, Nellore, has recommended special conservancy arrangements including provision of latrines of the bore-hole type, and the mine owners have been given time till 31st May 1930.

(*e*) *Housing.*—In the Nilgiris, suitable housing accommodation has been provided for the imported labourers. In the districts of Vizagapatam, Salem and Kurnool, housing has not been provided as the labourers who come from adjoining villages have presumably houses of their own. In Nellore district, the labourers are provided with thatched sheds of the kind found in villages. In the mines in Cuddapah district, huts have been provided for a small proportion of the labourers and a better type of buildings for the clerical and supervising staff. As regards Bellary district, it is reported that huts have been provided for the labourers employed in two out of the four manganese mines in the district.

(*f*) *Medical relief.*—In Nellore district, medical and surgical outfits were better maintained in all the mines than in the previous year; fever and cough pills and cholera medicines were kept in stock. It is reported that the anti-hookworm treatments administered last year have improved the physical condition of the labouring classes. On the Salem district Health Officer's suggestion, the Collector has addressed the magnesite mines authorities to employ in Kanjamalai a person trained in first aid. The magnesite mines at Suramangalam, Salem district, maintain a dispensary which is in charge of a part-time Medical officer, who attends twice a week and, when necessary, daily; a full-timed compounder and nurse are also attached to the dispensary. In Cuddapah district, the mine owners keep sufficient supplies of materials and medicines for first aid and these are freely supplied. In the Tummaragudi mines in Bellary district, a small dispensary in charge of a sub-assistant surgeon has been opened for the treatment of the sick."

SANITARY WORKS (CIVIL).

CONSERVANCY STAFF AND PLANT—PUBLIC HEALTH FINANCE.

169. The following summary regarding major sanitary works is extracted from the report of the Sanitary Engineer which may be referred to for details:—

(*a*) *Water-supply*—(i) *Municipalities.*—Excluding the partial advance schemes in Coimbatore, 32 out of the 82 municipalities in the Presidency possess protected water-supply systems. Improvements to the existing supplies are in actual progress in five of these towns and have been sanctioned or are in contemplation in sixteen towns.

Schemes for the provision of protected water-supply are in the course of execution in ten municipalities and investigation has been completed or in progress or has been ordered in the case of twenty-three towns.

(ii) *Rural areas.*—Protected supply has been provided in Rameswaram union. The scheme is in the course of execution in Chodavaram and Gudur; it was sanctioned for Gobichettipalaiyam, but is kept in suspension in view of the large Bhavani scheme. Investigation has been finished or in progress or in contemplation in twenty-three cases.

In connexion with rural water supplies, the grants given by Government to local bodies are very often spent on works without due regard to their urgency from the Public Health standpoint. Analogous to the system adopted by the Ministry of Health of England, a technical committee should be constituted for the purpose of classifying the works in the order of their urgency and the grants distributed only on the recommendations of the Committee. If this suggestion is accepted by the Government, detailed proposals will be submitted.

(*b*) *Drainage.*—Only four towns, viz., Madras, Ootacamund, Madura and Vellore have fairly comprehensive drainage systems and the work is in progress in three other municipalities.

Investigation has been completed or in progress or has been ordered in the case of 43 municipal towns and 3 unions.

(*c*) An amended priority list of water-supply and drainage schemes arranged in the order of their urgency and importance from the standpoint of public health has been approved in G.O. No. 1780-P.H., dated 16th July 1929.

170. *Conservancy*—(1) *Municipalities.*—(*a*) The full complement of Sanitary Inspectors with reference to population (1 for every 10,000) is 251, whereas the number actually employed is only 232. The number of peons and maistris entrusted with the immediate supervision of the menials is still more inadequate. These defects have been brought then and there to the notice of the municipal councils concerned during inspection. Government are requested to draw the attention of the Councils to the schedules prescribed in Government Order No. 760 M, dated 16th April 1914.

(*b*) Excepting about half a dozen towns where motor traction is employed for the removal of town refuse, only bullock draught is adopted in the great majority of cases; as regards the latter, the supply of bulls is generally under the contract system, the bulls supplied being in most instances too weak to drag even the empty carts. In these cases, the Councils are not getting their money's worth and it is advisable that Government impress on the Councils the desirability of the departmental maintenance of live-stock for conservancy; better still would be the replacement of bullock carts by motor vehicles.

(*c*) Very few Councils recognize the financial aspect of refuse disposal. The methods adopted in most cases are crude, and, excepting in Madura and about another four or five towns, the income derived from refuse is insignificant. The Royal Commission on Agriculture has laid considerable stress on the importance of the scientific treatment of refuse from the standpoint of agriculture. The subject is under correspondence with the Government.

(*d*) There was very little increase during the year in the number of public latrines; apart from inadequacy, a large proportion of these latrines is of a very primitive type. Their defects have not received the serious attention of the Councils in spite of these being brought to their notice.

The increase in the number of public latrines from about 175,000 to 204,000 is however gratifying to some extent. Eighty-three per cent of these latrines were conserved by municipal agency.

(*e*) *Rural areas.*—In spite of the statutory obligations imposed by the Local Boards Act, conservancy in unions is in the great majority of cases far from satisfactory; this is chiefly due to lack of supervision of the menial staff. Unless Government insist on employment of Sanitary Inspectors by the Union Boards at least in the case of towns having a population of about 8,000 and over, it is difficult to expect any improvement.

As regards non-union villages, rural reconstruction schemes with scavenging and cleansing as part of the programme have been started in Gōdāvari West, South Kanara and Chingleput districts; in the last of these, it is stated that 100 school teachers have been trained in first aid and sanitation. In Kistna district, arrangements for conservancy have been made in nine non-union villages. In Guntūr district, the recently constituted panchayats are reported to be doing excellent work in village sanitation. Lastly, in Bellary district, it is stated that improvements in rural sanitation were effected in several villages by voluntary agencies. It is hoped that in the course of the next few years, every district will have a properly organized rural reconstruction scheme.

The financial statements received from Local Boards and Municipalities are very incomplete and a discussion on the subject is not therefore possible.

VACCINATION (1929–30).

171. In accordance with the instructions contained in G.O. Mis. No. 1299, P.H., dated 22nd March 1929, the annual report on vaccination for 1929–30 has been included in the Annual Public Health Report for 1929 instead of being issued separately as heretofore.

172. As in previous years, the King Institute, Guindy, continued to be the sole agency for the manufacture and distribution of vaccine lymph in the Presidency.

173. The hot weather months during which routine vaccination work was suspended were as usual utilized by the subordinate health staffs for checking the registers of vital statistics and of unprotected children. The total number of unprotected cases detected during the year amounted to 2·55 lakhs. More than one-half of the detections were reported from six districts alone, viz., Coimbatore, Tinnevelly, Gōdāvari East and West, Kistna and Madura.

A few District Health Officers have suggested certain changes in the vaccination off-season in their districts; these suggestions will be discussed with the Director of the King Institute and the Government will be addressed if any changes are needed.

174. The excessive decentralization in the administration of vaccination in rural areas as a result of the Local Boards Act of 1920 has been found by the Public Health department to be attended with considerable difficulties in the conduct of vaccination. This is especially felt in the case of the lowest administrative units under that Act, viz., the Union Boards, which under ordinary conditions are not subject to the control of either the taluk or the district boards, nor are they amenable as a rule to suggestions and advice from the Public Health department; and, even in spite of the repeated remarks of the Government on the inefficiency of the administration of vaccination, there are no signs of improvement. As examples may be mentioned Guntakal Union Board, the President of which is stated to have told the Health staff that he has nothing to do with vaccination in spite of the statutory obligations to the contrary, and that it was the business of the Health Inspector to go from door to door to conduct his inspections; Dharmavaram Union Board President refused to give any help to the Health Inspector and the vaccinator even during the

prevalence of smallpox. The maintenance of registers of unprotected cases complete and up-to-date, so essential for the conduct of vaccination, is more the exception than the rule in Union Board areas. As a matter of fact, the inefficiency in administration has gone to so great an extent that, in certain districts, the Union Boards have been relieved either wholly or partially of their responsibility in connexion with vaccination and this has been transferred to village headmen. Pending legislation that has been proposed for the vesting of the control in the District Board, it is advisable that Government transfer to the village headmen the Union Boards' obligations in the above respect; it is extremely unlikely that Union authorities will raise any objection to this proposal, whereas the great majority of them at any rate will heartily welcome it.

175. As regards the administration of vaccination by taluk boards, although it may not be characterized as unsatisfactory, the number of instances in which inefficiency has been reported, either due to acts of commission or omission on their part, is in no way negligible. In spite of the fact that District Health Officers are in immediate charge of the vaccination establishment and notwithstanding the definite instructions of the Government on the subject, several taluk boards are in the practice of appointing vaccinators who are very often incompetent and have been condemned on previous occasions, ordering the transfer of vaccinators and granting leave to them without consulting the District Health Officer or in total disregard of his recommendations. In the matter of punishments, it is very often the case that either these are entirely disproportionately low to the seriousness of the offence or no punishments are awarded at all. Under these circumstances, it is impossible to maintain any discipline among the staff and inefficiency is inevitable. As examples of the remarks made above may be mentioned the taluk boards of Markapur, Tindivanam, Tirukkoyilur, Papanasam and the majority of taluk boards in Cudappah district. The next difficulty experienced by the Public Health department is the attitude taken by the local boards in the matter of prosecutions for vaccination offences. Generally speaking, the presidents are very reluctant to sanction prosecutions of parents and guardians who refuse to get their children vaccinated. As no law is self-enforcing, it is impossible to expect efficiency in administration if the local bodies do not exercise the powers conferred on them. The extreme instances in this respect are the taluk boards of Coimbatore and Pattukkottai, the latter being a chronic defaulter. Ramachandrapur Taluk Board is even worse as it refused to take any notice even in cases of gross violation of rules and insults to vaccinators. It is reported that the Rajahmundry Taluk Board President refers to his overseers the recommendations for prosecutions sent up by the District Health Officer. Apart from the fact that these overseers are incompetent to give an opinion on the subject, the procedure adopted by the President is one which is irregular, unnecessary and derogatory to the prestige of this department. A still more extraordinary attitude is taken by the President of the Hospet Taluk Board who, when any prosecution rolls are sent to him, states that vaccination ought to be done at the instance of the respective Taluk Board members. As it is impossible to make any progress in the face of such difficulties, Government are requested to issue necessary instructions in the matter to the local bodies, especially those mentioned above. It has also been brought to notice that the punishments imposed by magistrates in cases of offences against vaccination laws are in a great proportion of instances ridiculously low amounting to a few annas only. Such fines do not serve any useful purpose. District Magistrates may be requested to take necessary action in the matter.

176. In non-union rural areas, the village headmen are responsible for the assembling of children for vaccination and inspection of vaccinated cases. There have been several instances in which they have been at default and this has resulted in considerable waste of time and wastage of lymph, the vaccinator being penalized for short work for which the village headman is responsible. Although the action taken by the Revenue authorities on the complaints made in this connexion by the Health department has been on the whole satisfactory, there have been several cases in which the punishments which were awarded

were either nil or amounted to only a warning, the worst instance in this respect being Tanjore district. Apart from inviting the attention of the Collector of this district, it is suggested that a yearly circular may be issued from the Collectorate to the village headmen warning them of their obligations in regard to vaccination and their liability to defray the cost of vaccine lymph which is wasted as a result of their default. It is expected that such a circular will serve as a wholesome check.

177. In the notification of infectious diseases, delinquencies are most numerous in the case of smallpox. It is reported that the commonest excuse made by the village munsifs in the matter of delays or failure to report smallpox is the difficulty of differentiating it from chickenpox. Whilst this may apply to very mild cases of smallpox, it cannot be considered even for a moment in severe or fatal cases, failure to report which is not at all uncommon. The suggestion has been made that in order to circumvent such an excuse, village headmen should be directed to report all cases of eruptive fevers. This suggestion is worth consideration.

Discrepancies in smallpox statistics as reported from Taluk offices and those published in the Collectors' returns are still far too common. The following are a few instances :—

District.	Deaths from smallpox.	
	Tahsildar's reports.	Collector's returns.
North Arcot	426	862
Guntūr	17	101
Rāmnād	11	60

As pointed out in the Public Health report for 1928, there is no justification for the occurence of such variations and, provided that reasonable care is exercised in the submission of daily reports and the compilation of returns, these differences will cease to exist.

178. During the year under review, compulsory vaccination was extended to certain areas in Cuddapah district and three taluks in Salem district. The recommendation which has been made year after year regarding the extension of compulsory vaccination laws throughout the Presidency is once again urged. In this connexion, the District Health Officer of Cuddapah has stated that the refusal of some of the Taluk Boards in his district to declare vaccination compulsory in their areas is due to the fact that the village headmen who form a large proportion of the personnel of the Taluk Boards vote against the proposition on account of their unwillingness to shoulder the responsibility which will ultimately have to be discharged by them. It is probable that a similar feature may obtain in the case of several other Taluk Boards. It is hoped that the amended Local Boards Act of 1929 will remove this anomaly.

At present, vaccination is compulsory in all municipalities and 17 districts and in limited areas in 8 districts.

179. Anti-vaccination propaganda was restricted to certain parts of Malabar and the taluks in South Kanara and Coimbatore districts immediately adjoining Malabar.

180. About 85 per cent of the deaths from smallpox during the year under report occurred under 10 years of age. The great incidence of mortality in the younger ages is a proof of the slackness in the administration of vaccination. Again, there is a slow but definitely perceptible change in the age incidence of smallpox, the proportion of persons in adult ages who get the disease being gradually on the increase. Several Health Officers have expressed that, on account of this change in the trend of mortality, the question of making revaccination compulsory at least in areas infected with smallpox should be considered. This has been provided for in the draft Public Health Bill.

181. An abstract of vaccination staffs employed by all agencies during the year is given below :—

Year.	Health Inspectors.	Vaccinators.			
		First class.	Second class.	Probationary.	Total.
1929-30	284	214	525	58	797
Increase or decrease as compared with 1928-29.	+1	+27	+23	−26	+24

Although the increase in the grade of first and second-class vaccinators and the diminution in the probationary class are gratifying, the employment of as many as 58 vaccinators in the last of these groups is a serious anomaly as it is obviously absurd to keep a man on probation for an indefinite number of years—very often the whole of a man's service—without promoting him to the second class. The separate entity of a probationary class should be abolished with as little delay as possible and future recruits should, as in other services, be kept on probation for a limited period—a year or two—and, if their work is found satisfactory, be confirmed as first-class or second-class vaccinators as the case may be.

Inequalities in the salaries and allowances of vaccinators employed by the different taluk boards in individual districts still continue. As pointed out in previous reports, such invidious distinctions are a cause of serious discontentment of the staff and should naturally detract efficiency. Pending the acceptance of the proposal regarding the centralization of vaccination administration in the district board, Government are requested to address the taluk boards to revise the pay of vaccinators, so that a uniform grade for each class obtains in each district.

The constant complaint of District Health Officers is that the salaries paid by some taluk boards to their vaccinators are very low and hardly sufficient for even a hand-to-mouth existence. The District Health Officer, Bellary, goes so far as to say that the premature death of two vaccinators during the year is to be attributed partly at any rate to the miserable pay of Rs. 22-8-0 which was given to them. Commensurate with their financial conditions, it is quite possible for local bodies to be more liberal in the pay of vaccinators as contentment is indispensable for honest and efficient work.

The employment of women vaccinators has been urged by several Health Officers. According to information available in this office, it is only two district boards, namely, Malabar and Kistna, and three municipalities, viz., Madura, Coimbatore and Tellicherry, that employ women vaccinators. In order to encourage and facilitate vaccination work in communities and castes where the womenfolk are very conservative or observe purdah, the Health Officers' proposals about the appointment of vaccinatrices are strongly emphasized on district boards and the councils of the larger municipalities.

182. The statistics of vaccination operations performed during 1929-30 are summarized below :—

	Primary and secondary vaccination.	Re-vaccination.	Total.
1929-30	1,486,255	653,066	2,139,321
Increase as compared with 1928-29	5,257	128,261	133,518

The number of vaccinations done in 1929-30 is the highest on record up to date.

183. *Vaccination in districts.*—The number of vaccine operations done in the rural areas of the Presidency during 1929-30 was approximately 1·86 millions,

which is an increase of over 92,000 compared with the previous year. This increase was both under primary and secondary vaccinations (+ 85,000) and re-vaccinations (+ 7,200). The increase is attributed chiefly to the intensive vaccination and re-vaccination campaigns in the districts where smallpox prevailed.

Chittoor and Malabar districts reported the largest increases, viz., 17,500 and 16,500 respectively. These were followed by Chingleput and Cuddapah (about 10,000 in each), South Kanara and North Arcot (about 9,000) and Salem and Vizagapatam (about 7,000 each).

Among the nine districts where a decreased outturn was recorded, Tanjore heads the list with a fall of nearly 12,000 vaccinations, next in order being Rāmnād (—7,000), Trichinopoly (—6,000) and Madura (—4,700). In most cases the reasons assigned for the decreases are that a sufficient number of unprotected children was not available on account of intensive vaccinations in previous years. In Rāmnād district, the prevalence of cholera is said to have been the cause of the shortage in vaccination during the year.

184. *Vaccination in municipalities.*—The total number of vaccinations performed in the 82 municipalities in the Presidency was 245,558, an increase of nearly 33,100 when compared with the previous year. Increases were recorded in 55 towns, and were most marked in the following instances, viz., about 22,500 in Madras, 5,000 in Cannanore, 3,000 in Mangalore, 2,300 in Cochin, 1,600 in Coimbatore and about 1,000 in Chidambaram, Nandyal and Salem.

The largest decreases were reported from Kurnool and Chittoor (about 1,500 in each), and in Vizianagram (about 1,000).

185. The success rates in the vaccinations done during the year are classified in the following table according to the agencies which performed the vaccinations:—

—	Number of successful vaccinations.			Percentage of sucess.		
	Primary vaccination.	Re-vaccination.	Total.	Primary vaccination.	Re-vaccination.	Total.
Local fund vaccinators ...	1,165,405	134,647	1,300,052	95·7	31·3	78·9
Government vaccinators ...	23,894	3,945	27,839	92·6	30.3	71·7
Municipal vaccinators ...	117,136	35,669	152,805	97 8	32 6	66·9
Cantonment vaccinators ...	5,800	4,432	10,232	93·6	35·8	54·0
Dispensaries	1,842	642	2,484	99 2	60·3	85·0
Medical subordinates	101	3,722	3,823	97·1	44 9	45·6
Railways	625	2,965	3,590	92 0	65·2	68·7
Total ...	1,314,603	186,222	1,500,825	95 9	32·1	76·9

The slight differences in the average success rates under all agencies as compared with the previous year—a fall of ·5 per cent under primary and secondary vaccinations and an increase of 1·2 per cent under re-vaccinations—do not call for any special remarks.

The low success rate of 92·6 in primary vaccination performed by Government vaccinators is due to the delays in the use of lymph which are unavoidable in the Agency areas where these men are employed.

The cause of the low rates noticed in the vaccinations done in Railway Institutions is not known. Information is not available even whether all the lymph used therein was obtained from the King Institute or from other sources.

The variations in the success rates under primary vaccinations which alone should be taken as the criterion of efficiency ranged from 91·9 per cent in

Kurnool district to 99·2 per cent in Malabar. These variations are to be attributed to differences in climatic conditions in the several districts and even in parts of the same district, competency of vaccinators and so forth.

Calculated with reference to population, the ratio of successful vaccinations per mille of population ranged from 24·8 in Trichinopoly to 44·8 in Malabar; the ratio of 95·6 recorded in Nilgiris should be considered as rather exceptional. In five districts, viz., Trichinopoly, Tanjore, Rāmnād, Gōdāvari East and South Arcot, where ratios of 25 to 30 per mille were recorded, the condition of vaccination cannot be considered to be satisfactory.

As regards municipalities, the rates of successful vaccination per mille of population ranged from 24·3 in Villupuram to 96·3 in Cochin Municipality. The remark made at the end of the previous sub-paragraph applies to the five municipalities of Villupuram, Erode, Karaikudi, Vizianagram and Chittoor which recorded rates below 30 per mille.

186. *Infantile vaccinations.*—The total number of successful vaccinations in children under one year of age was 79,005 as compared with 81,375 in 1928–29.

The proportion of successful infantile vaccination to births registered in the year varied from 35·5 in Tiruppattur to 99·8 in Nandyal Municipality. If infant mortality rates and sickness and absentees are taken into account, it may be stated generally that infant vaccination ratios exceeding 75 per cent are untrustworthy, registration of vital statistics being defective, whereas administration of vaccination is better conducted. In six municipalities, viz., Tiruppattur, Cocanada, Tenali, Nellore, Vizianagram and Gudiyattam, the ratios of infant vaccinations to registered births were less than 40 per cent. In such cases, the low figures are probably due to non-enforcement of vaccination laws.

187. According to the Director of the King Institute, lymph for approximately 2·19 million cases was issued to local bodies during 1929–30 and returns were received for 2·10 million cases. The difference between the two figures represents wastage of lymph to an extent of about 4 per cent which cannot be considered as excessive.

188. Abstract of the expenditure incurred on the vaccination establishments employed by various agencies is given below:—

Establishment.	Total expenditure.		Average cost of each successful case.	
	1928–29.	1929–30.	1928–29.	1929–30.
	Rs.	Rs.	Rs. A. P.	Rs. A. P.
Rural areas—				
Government establishment—Vaccinators and Health Inspectors.*	1,88,200	1,96,000	...	...
Local Fund	3,44,700	3,72,500	...	...
Total of rural areas	5,32,900	5,68,500	0 6 6	0 6 10
Municipal	1,05,100	1,22,100	0 11 5	0 12 8
Cantonment	4,500	4,500	0 8 10	0 7 0
Total ...	6,42,500	6,95,500	0 7 1	0 7 5

* One-third of the expenditure on the establishment of Health Inspectors is debited to Vaccination.

The cost per successful vaccination varied from As. 5–2 in Chingleput to As. 12–6 in Nilgiris. As regards Municipalities, the minimum and the maximum rates were As. 5–3 in Cannanore and Rs. 1–9–3 in Tadpatri. Variations in cost are due to several causes, chief among them being differences in the pay of subordinates, differences in the outturn of vaccinations—the larger the outturn the less being the cost—and preponderance of re-vaccinations which increases the cost per case on account of the lower success rate.

189. The number of vaccinated cases inspected by District Health officers ranged from 518 in Vizagapatam to 5,134 in South Kanara. Three District Health officers inspected less than 1,000 cases each, 11 inspected between 1,000

to 2,000, five between 2,000 to 3,000, a similar number between 3,000 to 4,000 and one over 5,000. In the case of municipalities, nine Health officers inspected less than 75 per cent of the cases; in those towns having no Health officers, the number of medical officers whose inspections fell short of the above figure was 10.

District Medical Officers and Civil Surgeons inspected in all 14,606 cases, an increase of about 3,000 compared with 1928–29.

Forty-five out of the 284 Health Inspectors failed to inspect the minimum of 85 per cent prescribed for them.

As regards the shortages in inspections referred to above, necessary action will be taken.

190. No district was free from smallpox during the year, the total mortality during the official year being 7,337. The epidemic was very severe in the districts of South Arcot, North Arcot, Tanjore, Malabar and Chingleput, these five districts alone being responsible for nearly 50 per cent of the total mortality in the Presidency. Deaths from smallpox in municipalities amounted to just about 2,000, more than a sixth of which occurred in Madras City.

191. The following statement regarding the incidence of mortality from smallpox among the vaccinated and the unvaccinated is compiled from the figures furnished in the reports of the District Health officers of Bellary, Tanjore and South Kanara.

	In vaccinated persons.	In unvaccinated persons.
Number of cases of smallpox	1,342	838
Number of deaths among the above	46	390
Fatality rate per cent	3·43	46·54

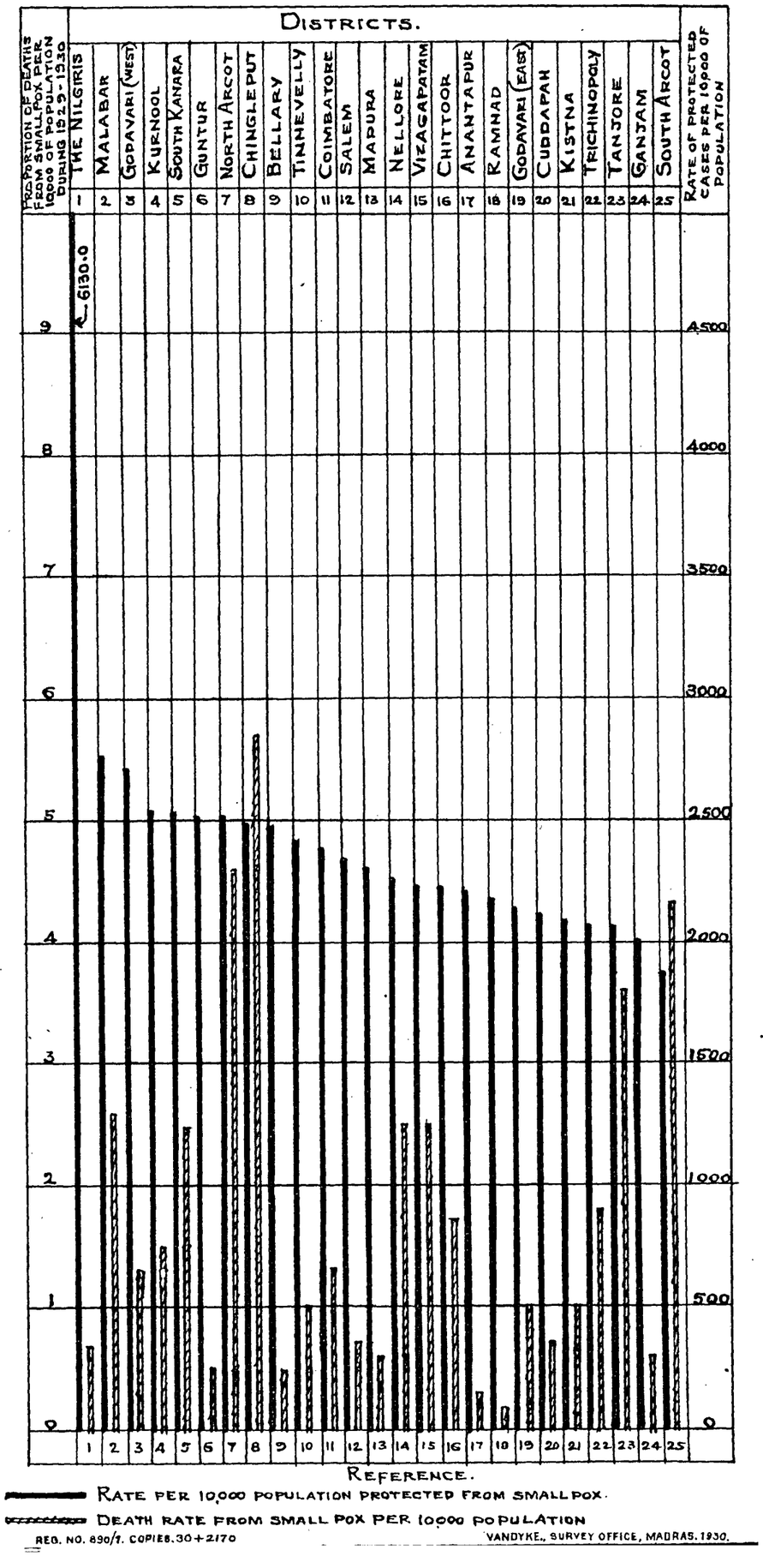
These figures demonstrate the importance of vaccination in the prevention and control of smallpox and indicate the need for toning up this branch of administration in the districts and towns where it is backward.

192. In the report for 1928–29, reference was made to certain recommendations made by the committee appointed by the Ministry of Health of England on the technique of vaccination and certain other subjects connected therewith. Although encephalitis as a complication of vaccination has not been reported up to date, most elaborate arrangements have been made in the King Institute for a thorough examination of every batch of lymph and only such lymph as satisfies every test is issued. The adoption of the other recommendations of the Committee has been decided to be unnecessary.

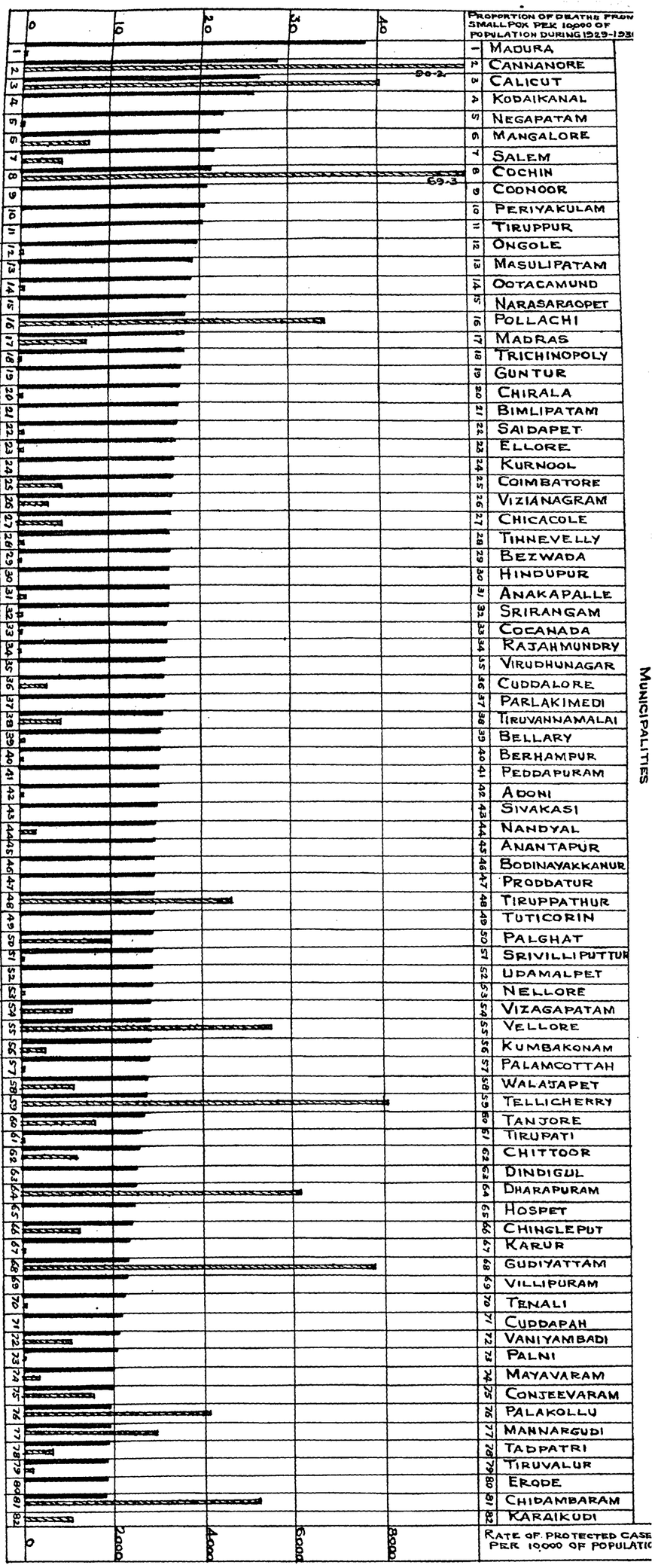
193. (1) With reference to letter No. 1250, Health, dated 4th September 1925, of the Government of India, the subjoined statement has been compiled showing certain particulars regarding smallpox cases treated in isolation hospitals and wards during 1929–30. One hundred and forty-four cases were treated in institutions exclusively reserved for isolation of smallpox cases and 33 cases were treated in sheds provided for infectious diseases in general:—

(*a*) Vaccinated as evidenced by one or more cicatrices	62
(*b*) Stated to have been successfully vaccinated but no vaccination cicatrices present	2
(*c*) Stated to be unvaccinated or unsuccessfully vaccinated but no vaccination cicatrices present	109
(*d*) Previously unvaccinated but vaccinated during the incubation period of smallpox	4
(*e*) Stated to have been successfully re-vaccinated	
	177

(2) Reports regarding the expenditure on the maintenance of infectious diseases hospitals have been received from the Guntūr, Nellore, Madras, Ootacamund, Coonoor, Cochin and Palamcottah municipalities and the amount spent on this account in these towns during 1929 was Rs. 42,614.



MUNICIPALITIES



1	1	MADURA
2	2	CANNANORE
3	3	CALICUT
4	4	KODAIKANAL
5	5	NEGAPATAM
6	6	MANGALORE
7	7	SALEM
8	8	COCHIN
9	9	COONOOR
10	10	PERIYAKULAM
11	11	TIRUPPUR
12	12	ONGOLE
13	13	MASULIPATAM
14	14	OOTACAMUND
15	15	NARASARAOPET
16	16	POLLACHI
17	17	MADRAS
18	18	TRICHINOPOLY
19	19	GUNTUR
20	20	CHIRALA
21	21	BIMLIPATAM
22	22	SAIDAPET
23	23	ELLORE
24	24	KURNOOL
25	25	COIMBATORE
26	26	VIZIANAGRAM
27	27	CHICACOLE
28	29	TINNEVELLY
29	30	BEZWADA
30	31	HINDUPUR
31	32	ANAKAPALLE
32	33	SRIRANGAM
33	34	COCANADA
34	35	RAJAHMUNDRY
35	36	VIRUDHUNAGAR
36	37	CUDDALORE
37	38	PARLAKIMEDI
38	39	TIRUVANNAMALAI
39	40	BELLARY
40	41	BERHAMPUR
41	42	PEDDAPURAM
42	43	ADONI
43	44	SIVAKASI
44	45	NANDYAL
45	46	ANANTAPUR
46	47	BODINAYAKKANUR
47	48	PRODDATUR
48	49	TIRUPPATHUR
49	50	TUTICORIN
50	51	PALGHAT
51	52	SRIVILLIPUTTUR
52	53	UDAMALPET
53	54	NELLORE
54	55	VIZAGAPATAM
55	56	VELLORE
56	57	KUMBAKONAM
57	58	PALAMCOTTAH
58	59	WALAJAPET
59	60	TELLICHERRY
60	61	TANJORE
61	62	TIRUPATI
62	63	CHITTOOR
63	64	DINDIGUL
64	65	DHARAPURAM
65	66	HOSPET
66	67	CHINGLEPUT
67	68	KARUR
68	69	GUDIYATTAM
69	70	VILLIPURAM
70	71	TENALI
71	72	CUDDAPAH
72	73	VANIYAMBADI
73	74	PALNI
74	75	MAYAVARAM
75	76	CONJEEVARAM
76	77	PALAKOLLU
77	78	MANNARGUDI
78	79	TADPATRI
79	80	TIRUVALUR
80	81	ERODE
81	82	CHIDAMBARAM
82		KARAIKUDI

PROPORTION OF DEATHS FROM SMALL POX PER 10000 OF POPULATION DURING 1929-193

RATE OF PROTECTED CASE PER 10000 OF POPULATIO

REFERENCE

RATE PER 10,000 POPULATION PROTECTED FROM SMALL POX.

DEATH RATE FROM SMALL POX PER 10000 POPULATION.

REG. NO. 8902. COPIES. 30+2170

VANDYKE, SURVEY OFFICE, MADRAS. 1930.

GENERAL REMARKS AND PERSONAL PROCEEDINGS.

194. During the year under review, the second-class Health Officer's post in Mangalore Municipality was converted into a first-class one and a second-class Health Officer was appointed newly to each of the municipalities of Periyakulam and Cannanore. In view of the importance of Rameswaram as a place of pilgrimage, a second-class Health Officer was appointed in the place of the Sanitation Officer who was only a Sanitary Inspector. The reserve of first-class Health Officers in the office of the Director of Public Health was strengthened by the addition of one more officer. In South Kanara district, the Health Inspector's range at Kasaragod was bifurcated and an additional Health Inspector was posted with headquarters at Hosdrug. At the end of the year there were 25 District Health Officers, 41 Municipal Health Officers and 284 Health Inspectors. The services of one second-class Health Officer and four probationary Health Inspectors were terminated and 25 Health Inspectors were punished for inefficiency and misconduct. One first-class Health Officer and three Health Inspectors died during the year and five Health Inspectors retired from service.

The rural sanitation campaign was strengthened by three units.

The anti-malarial staff working in Gudem Agency was reorganized. Three out of the four Health Inspectors originally sanctioned were replaced by a Sub-Assistant Surgeon, an Agricultural Demonstrator and a Public Works Overseer.

195. The Leprosy Survey Party deputed by the Indian Research Fund Association conducted investigation for four months in South Arcot, East Gōdāvari and Ganjām districts and this opportunity was availed of to train all the District Health Officers in leprosy survey.

196. When the Public Health department was reorganized in 1923, a sufficient number of graduates in sanitary science were not available for the appointment of first-class Health Officers; persons possessing diplomas only had therefore to be recruited. As these conditions do not obtain at present, Government have prescribed that the B.S.Sc. degree will in future be the minimum qualification for appointment as first-class Health Officer; this rule will not however affect those already in employ.

197. Consequent on the abolition of the Government Technical Examinations in Animal Physiology, Hygiene and Elementary Sanitary Engineering, the rules regarding the recruitment of Sanitary Inspectors were revised and in future there will be no separate class of Assistant Sanitary Inspectors. Eighty-three candidates underwent the Sanitary Inspector's course and 51 qualified as Sanitary Inspectors, including eleven under old regulations. In addition to Sanitary Inspectors, thirty-five candidates underwent the first-class vaccinator's course, and 33 passed.

198. The rules regarding quinquennial training of Health Inspectors and Sanitary Inspectors were also revised. Twenty-six Health Inspectors and 33 Sanitary Inspectors underwent the quinquennial training in 1929. Two Health Inspectors and three Sanitary Inspectors were exempted from appearing for the examination, and the rest came out successful in the Final examination.

199. Seven medical graduates underwent the course for the B.S.Sc. degree and 13 L.M.Ps. underwent the Diploma course. Three Health Officers were deputed to undergo the D.T.M. course in the School of Tropical Medicine and Hygiene, Calcutta. Those who took the course in the previous year were all successful in the examination. One Health Officer was granted study leave for higher studies in England. At the end of the year, two Health Officers were on study leave. One Health Officer was deputed to America on Rockefeller Foundation Fellowship. Two Health Officers were deputed for malaria training in Karnal.

200. Reference to the visit of the Malaria Commission of the League of Nations has been made in paragraph 92 above.

201. The following is a resume of my tours during the year:—

Coimbatore	Inspection of the Offices of the District and Municipal Health Officers.
South Arcot	
Masulipatam	
Vizagapatam	
Berhampore	
Ellore	
Cocanada	Inspection of the Offices of the District and Municipal Health Officers and Departmental investigation.
Madura	Inspection of the Offices of the District and Municipal Health Officers and evidence in Sub-court.
Pollachi	Inspection of the Office of Municipal Health Officer and joint inspection of water-works with the Sanitary Engineer.
Cannanore	Routine Municipal inspection.
Bezwada	Routine Municipal inspection; inspection of Health Officer's office; Health Week arrangements.
Poonamalle	Opening of Child Welfare Centre.
Saidapet	Joint inspection with Chairman, Municipal Council.
Cuddapah and Kurnool districts.	Inspection of Health Week arrangements.
Periyakulam	Departmental investigation.
Meppady and Gudalur.	Wynaad Planters' Association Meeting and Inspection of Vaccination, respectively.
Coonoor	Pasteur Institute Meeting.
Villupuram	Inspection of Leprosy Campaign.

202. Lieut.-Col. A. J. H. Russell continued to be on leave till the 11th October 1929, when he was appointed as Medical Assessor to the Royal Commission on Labour in India and I held charge of the office of the Director of Public Health throughout the year. There was no change in the personnel of the Assistant Directors of Public Health and the Special Malaria Officer; all of them discharged their duties zealously and the success attained during the year is in no small measure due to their hearty co-operation. In this connexion, I should like to make special mention of the names of Dr. B. Ethirajulu and Dr. R. Adiseshan. Dr. Ethirajulu who was in immediate charge of the establishment was of very great assistance to me in this branch of administration. Dr. Adiseshan continued his investigation on "Maternal mortality" and it is expected that this research will be a valuable contribution to the knowledge on this subject. He also drafted the Public Health Bill, a really arduous task involving considerable sacrifice of time and energy. The enactment of a Public Health Act has been pending for a long time, and, now that the preliminary drafting has been completed, it is hoped that it will be passed into law at an early date; Madras Presidency will then be the pioneer among the provinces in India in having a Public Health Act.

203. The Health Officers have carried out their duties conscientiously and with zeal but for which the progress during the year would not have been possible and I gratefully acknowledge the services rendered by them.

204. The ministerial establishment have discharged their duties satisfactorily and Mr. Ramalinga Ayyar, the Manager, and also Mr. Guruswami Achari, the Superintendent, have to be congratulated on the efficiency of their management and supervision. The expansion of the activities of the department in recent years has resulted in an extraordinary increase in the work of the ministerial establishment and every day adds still further to their responsibility. Proposals have been submitted on several occasions for the reorganization of the staff and the elevation of the office to A class rank, but these have unfortunately not been accepted by the Government. The establishment is working under considerable strain and difficulties, and their enthusiasm is being damped on account of stagnation in prospects. As a discontented staff is hardly conducive to efficiency, a re-examination of the above proposal is strongly urged on the Government.

COTACAMUND,
20th June 1930.

N. R. UBHAYA, Capt., D.P.H.,
Acting Director of Public Health.

ANNEXURE A.

1. *Districts—Birth-rates in districts during* 1929.

Names of districts.	Birth-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.	Names of districts.	Birth-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.
1. Tanjore	30·5	− 1·3	14. Gōdāvari, East	39·2	− 4·5
2. South Arcot	30·9	+ 1·8	15. Tinnevelly	39·8	− 0·8
3. Ramnād	30·9	− 0·4	16. Anantapur	40·6	− 0·6
4. Cuddapah	31·0	− 2·1	17. Guntūr	40·9	+ 0·9
5. Trichinopoly	31·7	+ 1·2	18. Salem	41·0	+ 3·2
6. Coimbatore	36·0	+ 1·1	19. Kistna	41·4	− 0·5
7. Kurnool	56·8	− 3·7	20. South Kanara	41·7	+ 2·3
8. Madura	36·8	+ 0·3	21. North Arcot	41·9	+ 1·5
9. Chingleput	37·8	+ 0·8	22. Malabar	42·3	− 0·5
10. Nellore	37·8	+ 4·7	23. Gōdāvari, West	43·3	− 2·3
11. Vizagapatam	37·9	− 1·7	24. Madras Town	43·9	− 1·3
12. Ganjām	38·9	+ 4·8	25. Bellary	47·2	+ 3·9
13. Chittoor	39·0	+ 1·9	26. Nilgiris, The	51·3	+ 12·1

2. *Municipalities—Birth-rates in municipalities for* 1929.

Names of municipalities.	Birth-rate per mille for 1929.	Increase or decrease (+ or −) compared with 1928.	Names of municipalities.	Birth-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.
Below 20 *per mille* (2).					
1. Erode	14·2	− 2·6	2. Tiruvarur	16·8	− 4·2
Between 20 *and* 25 *per mille* (3).					
1. Nandyal	23·7	+ 1·4	3. Tadpatri	24·2	− 8·3
2. Karaikudi	23·8	− 1·6			
Between 25 *and* 30 *per mille* (8).					
1. Srirangam	27·3	+ 3·3	5. Villupuram	28·7	− 7·2
2. Chirala	28·0	− 7·5	6. Chidambaram	28·9	− 2·2
3. Tirupati	28·5	− 2·9	7. Tenali	28·9	− 2·9
4. Vaniyambadi	28·7	− 1·8	8. Negapatam	29·0	− 4·0
Between 30 *and* 35 *per mille* (21).					
1. Saidapet	30·0	− 5·4	12. Calicut	32·7	− 8·2
2. Sivakasi	30·0	− 11·5	13. Tinnevelly	33·0	− 2·1
3. Karur	30·1	− 3·9	14. Conjeeveram	33·2	− 4·4
4. Mayavaram	30·3	− 2·5	15. Tiruppur	33·7	+ 3·3
5. Palakollu	30·3	+ 6·4	16. Parlakimedi	33·7	...
6. Narasaraopet	30·5	+ 0·2	17. Tanjore	34·0	− 2·0
7. Peddapuram	30·6	− 6·4	18. Mannargudi	34·2	− 0·3
8. Vizagapatam	31·3	− 5·4	19. Chittoor	34·6	− 4·0
9. Chicacole	31·7	− 0·2	20. Tellicherry	34·8	− 4·6
10. Kumbakōnam	32·1	− 0·3	21. Cuddappah	34·9	+ 3·6
11. Anakapalle	32·1	+ 2·0			
Between 35 *and* 40 *per mille* (19).					
1. Berhampore	35·1	− 1·5	11. Trichinopoly	37·6	+ 0·7
2. Rajahmundry	35·2	− 5·6	12. Tuticorin	37·9	− 8·3
3. Vizianagram	35·3	− 0·1	13. Coonoor	37·9	+ 0·6
4. Anantapur	36·2	+ 1·1	14. Srivilliputtur	38·5	− 2·9
5. Masulipatam	36·7	− 2·6	15. Hindupur	39·0	− 5·3
6. Cocanada	37·0	− 5·7	16. Palni	39·4	+ 2·4
7. Cannanore	37·1	− 8·4	17. Cuddalore	39·7	+ 0·3
8. Gudiyattam	37·2	+ 4·8	18. Dharapuram	39·8	+ 1·0
9. Palamcottah	37·3	− 1·6	19. Udumalpet	39·8	− 2·9
10. Mangalore	37·5	− 1·8			

ANNEXURE A—*cont.*

Municipalities—Birth-rates in municipalities for 1929—*cont.*

Names of municipalities.	Birth-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.	Names of municipalities.	Birth-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.
Between 40 *and above* (29).					
1. Ellore	40·2	+ 3·3	16. Pollachi	44·6	− 5·3
2. Virudunagar	40 3	− 4·6	17. Walajapet	45·9	− 0·5
3. Palghat	40·4	+ 1·9	18. Adoni	46·5	+ 11·7
4. Hospet	40·8	+ 4·8	19. Kurnool	47·7	+ 5·6
5. Madura	41·7	− 5·1	20. Tiruvannamalai	47·9	+ 3·9
6. Proddatur	41·8	+ 12·5	21. Periyakulam	48·3	+ 7·0
7. Ongole	42 2	− 2 7	22. Bezwada	49·6	+ 4·2
8. Bellary	42·4	+ 6·0	23. Tirupattur	50·1	+ 5·0
9. Cochin	42 7	+ 6·3	24. Bodinayakanur	50·7	− 1·4
10. Coimbatore	42·8	− 3·3	25. Chingleput	52·0	− 0·2
11. Vellore	43·0	+ 4·0	26. Guntūr	52·3	− 2·3
12. Ootacamund	43 8	− 6 3	27. Nellore	53·6	+ 10·8
13. Madras	43·9	− 1·2	28. Kodaikanal	57·5	− 2·0
14. Bimlipatam	44·0	− 2·5	29. Salem	69·8	+ 7·6
15. Dindigul	44 2	− 2·1			

ANNEXURE B.

Birth-rates in rural towns for 1929.

Names of rural towns.	Birth-rates per mille in 1929.	Increase or decrease (+ or −) compared with 1928.	Names of rural towns.	Birth-rates per mille in 1929.	Increase or decrease (+ or −) compared with 1928.
Below 20 *per mille* (10).					
1. Ayyampettai	7·9	− 2·7	6. Kottayur	14·1	−12·6
2. Devakottai	9·3	− 1·5	7. Tiruppattur	15·1	−10·7
3. Pallavaram	12·5	− 1·8	8. Kamudi	18·2	− 3·1
4. Kandanur	13·8	− 9·9	9. Valuru	19·0	−17·5
5. Wellington	14·1	− 5·1	10. Tirukkattupalli	19·7	− 4·3
Between 20 *and* 25 *per mille* (18).					
1. Valavanur	20·8	− 0·1	10. Dowlaishweram	22·9	− 4·0
2. Paramagudi	21·1	− 7·6	11. Ponnr	23·2	− 8·4
3. Ilaiyangudi	21·5	−11·0	12. Eral	23·4	−12·3
4. Bikkavolu	21·9	− 4·7	13. Tondi	23·6	− 7·5
5. Vriddhachalam	22·2	− 2·4	14. Addanki	23·6	+ 0·3
6. Sivaganga	22·5	+ 2·5	15. Pandalgudi	23·7	+ 4·1
7. Dharmapuri	22·5	+ 2·1	16. Tiruvottiyur	24·3	− 3·2
8. Ichchapuram	22·5	+ 0·1	17. Tiruttani	24·4	− 6·4
9. Kamalapuram	22 6	+ 3·9	18. Allurukottapatnam ...	24·7	+ 1·8
Between 25 *and* 30 *per mille* (26).					
1. Vaidisvarankoil	25·2	+ 4·3	14. Tiruvadanai	27·6	− 3·6
2. Krishnagiri	25·3	− 6·9	15. Pattukkottai	27·9	− 4·3
3. Panruti	25·3	+ 3·1	16. Sendamangalam	28·2	− 1·7
4. Kulasekarapatnam	25·3	− 5·2	17. Yadiki	28·7	− 9·5
5. Samalkot	25·8	− 7·5	18. Muttupet	28·7	− 3·4
6. Parvatipuram	25·8	− 5·6	19. Chodavaram	28·7	− 9·1
7. Tirukkoyilur	25·9	+ 8·9	20. Porto Novo	28·8	+ 9·8
8. Jammalamadugu	26·2	−16·0	21. Bhuvanagiri	29·1	+15·8
9. Tekkali Raghunadhapuram.	26·2	+ 1·9	22. Tiruvadi	29·1	− 2·9
10. Tindivanam	26·3	+ 1·2	23. Tiruparankunram	29·3	+ 0·2
11. Adirampatnam	26·6	−10·5	24. Sattur	29·3	− 3·3
12. Tuni	26·7	−13·1	25. Srivaikuntam	29·2	− 0·2
13. Manamadurai	27·4	− 5·8	26. Manachanallur	29·9	+ 2·3
Between 30 *and* 35 *per mille* (50).					
1. Tranquebar	30·0	− 5·2	26. Kolluru	32·9	+14·1
2. Tiruvallur	30·3	− 5·0	27. Sholavandan	33·1	− 1·3
3. Cheyyur	30·6	+ 3·7	28. Kayalpatnam	33·1	+ 2·4
4. Razampeta	30·6	+ 2·2	29. Mangalagiri	33·2	− 2·0
5. Sembiem	30·8	− 1·0	30. Kurichchi	33·4	− 2·0
6. Badvel	30·9	− 0·6	31. Palladam	33·6	+ 2·9
7. Padana	31·0	−12·5	32. Vetapalam	33·6	− 2·8
8. Poonamallee	31·1	− 3·7	33. Arappukkotai	33·7	− 2·2
9. Shiyali	31·1	− 2·5	34. Pattamadai	33·8	− 3·4
10. Puliampatti	31·3	+ 0·4	35. Udaiyarpalaiyam	33·8	+ 4·5
11. Jaggayyapeta	31·6	+ 8·3	36. Chillakalurpet	33·9	− 9·5
12. Kollegal	32·0	+ 1·2	37. Nattam	34·1	+ 0·3
13. Nanguneri	32·0	+ 6·1	38. Kaveripakkam	34·3	+ 0·3
14. Kulittalai	32·0	− 3·2	39. Gudur	34·3	+11·1
15. Kampli	32·3	+ 8·0	40. Tirumangalam	34·4	−10·9
16. Tiruppuvanam	32·3	− 1·9	41. Hosur	34·4	+ 5·4
17. Vadakkuvalliyur	32·4	+ 1·6	42. Chinnamerangu	34·4	+ 7·5
18. Chebrolu	32·5	− 2·4	43. Ambasamudram	34·5	+ 4·7
19. Rāmnād	32·5	+ 3 5	44. Badagara	34·6	−12·5
20. Vedaranniyam	32·5	− 2·0	45. Pallapatti	34·6	+ 1·5
21. Bobbili	32·5	−14·4	46. Kavali	34·7	− 2·9
22. Alvartirunagari	32·6	+ 2·1	47. Kambam	34·8	− 0·2
23. Pithapuram	32·7	− 1·6	48. Venkatagiri	34·9	+11·1
24. Vempalle	32·9	+ 4·5	49. Russellkonda	34·9	+13·9
25. Madugula	32·9	+ 3·5	50. Lalgudi	35·0	− 6·5
Between 35 *and* 40 *per mille* (49).					
1. Surandai	34·3	+ 2·3	7. Gooty	35·4	+ 3·8
2. Bapatla	35 1	− 9·7	8. Sompeta	35·4	+12·1
3. Kandukur	35·1	+ 1·6	9. Namakkal	35·5	+ 0·1
4. Turaiyur	35·1	+ 0·5	10. Mettupalaiyam	35·6	− 2·4
5. Pallikonda	35·2	− 7·1	11. Kallakurichi	35·8	+ 7·8
6. Nellikuppam	35·3	+ 2·1	12. Tirachendur	35·9	− 4·5

ANNEXURE B—*cont.*

Birth-rates in rural towns for 1929—cont.

Names of rural towns.	Birth-rates per mille in 1929.	Increase or decrease (+ or −) compared with 1928.	Names of rural towns.	Birth-rates per mille in 1929.	Increase or decrease (+ or −) compared with 1928.
Between 35 *and* 40 *per mille* (49)—cont.					
13. Sriperumbudur	35·9	+ 1·2	32. Tirukkalikkunram ...	38·1	− 4·6
14. Kallidaikurichi	36·0	− 3·3	33. Uttamapalaiyam	38·3	− 8·3
15. Sirugappa	36·1	+ 9·8	34. Viravanallur	38·3	− 3·0
16. Arkonam	36·1	+ 1·5	35. Rayachoti	38·5	− 1·5
17. Narasinnapeta	36·1	+ 4·9	36. Ettiyapuram	38·6	− 2·6
18. Mandapeta	36·3	− 5·0	37. Ramachandrapuram ...	38·7	− 2·6
19. Pamidi	36·3	+12·4	38. Watrap	38·7	− 2·0
20. Rasipuram	36·3		39. Kalahasti	38·8	+ 4·0
21. Chinnamanur	36·4	− 8·7	40. Alizabad	38·9	+ 0·2
22. Dharmavaram	36·4	− 7·7	41. Tiruturaipundi	39·1	
23. Alluru	36·5	+ 7·7	42. Wandiwash	39·3	+ 1·9
24. Abiramam	36·6	+ 4·3	43. Sermadevi	39·4	− 2·2
25. Kovilpatti	37·1	− 5·2	44. Salura	39·4	− 4·6
26. Vinukonda	37·5	+ 2·0	45. Kottura	39·4	− 2·7
27. Amalapuram	37·7	+ 2·1	46. Viraghattam	39·5	+ 4·6
28. Sholinghur	37·7	− 0·8	47. Narasapatnam	39·6	− 8·3
29. Rajappalaiyam	37·7	− 3·2	48. Attur	39·7	− 5·6
30. Rameswaram	37·9	− 1·7	49. Mulki	39·9	− 0·5
31. Visharam	38·1	+ 7·0			
Between 40 *and* 45 *per mille* (31).					
1. Kottur	40·0	− 5·6	17. Pernampattu	42·5	− 0·7
2. Nayudupeta	40·1	+17·7	18. Sankaranayinarkovil ...	42·5	+ 0·8
3 Ariyalur	40·1	− 1·0	19. Gopichettipalaiyam ...	42·6	+ 0·8
4. Nuzvid	40·4	+ 2·9	20. Penukonda	42·9	+ 1·0
5. Srungavarappukota	40·8	+ 4·7	21. Sivagiri	43·1	+ 1·4
6. Kadaiyanur	40·9	+ 1·8	22. Gurzala	43·1	+ 2·2
7. Uttiramerur	41·0	− 1·0	23. Madurantakam	43·2	−11·7
8. Nidadavolu	41·2	− 3·0	24. Yellamanchili	43·3	− 6·8
9. Sattenapalle	41·3	+ 4·9	25. Narasapur	43·6	+ 2·3
10. Madanapalle	41·7	− 0·9	26. Pallikonda	43·7	+ 3·8
11. Tiruvottur	42·0	+ 4·3	27. Uravakonda	43·8	+ 2·0
12. Kollipara	42·3	+ 1·0	28. Achanta	43·9	+ 2·5
13. Bukkapatnam	42·4	− 0·6	29. Karkala	44·2	+19·0
14. Tiruchengodu	42·4		30. Vallam	44·2	− 2·1
15. Tenkasi	42·4	+ 0·1	31. Gudivada	44·8	− 3·9
16. Arcot	42·4	+ 3·4			
Between 45 *and* 50 *per mille* (17).					
1. Pennkonda	45·3	+11·3	10. Kosgi	48·6	+ 3·8
2. Attili	46·2	− 4·1	11. Chetput	48·9	+11·7
3. Tanuku	46·8	+ 0·6	12. Guntakal	49·0	− 1·0
4. Udipi	47·5	+ 5·2	13. Repalle	49·2	+ 7·5
5. Arni	47·8	− 4·2	14. Ponnani	49·2	− 6·1
6. Puliyangudi	48·5	+ 1·7	15. Udangudi	49·5	−16·1
7. Harpanahalli	48·5	− 1·9	16. Rayadrug	49·6	+ 0·5
8. Coondapoor	48·6	+ 4·9	17. Vasudevanallur	49·9	+ 1·3
9. Kadiri	48·6	+14·9			
Between 50 *and* 55 *per mille* (6).					
1. Nizampatnam	50·3	+ 5·1	4. Sattangulam	51·7	−17·6
2. Polur	50·8	+ 2·3	5. Ambur	52·7	− 3·0
3. Yemmiganuru	51·0	+ 4·7	6. Ranipettai	54·5	+ 6·5
Between 55 *and* 60 *per mille* (5).					
1. Kilakarai	55·0	−10·1	4. Kasaragod	58·2	+ 7·6
2. Settur	56·7	− 9·1	5. Kanduyanallur	59·5	+ 5·2
3. Punganur	56·9	− 3·1			
Above 60 (1).					
1. Bhavani	62·6	+ 3·4	-		

ANNEXURE C.

1. *District—Death-rates in districts during* 1929.

Names of districts.	Death-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.	Names of districts.	Death-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.
Below 150 *per mille* (26).					
1. Coimbatore	21·0	+ 0·3	14. Madura	25·5	+ 4·2
2. Salem	21·5	+ 0·2	15. Ganjām	25·8	+ 4·8
3. Malabar	22·0	− 0·3	16. Tanjore	25·9	− 1·0
4. South Arcot	23·2	− 0·5	17. Cuddapah	26·1	− 8·5
5. North Arcot	23·4	− 0·9	18. Guntūr	26·5	− 2·6
6. Nellore	23·5	− 4·4	19. Gōdāvari, West	27·1	− 4·5
7. Chingleput	23·6	− 4·3	20. Vizagapatam	27·9	− 1·0
8. Trichinopoly	23·7	− 1·0	21. Anantapur	28·3	− 1·0
9. Kistna	23·9	− 7·1	22. Tinnevelly	30·3	+ 3·4
10. Chittoor	24·1	− 3·7	23. Bellary	32·2	+ 2·1
11. South Kanara	24·1	− 3·9	24. Kurnool	35·6	− 7·5
12. Rāmnād	24·1	+ 3·2	25. Nilgiris, the	37·5	+ 6·8
13. Gōdāvari, East	25·0	− 4·3	26. Madras Town	42·8	− 8·2

2. *Municipalities—Death-rates in municipalities for* 1929.

Names of municipalities.	Death-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.	Names of municipalities.	Death-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.
Below 15 *per mille*—Nil.					
Between 15 *and* 20 *per mille* (7).					
1. Erode	15·5	+ 1·0	5. Vaniyambadi	18·9	− 0·5
2. Chittoor	16·8	− 12·5	6. Palakolu	19·7	+ 2·0
3. Tadpatri	17·5	− 9·4	7. Tiruvalur	19·8	− 1·4
4. Ellore	18·8	+ 0·2			
Between 20 *and* 25 *per mille* (16)					
1. Berhampur	20·0	+ 4·5	9. Narasaraopet	22·4	− 2·6
2. Peddapuram	20·2	− 6·5	10. Mangalore	23·0	...
3. Villupuram	20·7	− 1·4	11. Anakapalle	23·2	− 3·1
4. Sivakasi	20·8	− 1·2	12. Udamalpet	23·4	− 4·8
5. Chirala	21·3	− 2·1	13. Hindupur	23·5	− 5·6
6. Coonoor	21·5	− 0·1	14. Tiruppur	24·2	− 2·5
7. Tenali	21·8	+ 0·2	15. Masulipatam	24·6	− 7·4
8. Saidapet	22·2	− 4·5	16. Parlakimedi	25·0	+ 0·4
Between 25 *and* 30 *per mille* (24).					
1. Conjeeveram	25·4	− 1·3	13. Proddatur	27·6	− 0·6
2. Adoni	25·5	+ 4·6	14. Ongole	27·6	− 5·3
3. Karur	25·5	+ 0·9	15. Cuddapah	27·7	+ 0·7
4. Vellore	25·6	+ 7·4	16. Chidambaram	27·8	+ 1·2
5. Vizianagram	26·2	+ 1·7	17. Cuddalore	28·0	− 1·4
6. Tirupattur	26·4	+ 3·6	18. Nandyal	28·8	− 16·4
7. Gudiyattam	26·5	+ 6·4	19. Calicut	29·1	− 5·7
8. Negapatam	26·8	− 0·9	20. Anantapur	29·3	+ 3·5
9. Kodaikanal	27·1	+ 0·9	21. Tinnevelly	29·3	+ 1·7
10. Cocanada	27·1	+ 2·4	22. Cotacamund	29·5	...
11. Srivilliputtur	27·2	+ 2·3	23. Bimlipatam	29·5	+ 1·4
12. Palghat	27·4	− 1·4	24. Rajahmundry	29·6	− 9·4

ANNEXURE C—*cont.*

2. *Municipalities—Death-rates in municipalities for* 1929—cont.

Names of municipalities.	Death-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.	Names of municipalities.	Death-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.
Between 30 *and* 35 *per mille* (22).					
1. Coimbatore	30·5	+ 1·3	12. Mannargudi	33·5	− 1·1
2. Srirangam	30·9	− 6·1	13. Vizagapatam	33·6	− 3·9
3. Bezwada	31·2	− 7·6	14. Karaikudi	33·6	+ 4·5
4. Mayavaram	31·5	+ 1·4	15. Cannanore	33·6	+ 4·5
5. Tiruvannamalai	31·7	− 3·1	16. Kurnool	33·7	+ 1·0
6. Tirupati	31·7	− 4·0	17. Chicacole	33·8	+ 10·1
7. Palamcottah	32·4	+ 4·6	18. Palni	33·8	+ 3·9
8. Cochin	32·4	+ 4·8	19. Dharapuram	34·0	+ 5·9
9. Chingleput	32·9	− 3·8	20. Nellore	34·1	− 9·7
10. Trichinopoly	33·0	− 4·2	21. Walajapet	34·3	+ 4·2
11. Kumbakónam	33·2	+ 2·9	22. Tellicherry	35·0	+ 7·7
Between 35 *and* 40 *per mille* (8).					
1. Dindigol	35·1	+ 7·8	5. Tanjore	37·2	+ 2·2
2. Hospet	35·5	+ 1·5	6. Bodinayakanur	37·6	+ 12·0
3. Madura	35·7	+ 3·3	7. Pollachi	39·2	+ 6·0
4. Guntúr	36·7	− 6·2	8. Bellary	39·5	+ 5·0
Between 40 *and* 45 *per mille* (4).					
1. Periyakulam	40·9	+ 11·2	3. Tuticorin...	41·1	+ 2·3
2. Virudunagar	41·0	+ 5·8	4. Madras	42·8	− 8·2
Above 45 *per mille* (1).					
1. Salem	45·6	− 1·6			

ANNEXURE D.

Death-rates in rural towns for 1929.

Names of rural towns.	Death-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.	Names of rural towns.	Death-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928.
Below 20 *per mille* (60).					
1. Pallavaram	6·9	− 1·8	31. Tondi	17·3	− 7·4
2. Ayyampettai	7·9	+ 0·2	32. Paramagudi	17·4	+ 4·5
3. Bikkavolu	9·7	− 7·4	33. Sendamangalam	17·4	− 0·4
4. Valuru	9·9	−16·2	34. Kampli	17·5	− 2·0
5. Telliapuram	10·6	− 0·5	35. Vempali	17·5	+12·2
6. Kandanur	11·4	−15·5	36. Vriddhachalam	17·6	− 6·7
7. Pandalgudi	11·8	− 2·1	37. Alluru	17·6	−11·7
8. Ilaiyangudi	12·4	− 0·9	38. Palladam	18·3	+ 2·3
9. Ponnani	12·6	−13·7	39. Pedana	18·4	−20·7
10. Wellington	12·6	− 3·6	40. Ramachandrapuram... ...	18·4	− 9·6
11. Rayachoti	12·6	− 6·9	41. Vadakkuvalliyur	18·5	− 0·2
12. Dowlaishweram	12·9	− 4·8	42. Tekkali	18·7	+ 3·7
13. Kottaiyur	12·9	−13·6	43. Namakkal	18·7	− 0·5
14. Krishnagiri	13·5	+ 0·6	44. Narasimhapeta	18·7	+ 3·9
15. Kamalapuram	13·6	− 3·6	45. Dharmavaram	18·8	− 4·1
16. Kavali	13·9	− 7·1	46 Kamudi	18·8	+ 7·8
17. Kurichchi	14·6	− 0·8	47. Hosur	18·8	− 5·1
18. Valavanur	14·6	+ 2·7	48. Yadiki	18·9	− 4·3
19. Allurukottapatnam	14·7	− 0·4	49. Sirupappetta	18·9	+ 1·8
20. Tirukkattupalli	14·7	+ 0·1	50. Razampeta	18·9	− 2·6
21. Devakottai	15·1	+ 4·4	51. Tiruttani	19·0	− 8·9
22. Samalkot	15·6	− 8·5	52. Wandiwash	19·1	−12·1
23. Cheyur	15·7	− 7·8	53. Surandai	19·3	− 1·7
24. Vaidisvarankoil	15·8	− 8·2	54. Tirukkoyilur	19·4	+ 1·8
25. Gudur	16·4	− 9·2	55. Bhuvanagiri	19·5	+ 5·8
26. Tiruppattur	16·6	− 3·0	56. Medugula	19·5	− 3·2
27. Dharmapuri	16·7	+ 3·0	57. Narkala	19·6	+ 4·3
28. Kolluru	16·9	− 2·9	58. Jaggayyapeta	19·7	+ 1·3
29. Tindivanam	16·9	− 8·2	59. Manachanallur	19·8	+ 1·2
30. Addanki	17·1	− 5·1	60. Attur	19·9	+ 2·1
Between 20 *and* 25 *per mille* (53).					
1. Nattam	20·3	+ 2·5	29. Nizampatnam	23·2	− 5·0
2. Tirukkalikkundram	20·4	− 5·0	29. Turaiyur	23·2	− 1·8
3. Chetput	20·5	− 7·6	30. Perrampattu...	23·3	+11·7
4. Kaveripakkam	20·6	− 2·7	31. Kandukur	23·8	− 2·7
5. Bapatla	20·6	− 6·2	32. Yellamanchili	23·9	− 3·7
6. Vetapalem	20·6	− 3·0	33. Udipi	23·9	− 2·8
7. Tranquebar	20·8	− 6·0	34. Venkatagiri	23·9	+ 2·8
8. Rayadrug	20·8	− 1·6	35. Madurantakam	23·9	− 9·5
9. Poonamallee	20·9	− 9·2	36. Tuni	24·0	− 4·9
10. Abiraman	20·9	+ 2·5	37. Mangalagiri	24·1	− 4·5
11. Sriperumbudur	21·0	− 3·8	38. Srungavarapukota	24·1	+ 3·1
12. Panruti	21·2	+ 7·3	39. Nidadavole	24·2	− 3·9
13. Russellkonda	21·2	+11·2	40. Penukonda	24·2	+ 9·9
14. Bobbili	21·3	−10·5	41. Kottar...	24·2	− 6·9
15. Kollegal	21·5	− 0·4	42. Sholinghur	24·2	− 2·1
16. Kulasekarapatnam	21·7	+ 2·6	43. Pattukkottai	24·2	− 4·9
17. Tiruvallur	21·7	− 8·6	44. Pamidi	24·3	+ 5·6
18. Nayudupet	21·9	+ 6·8	45. Udaiyarpalaiyam	24·3	− 4·1
19. Rasipuram	21·9	+ 0·3	46. Rajampalaiyam	24·5	+ 2·5
20. Mulki	21·9	+ 1·3	47. Aruppukottai	24·5	+ 3·6
21. Badvel	22·3	−10·5	48. Tiruvottiyur	24·7	+ 0·3
22. Pallapatti	22·4	− 1·4	49. Coondapoor	24·7	+ 4·2
23. Amalapuram	22·5	+ 0·8	50. Arkonam	24·7	− 5·7
24. Porto Novo	22·6	+ 7·6	51. Tirupparankunram	24·8	+ 0·4
25. Chinnamerangu	22·8	+ 4·8	52. Chodavaram	24·9	− 2·1
26. Arcot	23·0	− 6·7	53. Gopichettipalaiyam	24·9	− 4·0
27. Tiruchengodu	23·1	+ 1·6			
Between 25 *and* 30 *per mille* (54).					
1. Nuzvid	25·1	− 3·3	7. Rāmnād	25·6	+ 9·0
2. Watrap	25·3	+ 2·4	8. Shiyali	25·7	+ 2·2
3. Polur	25·4	− 3·0	9. Tiruvadamarndur	25·7	− 2·1
4. Sankaranayinarkovil ...	25·4	+ 0·2	10. Pithapuram	25·8	− 2·0
5. Kalahasti	25·6	− 7·5	11. Kollipara	25·9	− 1·8
6. Narasapatnam	25·6	+ 3·1	12. Kallakurichi	25·9	+ 4·7

ANNEXURE D—*cont.*

Death-rates in rural towns for 1929—cont.

Names of rural towns.	Death-rate per mille in 1929.	Increase or decrease (+ or −) compared with 1928	Names of rural towns.	Death-rates per mille in 1929.	Increase or decrease (+ or −) compared with 1928.
Between 25 *and* 30 *per mille* (54)—cont.					
13. Eral	25·9	−11·0	34. Srivaikuntam	27·5	+ 0·9
14. Viraghattam	26·1	+ 4·8	35. Chebrolu	27·9	+ 0·3
15. Vedaranniyam	26·1	+ 3·8	36. Achanta	28·1	+ 2·2
16. Visharam	26·2	− 0·3	37. Arni	28·4	− 7·1
17. Madanapalle	26·3	+ 3·3	38. Kalladakurichi	28·4	+ 0·4
18. Badagara	26·4	− 3·8	39. Bukkapatnam	28·5	+ 4·3
19. Muttupet	26·5	− 9·0	40. Puliyampatti	28·5	+ 4·2
20. Koyilpatti	26·6	− 1·9	41. Gurzala	28·6	−26·8
21. Nellikuppam	26·6	+ 0·3	42. Tiruppuvanam	28·6	+ 2·8
22. Gudivada	26·6	−18·9	43. Kadayanallur	28·6	+ 1·6
23. Sattenapalle	26·6	− 1·4	44. Pallikonda	28·7	+ 3·6
24. Palkonda	26·6	− 0·1	45. Kadayanur	28·7	+ 5·3
25. Tirumangalam	26·8	+ 1·5	46. Harpanahalli	28·8	+ 2·6
26. Parvatipuram	26·8	− 1·9	47. Adirampatnam	28·8	+ 3·3
27. Sembiyam	26·8	− 7·5	48. Kasaragod	28·9	+ 3·8
28. Uravakonda	27·1	− 0·1	49. Kulittalai	28·9	− 1·7
29. Mandapeta	27·1	− 6·5	50. Repalle	28·9	+ 2·7
30. Uttamapalaiyam	27·1	+ 5·9	51. Chinnamanur...	28·9	+ 5·4
31. Alizabad	27·4	+ 3·3	52. Cumbum	29·7	+13·0
32. Sivaganga	27·4	+ 4·5	53. Sompeta	29·8	+15·1
33. Puliyangudi	27·4	+ 2·8	54. Punganur	29·9	− 1·5
Between 30 *and* 35 *per mille* (27).					
1. Yemmiganur	30·0	+ 2·0	15. Guntakal	32·0	− 1·1
2. Ariyalur	30·0	+ 3·4	16. Ambur	32·2	+ 3·0
3. Ettaiyapuram	30·0	− 9·7	17. Sattur	32·3	+10·7
4. Uttiramerur	30·2	− 5·7	18. Gooty	33·1	+ 3·9
5. Narasapur	30·4	− 0·1	19. Kadiri	33·2	+ 5·3
6. Pattamadai	30·4	− 0·8	20. Manamadurai...	33·2	+19·7
7. Tiruvottiyur	30·7	− 0·4	21. Sattangulam	33·4	− 4·2
8. Tanuku	30·9	− 4·9	22. Penukonda	33·6	− 3·7
9. Tiruvadi	31·2	+ 1·1	23. Kosigi...	34·1	+ 4·1
10. Lalgudi	31·2	− 2·5	24. Attili	34·3	− 1·7
11. Mettupalaiyam	31·3	− 4·4	25. Sholavandan	34·5	+14·6
12. Sermadevi	31·6	− 1·0	26. Ponnani	34·7	+ 4·2
13. Nanguneri	31·9	+ 5·6	27. Tiruchendur	34·7	+10·5
14. Chilakalurpet...	32·0	− 0·4			
Between 35 *and* 40 *per mille* (13).					
1. Rameswaram	35·2	+ 1·1	8. Tirutturaippundi	36·8	+ 4·8
2. Kayalpatnam	35·5	+12·1	9. Vallam	37·9	+ 3·7
3. Ranipettai	35·6	+ 0·7	10. Saluru	38·2	+ 4·2
4. Kilakkari	35·9	+ 0·8	11. Ambasamudram	38·4	+ 8·0
5. Tenkasi	36·7	+ 3·4	12. Alvar Tirunagari	38·9	+16·2
6. Vinukonda	36·8	+ 5·4	13. Sivagiri	39·3	+13·5
7. Viravanallur	36·9	+ 6·7			
Between 40 *and* 45 *per mille* (2).					
1. Bhavani	42·6	− 3·3	2. Kotturu...	44·7	+14·7
Between 45 *and* 50 *per mille* (2).					
1. Udangudi	45·6	+ 3·5	2. Vasudevanallur	47·4	+20·6
Between 50 *and* 55 *per mille* (2).					
1. Settur	52·4	+ 9·6	2. Jammalamadugu	58·9	+19·4

ANNEXURE E.

1. *Districts—Infantile death-rates in districts.*

Names of districts.	Number of infantile deaths in 1929.	Rate per 1,000 births.	Increase or decrease (+ or −) compared with 1928.	Names of districts.	Number of infantile deaths in 1929.	Rate per 1,000 births.	Increase or decrease (+ or −) compared with 1928.
Below 150 *per mille* (1).							
1. Malabar	19,141	146·1	+ 4·0				
Between 150 *and* 200 *per mille* (19).							
1. Rāmnād	7,980	150·2	+10·2	11. South Arcot ...	12,908	180·1	−10·6
2. South Kanara ...	8,111	155·9	−15·2	12. Nilgiris, The ...	1,135	180·6	−11·3
3. North Arcot ...	13,721	159·4	− 6·1	13. Tanjore	12,838	180·8	+ 5·3
4. Nellore	8,535	162·9	−16·5	14. Coimbatore ...	14,529	181·8	+ 0·9
5. Chittoor	8,177	165·4	−16·0	15. Trichinopoly ...	11,045	183·2	+39·8
6. Salem	14,640	169·0	− 0·4	16. Anantapūr	7,122	183·6	− 5·9
7. Gōdāveri, East ...	11,421	174·1	− 1·8	17. Bellary	7,804	189·1	− 6·3
8. Cuddapah	4,808	174·8	−10·7	18. Vizagapatam ...	16,013	189·3	+ 2·1
9. Madura	13,096	177·3	+12·8	19. Tinnevelly	14,659	193·6	+ 8·0
10. Chingleput	10,125	179·9	−17·3				
Between 200 *and* 250 *per mille* (5).							
1. Ganjām	14,685	204·5	+ 5·5	4. Gōdāvari, West ...	9,697	214·1	−10·4
2. Guntūr	15,268	206·4	−18·1	5. Kistna	9,652	214·5	− 4·7
3. Kurnool	7,085	210·2	−25·4				
250 *and over per mille* (1).							
1. Madras	5,884	259·2	−30·3	Total ...	280,079	179·53	− 4·2

2. *Municipalities—Infantile death-rates in municipalities during* 1929.

Names of municipalities.	Number of infantile deaths in 1929.	Infantile death-rate per 1,000 births	Increase or decrease (+ or −) compared with 1928.	Names of municipalities.	Number of infantile deaths in 1929.	Infantile death-rate per 1,000 births.	Increase or decrease (+ or −) compared with 1928.
Below 100 *per mille.*							
1. Chittoor	48	77·4	−16·5	4. Karur	103	87·3	−35·3
2. Coonoor	37	80·1	− 6·6	5. Sivakasi	41	93·6	−35·1
3. Tadpatri	22	81·2	−41·4				
Between 100 *and* 150 *per mille.*							
1. Proddatur	75	112·8	−46·0	12. Tiruppattur ...	114	139·5	+23·1
2. Ongole	71	117·6	−74·3	13. Cuddapah	96	141·0	−11·2
3. Peddapuram ...	53	118·6	− 1·5	14. Vizianagram ...	197	142·1	+29·4
4. Ellore	221	119·7	+ 5·7	15. Palakolu	63	143·2	−35·5
5. Udamalpet ...	50	123·2	−48·4	16. Erode	47	145·1	−20·7
6 Vellore	271	125·5	+16·7	17. Calicut	395	146·3	+10·4
7. Villupuram ...	63	126·0	+ 4·6	18. Anantapur ...	61	147·0	+22·6
8. Berhampur ...	147	128·1	+15·6	19. Nellore	285	148·1	−79·6
9. Hindupur	61	128·5	−18·2	20. Chingleput	91	148·2	−50·2
10. Mangalore	269	133·3	+18·5	21. Nandyal	64	149·2	−43·9
11. Cannanore	139	135·4	+33·0				

ANNEXURE E—*cont.*

2. *Municipalities—Infantile death-rates in municipalities during* 1929—cont.

Names of municipalities.	Number of infantile deaths in 1929.	Infantile death-rate per 1,000 births.	Increase or decrease (+ or −) compared with 1928.	Names of municipalities.	Number of infantile deaths in 1929.	Infantile death-rate per 1,000 births.	Increase or decrease (+ or −) compared with 1928.
Between 150 *and* 200 *per mille.*							
1. Conjeeveram ...	311	152·5	−11·9	15. Gudiyattam ...	147	173·1	+48·4
2. Cocanada	294	152·8	+ 6·3	16. Palghat	330	179·4	+10·4
3. Kurnool	205	154·1	−27·2	17. Chirala	77	179·5	+39·8
4. Bodinayakkanur ...	159	154·4	+ 2·5	18. Tirupati	89	179·8	+11·9
5. Arakapalle ...	102	156·0	−27·3	19. Dindigul	248	181·7	− 9·6
6. Cochin	139	158·0	−23·3	20. Tiruvarur	76	187·6	+14·0
7. Tiruvannāmalai ...	166	158·4	−46·0	21. Negapatam	295	188·5	− 4·6
8. Narasaraopet ...	56	162·3	−39·5	22. Mayavaram... ...	164	188·9	− 2·6
9. Tiruppūr	60	163·5	− 9·2	23. Dharapuram ...	121	189·1	−28·2
10. Srirangam ...	105	166·1	−28·8	24. Cuddalore	384	191·5	+ 5·2
11. Srivilliputtur ...	201	166·9	+ 0·8	25. Chicacole	99	191·6	+41·6
12. Saidapet	138	167·9	+ 8·1	26. Trichinopoly ...	875	193·2	+ 6·7
13. Salem	623	171·0	−20·6	27. Periyakulam ...	156	195·7	−16·3
14. Adōni	241	171·8	+23·4	28. Ootacamund ...	170	199·1	+ 3·8
Between 200 *and* 250 *per mille.*							
1. Tanjore	409	200·6	...	12. Kumbakōnam ...	416	213·9	+11·4
2. Viradhunagar ...	178	202·5	+13·5	13. Coimbatore ...	608	215·8	+39·9
3. Hospet	153	204·8	−37·3	14. Tenali	147	219·4	+59·5
4. Tellicherry ...	197	205·2	+76·3	15. Rajahmundry ...	417	220·1	−10·2
5. Vaniyambadi ...	119	206·6	+49·3	16. Bellary	380	224·7	+ 8·3
6. Kodaikanal ...	51	207·3	− 0·3	17. Bezwada	499	227·4	+32·0
7. Mannargudi ...	156	210·8	+ 0·4	18. Masulipatam ...	373	231·24	−36·6
8. Pollachi	112	210·9	+42·3	19. Chidambaram ...	153	235·0	+35·0
9. Bimlipatam ...	70	211·4	+64·9	20. Palni	169	245·0	−22·4
10. Parlākimedi ...	134	212·4	+23·5	21. Palamcottah ...	481	247·0	+ 9·8
11. Madura	1,236	213·4	+17·3				
250 and over per mille.							
1. Tinnevelly... ...	449	253·2	+13·8	6. Karaikudi	102	278·0	+16·2
2. Guntūr	639	253·6	−20·4	7. Vizagapatam ...	413	295·6	+21·5
3. Walajapet	117	255·0	+65·3				
4. Tuticorin	434	256·1	+26·0	Total ...	23,561	197·62	− 4·8
5. Madras	5,884	259·2	+43·5				

ANNEXURE F.

1. *Districts—Incidence of mortality from cholera during* 1929.

Districts.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.	Districts.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.
1. Guntūr	...	...	0·3	15. Coimbatore ...	620	0·3	1·3
2. Nilgiris, The ...	...	...	0·2	16. Cuddapah ...	270	0·3	0·4
3. Gōdāvari, East ...	2	0·001	0·02	17. Salem	652	0·3	1·0
4. Kistna	6	0·01	0·4	18. Chittoor	482	0·4	0·2
5. Gōdāvari, West...	7	0·01	0·3	19. Ganjām	747	0·4	0·2
6. Madras	15	0·03	0·4	20. North Arcot ...	1,175	0·6	0·7
7. Malabar	78	0·03	0·3	21. Trichinopoly ...	1,230	0·7	1·3
8. Anantapur ...	94	0·1	1·2	22. South Arcot ...	3,089	1·3	1·8
9. Bellary	75	0·1	1·6	23. Tanjore	3,959	1·7	2·7
10. Kurnool	69	0·1	0·4	24. Rāmnād ...	3,316	1·9	1·7
11. Nellore	157	0·1	0·5	25. Madura	4,101	2·0	1·8
12. Vizagapatam ...	368	0·1	0·1	26. Tinnevelly ...	4,819	2·5	2·1
13. Chingleput ...	329	0·2	0·5				
14. South Kanara ...	206	0·2	0·1	Total ...	25,846	0·6	0·9

2. *Municipalities—Incidence of mortality from cholera in* 1929.

Names of municipalities.	Number of deaths from cholera.	Rate for 1929.	Average rate for 5 years ending 1928.	Names of municipalities.	Number of deaths from cholera.	Rate for 1929.	Average rate for 5 years ending 1928.
1. Hindupur ...	...	...	0·1	43. Nellore	2	0·1	0·08
2. Anantapur ...	...	...	0·5	44. Vaniyambadi ...	2	0·1	2·0
3. Tadpatri ...	...	...	2·2	45. Conjeeveram ...	1	0·2	0·2
4. Bellary	...	...	0·70	46. Chingleput ...	2	0·2	2·0
5. Adōni	...	...	2·83	47. Parlakimedi ...	3	0·2	0·09
6. Hospet	...	...	2·5	48. Vizianagram ...	6	0·2	3·6
7. Tirupati	...	...	0·2	49. Udumalpet ...	3	0·3	0·94
8. Erode	...	...	0·6	50 Trichinopoly ...	32	0·3	3·5
9. Tiruppur	...	...	1·4	51. Tiruppattur ...	7	0·4	0·24
10. Proddatur ...	...	...	0·3	52. Srivilliputtūr ...	13	0·4	1·3
11. Chicacole ...	...	...	1·3	53. Tanjore	28	0·5	1·2
12. Rajahmundry ...	...	...	0·36	54. Negapatam ...	25	0·5	1·5
13. Cocanada ...	...	...	0·03	55. Saidapet... ...	16	0·6	1·2
14. Peddapuram ...	...	...	0·15	56. Chidambaram ...	14	0·6	0·8
15. Guntūr	...	...	0·37	57. Pollachi ...	8	0·7	3·4
16. Tenali	...	...	0·44	58. Salem	38	0·7	2·3
17 Chirala	...	...	0·6	59. Cuddapah ...	15	0·8	0·3
18. Ongole	...	...	0·25	60. Mangalore ...	45	0·8	0·003
19. Narasaraopet ...	...	...	0·02	61. Tiruvarur ...	20	0·8	2·4
20. Bezwada	...	...	0·44	62. Srirangam ...	20	0·9	2·9
21. Masulipatam ...	...	...	0·2	63. Vellore ...	48	1·0	0·86
22. Kurnool	...	...	0·07	64. Tiruvannāmalai.	22	1·0	1·1
23. Nandyal	...	...	1·9	65. Cuddalore. ...	49	1·0	1·9
24. Kodaikanal ...	...	...	...	66. Mannargudi ...	22	1·0	2·5
25. Tellicherry ...	...	...	...	67. Palni	20	1·1	4·2
26. Cochin	...	...	1·3	68. Karur	20	1·1	5·0
27. Ootacamund ...	...	...	0·1	69. Madura	175	1·3	2·18
28. Coonoor	...	...	0·04	70. Villupuram ...	23	1·3	1·9
29. Gudiyattam ...	...	...	0·6	71. Karaikudi ...	21	1·4	...
30. Walajapet ...	...	...	0·5	72. Kumbakōnam ...	91	1·5	0·6
31. Anakapalle ...	...	...	1·7	73. Mayavaram... ...	47	1·6	1·7
32. Bimlipatam... ...	...	...	2·5	74. Periyakulam ...	32	1·9	0·6
33. Madras	15	0·03	0·43	75. Palamcottah ...	92	2·0	4·2
34. Cannanore ...	1	0·04	...	76. Sivakāsi ...	44	3·0	1·0
35. Vizagapatam ...	2	0·04	3·0	77. Tuticorin ...	141	3·2	4·3
36. Chittoor	2	0·1	0·74	78. Tinnevelly ...	175	3·3	4·8
37. Coimbatore ...	9	0·1	1·7	79. Dindigul ...	142	4·6	0·8
38. Berhampur ...	4	0·1	0·92	80. Virudhunagar ...	109	5·0	1·33
39. Ellore	4	0·1	0·6	81. Dharapuram ...	108	6·7	4·0
40. Palakollu ...	1	0·1	0·12	82. Bodinayakkanur.	317	15·6	5·4
41. Calicut... ...	9	0·1	0·44				
42. Palghat	2	0·1	1·1	Total ...	2,047	0·67	1·2

ANNEXURE G.

1. *Districts—Incidence of mortality from dysentery and diarrhœa.*

Districts.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.	Districts.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.
1. Gōdāvari, East ...	1,229	0·7	0·8	15. Trichinopoly ...	3,471	1·8	1·6
2 Cuddapah ...	843	0·9	1·0	16. Rāmnād	3,219	1·9	2·0
3. Gōdāvari, West.	977	0·9	0·7	17. Anantapur ...	1,937	2·0	1·4
4. Nellore	1,291	0·9	0·8	18. Chingleput ...	3,010	2·0	3·1
5. Guntūr	1,735	1·0	0·9	19. North Arcot ...	4,460	2·2	2·7
6. Tanjore	2,758	1·2	1·4	20. Madura	4,787	2·4	2·3
7. Vizagapatam ...	2,595	1·2	1·2	21. Tinnevelly ...	4,553	2·4	2·3
8. Kistna	1,379	1·3	1·0	22. Bellary	2,502	2·9	2·2
9. Kurnool	1,396	1·5	1·1	23. Chittoor	3,851	3·0	2·4
10. Ganjām	3,025	1·6	1·7	24. Coimbatore ...	7,600	3·4	3·1
11. Salem	3,448	1·6	1·7	25. Nilgiris, The ...	699	5·7	5·7
12. South Kanara ...	2,162	1·7	2·7	26. Madras	3,085	6·0	7·1
13. Malabar	5,434	1·8	2·3				
14. South Arcot ...	4,141	1·8	2·2	Total ...	75,587	1·84	1·9

2. *Municipalities—Incidence of mortality from dysentary and diarrhœa in* 1929.

Municipalities.	Number of deaths from dysentery and diarrhœa.	Rate for 1929.	Average rate for 5 years ending 1928.	Municipalities.	Number of deaths from dysentery and diarrhœa.	Rate for 1929.	Average rate for 5 years ending 1928.
1. Peddapuram ...	7	0·5	1·9	43. Karur	56	3·1	2·3
2. Chittoor	11	0·6	1·1	44. Chidambaram ...	70	3·1	3·1
3. Nandyal	15	0·8	1·3	45. Kurnool	90	3·2	2·2
4. Kodaikanal ...	4	0·9	1·4	46. Tellicherry ...	88	3·2	2·7
5. Ellore	47	1·0	2·0	47. Virudhunagar ...	118	3·3	5·5
6. Vaniyambadi ...	21	1·0	1·4	48. Vizianagram ...	133	3·4	3·0
7. Tadpatri ...	12	1·1	0·3	49. Negapatam ...	185	3·4	3·5
8. Bezwada ...	62	1·4	2·7	50. Cochin	70	3·4	3·1
9. Mayavaram ...	40	1·4	2·1	51. Berhampur ...	112	3·4	3·4
10. Mangalore ...	79	1·5	2·7	52. Ootacamund ...	67	3·4	4·0
11. Karaikudi ...	73	1·6	...	53. Palamcottah ...	162	3·5	6·4
12. Erode	38	1·6	1·8	54. Trichinopoly ...	442	3·7	4·5
13. Guntūr	77	1·6	1·6	55. Bellary	154	3·9	2·8
14. Rajahmundry ...	92	1·7	3·0	56. Coonoor	47	3·9	3·2
15. Cocanada ...	89	1·7	2·4	57. Tenali	91	3·9	2·2
16. Sivakasi	32	1·7	2·3	58. Chingleput ...	48	4·1	5·0
17. Kumbakōnam ...	104	1·7	2·1	59. Hospet	77	4·2	5·1
18. Srivilliputtur ...	128	1·8	3·6	60. Bodinayakkanur...	86	4·2	3·5
19. Udumalpet ...	18	1·8	4·7	61. Mannargudi ...	91	4·2	3·3
20. Saidapet ...	56	2·0	3·0	62. Coimbatore ...	283	4·3	5·0
21. Nellore	74	2·1	2·1	63. Pollachi	52	4·4	6·1
22. Tinnevelly ...	119	2·2	3·0	64. Periyakulam ...	74	4·5	6·7
23. Cuddalore ...	109	2·2	3·6	65. Walajapet ...	46	4·6	3·5
24. Calicut	177	2·2	3·3	66. Anakapalle ...	98	4·8	5·3
25. Palakollu ...	32	2·2	4·0	67. Salem	265	5·1	5·0
26. Proddatur ...	35	2·2	1·9	68. Tanjore	305	5·1	5·0
27. Cuddapah ...	43	2·2	1·8	69. Bimlipatam ...	30	5·2	5·5
28. Anantapur ...	27	2·4	2·0	70. Adōni	156	5·2	2·8
29. Srirangam ...	56	2·4	3·5	71. Tirupati	92	5·3	4·0
30. Chirala	39	2·6	1·9	72. Masulipatam ...	232	5·3	2·3
31. Tiruppur ...	28	2·6	3·9	73. Madura	619	5·3	4·1
32. Palghat	122	2·7	4·0	74. Tiruvannāmalai...	116	5·3	3·7
33. Narasaraopet ...	31	2·7	1·8	75. Tuticorin ...	249	5·6	5·1
34. Ongole	38	2·7	1·7	76. Parlakimedi ...	106	5·7	2·6
35. Hindupur ...	35	2·8	2·4	77. Madras ...	3,085	6·0	7·1
36. Vellore	138	2·8	1·3	78. Vizagapatam ...	266	6·0	5·0
37. Villupuram ...	48	2·8	3·0	79. Palni	108	6·2	3·6
38. Tiruvārūr ...	69	2·9	3·0	80. Chicacole ...	108	6·6	6·3
39. Conjeeveram ...	175	2·9	2·7	81. Dharapuram ...	112	7·0	5·2
40. Cannanore ...	83	3·0	3·3	82. Dindigul ...	217	7·0	6·9
41. Gudiyāttam ...	69	3·0	3·4				
42. Tiruppattur ...	49	3·0	2·5	Total ...	11,414	3·8	4·1

ANNEXURE H.

1. *Districts—Incidence of mortality from smallpox during* 1929.

Districts.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.	Districts.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.
1. Ganjām	184	0·01	0·4	15. Chittoor	196	0·2	0·2
2. Anantapur ...	38	0·04	0·5	16. Kistna	204	0·2	0·5
3. Rāmnād	74	0·04	0·2	17. Nellore	298	0·2	0·4
4. Bellary	55	0·1	0·8	18. South Kanara ...	261	0·2	0·2
5. Coimbatore ...	259	0·1	0·2	19. Trichinopoly ...	320	0·2	0·3
6. Cuddapah ...	53	0·1	0·3	20. Vizagapatam ...	575	0·3	0·2
7. Gōdāvari, East ...	173	0·1	0·6	21. Chingleput ...	803	0·5	0·2
8. Gōdāvari, West ...	94	0·1	0·5	22. Malabar	1,458	0·5	0·2
9. Guntūr	103	0·1	0·4	23. North Arcot ...	1,098	0·5	0·5
10. Kurnool	108	0·1	0·4	24. Tanjore	1,044	0·5	0·3
11. Madura	103	0·1	0·2	25. South Arcot ...	1,297	0·6	0·7
12. Nilgiris, The ...	13	0·1	0·2	26. Madras	503	1·0	0·5
13. Salem	189	0·1	0·5				
14. Tinnevelly ...	205	0·1	0·2	Total ...	9,708	0·2	0·4

2. *Municipalities—Incidence of mortality from smallpox in* 1929.

Municipalities.	Number of deaths in 1929.	Rate for 1928.	Average rate for 5 years ending 1928.	Municipalities.	Number of deaths in 1929.	Rate for 1928.	Average rate for 5 years ending 1928.
1. Hindupur ...	...	...	0·8	43. Villupuram ...	1	0·1	0·4
2. Anantapur ...	...	...	0·2	44. Mayavaram ...	4	0·1	0·31
3. Adōni	...	...	...	45. Tinnevelly ...	7	0·1	0·4
4. Hospet	...	...	...	46. Palamcottah ...	4	0·1	0·13
5. Chittoor	...	...	0·2	47. Srirangam ...	2	0·1	1·0
6. Erode	...	...	0·56	48. Karur	1	0·1	0·16
7. Tiruppur... ...	...	...	0·2	49. Tadpatri	2	0·2	0·56
8. Udumalpet ...	...	...	0·26	50. Ellore	9	0·2	0·26
9. Cuddapah ...	...	...	0·6	51. Nandyal	3	0·2	0·8
10. Parlakimedi ...	...	...	0·54	52. Chidambaram ...	4	0·2	0·93
11. Rajahmundry ...	...	...	2·5	53. Negapatam ...	11	0·2	0·37
12. Peddapuram ...	...	...	0·72	54. Vizianagram ...	6	0·2	0·12
13. Guntūr	...	...	2·9	55. Tirupati	5	0·3	0·26
14. Ongole	...	...	1·6	56. Proddatur ...	5	0·3	0·1
15. Narasaraopet ...	...	...	0·48	57. Cuddalore ...	16	0·3	0·04
16. Bezwada	...	...	0·3	58. Anakapalle ...	6	0·3	1·1
17. Masulipatam ...	...	...	0·38	59. Coimbatore ...	25	0·4	0·29
18. Dindigul	...	...	0·12	60. Walajapet ...	4	0·4	0·004
19. Bodinayakanur ...	...	...	0·08	61. Tiruvarur ...	10	0·4	0·1
20. Palni	...	...	0·1	62. Tanjore	27	0·5	0·18
21. Periyakulam ...	...	...	...	63. Chingleput ...	7	0·6	0·2
22. Kodaikanal ...	...	...	...	64. Conjeeveram ...	44	0·7	7·1
23. Coonoor	...	...	0·1	65. Vaniyambadi ...	13	0·7	0·6
24. Srivilliputtur ...	...	...	0·007	66. Kumbakōnam ...	41	0·7	0·1
25. Virudhunagar ...	...	...	1·4	67. Pollachi	9	0·8	0·4
26. Sivakasi	...	...	0·03	68. Mangalore ...	41	0·8	0·34
27. Bimlipatam ...	...	...	0·05	69. Vizagapatam ...	34	0·8	1·2
28. Cocanada	1	0·02	0·84	70. Karaikudi ...	14	0·9	...
29. Madura	3	0·02	1·12	71. Madras	503	1·0	0·5
30. Tuticorin ...	1	0·02	0·10	72. Tiruppattur ...	19	1·2	0·2
31. Bellary	1	0·03	0·4	73. Palakollu ...	20	1·4	3·1
32. Trichinopoly ...	4	0·03	0·3	74. Tiruvannāmalai ..	30	1·4	0·23
33. Tenali	1	0·04	0·49	75. Gudiyattam ...	44	1·9	0·5
34. Kurnool	1	0·04	0·25	76. Palghat	98	2·2	0·4
35. Saidapet	3	0·1	0·16	77. Cochin	50	2·4	0·34
36. Dharapuram ...	2	0·1	0·12	78. Vellore	126	2·5	0·36
37. Berhampur ...	1	0·1	0·1	79. Calicut	254	3·1	0·27
38. Chicacole ...	1	0·1	0·34	80. Coonoor	103	3·7	1·9
39. Chirala	1	0·1	1·8	81. Mannargudi ...	108	5·0	0·16
40. Nellore	2	0·1	0·54	82. Tellicherry ...	146	5·3	0·7
41. Ootacamund ...	2	0·1	0·005				
42. Salem	6	0·1	0·5	Total ...	1,886	0·62	0·5

ANNEXURE I.

1. *Districts—Incidence of mortality from plague in* 1929.

Names of districts.	Number of deaths from plague.	Rate per mille.	Average rate for 5 years ending 1928.	Names of districts.	Number of deaths from plague.	Rate per mille.	Average rate for 5 years ending 1928.
1. Chingleput ...	...	...	...	15. Trichinopoly ...	...	...	0·004
2. Cuddapah ...	...	...	0·0004	16. Vizagapatam ...	...	...	0 0007
3. Ganjām	...	...	...	17. Kurnool	1	0·001	...
4. Gōdāvari, East ...	...	...	...	18. North Arcot ...	10	0·001	0·5
5. Gōdāvari, West ...	...	...	0·0002	19. Chittoor	4	0·003	0·001
6. Guntūr	...	...	0·002	20. Coimbatore ...	19	0·01	0·4
7. Kistna	...	...	0·001	21. Malabar	25	0·01	0·02
8. Madras	...	...	0·0004	22. Anantapur ...	86	0·1	0·001
9. Nellore	...	...	...	23. Nilgiris, The ...	11	0·1	0·2
10. Rāmnād	...	...	0·007	24. Madura	461	0·2	0·4
11. South Arcot ...	...	...	...	25. Salem	574	0·3	0·3
12. South Kanara ...	...	...	0·1	26. Bellary	610	0·7	0·7
13. Tanjore	...	...	0·0001				
14. Tinnevelly ...	...	...	0·02	Total ...	1,801	0·04	0·08

2. *Municipalities—Incidence of mortality from plague in* 1929.

Names of municipalities.	Number of deaths from plague.	Rate for 1929.	Average rate for 5 years ending 1928.	Names of municipalities.	Number of deaths from plague.	Rate for 1929.	Average rate for 5 years ending 1928.
1. Conjeeveram ...	...	...	...	43. Gudiyattam ...	...	...	...
2. Saidapet	...	...	...	44. Tiruvannāmalai...	...	...	...
3. Chingleput ...	...	...	...	45. Vaniyambadi ...	...	...	0·03
4. Chittoor	...	...	...	46. Walajapet ...	...	...	...
5. Tirupati	...	...	...	47. Srivilliputtur ...	...	...	...
6. Coimbatore ...	...	...	0·22	48. Virudhunagar ...	...	...	0·01
7. Erode	...	...	0·28	49. Sivakasi	...	...	...
8. Dharapuram ...	...	...	2·75	50. Salem	...	..	6·8
9. Pollachi	...	...	3·7	51. Cuddalore ...	...	...	...
10. Tiruppur	...	...	4·0	52. Chidambaram ...	...	...	...
11. Udumalpet ...	...	...	0·76	53. Villupuram ...	...	...	...
12. Cuddapah ...	...	...	0·004	54. Mangalore ...	...	...	0 2
13. Proddatur ...	...	...	...	55. Kumbakōnam ...	...	...	0·005
14. Berhampur ...	...	...	...	56. Tanjore	...	...	...
15. Parlakimedi ...	...	...	...	57. Negapatam ...	...	...	...
16. Chicacole ...	...	...	...	58. Mayavaram ...	...	...	...
17. Rajahmundry ...	...	...	...	59. Tiruvarur ...	...	...	...
18. Cocanada ...	...	...	...	60. Mannargudi ...	...	...	...
19. Peddapuram ...	...	...	...	61. Tinnevelly ...	...	...	...
20. Ellore	...	...	0·005	62. Palamcottah ...	...	...	...
21. Palakollu... ...	...	...	...	63. Tuticorin ...	...	...	1·18
22. Guntūr	...	...	0·0016	64. Trichinopoly ...	...	...	...
23. Tenali	...	...	0·01	65. Srirangam ...	...	...	...
24. Chirala	...	...	0·02	66. Karūr	...	...	0·02
25. Ongole	...	...	...	67. Vizagapatam ...	...	...	0·0008
26. Narasaraopet ...	...	...	0·005	68. Vizianagram ...	...	...	...
27. Bezwada	...	...	...	69. Anakapalle ...	...	...	...
28. Masulipatam ...	...	...	...	70. Bimlipatam ...	..	...	...
29. Nandyal	...	...	...	71. Karaikudi ...	...	...	...
30. Madras	...	...	0·00008	72. Anantapur ...	...	...	0·024
31. Madura	...	...	0·14	73. Tadpatri	...	...	0·004
32. Dindigul	...	...	0·004	74. Bellary	...	...	0·04
33. Bodinayakkanur...	...	...	1·9	75. Adōni	...	...	...
34. Palni	...	...	...	76. Vellore	1	0·02	...
35. Kodaikanal ...	...	...	0·5	77. Kurnool	1	0·04	...
36. Palghat	...	...	0·0002	78. Tiruppattur ...	1	0·1	0·004
37. Cannanore ...	...	...	0·009	79. Calicut	21	0·3	0·5
38. Tellicherry ...	...	...	0·1	80. Hospet	27	1·5	2·7
39. Cochin	...	...	...	81. Hindupur ...	27	2·2	0·01
40. Nellore	...	...	...	82. Periyakulam ...	70	4·2	3·9
41. Ootacamund ...	...	...	0·08				
42. Coonoor	...	...	0·7	Total ...	143	0·05	0·2

ANNEXURE J.

1. *Districts—Incidence of mortality from fevers.*

Districts.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.	Districts.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.
1. Tanjore	5,506	2·4	2·2	15. Kistna	8,898	8·2	9·6
2. Madura	5,468	2·7	3·7	16. Rāmnād	14,993	8·7	6·1
3. Coimbatore ...	8,915	4·0	3·9	17. South Kanara ...	11,236	9·0	10·2
4. Chingleput ...	6,037	4·1	3·9	18. Nellore	14,805	10·7	10 6
5. Trichinopoly ...	8,717	4·6	3·5	19. Gōdāvari, West ...	11,449	10·9	9·0
6. North Arcot ...	9,584	4·7	3·6	20. Guntūr	19,699	10·9	10·6
7. South Arcot ...	10,936	4·7	4·5	21. Nilgiris, The ...	1,360	11·2	14·0
8. Madras	2,511	4·9	4·3	22. Gōdāvari, East ...	20,862	12·5	11·2
9. Tinnevelly ...	11,091	5·8	4·3	23. Cuddapah ...	14,168	16·0	14·8
10. Bellary	5,938	6·8	7·0	24. Vizagapatam ...	40,827	18·3	22·0
11. Salem	14,599	6·9	7·4	25. Ganjām	33,973	18·5	18·5
12. Malabar	22,731	7·4	8·3	26. Kurnool	18,091	19·8	13·3
13. Anantapur ...	7,212	7·5	4·8				
14. Chittoor	9,446	7·5	6·3	Total ...	339,052	8·4	7·9

2. *Municipalities—Incidence of mortality from fevers.*

Municipalities.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.	Municipalities.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.
1. Dindigul	13	0·4	1·7	43. Kumbakōnam ...	275	4·5	3·0
2. Vaniyambadi ...	7	0·4	0·12	44. Bodinayakkanur.	95	4·7	4·7
3. Mannargudi ...	10	0·5	1·9	45. Palni	83	4·7	2·3
4. Ootacamund ...	10	0·5	1·8	46. Tiruppūr... ...	52	4·8	2·2
5. Adōni	17	0·6	1·1	47. Madras	2,511	4·9	4·3
6. Madura	183	1·04	3·9	48. Chirala	76	5·0	6·6
7. Coonoor	16	1·3	2·0	49. Bezwada	220	5·0	6·0
8. Mangalore ...	71	1·3	2·3	50. Vizianagram ...	201	5·1	5·4
9. Kodaikanal ...	6	1·4	4·7	51. Hospet	93	5·1	4·7
10. Palghat	63	1·4	3·3	52. Udumalpet ...	52	5·1	4·4
11. Dharapuram ...	24	1·5	3·6	53. Sivakasi	77	5·2	6·0
12. Hindupur ...	19	1·5	2·8	54. Tiruvarūr ...	127	5·3	5·6
13. Palamcottah ...	86	1·8	2·3	55. Vizagapatam ...	242	5·4	6·0
14. Masulipatam ...	87	2·0	5·5	56. Bimlipatam ...	41	5·5	8·0
15. Srirangam ...	50	2·2	3·9	57. Palakol ...	81	5·6	6·3
16. Trichinopoly ...	260	2·2	1·7	58. Guntūr	271	5·6	7·1
17. Vellore	111	2·2	2·1	59. Nellore	201	5·6	5·2
18. Periyakulam ...	41	2·5	7·1	60. Anakapalle ...	117	5·7	6·4
19. Chidambaram ...	56	2·5	2·6	61. Parlakimedi ...	107	5·7	5·6
20. Chittoor	48	2·7	2·2	62. Villupuram ...	101	5·8	4·8
21. Cuddalore ...	184	2·7	3·0	63. Berhampur ...	191	5·8	6·1
22. Calicut	231	2·8	3·6	64. Kurnool	168	6·0	7·0
23. Conjeeveram ...	181	2·9	0·9	65. Cochin	130	6·3	5·7
24. Walajapet ...	29	2·9	4·2	66. Proddatur ...	107	6·7	5·3
25. Negapatam ...	161	3·0	4·3	67. Mayavaram ...	194	6·3	3·8
26. Chingleput ...	37	3·1	4·3	68. Salem	378	6·9	5·6
27. Coimbatore ...	204	3·1	3·2	69. Tenali	162	7·0	5·7
28. Tellicherry ...	88	3·2	4·1	70. Srivilliputtur ...	225	7·2	6·2
29. Saidapet	95	3·5	4·1	71. Peddapuram ...	112	7·7	7·0
30. Tinnevelly ...	191	3·6	4·0	72. Tirupati	135	7·8	5·2
31. Karur	68	3·7	3·0	73. Cocanada... ...	423	7·9	6·9
32. Cannanore ...	106	3·8	3·1	74. Karaikudi ...	124	8·1	3·9
33. Ongole	56	3·9	6·9	75. Chicacole ...	139	8·5	3·5
34. Bellary	159	4·0	3·5	76. Rajahmundry ...	464	8·6	8·6
35. Pollachi	48	4·0	4·7	77. Narasaraopet ...	104	9·2	10·7
36. Erode	94	4·1	2·5	78. Anantapur ...	110	9·6	7·3
37. Tuticorin... ...	182	4·1	5·4	79. Tiruvannāmalai...	218	10·0	13·6
38. Cuddapah ...	79	4·1	4·6	80. Tadpatri	120	10·7	13·8
39. Tiruppattūr ...	69	4·2	2·8	81. Virudhunagar ...	248	11·2	7·2
40. Gudiyattam ...	99	4·3	5·1	82. Nandyal	344	19·0	9·3
41. Tanjore	259	4·3	4·2				
42. Ellore	203	4·4	4·9	Total ...	13,045	4·9	4·4

ANNEXURE K.

1. *Districts—Incidence of mortality from respiratory diseases.*

Districts.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.	Districts.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.
1. Ganjām	1,175	0·6	0·8	16. Coimbatore ...	5,973	2·7	1·7
2. Tanjore	2,374	1·0	0·9	17. Guntūr	5,015	2·8	2·2
3. Vizagapatam ...	2,644	1·2	1·1	18. Kurnool	2,603	2·8	2·8
4. Salem	2,673	1·3	1·1	19. Madura	5,905	2·9	2·3
5. Trichinopoly ...	2,661	1·4	1·2	20. Chittoor	3,987	3·1	2·6
6. Nellore	2,126	1·5	1·0	21. Anantapur ...	3,087	3·2	2·3
7. South Arcot ...	3,374	1·5	1·3	22. Bellary	2,920	3·3	2·3
8. Chingleput ...	2,432	1·6	1·8	23. Kistna	3,653	3·4	3·7
9. North Arcot ...	3,212	1·6	1·3	24. Godāvari, West ...	4,271	4·1	3·4
10. South Kanara ...	2,293	1·8	1·9	25. Nilgiris, The ...	877	7·2	5·0
11. Cuddapah ...	1,781	2·0	1·6	26. Madras	6,695	12·9	12·1
12. Rāmnād	3,398	2·0	1·6				
13. Tinnevelly ...	4,054	2·1	1·3				
14. Godāvari, East ...	3,676	2·2	2·0				
15. Malabar	7,300	2·4	1·7	Total ...	90,159	2·2	1·5

2. *Municipalities—Incidence of mortality from respiratory diseases in* 1929.

Municipalities.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.	Municipalities.	Number of deaths in 1929.	Rate for 1929.	Average rate for 5 years ending 1928.
1. Tiruvannāmalai ..	4	0·2	1·2	43. Coimbatore ...	235	3·6	2·1
2. Nandyal	11	0·6	1·5	44. Guntūr	173	3·6	2·8
3. Erode	16	0·7	2·1	45. Tanjore	230	3·8	3·0
4. Tadpatri	9	0·8	6·7	46. Proddatur ...	61	3·8	0·7
5. Peddapuram ...	13	0·9	0·7	47. Mannargudi ...	87	4·0	3·0
6. Tiruvalur ...	24	1·0	0·4	48. Salem	208	4·0	3·0
7. Mayavaram ...	30	1·1	0·6	49. Walajapet ...	40	4·0	3·3
8. Chirala	19	1·2	1·2	50. Vellore	211	4·2	2·1
9. Chicacole ...	19	1·2	1·4	51. Vaniyambadi ...	86	4·3	4·5
10. Berhampur ...	43	1·3	8·6	52. Dindigul ...	143	4·6	4·7
11. Karaikudi ...	25	1·6	...	53. Kurnool	127	4·6	4·1
12. Villupuram ...	30	1·7	1·6	54. Periyakulam ...	76	4·6	5·2
13. Sivakasi	25	1·7	2·0	55. Cannanore ...	130	4·7	5·0
14. Chittoor	31	1·7	1·9	56. Chingleput ...	59	5·0	1·9
15. Rajahmundry ...	96	1·8	1·4	57. Trichinopoly ...	599	5·0	5·4
16. Cocanada ...	97	1·8	2·5	58. Tirupati	88	5·1	2·2
17. Palni	31	1·8	2·0	59. Anakapalle ...	103	5·1	1·7
18. Srivilliputtur ...	55	1·8	1·4	60. Mangalore ...	277	5·2	5·1
19. Gudiyattam ...	42	1·8	2·6	61. Palghat	238	5·2	1·7
20. Masulipatam ...	85	1·9	1·7	62. Cuddapah ...	104	5·3	0·8
21. Tiruppattur ...	31	1·9	1·9	63. Tenali	123	5·3	2·8
22. Saidapet	57	2·0	2·4	64. Dharapuram ...	88	5·5	2·0
23. Cuddalore ...	108	2·1	2·2	65. Narasaraopet ...	62	5·5	1·0
24. Bodinayakkanur.	44	2·2	0·5	66. Negapatam ...	301	5·6	3·0
25. Palakol	36	2·5	2·8	67. Cochin	115	5·9	2·1
26. Bezwada	124	2·8	5·0	68. Conjeeveram ...	360	5·9	6·6
27. Parlakimedi ...	53	2·8	1·7	69. Tellicherry ...	166	6·0	4·1
28. Tiruppur... ...	32	2·9	1·0	70. Palamcottah ...	299	6·4	3·2
29. Nellore	104	2·9	2·1	71. Pollachi	83	7·0	2·0
30. Chidambaram ...	67	3·0	2·0	72. Coonoor	86	7·1	7·0
31. Kumbakonam ...	190	3·1	4·1	73. Tuticorin ...	321	7·2	2·8
32. Bimlipatam ...	23	3·1	2·5	74. Karur	136	7·5	5·0
33. Ongole	44	3·1	2·3	75. Adoni	230	7·6	5·2
34. Ellore	148	3·2	5·0	76. Madura	1,397	7·8	4·1
35. Calicut	265	3·2	0·9	77. Hospet	167	9·1	1·5
36. Tinnevelly ...	176	3·3	2·0	78. Kodaikanal ...	40	9·4	5·2
37. Virudhunagar ...	72	3·3	3·8	79. Ootacamund ...	205	10·5	8·1
38. Hindupur ...	42	3·4	9·3	80. Bellary	441	11·1	5·2
39. Vizianagram ...	135	3·4	3·6	81. Anantapur ...	138	12·1	6·7
40. Srirangam ...	78	3·4	3·5	82. Madras	6,695	12·9	12·1
41. Udumalpet ...	36	3·5	2·7				
42. Vizagapatam ...	154	3·5	3·0	Total ...	17,452	5·75	5·0

ANNEXURE L.

Statement showing the total number of deaths from cholera during 1929 *in the Municipalities protected with water-supply.*

Names of Municipalities.	Total deaths from cholera during 1929.	Names of Municipalities.	Total deaths from cholera during 1929.
1. Adoni	...	18. Kumbakonam	91
2. Anantapur	...	19. Kurnool	...
3. Berhampur	4	20. Madras	15
4. Bezwada	...	21. Madura	175
5. Chidambaram	14	22. Masulipatam	...
6. Chingleput	2	23. Negapatam	25
7. Cocanada	...	24. Nellore	2
8. Coimbatore	9	25. Ootacamund	...
9. Conjeeveram	1	26. Periyakulam	32
10. Coonoor	...	27. Salem	38
11. Cuddapah	15	28. Tanjore	28
12. Dindigul	142	29. Tirupati	...
13. Ellore	4	30. Trichinopoly	32
14. Erode	...	31. Vellore	48
15. Gudiyattam	...	32. Vizagapatam	2
16. Guntūr	...	33. Vizianagram	6
17. Kodaikanal	...		

ANNEXURE M.

Midwifery Statement—Districts excluding municipalities.

Names of districts.	Number of midwives.	Number of labour cases which received skilled attendance.	Percentage of total births which received skilled attendance.	Names of districts.	Number of midwives.	Number of labour cases which received skilled attendence.	Percentage of total births which received skilled attendance.
1. Anantapur ...	16	1,615	4·16	16. Nellore	19	1,903	3·63
2. Bellary	13	1,747	4·23	17. The Nilgiris ...	14	437	6·96
3. Chingleput ...	32	3,829	4·02	18. North Arcot ...	46	2,487	2·85
4. Chittoor	20	1,451	2·93	19. Rāmnād	31	2,117	3·98
5. Coimbatore ...	28	1,723	2·16	20. Salem	32	2,233	2·58
6. Cuddapah ...	30	1,575	5·72	21. South Arcot ...	18	1,897	3·
7. Ganjām	23	2,040	2·84	22. South Kanara	24	2,526	4·85
8. Gōdāvari, East ...	31	2,107	3·21	23. Tanjore	38	1,858	2·62
9. Gōdāvari, West ...	15	1,033	2·28	24. Tinnevelly ...	25	1,926	2·55
10. Guntūr	24	3,258	4·41	25. Trichinopoly ...	27	2,450	4·12
11. Kistna	16	1,478	3·28	26. Vizagapatam ...	21	2,326	2·75
12. Kurnool	9	537	1·59				
13. Madras	76	11,416	50·29				
14. Madura	20	2,019	2·73				
15. Malabar	40	2,126	1·62	Total ...	687	60,144	3·87

Municipalities, 1923.

Towns.	Number of midwives.	Number of labour cases which received skilled attendance.	Percentage of total births which received skilled attendance.	Towns.	Number of midwives.	Number of labour cases which received skilled attendance.	Percentage of total births which received skilled attendance.
1. Hindupur ...	1	194	38·86	43. Kodaikanal ...	2	152	61·75
2. Anantapur ...	2	113	27·23	44. Calicut	19	869	32·28
3. Tadpatri ...	3	181	66·79	45. Palghat	4	359	19·51
4. Bellary	8	342	20·22	46. Cannanore ...	8	443	43·14
5. Adoni	2	240	17·11	47. Tellicherry ...	8	364	37·91
6. Hospet	2	220	29·45	48. Cochin	5	406	46·14
7. Conjeeveram ...	8	1,083	53·11	49. Nellore	25	1,261	65·50
8. Saidapet... ...	2	187	22·75	50. Ootacamund ...	15	592	69·32
9. Chingleput ...	2	455	74·10	51. Coonoor	8	287	62·12
10. Chittoor	4	475	76·61	52. Vellore	4	503	23·30
11. Tirupati	2	154	31·11	53. Gudiyattam ...	2	194	22·85
12. Coimbatore ...	18	1,164	41·32	54. Tiruvannamalai...	1	181	17·27
13. Erode	5	295	91·04	55. Vaniyambadi ...	1	147	25·52
14. Dharapuram ...	2	180	28·11	56. Tiruppattur ...	2	455	55·69
15. Pollachi	3	227	42·74	57. Walajapet ...	1	145	31·59
16. Tiruppur ...	3	108	29·43	58. Srivilliputtur ...	2	273	22·75
17. Udamalpet ...	2	226	55·67	59. Virudhunagar ...	1	220	25·03
18. Cuddapah ...	8	429	63·00	60. Sivakasi	1	189	43·15
19. Proddatur ...	1	47	7·07	61. Karaikudi ...	2	114	31·06
20. Berhampur ...	3	256	22·30	62. Salem	2	725	19·90
21. Parlakimedi ...	1	100	15·85	63. Cuddalore ...	8	669	33·37
22. Chicacole ...	37	169	32·69	64. Chidambaram ...	3	226	32
23. Rajahmundry ...	13	576	30·41	65. Villupuram ...	2	287	46
24. Cocanada ...	9	843	43·81	66. Mangalore ...	6	769	38·11
25. Peddapuram ...	1	69	15·44	67. Kumbakonam ...	9	647	33·26
26. Ellore	3	525	28·42	68. Tanjore	15	706	34·64
27. Palakolu	1	119	27·05	69. Negapatam ...	7	417	26·65
28. Guntur	18	1,954	77·54	70. Mayavaram ...	3	82	9·45
29. Tenali	2	466	69·55	71. Tiruvarur ...	4	59	14·57
30. Chirala	1	77	17·95	72. Mannargudi ...	2	183	24·73
31. Ongole	4	282	43·38	73. Tinnevelly ...	4	532	30·01
32. Narasaraopet ...	2	67	19·42	74. Palamcottah ...	4	730	41·84
33. Bezwada... ...	2	415	18·92	75. Tuticorin ...	8	606	35·86
34. Masulipatam ...	4	698	43·27	76. Trichinopoly ...	15	1,983	43·78
35. Kurnool	3	402	30·23	77. Srirangam ...	2	187	29·59
36. Nandyal	4	122	28·44	78. Karur	3	281	51·09
37. Madras	76	11,416	50·29	79. Vizagapatam ...	9	807	57·77
38. Madura	137	1,460	25·21	80. Vizianagram ...	5	428	30·88
39 Dindigul	5	723	52·95	81. Anakapalle ...	4	301	46.02
40. Bodinayakanur ...	1	19	1·84	82. Bimlipatam ...	1	200	60·42
41. Palni	1	80	11·64				
42. Periyakulam ...	3	125	15·68				
				Total ...	...	45,242	38·27

ANNEXURE N.

1. *Districts.—Deaths from maternal causes during* 1929.

Districts.	Number of births in 1929.	Number of deaths from maternal causes.	Maternal mortality rates per 1,000 births.	Districts.	Number of births in 1929.	Number of deaths from maternal causes.	Maternal mortality rates per 1,000 births.
1. Anantapur ...	38,810	395	10·2	15. Malabar	130,921	849	6·5
2. Bellary	41,269	236	5·7	16. Nellore	52,378	369	7·0
3. Chingleput ...	56,276	342	3·4	17. The Nilgiris ...	6,283	20	3·2
4. Chittoor	49,452	320	6·5	18. North Arcot ...	86,068	418	4·9
5. Coimbatore ...	78,910	365	4·6	19. Rāmnād	53,122	266	5·0
6. Cuddapah ...	27,504	321	11·7	20. Salem	86,647	374	4·4
7. Ganjām	71,820	327	4·6	21. South Arcot ...	71,592	506	7·1
8. Gōdāvari, East ...	65,610	542	8·3	22. South Kanara ...	52,042	550	10·6
9. Gōdāvāri, West ...	45,294	342	7·5	23. Tanjore	71,003	1,175	16·6
10. Guntūr	73,955	504	6·8	24. Tinnevelly ...	75,675	478	6·3
11. Kistna	44,999	423	9·4	25. Trichinopoly ...	60,249	622	10·3
12. Kurnool	33,698	376	11·1	26. Vizagapatam ...	84,517	330	3·9
13. Madras	22,068	304	13·4				
14 Madura	73,869	333	4·5	Total ...	1,555,661	11,087	7·13

2. *Municipalities.—Deaths from maternal causes during* 1929.

Towns.	Number of births in 1929.	Number of deaths from maternal causes.	Maternal mortality rates per 1,000 births.	Towns.	Number of births in 1929.	Number of deaths from maternal causes.	Maternal mortality rates per 1,000 births.
1. Hindupur ...	486	4	8 23	43. Kodaikanal ...	246	2	8·13
2. Anantapur ...	415	16	38·55	44. Calicut	2,692	33	12·25
3. Tadpatri ...	271	9	33·21	45. Palghat	1,840	19	10·33
4. Bellary	1,691	19	11·23	46. Cannanore ...	1,027	13	12·66
5. Adōni	1,403	14	9·28	47. Tellicherry ...	960	9	9·38
6 Hospet	747	13	17·40	48. Cochin	880	5	5 68
7. Conjeeveram ...	2,039	35	17·17	49. Nellore	1,925	35	18·18
8. Saidapet ...	822	16	19·46	50. Ootacamund ...	854	10	11·71
9. Chingleput ...	614	18	29·32	51. Coonoor	462	3	6·49
10. Chittoor	620	3	4·84	52 Vellore	2,359	39	18 06
11. Tirupati	495	16	32 32	53. Gudiyattam ...	849	11	12·96
12. Coimbatore ...	2,817	27	9·58	54. Tiruvannamalai ...	1,048	17	16 22
13. Erode	324	...	...	55. Vaniyambādi ...	576	9	15·63
14. Dharapuram ...	640	5	7·81	56. Tiruppattur ...	817	10	12·23
15. Pollachi	531	12	22·60	57. Walajapet ...	459	6	13·07
16 Tiruppur	367	8	21·80	58. Srivilliputtur ...	1,200	14	11·67
17. Udamalpet ...	406	3	7·39	59. Virudhunagar ...	879	11	12·51
18. Cuddapah ...	681	14	20·55	60. Sivakasi	438	1	2·28
19. Proddatur ...	665	13	19·55	61. Karaikudi ...	367	...	...
20. Berhampur ...	1,148	11	9·58	62. Salem	3,644	50	13 72
21. Parlakimedi ...	631	10	15·85	63. Cuddalore ...	2,005	64	31·92
22. Chicacole ...	517	11	21·28	64. Chidambaram ...	651	21	32·26
23. Rajahmundry ...	1,894	53	27·98	65. Villupuram ...	500	7	14·00
24. Cocanada ...	1,924	25	12·99	66. Mangalore ...	2,018	25	12·38
25. Peddapuram ...	447	15	33·56	67. Kumbakōnam ...	1,945	33	16 93
26. Ellore	1,847	20	10·83	68. Tanjore	2,038	67	32·88
27. Palakollu	440	6	13·67	69. Negapatam ...	1,565	31	19·81
28. Guntur	2,510	103	40 87	70. Māyavaram ...	868	25	28 80
29. Tenali	670	14	20·9	71. Tiruvarur ...	405	10	24·69
30. Chirala	429	7	15·32	72. Mannārgudi ...	740	12	16·22
31. Ongole	604	6	9·93	73. Tinnevelly ...	1,773	25	14·09
32. Narasaraopet ...	345	...	...	74. Palamcottah ...	1,745	24	13·75
33. Bezwada	2,194	28	12·76	75. Tuticorin ...	1,690	32	18 93
34. Masulipatam ...	1,613	29	17·98	76. Trichinopoly ...	4,529	56	12 36
35. Kurnool	1,330	29	21·81	77. Srirangam ...	632	14	22·15
36. Nandyal	429	14	32·63	78. Karur	550	14	25·45
37. Madras	22,698	304	13·39	79. Vizagapatam ...	1,397	16	11·46
38. Madura	5,791	74	12·78	80. Vizianagram ...	1,386	12	8·65
39. Dindigul	1,365	15	10·99	81. Anakapalle ...	654	3	4·59
40. Bodinayakkanur...	1,030	11	10 68	82. Bimlipatam ...	331	4	12·08
41. Palni	690	7	10·14				
42. Periyakulam ...	797	9	8·78	Total ...	118,131	1,838	15·56

ANNEXURE O.

Detailed Return of Births and Deaths in the 14 municipalities of Bellary, Calicut, Cocanada, Conjeeveram, Cuddalore, Kumbakonam, Madura, Mangalore, Negapatam, Salem, Tanjore, Tinnevelly, Trichinopoly, and Vellore, during the year 1929.

1		2								3	4						5
Age at the time of death.	Population under each age group for the 14 Municipalities.	Infectious diseases.									Fevers.						Respiratory diseases.
		Cholera.	Plague.	Smallpox.	Measles.	Chickenpox.	Typhoid or enteric fever.	Diphtheria.	Others.		Malaria.	Influenza.	Relapsing fever.	Kala Azar.	Rheumatic fever.	Other fevers.	Tuberculosis of lungs.
1 Under one year. Not exceeding one month. Under one week	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 Under one year. Not exceeding one month. Over one week	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3 Over one month and not exceeding 6 months.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4 Over 6 months and not exceeding 12 months.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total under one year ...	21,337	1	1	100	63	6	5	...	7		3	4	...	...	...	204	5
One and under 5 years	80,765	50	3	159	162	20	37	1	9		27	17	...	...	...	620	9
5 years and under 10 years	102,031	98	2	80	32	4	34	2	2		19	7	...	...	2	220	7
10 years and under 15 years	103,388	47	3	32	5	...	37	...	1		10	9	1	...	...	106	26
15 years and under 20 years	88,898	48	6	29	1	...	42	...	...		21	3	...	1	2	144	142
20 years and under 30 years	170,157	123	5	48	4	1	60	...	1		38	9	...	...	14	279	471
30 years and under 40 years	131,110	133	...	40	2	1	41	...	1		42	8	...	...	27	223	415
40 years and under 50 years	100,063	106	...	48	...	...	23	...	...		26	7	...	...	26	181	386
50 years and under 60 years	64,971	62	1	19	1	...	23	...	...		24	8	...	...	40	194	258
60 years and upwards	54,516	48	1	18	...	...	13	...	...		17	5	...	...	75	151	114
Total of all ages ...	917,236	716	22	573	270	32	315	3	21		227	77	1	1	186	2,322	1,833
Rate per mille of population under each death causation.	...	·78	·02	·62	·29	·03	·34	·003	·02		·25	·084	·001	·001	·20	2·53	2·0

ANNEXURE O—*cont.*

Detailed Return of Births and Deaths in the 14 municipalities of Bellary, Calicut, Cocanada Conjeeveram, Cuddalore, Kumbakonam, Madura, Mangalore, Negapatam, Salem, Tanjore. Tinnevelly, Trichinopoly, and Vellore, during the year 1929—cont.

	6		7			8		9			10		11		
Age at the time of death.	Respiratory diseases —*cont.*		Alimentary system.			Disease of the liver.		Circulatory system.			Genito-urinary diseases excluding venereal diseases		Venereal diseases.		
	Pneumonia.	Others.	Dysentery.	Diarrhœa.	Others.	Cirrhosis.	Others.	Heart disease.	Arterio sclerosis.	Others.	Bright's disease.	Others.	Syphilis.	Gonorrhœa.	Others.
1 Under one year. Not exceeding one month. Under one week	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 Under one year. Not exceeding one month. Over one week	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3 Over one month and not exceeding 6 months.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4 Over 6 months and not exceeding 12 months.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total under one year...	214	369	147	296	68	9	31	...	...	2	2	4	29	...	1
One and under 5 years	512	434	670	373	36	99	78	7	...	17	39	2	4	...	1
5 years and under 10 years	143	70	150	46	11	5	9	9	...	10	13	3	1	...	1
10 years and under 15 years	91	10	37	9	4	4	5	9	...	9	16	2	...	...	...
15 years and under 20 years	80	12	35	33	13	2	4	29	...	16	13	2	...	1	...
20 years and under 30 years	170	65	100	145	42	16	10	83	...	30	60	3	12	5	5
30 years and under 40 years	169	72	120	128	60	30	12	101	...	41	76	13	11	5	1
40 years and under 50 years	129	92	118	95	75	22	13	98	...	43	76	15	7	2	...
50 years and under 60 years	107	110	148	84	77	29	12	98	2	46	90	7	1	1	1
60 years and upwards	83	111	143	85	68	20	9	112	...	31	101	13	1	2	...
Total of all ages ...	1,698	1,345	1,668	1,294	454	236	183	546	2	245	486	64	66	16	10
Rate per mille of population under each death causation.	1·85	1·47	1·82	1·41	·49	·26	·20	·60	·002	·27	·53	·07	·07	·02	·01

ANNEXURE O—*cont.*

Detailed Return of Births and Deaths in the 14 *municipalities of Bellary. Calicut, Cocanada, Conjeeveram, Cuddalore, Kumbakonam, Madura, Mangalore, Negapatam, Salem, Tanjore, Tinnevelly, Trichinopoly and Vellore, during the year* 1929—cont.

Age at the time of death.	12					13			14			15			
	Diseases of the nervous system.					Accidents of pregnancy and child-birth.			Deficiency diseases.			Malignant diseases.			
	Convulsions.	Cerebral hæmorrhage (apoplexy).	Tetanus.	Epilepsy.	Others.	Puerperal sepsis.	Abortion.	Other accidents and diseases of pregnancy and parturition.	Beri Beri.	Rickets.	Others.	Alimentary tract.	Genito-urinary.	Breast.	Other regions.
1 Under one year. Not exceeding one month. Under one week ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 Under one year. Not exceeding one month. Over one week	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3 Under one year. Over one month and not exceeding 6 months.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4 Under one year. Over 6 months and not exceeding 12 months ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total under one year ...	2,388	4	...	..	6	...	...	...	...	44	118	...	...	...	2
One and under 5 years	867	...	2	1	3	...	...	...	1	187	2	1	...	...	7
5 years and under 10 years	51	...	8	2	3	...	...	...	1	39	...	...	...	...	...
10 years and under 15 years	7	1	3	4	5	15	1	3	...	9	1	...	...	...	2
15 years and under 20 years	4	...	5	5	5	84	18	61	...	...	1	...	...	...	1
20 years and under 30 years	3	7	5	15	19	134	36	171	4	2	4	1	1	...	8
30 years and under 40 years	2	10	7	11	30	46	15	71	8	...	7	...	2	...	10
40 years and under 50 years	1	15	5	5	56	10	...	9	8	...	8	...	2	1	11
50 years and under 60 years	3	30	5	5	68	...	...	...	6	...	6	1	...	1	15
60 years and upwards	2	45	1	4	139	...	...	...	7	...	9	...	...	...	8
Total of all ages ...	3,328	112	41	52	334	289	70	315	35	281	156	3	5	2	64
Rate per mille of population under each death causation.	3·63	·12	·04	·06	·36	·32	·08	·34	·04	·31	·17	·003	·005	·002	·07

ANNEXURE O—*cont.*

Detailed Return of Births and Deaths in the 14 *municipalities of Bellary, Calicut, Cocanada, Conjeeveram, Cuddalore, Kumbakonam, Madura, Mangalore, Negapatam, Salem, Tanjore, Tinnevelly, Trichinopoly and Vellore, during the year* 1929—cont.

Age at the time of death.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Remarks.
	Ankylostomiasis.	Diabetes.	Leprosy.	Alcoholism.	Congenital debility and malformation premature birth.	Rabies.	Wounds by accidents.	Snake-bite.	Killed by wild beasts.	Suicides.	Poisons.	Old age.	All other causes.	Total deaths from all causes.	Rate per mille of population.	
1 Under one year. Not exceeding one month. Under one week	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2 Under one year. Not exceeding one month. Over one week	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Males. Females. Total. Births.* .. 17,734 17,520 35,254
3 Under one year. Over one month and not exceeding 6 months ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Deaths.*... 15,196 14,843 30,039
4 Under one year. Over 6 months and not exceeding 12 months ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Still-births ... 855 712 1,567
Total under one year ...	...	...	...	...	2,070	...	14	...	...	...	...	..	459	6,676	† 189·36	* Total births and deaths should exclude "*Still-births.*"
One and under 5 years	9	..	...	...	15	2	51	1	...	...	3	...	246	4,784	59·21	† Calculated on *the* total births.
5 years and under 10 years	4	..	...	...	...	3	42	2	...	...	1	...	67	1,203	11·79	
10 years and under 15 years	5	...	1	...	...	5	33	2	...	2	...	...	31	603	5·83	
15 years and under 20 years	4	1	9	...	...	3	24	3	...	9	3	...	79	998	11·23	
20 years and under 30 years	21	6	27	...	...	4	53	4	...	20	3	...	215	2,562	15·05	
30 years and under 40 years	22	9	22	2	...	7	43	7	...	16	2	...	209	2,330	17·77	
40 years and under 50 years	31	40	23	1	...	4	36	3	...	8	3	...	223	2,091	20·9	
50 years and under 60 years	43	50	19	...	...	...	29	3	...	2	1	24	308	2,062	31·74	
60 years and upwards	37	23	11	...	...	2	45	2	...	3	...	4,823	348	6,730	123·44	
Total of all ages ...	176	129	112	3	2,085	30	370	27	...	60	16	4,847	2,185	30,039	32·74	
Rate per mille of population under each death causation.	·19	·14	·12	·003	2·27	·03	·40	0·03	...	·87	·02	5·28	2·38	32·74	...	

APPENDIX I.

VITAL STATISTICS OF THE GENERAL POPULATION.

No. I.—*Statement showing the Births registered in the districts of the Madras Presidency during the year* 1929.

1	2			3	4			5			6			7	8	9	10
Number.	Population (exclusive of Europeans and Anglo-Indians as per Census of 1921).			Districts.	Population (exclusive of Europeans and Anglo-Indians) for which returns were received.			Number of births registered (exclusive of Europeans and Anglo-Indians and still-births).			Ratio of births per 1,000 of population.			Number of males born to every 100 females born.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	Mean ratio of births per 1,000 during the previous five years.
	Males.	Females.	Total.		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Fe-males.	Total.				Males.	Fe-males.	Total.
1	492,122	463,355	955,477	Anantapur	492,122	463,355	955,477	19,587	19,223	38,810	20·5	20·1	40·6	101·9	12·3	...	19·3	18·8	38·0
2	445,337	428,363	873,700	Bellary	445,337	428,363	873,700	21,083	20,186	41,269	24·1	23·1	47·2	104·5	15·6	...	21·2	20·9	42·2
3	749,960	738,239	1,488,199	Chingleput	749,960	738,239	1,488,199	28,911	27,365	56,276	19·4	18·5	37·8	105·6	14·2	...	19·7	18·9	38·6
4	647,527	621,410	1,268,937	Chittoor	647,527	621,410	1,268,937	25,183	24,269	49,452	19·8	19·2	39·0	103·8	14·9	...	18·1	17·5	35·8
5	1,105,542	1,112,981	2,218,523	Coimbatore	1,105,542	1,112,981	2,218,523	40,795	39,115	79,910	18·4	17·6	36·0	104·3	15·0	...	16·9	16·3	33·2
6	452,150	435,727	887,877	Cuddapah	452,150	435,727	887,877	13,985	13,519	27,504	15·8	15·2	31·0	103·4	4·9	...	18·1	17·8	35·8
7	992,432	1,176,841	2,168,273	Ganjām	830,991	1,013,446	1,844,437	36,861	34,959	71,820	20·0	18·9	38·9	105·4	13·1	...	18·8	17·9	36·7
8	820,335	852,947	1,673,282	Gōdāvari, East	820,335	852,947	1,673,282	33,200	32,410	65,610	19·8	19·4	39·2	102·4	14·2	...	18·9	18·0	36·9
9	514,246	532,136	1,046,382	Gōdāvari, West ...	514,246	532,136	1,046,382	23,106	22,188	45,294	22·0	21·3	43·3	104·1	16·2	...	20·4	19·5	39·9
10	913,050	896,437	1,809,487	Guntūr	913,050	896,437	1,809,487	37,939	36,016	73,955	21·0	19·9	40·9	105·3	14·4	...	20·1	19·2	39·3
11	548,851	537,907	1,086,758	Kistna	548,851	537,907	1,086,758	23,225	21,774	44,999	21·4	20·0	41·4	106·6	17·5	...	21·0	20·2	41·1
12	481,779	469,728	951,507	Kurnool	463,222	451,593	914,815	17,120	16,578	33,698	18·7	18·1	36·8	103·3	1·2	...	22·0	21·3	43·3
13	270,879	245,958	516,837	Madras	270,879	245,958	516,837	11,866	11,032	22,898	22·6	21·3	43·9	105·7	1·1	...	22·6	21·6	44·2
14	986,911	1,018,986	2,005,897	Madura	986,911	1,018,986	2,005,897	37,494	36,375	73,869	18·6	18·2	36·8	103·0	11·3	...	16·6	15·7	32·4
15	1,511,628	1,589,327	3,100,955	Malabar	1,506,953	1,584,530	3,091,483	66,871	64,050	130,921	21·5	20·8	42·3	104·4	20·3	...	18·7	18·4	37·2
16	697,035	687,809	1,384,844	Nellore	697,035	687,809	1,384,844	26,809	25,569	52,378	19·4	18·4	37·8	104·8	14·3	...	16·2	16·1	33·0
17	64,714	56,982	121,696	Nilgiris, The	64,714	56,982	121,696	3,242	3,041	6,283	20·7	21·9	51·6	106·6	14·1	...	17·1	16·9	34·0
18	1,020,694	1,034,110	2,054,804	North Arcot	1,020,694	1,034,110	2,054,804	43,989	42,079	86,068	21·4	20·5	41·9	104·5	18·5	...	19·6	18·8	38·3
19	818,576	903,198	1,721,774	Rāmnād	818,576	903,198	1,721,774	27,140	25,982	53,122	15·8	15·1	30·9	104·4	6·8	...	13·6	13·0	26·6
20	1,050,928	1,060,902	2,111,830	Salem	1,050,928	1,060,902	2,111,830	44,245	42,402	86,647	20·9	20·1	41·0	104·3	19·5	...	17·6	16·8	34·4
21	1,152,010	1,167,315	2,319,325	South Arcot	1,152,010	1,167,315	2,319,325	36,567	35,025	71,592	15·8	15·1	30·9	104·4	7·7	...	15·5	15·1	30·6
22	606,231	640,986	1,247,217	South Kanara	606,231	640,986	1,247,217	26,461	25,581	52,042	21·3	20·4	41·7	103·4	17·6	...	19·0	18·1	36·9
23	1,116,217	1,209,202	2,325,419	Tanjore	1,116,217	1,209,202	2,325,419	36,476	34,527	71,003	15·7	14·8	30·5	105·6	4·6	...	15·6	14·8	30·4
24	926,405	974,751	1,901,156	Tinnevelly	926,405	974,751	1,901,156	38,635	37,040	75,675	20·3	19·5	39·8	104·3	9·5	...	18·2	17·5	35·7
25	1,136,545	1,192,311	2,328,856	Trichinopoly	931,523	970,540	1,902,063	30,669	29,580	60,249	16·1	15·6	31·7	103·7	8·0	...	12·8	12·8	25·1
26	1,079,467	1,151,010	2,230,477	Vizagapatam	1,079,467	1,151,010	2,230,477	43,044	41,473	84,517	19·3	18·6	37·9	103·8	10·0	...	18·8	18·1	36·8
27	481,254	479,084	960,338	Do. Agency ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	21,082,825	21,677,002	42,759,827	Grand Total for the Presidency	20,211,876	20,790,820	41,002,696	794,303	761,358	1,555,661	19·3	18·6	37·9	104·3	12·6	...	17·9	17·3	35·2
295	2,563,765	2,576,943	5,140,708	Total of Town circles in the Presidency ...	2,563,765	2,576,943	5,140,708	98,497	93,847	192,344	19·16	18·45	37·4	103·8	8·4	...	19·1	18·1	37·2
231	18,519,060	19,100,059	37,619,119	Total of Rural circles in the Presidency ...	17,648,111	18,213,877	35,861,988	695,806	667,511	1,363,317	19·39	18·58	38·0	104·3	13·25	...	18·1	17·4	35·5

No. II.—*Statements of Births and Deaths registered in the district of the Madras Presidency during the year* 1929.

1	2	3	4	5			6		7			8	9												10		
Number.	Districts.	Area in square miles.	Average population per square mile.	Population (exclusive of Europeans and Anglo-Indians) for which returns were received.			Births.		Number of deaths registered (exclusive of Europeans and Anglo-Indians and born-dead).			Number of deaths of males to every 100 deaths of females.	Ratio of deaths per 1,000 of population from								All causes.			Mean ratio of deaths per 1,000 during previous five years.		
				Males.	Females.	Total.	Total number.	Birth-rate per 1,000 of population.	Males.	Females.	Total.		Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	Deaths from child birth.	All other causes.	Males.	Females.	Total.	Males.	Females.	Total.
1	Anantapur ...	6,722	142·1	492,122	463,355	955,477	38,810	40·6	18,746	13,334	27,080	103·1	0·1	0·04	0·1	7·5	2·0	3·2	0·3	0·4	14·7	27·9	28·7	28·3	23·0	25·4	24·2
2	Bellary ...	5,871	148·8	445,337	428,363	873,700	41,269	47·2	14,303	13,836	28,139	103·3	0·1	0·1	0·7	6·8	2·9	3·3	0·2	0·3	17·8	32·1	32·3	32·2	29·3	29·1	29·2
3	Chingleput ...	3,071	485·2	749,960	738,239	1,488,199	56,276	37·8	18,094	17,074	35,168	105·9	0·2	0·5	...	4·1	2·0	1·6	0·2	0·2	14·8	24·1	23·1	23·6	25·3	24·9	25·9
4	Chittoor ...	5,611	226·2	647,527	621,410	1,268,937	49,452	39·0	15,572	14,994	30,566	103·8	0·4	0·2	0·003	7·5	3·0	3·1	0·4	0·2	9·3	24·1	24·1	24·1	22·9	23·1	23·0
5	Coimbatore ...	7,225	307·1	1,105,542	1,112,981	2,218,523	79,910	36·0	23,816	22,682	46,498	105·0	0·3	0·1	0·01	4·0	3·4	2·7	0·2	0·2	10·1	21·6	20·4	21·0	22·7	25·5	22·1
6	Cuddapah ...	5,918	150·0	452,150	435,727	887,877	27,504	31·0	11,690	11,454	23,144	101·3	0·3	0·1	...	16·0	0·9	2·0	0·3	0·4	6·1	25·9	26·3	26·1	24·2	24·7	24·4
7	Ganjām ...	4,798	382·5	830,991	1,013,446	1,844,437	71,820	38·9	24,119	23,405	47,524	103·0	0·4	0·01	...	18·5	1·6	0·6	0·2	0·2	4·3	29·0	23·0	25·8	27·8	22·5	24·9
8	Gōdāvari, East.	2,545	577·7	820,335	852,947	1,673,282	65,610	39·2	21,214	20,555	41,769	103·2	0·001	0·1	...	12·5	0·7	2·2	0·2	0·3	9·0	25·9	24·1	25·0	24·9	23·0	24·0
9	Gōdāvari, West	2,348	445·6	514,246	532,136	1,046,382	45,294	43·3	14,493	13,885	28,378	104·3	0·01	0·1	...	16·9	0·9	4·1	0·2	0·3	10·6	28·2	26·1	27·1	23·6	21·7	28·4
10	Guntūr ...	5,735	315·5	913,050	896,437	1,809,487	73,955	40·9	24,539	23,487	48,026	104·5	...	0·1	...	10·9	1·0	2·6	0·5	0·2	11·0	26·9	26·2	26·5	26·1	25·2	25·7
11	Kistna ...	3,559	305·4	548,851	537,907	1,086,758	44,999	41·4	13,418	12,578	25,996	106·7	0·01	0·2	...	8·2	1·3	3·4	0·3	0·3	10·2	24·5	23·4	23·9	27·9	27·0	27·4
12	Kurnool ...	7,580	120·7	463,222	451,593	914,815	33,698	36·8	16,696	15,918	32,614	104·9	0·1	0·1	0·001	18·8	1·5	2·6	0·2	0·4	10·7	36·0	35·3	35·6	25·3	25·6	29·4
13	Madras ...	29	17,757·3	270,879	245,958	516,837	22,698	43·9	11,112	11,011	22,123	100·9	0·03	1·0	...	4·9	6·0	12·9	0·2	0·6	17·2	41·0	44·8	42·8	42·9	45·6	44·2
14	Madura ...	4,907	408·8	986,911	1,018,986	2,005,897	73,869	36·8	26,364	24,783	51,147	106·3	2·9	0·1	0·2	2·7	2·4	2·9	0·2	0·2	14·8	26·7	24·3	25·5	26·0	22·0	23·0
15	Malabar ...	5,786	534·3	1,506,953	1,584,530	3,091,483	130,921	42·3	34,593	33,470	68,063	103·4	0·03	0·5	0·01	7·4	1·8	2·4	0·2	0·2	9·5	23·0	21·1	22·0	25·2	23·4	24·2
16	Nellore ...	7,973	173·7	697,035	687,809	1,384,844	52,378	37·8	16,779	15,810	32,589	106·1	0·1	0·2	...	10·7	0·9	1·5	0·4	0·3	9·4	24·1	23·0	23·5	22·2	23·2	21·7
17	Nilgiris, The ...	982	123·9	64,714	56,982	121,696	6,283	51·6	2,384	2,183	4,567	109·2	...	0·1	0·1	11·2	5·7	7·2	0·4	0·1	12·7	36·8	38·3	37·5	35·9	35·0	35·5
18	North Arcot ...	4,954	414·8	1,020,694	1,034,110	2,054,804	86,068	41·9	24,475	23,584	48,059	103·8	0·6	0·5	0·001	4·7	2·2	1·6	0·2	0·2	13·4	24·0	22·8	23·4	22·7	21·9	22·3
19	Rāmnād ...	4,838	355·9	818,576	903,198	1,721,774	53,122	30·9	20,901	20,546	41,447	101·7	1·9	0·04	..	8·7	1·9	2·0	0·2	0·2	9·2	25·5	22·7	24·1	21·5	18·5	19·9
20	Salem ...	6,912	305·5	1,050,928	1,060,902	2,111,830	86,647	41·0	22,880	22,580	45,460	101·3	0·3	0·1	0·3	6·9	1·6	1·3	0·3	0·2	10·5	21·8	21 2	21·5	22·5	21·3	22·2
21	South Arcot ...	4,207	551·3	1,152,010	1,167,315	2,319,325	71,592	30·9	27,237	26,550	53,787	102·6	1·3	0·6	...	4·7	1·8	1·5	0·3	0·2	12·8	23·6	22·7	23·2	24·6	23·4	24·0
22	South Kanara ...	4,021	310·2	606,231	640,986	1,247,217	52,042	41·7	15,081	14,917	29,998	101·6	0·2	0·2	...	9·0	1·7	1·8	0·4	0·4	10·4	24·9	23·3	24·1	27·1	26·2	26·6
23	Tanjore ...	3,727	623·9	1,116,217	1,209,202	2,325,419	71,003	30·5	29,865	30,324	60,189	98·5	1·7	0·5	...	2·4	1·2	1·0	0·2	0·5	18·4	26·8	25·1	25·9	26·9	25·0	25·9
24	Tinnevelly ...	4,325	439·6	926,405	974,751	1,901,156	75,675	39·8	28,819	28,808	57,627	100·0	2·5	0·1	...	5·8	2·4	2·1	0·2	0·3	16·9	31·1	29·5	30·3	26·6	24·9	25·8
25	Trichinopoly ...	4,319	440·4	931,523	970,540	1,902,063	60,249	31·7	22,757	22,400	45,157	101·6	0·7	0·2	...	4·6	1·8	1·4	0·2	0·3	14·5	24·4	23·1	23·7	21·1	19·8	20·4
26	Vizagapatam ...	4,568	488·3	1,079,467	1,151,010	2,230,477	84,517	37·9	32,160	30,177	62,337	106·6	0·1	0·3	...	18·3	1·2	1·2	0·2	0·1	6·5	29·7	26·2	27·9	28·4	26·7	25·3
27	Agencies ...	3,709	164·7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Grand total for the Presidency ...	126,240	324·8	20,211,876	20,790,820	41,002,696	1,555,661	37·9	527,107	510,345	1,037,452	103·3	0·6	0·2	0·04	8·3	1·8	2·2	0·3	0·3	11·6	26·1	24·5	25·3	25·3	23·9	25·1
	Total of town circles in the Presidency ...	...	...	2,563,765	2,576,943	5,140,708	192,344	37·4	76,383	73,678	150,061	103·7	0·9	0·5	0·1	5·4	3 0	4·1	0·4	0·5	14·3	29·8	28·6	29·2	29·8	28·4	29·1
	Total of rural circles in the Presidency ...	...	...	17,648,111	18,213,877	35,861,988	1,363,317	38·0	450,724	436,667	887,391	103·2	0·6	0·2	0·04	8·7	1·7	1·9	0·3	0·2	11·1	25·5	24·0	24·7	25·2	23·7	24

Note.—Born-dead cases are not included in this or any of the other statements.

No. III.—*Deaths registered in the districts of the Madras Presidency during each month of the year* 1929.

1	2	3												4
Number.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.
1	Anantapur	3,059	2,196	2,269	1,954	2,169	1,904	1,928	1,894	1,810	2,242	2,828	2,827	27,080
2	Bellary	2,302	1,936	2,570	2,715	2,612	2,060	2,214	2,223	2,082	2,499	2,526	2,400	28,139
3	Chingleput	3,520	2,704	2,859	2,419	2,602	2,475	2,730	2,779	2,794	2,879	2,506	3,901	35,168
4	Chittoor	3,359	2,248	2,037	1,841	2,118	1,990	2,181	2,301	2,289	2,562	3,462	4,178	30,566
5	Coimbatore	4,191	3,053	3,294	2,941	3,568	3,454	3,537	3,481	3,676	4,078	5,104	6,181	46,498
6	Cuddapah	2,607	1,937	1,857	1,645	1,759	1,357	1,642	1,636	1,563	2,091	2,571	2,479	23,144
7	Ganjām	3,556	2,863	3,314	3,832	4,473	3,996	4,637	5,719	4,225	3,822	3,438	3,649	47,524
8	Gōdāvari, East	3,915	2,870	2,932	2,688	3,047	2,959	3,603	3,989	3,673	4,216	3,952	3,925	41,769
9	Gōdāvari, West	2,555	1,750	1,831	1,631	2,079	1,935	2,667	2,928	2,567	2,817	2,810	2,808	28,378
10	Guntūr	4,065	3,073	3,128	3,211	3,983	3,519	4,383	4,715	4,479	4,797	4,312	4,381	48,026
11	Kistna	2,139	1,521	1,741	1,538	2,134	2,052	2,739	2,894	2,804	2,657	1,637	2,140	25,996
12	Kurnool	3,708	2,834	3,104	2,800	2,768	2,138	2,500	2,450	2,310	2,519	2,742	2,741	32,614
13	Madras	2,047	1,838	1,955	1,767	1,734	1,545	1,687	1,591	1,737	1,915	2,154	2,153	22,123
14	Madura	4,679	3,363	3,398	2,870	3,793	3,918	4,158	3,875	3,257	3,629	6,153	8,054	51,147
15	Malabar	6,134	5,566	5,920	5,527	5,851	6,121	6,763	5,616	5,115	4,975	4,844	5,651	68,063
16	Nellore	2,883	2,269	2,279	2,079	2,619	2,106	2,496	2,639	2,628	3,244	3,748	3,599	32,589
17	Nilgiris, The	334	294	395	349	408	410	423	336	316	386	451	465	4,567
18	North Arcot	5,242	3,558	3,184	3,048	3,420	3,217	3,742	3,714	3,590	3,896	4,949	6,499	48,059
19	Rāmnād	3,977	3,018	2,704	2,405	3,049	3,091	3,299	3,184	3,120	3,320	4,588	5,692	41,447
20	Salem	4,332	3,180	3,098	2,899	3,552	3,262	3,633	3,498	3,408	4,045	4,756	5,847	45,460
21	South Arcot	6,359	4,774	5,377	3,057	3,175	3,752	4,204	4,045	4,137	4,112	4,992	5,803	53,787
22	South Kanara	3,514	2,692	2,293	2,108	2,187	2,772	2,884	2,826	2,168	2,169	2,028	2,857	29,998
23	Tanjore	9,066	4,945	4,322	3,753	4,396	3,985	4,414	4,464	4,374	4,735	5,762	5,973	60,189
24	Tinnevelly	7,233	4,485	4,124	3,305	3,768	3,789	3,781	3,564	3,468	4,323	6,619	9,168	57,627
25	Trichinopoly	5,308	3,348	2,942	2,714	3,318	3,066	3,373	3,472	3,316	3,832	4,915	5,553	45,157
26	Vizagapatam	5,823	4,804	4,776	4,321	4,638	4,438	5,074	5,734	5,831	5,707	5,631	5,560	62,337
	Total, Madras Presidency ...	105,907	77,069	77,703	69,417	79,140	75,311	84,692	85,067	80,737	87,467	100,478	114,464	1,037,452
	Ratio of deaths per 1,000 in each district.	2·58	1·88	1·89	1·69	1·92	1·84	2·06	2·07	1·97	2·13	2·45	2·79	25·27

No. IV.—*Deaths registered according to Age in the districts of the Madras Presidency during the year* 1929.

1	2	3															
		Under one year.															
		Not exceeding one month.							Over one month and not exceeding six months.			Over six months and not exceeding twelve months.					
		Male.			Female.												
Number.	Districts.	Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	Total of cols. (3) and (6).	Male.	Female.	Total.	Male.	Female.	Total.	Total male cols. (3), (8) and (11).	Total female cols. (6), (9) and (12).	Total.
1	Anantapur	1,330	658	1,988	1,092	567	1,659	3,647	1,025	950	1,975	777	723	1,500	3,790	3,332	7,122
2	Bellary	1,327	720	1,947	1,060	558	1,618	3,565	1,268	1,123	2,391	976	872	1,848	4,191	3,613	7,804
3	Chingleput	2,071	961	3,032	1,535	765	2,300	5,332	1,376	1,228	2,604	1,133	1,056	2,189	5,541	4,584	10,125
4	Chittoor	1,769	719	2,488	1,408	615	2,023	4,511	1,105	1,027	2,133	767	767	1,534	4,360	3,817	8,177
5	Coimbatore	4,018	1,379	5,427	3,381	1,118	4,499	9,926	1,324	1,114	2,438	1,141	1,024	2,165	7,892	6,637	14,529
6	Cuddapah	813	410	1,223	797	366	1,163	2,386	731	683	1,413	562	447	1,009	2,516	2,292	4,808
7	Ganjām	1,943	1,348	3,291	1,634	1,160	2,794	6,085	2,469	2,100	4,569	2,245	1,786	4,031	8,005	6,680	14,685
8	Godāvari, East	2,578	604	3,182	2,095	511	2,606	5,788	1,537	1,382	2,919	1,407	1,307	2,714	6,126	5,295	11,421
9	Godāvari, West	1,942	653	2,595	1,694	557	2,251	4,846	1,749	1,342	3,091	1,632	728	1,760	5,376	4,321	9,697
10	Guntur	3,652	1,365	5,017	3,185	1,166	4,351	9,368	1,858	1,585	3,443	1,274	1,183	2,457	8,149	7,119	15,268
11	Kistna	1,969	727	2,696	1,556	609	2,165	4,861	1,645	1,325	2,970	914	907	1,821	5,255	4,397	9,652
12	Kurnool	1,312	643	1,955	1,088	588	1,676	3,631	935	868	1,803	847	804	1,651	3,737	3,348	7,085
13	Madras	772	403	1,175	536	393	929	2,104	1,030	961	1,991	865	864	1,729	3,070	2,814	5,884
14	Madura	2,837	1,308	4,145	2,223	1,059	3,282	7,427	1,807	1,227	2,534	1,640	1,495	3,135	7,092	6,004	13,096
15	Malabar	3,757	1,671	5,428	3,025	1,295	4,320	9,748	3,259	2,842	6,101	1,741	1,551	3,292	10,428	8,713	19,141
16	Nellore	2,013	806	2,819	1,584	730	2,314	5,133	1,018	884	1,902	781	719	1,500	4,618	3,917	8,535
17	Nilgiris, The	146	78	224	120	71	191	415	166	133	299	207	214	421	597	538	1,135
18	North Arcot	2,724	1,357	4,081	2,090	1,069	3,159	7,240	1,762	1,518	3,280	1,612	1,589	3,201	7,455	6,266	13,721
19	Rāmnād	1,581	895	2,476	1,157	751	1,908	4,384	914	826	1,740	959	837	1,796	4,349	3,631	7,980
20	Salem	3,836	1,309	5,145	3,154	1,106	4,260	9,405	1,292	1,189	2,481	1,401	1,353	2,754	7,838	6,802	14,640
21	South Arcot	2,504	1,277	3,781	2,093	1,119	3,212	6,993	1,414	1,302	2,716	1,650	1,549	3,199	6,845	6,063	12,908
22	South Kanara	1,554	798	2,352	1,182	691	1,873	4,225	1,234	1,066	2,300	845	751	1,596	4,431	3,680	8,111
23	Tanjore	3,013	1,262	4,275	2,330	1,086	3,416	7,691	1,599	1,422	3,021	1,101	1,025	2,126	6,975	5,862	12,838
24	Tinnevelly	3,527	1,725	5,252	2,667	1,419	4,086	9,338	1,453	1,439	2,892	1,187	1,242	2,429	7,892	6,767	14,659
25	Trichinopoly	2,576	1,271	3,847	2,094	1,009	3,103	6,950	1,134	980	2,114	1,031	950	1,981	6,012	5,033	11,045
26	Vizagapatam	2,856	1,274	4,130	2,182	1,091	3,273	7,403	2,329	2,085	4,414	2,131	2,065	4,196	8,590	7,423	16,013
	Total, Madras Presidency	58,350	25,621	83,971	47,022	21,459	68,481	152,452	36,933	32,600	69,533	30,226	27,868	58,094	*151,130	*128,949	*280,079
	Total population according to the census of 1921 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	530,924	543,360	1,074,284
	* Ratio per mille of births	...	...	...	...	...	...	...	...	...	...	...	...	...	*190·34	*169·44	*179·53

* Calculated on the total births of the Presidency.

No. IV.—*Deaths registered according to Age in the districts of the Madras Presidency during the year* 1929—cont.

1	2	3		4		5		6		7		8		9		10		11	
		1 to 4.		5 to 9.		10 to 14.		15 to 19.		20 to 29.		30 to 39.		40 to 49.		50 to 59.		60 and upwards.	
Number.	Districts.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	Anantapur	2,334	2,473	659	681	306	319	274	494	701	1,234	899	874	981	707	1,114	875	2,088	2,342
2	Bellary	2,989	3,024	702	735	325	294	325	483	829	1,310	1,002	928	961	716	964	753	2,015	1,952
3	Chingleput	2,657	2,733	778	800	464	456	491	709	1,062	1,474	1,151	1,089	1,239	913	1,336	1,042	3,375	3,274
4	Chittoor	2,457	2,482	559	626	342	359	351	499	767	1,195	1,008	1,067	979	867	1,355	1,013	3,401	3,069
5	Coimbatore	3,074	3,151	899	953	600	560	619	827	1,405	2,016	1,628	1,582	1,512	1,321	1,617	1,270	4,579	4,365
6	Cuddapah	1,874	1,854	581	553	277	290	251	382	643	1,085	836	880	1,050	775	1,168	1,018	2,442	2,325
7	Ganjām	3,748	3,686	1,071	1,044	576	556	664	923	1,467	1,871	1,589	1,413	1,860	1,446	2,108	2,002	3,031	3,732
8	Godāvari, East ...	3,083	3,086	1,121	1,101	655	539	614	861	1,471	1,796	1,452	1,382	1,503	1,125	1,442	1,179	3,747	4,191
9	Godāvari, West ...	2,014	1,998	660	620	370	403	393	598	880	1,179	859	830	777	662	815	725	2,344	2,549
10	Guntūr	3,883	3,650	1,089	1,034	504	528	629	1,019	1,310	2,047	1,362	1,403	1,394	1,028	1,607	1,161	4,612	4,498
11	Kistna	1,828	1,780	453	520	277	279	387	584	756	1,073	693	741	739	548	784	562	2,246	2,094
12	Kurnool	2,978	3,111	1,021	935	399	381	385	498	1,034	1,368	1,219	1,158	1,360	986	1,445	1,242	3,118	2,891
13	Madras	1,881	1,963	530	533	221	252	270	438	908	1,057	881	821	840	621	738	560	1,773	1,952
14	Madura	4,437	4,266	1,291	1 262	720	673	802	855	1,891	2,231	1,980	1,841	1,952	1,582	1,832	1,592	4,337	4,477
15	Malabar	5,462	5,623	1,588	1,602	842	764	846	870	2,221	2,669	2,724	2,918	2,571	2,088	2,502	1,969	5,409	6,254
16	Nellore	2,597	2,464	734	665	382	406	404	485	897	1,269	1,065	1,178	1,127	865	1,293	985	3,062	3,576
17	Nilgiris, The	485	496	108	92	72	58	78	97	207	240	226	180	154	97	139	129	318	256
18	North Arcot	5,031	5,072	1,074	1,067	685	688	626	989	1,219	1,821	1,269	1,246	1,310	1,018	1,450	1,211	4,353	4,196
19	Rāmnād	3,676	3,694	1,032	1,017	577	543	619	767	1,578	2,071	1,764	1,706	1,792	1,514	1,788	1,622	3,726	3,981
20	Salem	3,264	3,176	858	867	620	555	582	851	1,171	1,946	1,531	1,597	1,527	1,345	1,699	1,535	3,790	3,906
21	South Arcot	4,655	4,564	1,371	1,298	715	601	814	1,140	1,726	2,403	2,046	1,949	2,170	1,870	2,357	2,160	4,538	4,502
22	South Kanara ...	1,988	2,008	688	684	328	356	336	505	1,075	1,422	1,266	1,288	1,325	1,031	1,274	1,066	2,370	2,787
23	Tanjore	3,323	3,278	1,160	1,112	762	702	829	1,358	2,110	3,406	2,506	2,674	2,802	2,392	2,929	2,368	6,569	7,171
24	Tinnevelly	5,469	5,623	1,481	1,542	765	811	700	1,023	1,799	2,416	1,874	1,939	1,960	1,521	2,088	1,656	4,791	5,521
25	Trichinopoly	3,327	3,233	860	862	482	493	603	855	1,452	2,040	1,594	1,573	1,714	1,373	1,911	1,613	4,796	5,316
26	Vizagapatam ...	5,395	5,458	1,582	1,500	931	769	909	1,024	2,239	2,674	2,404	2,156	2,609	1,809	2,547	2,243	4,954	5,061
	Total, Madras Presidency ...	83,912	84,036	23,934	23,711	13,197	12,659	13,812	19,144	32,820	45,321	36,578	36,463	38,208	30,280	40,232	33,548	92,984	96,236
	Total population according to the census of 1921 ...	1,946,911	2,048,467	2,734,825	2,804,196	2,522,055	2,343,485	1,735,071	1,643,611	3,230,542	3,788,751	2,873,668	2,887,311	2,042,555	2,055,624	1,391,174	1,394,174	1,217,013	1,294,208
	Ratio per mille of population ...	43·10	41·02	8·75	8·45	5·23	5·40	7·96	11·64	10·15	11·96	12·83	12·63	18·70	14·73	28·92	24·06	76·34	74·35

NOTE.—Calculated on the total population of the Presidency including Europeans and Anglo-Indians though the statistics are exclusive of Europeans and Anglo-Indians and born-dead cases.

No. V.—*Deaths registered according to Classes in the districts of the Madras Presidency during the year* 1929.

1	2	3											4			
		Population for which returns were received.											Number of deaths registered.			
		Indian Christians.		Muhammadans.		Hindus.		Other classes.		Total.			Indian Christians.		Muhammadans.	
Number.	Districts.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.	Males.	Females.	Males.	Females.
1	Anantapur	2,417	2,066	43,726	41,231	445,055	419,260	924	748	492,122	463,355	955,477	57	56	1,133	1,082
2	Bellary	1,596	1,625	46,562	42,955	396,380	383,250	790	503	445,337	428,363	873,700	72	61	1,274	1,261
3	Chingleput	14,785	14,743	17,337	16,044	716,668	708,430	1,172	1,022	749,960	738,239	1,488,199	270	286	311	283
4	Chittoor	3,328	3,368	33,927	30,949	607,740	584,699	2,532	2,394	647,527	621,410	1,268,937	62	56	696	643
5	Coimbatore	14,339	12,644	24,054	21,980	1,067,064	1,078,333	85	24	1,105,542	1,112,981	2,218,523	252	204	490	502
6	Cuddapah	12,863	12,824	54,795	51,630	383,569	370,380	923	893	452,150	435,727	887,877	478	468	1,203	1,162
7	Ganjām	942	852	2,641	2,531	800,214	982,114	27,194	27,949	830,991	1,013,446	1,844,437	20	30	126	106
8	Gōdāvari, East	8,195	7,792	12,804	13,108	795,339	828,109	3,997	3,938	820,335	852,947	1,673,282	157	138	317	285
9	Gōdāvari, West	18,041	18,545	10,881	10,844	484,473	501,973	851	774	514,246	532,136	1,046,382	538	540	261	240
10	Guntūr	77,944	75,479	66,411	64,307	763,880	752,106	4,815	4,545	913,050	896,437	1,809,487	1,998	1,979	1,689	1,608
11	Kistna	27,842	26,485	27,096	25,932	493,118	484,761	795	729	548,851	537,907	1,086,758	753	664	683	529
12	Kurnool	27,162	26,419	62,793	59,747	372,602	384,858	665	569	463,222	451,593	914,815	1,008	859	1,949	1,914
13	Madras	15,455	16,751	29,121	24,117	225,037	204,466	1,266	624	270,879	245,958	516,837	489	505	1,321	1,333
14	Madura	32,472	31,644	39,608	39,314	914,830	948,027	1	1	986,911	1,018,986	2,005,897	892	869	994	1,101
15	Malabar	27,394	27,427	492,004	503,088	987,372	1,053,729	273	286	1,506,953	1,584,530	3,091,483	547	547	11,407	11,343
16	Nellore	25,842	25,945	45,326	43,796	597,916	591,639	27,891	26,429	697,035	687,809	1,384,844	626	656	1,025	1,035
17	Nilgiris, The	7,715	7,640	4,155	2,611	52,619	46,491	227	240	64,714	56,982	121,696	285	267	179	140
18	North Arcot	17,585	17,644	58,362	59,983	940,424	952,249	4,323	4,234	1,020,694	1,034,110	2,054,804	309	280	1,402	1,353
19	Rāmnād	40,771	44,268	47,504	68,652	730,290	790,276	11	2	818,576	903,198	1,721,774	792	806	1,216	1,295
20	Salem	7,383	7,788	24,590	22 585	1,018,936	1,030,516	19	13	1,050,928	1,060,902	2,111,830	221	269	511	510
21	South Arcot	31,588	32,306	33,838	33,223	1,084,292	1,099,479	2,292	2,307	1,152,010	1,167,315	2,319,325	433	481	545	479
22	South Kanara	51,859	54,344	75,207	76,549	474,907	506,127	4,258	3,966	606,231	640,986	1,247,217	1,077	1,017	1,789	1,715
23	Tanjore	42,906	45,806	57,522	73,131	1,015,491	1,090,005	298	260	1,116,217	1,209,202	2,325,419	1,099	1,075	1,699	1,928
24	Tinnevelly	92,785	99,325	48,599	60,462	785,003	814,959	18	5	926,405	974,751	1,901,156	2,627	2,588	1,743	1,842
25	Trichinopoly	44,090	46,862	31,198	32,733	856,218	890,935	17	10	931,523	970,540	1,902,063	1,107	1,096	862	812
26	Vizagapatam	2,020	2,239	9,381	10,279	1,066,309	1,136,853	1,757	1,639	1,079,467	1,151,010	2,230,477	30	28	134	123
	Total, Madras Presidency ...	649,229	662,831	1,399,500	1,431,861	18,075,753	18,612,024	87,394	84,104	20,211,876	20,790,820	41,002,696	16,199	15,834	34,959	34,624

No. V.—*Deaths registered according to Classes in the districts of the Madras Presidency during the year* 1929—cont.

Number.	Districts	4				5						
		Number of deaths registered—*cont.*								Ratio of deaths per 1,000 of population.		
		Hindus.		Other classes.		Total.			Indian Christians.		Muhammadans.	
		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Males.	Females.	Males.	Females.
1	Anantapur	12,542	12,191	14	5	13,746	13,334	27,080	23·58	27·11	25·91	26·20
2	Bellary	12,953	12,508	4	6	14,303	13,836	28,139	45·11	37·54	27·35	29·34
3	Chingleput	17,442	16,438	71	67	18,094	17,074	35,168	18·26	19·39	17·94	17·83
4	Chittoor	14,755	14,221	59	74	15,572	14,994	30,566	18·62	16·62	20·15	20·78
5	Coimbatore	23,074	21,977	...	...	23,816	22,682	46,498	17·57	16·05	20·37	22·84
6	Cuddapah	9,983	9,792	26	32	11,690	11,454	23,144	37·14	36·4	21·95	22·51
7	Ganjām	23,868	23,197	105	72	24,119	23,405	47,524	21·23	35·21	47·73	41·88
8	Gōdāvari, East	20,703	20,092	37	40	21,214	20,655	41,769	19·92	17·71	24·75	21·73
9	Gōdāvari, West	13,680	13,094	14	11	14,493	13,885	28,378	29·81	29·11	23·6	22·12
10	Guntūr	20,750	19,804	102	96	24,539	23,487	48,026	25·63	26·22	25·42	25·00
11	Kistna	11,973	11,378	9	7	13,418	12,578	25,996	27·04	25·06	25·20	20·39
12	Kurnool	13,725	13,135	14	10	16,696	15,918	32,614	37·09	32·51	31·04	32·03
13	Madras	9,302	9,173	..	...	11,112	11,011	22,123	31·63	30·13	45·34	55·26
14	Madura	24,478	22,813	...	...	26,364	24,783	51,147	26·64	27·45	25·03	28·01
15	Malabar	22,631	21,566	8	14	34,593	33,470	68,063	20·02	19·87	22·15	22·55
16	Nellore	15,001	14,030	127	89	16,779	15,810	32,589	24·22	25·28	22·58	23·63
17	Nilgiris, The	1,911	1,773	9	3	2,384	2,183	4,567	36·94	34·95	43·08	53·62
18	North Arcot	22,690	21,857	74	84	24,475	23,584	48,059	17·57	16·43	24·02	22·56
19	Rāmnād	18,853	18,445	...	...	20,901	20,546	41,447	19·42	18·21	25·59	18·86
20	Salem	22,148	21,801	...	...	22,880	22,580	45,460	29·93	34·54	20·78	22·58
21	South Arcot	26,178	25,521	81	69	27,237	26,550	53,787	13·71	14·89	16·11	14·41
22	South Kanara	12,204	12,168	11	17	15,081	14,917	29,998	20·71	22·15	23·79	22·40
23	Tanjore	27,066	27,319	1	2	29,865	30,324	60,189	25·61	23·42	29·53	26·36
24	Tinnevelly	24,449	24,377	..	1	28,819	28,808	57,627	28·31	26·06	35·86	30·46
25	Trichinopoly	20,788	20,492	...	...	22,757	22,400	45,157	21·11	23·38	27·62	24·8
26	Vizagapatam	31,963	29,975	33	51	32,160	30,177	62,337	14·84	12·51	14·28	11·96
	Total, Madras Presidency ...	475,150	459,137	799	750	527,107	510,345	1,037,452	24·95	23·83	24·97	24 18

Number.	Districts	5																							
		Ratio of deaths per 1,000 of population.																							
		Hindus.				Other classes.				Total.															
		Males.	Females.	Total.	Birth-rate per mille of population.	Males.	Females.	Total.		Males.	Females.	Total.													
	A.—Rural districts.																								
1	Anantapur	25·93	29·08	15·15	6·68	27·93	28·72	28·3	840,956	17,318	17,001	34,319	40·87	81	31	59	6,498	1,690	2,613	23	25	118	43	17	226
2	Bellary	32·68	32·63	5·06	11·93	32·11	32·30	32·2	728,277	17,833	17,041	34,874	47·78	75	54	506	5,174	1,995	1,999	14	20	83	41	1	159
3	Chingleput	60·58	65·56	24·12	23·13	23·6			1,266,800	25,300	24,077	49,467	39·03	282	711	...	5,010	2,480	1,814	14	13	120	58	21	226
4	Chittoor	24·28	24·32	23·30	30·91	24·05	24·12	24·1	1,199,640	23,874	23,072	46,946	39·15	480	175	4	9,097	3,697	3,741	20	36	358	78	6	498
5	Coimbatore	21·60	20·37	...	...	21·53	20·38	21·0	2,013,390	36,860	35,368	72,228	35·90	489	219	19	8,098	6,841	5,300	21	32	232	69	...	354
6	Cuddapah	21·95	22·51	26·03	26·43	28·17	35·83	25·85	26·28	26·1	806,133	12,601	12,181	24,782	30·73	255	46	...	13,125	731	1,539	9	34	160	27
7	Ganjām	24·75	21·73	26·03	24·26	9·25	10·16	25·86	22·92	25·0	1,740,472	35,074	33,363	68,437	39·28	677	182	...	33,122	2,667	1,044	10	18	193	83
8	Gōdāvari, East	23·6	22·12	28·23	26·08	16·46	14·20	28·16	26·09	27·1	1,465,125	29,654	29,042	58,696	40·03	2	168	...	9,052	971	3,294	17	22	179	54
9	Gōdāvari, West	25·42	25·00	27·16	26 33	21·18	21·12	26·87	26·08	26·5	923,735	20,569	19,699	40,259	43·46	2	65	...	10,530	820	3,826	21	16	107	65
10	Guntur	25·20	20·39	24·28	23·46	11·32	9·60	24·44	23·37	23·9	1,579,356	33,526	31,892	65,328	41·35	...	101	...	18,092	1,359	4,184	13	34	242	561
11	Kistna	31·04	32·03	36·82	36·0	21·05	17·58	36·04	35·25	35·6	955,076	20,468	19,213	39,681	41·27	6	204	...	8,278	1,028	3,368	23	30	149	95
12	Kurnool	41·32	44·86	...	...	41·02	44·77	42·8	868,783	16,219	15,720	31,939	36·73	69	104	...	17,579	1,291	2,465	19	32	106	42	3	202
13	Madras	45·34	55·26	41·32	44·86	...	...	41·02	44·77	42·8	1,706,275	31,103	30,321	61,424	35·99	3,170	98	253	4,761	3,500	4,038	21	40	152	74
14	Madura	25·03	28·01	26·76	24·06	...	...	26·72	24·32	25·5	2,864,595	62,601	59,925	122,526	42·76	66	807	4	21,952	4,775	6,312	64	44	398	215
15	Malabar	22·15	22·55	37·84	36·45	29·30	48·95	22·65	21·12	22·0	1,293,672	24,790	23,690	48,480	37·48	154	258	...	14,185	1,158	1,929	18	54	278	123
16	Nellore	22·58	23·63	25·09	23 71	4·55	3 37	24·07	22·98	23·5	83,197	2,527	2,344	4,871	58·45	...	10	11	1,331	571	586	1	...	22	2
17	Nilgiris, The	43·08	53·62	36·32	38·12	39·65	12·5	36·84	38·30	37·5	1,770,765	37,744	36,102	73,846	41·72	963	750	...	8,432	3,666	2,479	49	36	257	60
18	North Arcot	24·02	22·56	24·12	22·95	17·12	19·84	23·97	27·79	23·4	1,338,093	21,932	21,060	42,992	30·87	2,548	45	...	12,541	2,327	2,825	19	18	124	30
19	Rāmnād	25·59	18·86	25·83	23·34	...	...	25·53	19·85	24·1	1,976,943	41,043	39,263	80,306	40·55	567	182	546	13,890	3,020	2,323	36	56	301	98
20	Salem	21·74	21·16	...	...	21·76	21·28	21·3	2,131,331	33,517	32,184	65,701	30·81	2,832	1,209	...	10,201	3,741	3,017	45	27	195	337	60
21	South Arcot	24·13	23·20	35·34	29·91	23·62	22·73	23·2	1,155,125	24,481	23,702	48,183	41·68	161	219	...	10,88	2,019	1,915	27	28	310	78	8	451
22	South Kanara	25·69	24·04	2 58	4·28	24·87	23·27	24·1	1,935,036	30,952	29,038	59,990	30·65	3,547	833	...	4,076	1,796	1,437	40	38	231	133	12	454
23	Tanjore	25 64	25·04	3·36	7·69	26·73	25·07	25·9	1,460,486	29,941	28,722	58,663	40·13	3,312	148	...	8,742	3,215	2,838	14	13	204	22	5	258
24	Tinnevelly	31·14	29·91	...	2·00	31·11	29·56	30·3	1,680,141	26,665	25,791	52,456	31·21	1,109	302	...	7,973	2,763	1,723	39	45	218	85	9	396
25	Trichinopoly	24·28	23·0	...	...	24·43	23·07	23·7	2,009,577	39,133	37,790	76,923	38·31	248	421	...	38,713	1,952	2,120	26	34	315	66	17	458
26	Vizagapatam	29·96	26·36	18·78	31·12	29·79	26·20	27·9																	
	Total, Madras Presidency ...	26·28	24·57	9·14	8·73	26·07	24 5	25·3																	

No. VI.—*Births and Deaths registered from different causes in the districts and towns of the Madras Presidency during the year* 1929.

Number.	Districts and towns.	2	4				5	6	7	8	9	10	11							12	13	14	15											
			Births.										Injuries.										Ratio of deaths per 1,000 of population.											
		Population for which returns were received.	Males.	Females.	Total.	Birth-rate per mille of population.	Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Suicides.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.	Deaths from child births.	All other causes.	Total deaths from all causes.	Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	Deaths from child births.	All other causes.	From all causes.		
													Males.	Females.																	For the year.	Mean for the previous 5 years.
	A.—Rural districts.																																	
1	Anantapur	840,956	17,318	17,001	34,319	40·87	81	31	59	6,498	1,690	2,613	23	25	118	43	17	226	332	12,588	24,118	0·10	0·04	0·07	7·73	2·01	3·11	0·27	0·40	15·03	28·79	26·62
2	Bellary	728,277	17,833	17,041	34,874	47·78	75	54	506	5,174	1,995	1,999	14	20	83	41	1	159	169	13,426	23,557	0·10	0·07	0·69	7·09	2·73	2·74	0·22	0·23	18·39	32·27	29·84
3	Chingleput	1,266,800	25,300	24,077	49,467	39·03	282	711	...	5,010	2,480	1,814	14	13	120	58	21	226	257	19,435	30,215	0·22	0·56	...	3·95	3·40	1·43	0·18	0·20	15·33	23·84	25·66
4	Chittoor	1,199,640	23,874	23,072	46,946	39·15	480	175	4	9,097	3,697	3,741	20	36	358	78	6	498	275	10,968	28,845	0·40	0·15	0·003	7·51	3·08	3·12	0·42	0·23	9·15	24·06	23·92
5	Coimbatore	2,013,390	36,860	35,368	72,228	35·90	489	219	19	8,098	6,841	5,300	21	32	232	69	...	354	307	19,340	40,967	0·24	0·11	0·01	4·02	3·40	2·63	0·17	0·15	9·61	20·36	21·32
6	Cuddapah	806,133	12,601	12,181	24,782	30·73	255	46	...	13,125	731	1,539	9	34	160	27	3	233	283	4,571	20,783	0·32	0·06	...	16·28	0·91	1·91	0·29	0·35	5·67	25·77	27·02
7	Ganjām	1,740,472	35,074	33,363	68,437	39·28	677	182	...	33,122	2,667	1,044	10	18	193	83	...	304	282	7,046	45,324	0·39	0·30	...	19 01	1·53	0·60	0·17	0·16	4·04	26·01	24·48
8	Gōdāvari, East	1,465,125	29,654	29,042	58,696	40·03	2	168	...	9,052	971	3,294	17	22	179	54	9	281	423	12,486	36,677	0·001	0·11	...	12·99	0·06	2·25	0·19	0·29	8.52	25·01	24·76
9	Gōdāvari, West	923,735	20,569	19,699	40,259	43·46	2	65	...	10,530	820	3,826	21	16	107	65	19	228	284	9,553	25,308	·002	0·07	...	11·37	0·89	4·18	0·24	0·31	10·32	27·33	29·82
10	Guntur	1,579,356	33,526	31,892	65,328	41·35	...	101	...	18,092	1,359	4,184	13	34	242	561	23	878	341	17,099	42,054	...	0·06	...	11·45	0·86	2 65	0·56	0·22	10·82	26·62	26·2
11	Kistna	955,076	20,468	19,213	39,681	41·27	6	204	...	8,278	1,028	3,368	23	30	149	95	29	326	348	9,075	22,633	0·005	0·21	...	8·61	1·07	3·50	0·34	0·36	9·42	23·54	27·42
12	Kurnool	868,783	16,219	15,720	31,939	36·73	69	104	...	17,579	1,291	2,465	19	32	106	42	3	202	333	9,110	31,153	0·08	0·12	...	20·22	1·43	2·83	0·23	0·38	10·48	35·85	32·52
13	Madura	1,706,275	31,103	30,321	61,424	35·99	3,170	98	253	4,761	3,500	4,038	21	40	152	74	...	287	204	24,613	40,924	1·86	0·06	0·15	2·79	2·05	2·37	0·17	0·12	14·42	23·98	21·02
14	Malabar	2,864,595	62,601	59,925	122,526	42·76	66	807	4	21,952	4,775	6,312	64	44	398	215	24	745	765	25,705	61,131	0·02	0·28	0·0013	7·66	1·67	2·20	0·26	0·27	8·97	21·33	23·52
15	Nellore	1,293,672	24,790	23,690	48,480	37·48	154	258	...	14,185	1,158	1,929	18	54	278	123	23	496	293	11,790	30,263	0·12	0·20	...	10·97	0·90	1·49	0·38	0·23	9·11	23·39	22·7
16	Nilgiris, The	83,197	2,527	2,344	4,871	58·45	...	10	11	1,331	571	586	1	...	22	2	...	25	7	1,102	3,643	...	0·12	0·13	15·97	6·85	7·03	0·30	0·08	13·22	43·72	38·44
17	North Arcot	1,770,765	37,744	36,102	73,846	41·72	963	750	...	8,432	3,666	2,479	49	36	257	60	3	405	259	23,620	40,574	0·54	0·42	...	4·76	2·07	1·40	0·23	0·15	13·35	22·92	22·72
18	Rāmnād	1,338,093	21,932	21,060	42,992	30·87	2,548	45	...	12,541	2,327	2,825	19	18	124	30	3	194	203	12,403	33,086	1·83	0·03	...	9·00	1·67	2·03	0·14	0·15	8·91	23·76	19·18
19	Salem	1,976,943	41,043	39,263	80,306	40·55	567	182	546	13,890	3,020	2,323	36	56	301	98	28	519	307	20,164	41,518	0·29	0·09	0·28	7·01	1·53	1·17	0·26	0·16	10·18	20·97	21·3
20	South Arcot	2,131,331	33,517	32,184	65,701	30·81	2,832	1,209	...	10,201	3,741	3,017	45	27	195	337	60	664	379	27,318	49,361	1·33	0·57	...	4·78	1 75	1·41	0·31	0 18	12·81	23·15	23·8
21	South Kanara	1,155,125	24,481	23,702	48,183	41·68	161	219	...	10,88	2,019	1,915	27	28	310	78	8	451	502	11,688	27,844	0·14	0·19	...	9·42	1·75	1·66	0·39	0·43	10·11	24·09	27·
22	Tanjore	1,935,036	30,952	29,038	59,990	30·65	3,547	833	...	4,076	1,796	1,437	40	38	231	133	12	454	938	36,321	49,402	1·81	0·43	...	2·08	0·92	0·73	0·23	0·48	18·56	25·24	25·
23	Tinnevelly	1,460,486	29,941	28,722	58,663	40·13	3,312	148	...	8,742	3,215	2,838	14	13	204	22	5	258	308	24,449	43,300	2·29	0·10	...	5·98	2·20	1·94	0·18	0·21	16·72	29·63	25·34
24	Trichinopoly	1,680,141	26,665	25,791	52,456	31·21	1,109	302	...	7,973	2,763	1,723	39	45	218	85	9	396	515	23,681	33,462	0·66	0·18	...	4·74	1·64	1·03	0·24	0·31	14·09	22·88	19·74
25	Vizagapatam	2,009,577	39,133	37,790	76,923	38·31	248	421	...	38,713	1,952	2,120	26	34	315	66	17	458	279	12,058	56,249	0·12	0·21	...	19·28	0·97	1·06	0·23	0·14	6·00	28·01	18·08
	Total, rural districts ...	35,861,988	695,806	667,511	1,363,317	37·98	21,125	7,342	1,402	311,251	60,073	68,729	608	745	5,052	2,539	323	9,267	8,593	396,609	887,391	0·6	0·2	0·04	8·7	1·7	1·9	0·3	0·2	11·2	24·9	24·44

No. VI.—*Births and Deaths registered from different causes in the districts and towns of the Madras Presidency during the year 1929—cont.*

1	2	3	4				5	6	7	8	9	10	11						12	13	14	15										
Number.	Districts and towns.	Population for which returns were received.	Births. Males.	Births. Females.	Births. Total.	Birth-rate per mille of population.	Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries. Suicides. Males.	Injuries. Suicides. Females.	Injuries. Wounds and accidents.	Injuries. Snake-bite and killed by wild beasts.	Injuries. Rabies.	Injuries. Total.	Deaths from child births.	All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population. Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	Deaths from child births.	All other causes.	From all causes. For the year.	From all causes. Mean for the previous 5 years.
	B.—Towns.																															
	Anantapur—																															
1	M.T.C. Hindupur	12,456	252	234	486	39.0	...	...	27	19	35	42	...	1	7	...	...	8	4	158	283	...	...	2.20	1.5	2.8	3.4	0.6	0.3	12.7	23.5	22.23
2	M.T.C. Anantapur	11,452	209	206	415	36.23	...	...	...	110	27	138	1	...	12	...	1	14	16	80	335	...	...	...	9.61	2.4	12.1	1.22	1.4	2.6	29.3	23.92
3	M.T.C. Tadpatri	11,293	135	136	271	24.2	...	2	...	120	12	9	...	...	...	...	...	...	9	44	196	...	0.17	...	10.71	1.07	0.8	...	0.8	3.93	7.5	22.34
4	T.C. Guntakal	12,519	281	332	613	49.04	...	1	...	53	31	30	...	...	2	...	...	2	11	272	400	...	0.08	...	4.2	2.48	2.4	1.6	0.88	21.76	32.00	23.12
5	T.C. Kadiri	11,619	298	266	564	48.6	13	...	...	89	29	12	...	1	...	...	...	1	5	186	335	1.12	...	...	7.67	2.5	1.03	0.09	0.43	16.03	33.20	23.16
6	T.C. Uravakonda	10,274	234	217	451	43.79	...	...	...	87	11	13	...	...	...	...	...	...	2	166	279	...	...	...	8.45	1.07	1.26	...	0.19	16.12	27.09	25.74
7	T.C. Gooty	8,720	152	157	309	35.4	...	...	...	30	18	139	...	...	1	...	...	1	4	97	289	...	...	...	3.4	2.06	15.94	0.01	0.04	11.12	33.14	17.6
8	T.C. Bukkapatnam	8,705	191	178	369	42.41	...	...	...	57	18	6	...	...	1	...	...	1	6	160	248	...	...	...	6.55	2.07	0.69	0.11	0.69	18.3	28.51	19.8
9	T.C. Dharmavaram	8,117	150	146	296	36.4	...	3	...	34	10	11	1	1	2	...	...	4	3	88	153	...	0.37	...	4.19	1.23	1.35	0.53	0.37	10.8	18.84	20.9
10	T.C. Penukonda	7,385	167	168	335	45.33	...	1	...	50	27	40	...	...	...	...	...	...	...	61	179	...	0.14	...	6.77	3.65	5.41	...	...	8.25	24.22	16.7
11	T.C. Yadiki	6,751	102	90	192	28.44	...	...	...	26	24	27	...	1	1	...	...	2	3	46	128	...	...	...	3.85	3.56	4.0	0.30	0.44	6.81	18.96	22.24
12	T.C. Pamidi	5,230	98	92	190	36.33	...	...	...	39	5	7	...	...	...	...	...	...	...	76	127	...	...	...	7.46	0.96	1.34	...	...	14.53	24.28	26.8
	Bellary—																															
13	M.T.C. Bellary	39,842	901	790	1,691	42.44	...	1	...	159	154	441	...	1	15	...	2	18	19	784	1,576	...	0.3	...	3.99	3.87	11.1	0.45	0.45	19.68	39.54	31.74
14	M.T.C. Adoni	31,232	693	710	1,403	46.46	...	...	...	17	156	230	...	...	11	...	2	13	14	340	770	...	...	...	0.56	5.17	7.61	0.43	0.46	12.58	25.5	19.78
15	M.T.C. Hospet	18,337	381	366	747	40.82	...	...	27	93	77	167	...	...	15	3	...	18	13	254	649	...	...	1.48	5.08	4.21	9.13	0.98	0.71	13.88	35.46	36.58
16	T.C. Yemmiganuru	10,879	291	265	556	51.0	...	...	...	189	5	26	...	...	...	...	...	...	...	107	327	...	...	...	17.3	0.46	2.39	...	...	9.82	30.0	24.5
17	T.C. Rayadrug	9,565	244	231	475	49.63	...	...	...	34	13	12	...	...	...	...	...	...	8	132	199	...	...	...	3.6	1.36	1.25	...	0.84	13.79	20.79	20.18
18	T.C. Kosgi	9,305	221	232	453	48.6	...	...	...	105	16	1	...	...	2	...	...	2	...	193	317	...	...	...	11.28	1.72	0.11	0.21	...	20.73	34.05	28.12
19	T.C. Harpanahalli	7,464	164	198	362	48.52	...	...	11	29	24	7	...	...	...	...	...	...	...	144	215	...	...	0.47	3.89	3.22	0.94	...	...	19.3	28.82	28.44
20	T.C. Kampli	7,298	116	120	236	32.33	...	...	...	34	6	25	...	...	2	1	...	3	9	51	128	...	...	...	4.66	0.82	3.42	0.41	1.23	6.99	17.53	22.34
21	T.C. Kotturu	6,372	131	120	251	39.4	...	...	66	9	56	11	2	1	1	...	...	4	4	135	285	...	...	10.36	1.41	8.79	1.73	0.63	0.63	21.19	44.74	35.6
22	T.C. Siruguppa	6,129	108	113	221	36.05	...	...	...	95	...	1	...	...	...	...	...	...	...	20	116	...	...	...	15.5	...	0.16	...	...	3.26	18.92	20.6
	Chingleput—																															
23	M.T.C. Conjeeveram	61,376	1,037	1,002	2,039	33.2	1	44	...	181	175	360	2	2	17	2	2	25	35	739	1,560	0.20	0.72	...	2.94	2.85	5.87	0.4	0.57	12.04	25.42	26.64
24	M.T.C. Saidapet	27,401	410	412	822	30.0	16	3	...	95	56	57	1	...	6	...	...	7	16	358	608	0.58	0.1	...	3.47	2.04	2.04	0.25	0.58	13.06	22.19	25.96
25	M.T.C. Chingleput	11,763	318	296	614	52.03	2	7	...	37	48	59	1	1	12	...	1	15	18	202	388	0.17	0.59	...	3.14	4.07	5.0	1.27	1.53	17.12	32.88	36.94
26	T.C. Sembiam	23,192	379	336	715	30.82	...	17	...	259	37	47	...	...	5	1	...	6	7	240	622	...	0.73	...	11.16	1.59	2.03	0.26	0.3	10.73	26.81	25.66
27	T.C. Poonamallee	17,549	293	252	545	31.14	9	1	...	121	71	31	...	...	2	...	...	2	4	128	367	0.51	0.06	...	6.91	4.06	1.77	0.11	0.23	7.31	20.97	27.56
28	T.C. Uttiramerur	10,638	227	208	435	41.03	10	7	...	53	24	16	...	...	...	1	...	1	1	208	320	0.94	0.66	...	5.0	2.26	1.51	0.09	0.09	19.62	30.19	31.86
29	T.C. Tiruvallur	9,861	144	155	299	30.3	...	1	...	35	16	11	...	...	...	...	...	...	...	151	214	...	0.1	...	3.55	1.62	1.12	...	...	15.31	21.7	27.46
30	T.C. Pallavaram (C.)	8,753	64	45	109	12.46	...	...	...	23	7	16	...	...	1	...	...	1	1	12	60	...	...	...	2.63	0.8	1.83	0.11	0.11	1.37	6.86	8.66
31	T.C. Tiruvottiyur	8,100	102	95	197	24.32	...	5	...	68	55	7	...	...	...	...	...	...	1	113	249	...	0.62	...	8.4	6.8	0.86	...	0.12	13.95	30.74	28.44
32	T.C. Tirukkalikkunram	7,957	161	142	303	38.07	...	...	...	14	10	6	...	...	...	...	...	...	...	132	162	...	...	...	1.76	1.26	0.75	...	...	16.58	20.35	24.84
33	T.C. Madurantakam	7,133	172	136	308	43.2	9	4	...	79	17	2	...	...	...	...	...	...	...	60	171	1.26	0.56	...	11.08	2.38	0.28	...	...	8.4	23.98	28.32
4	T.C. Sriperumbudur	5,853	107	103	210	35.9	...	...	...	35	6	2	...	...	1	...	...	1	1	78	123	...	...	...	5.98	1.02	0.34	0.17	0.17	13.33	21.03	27.48
35	T.C. Cheyur	6,948	107	106	213	30.65	...	3	...	27	8	4	...	...	...	...	...	...	1	66	109	...	0.43	...	3.88	1.15	0.58	...	0.14	9.5	15.69	21.34
	Chittoor—																															
36	M.T.C. Chittoor	17,941	307	313	620	34.64	2	...	...	48	11	31	...	...	8	...	...	8	3	198	301	0.11	...	...	2.68	0.61	1.73	0.45	0.17	11.06	16.82	28.74
37	M.T.C. Tirupati	17,434	263	232	495	28.45	...	5	...	135	92	88	1	1	2	1	...	5	16	210	551	...	0.29	...	7.76	5.29	5.06	0.29	0.92	12.07	31.67	31.16
38	T.C. Kalahasti	12,266	240	237	477	38.78	...	...	...	104	17	48	...	...	...	...	...	...	8	138	315	...	...	...	8.46	1.38	3.90	...	0.65	11.22	25.61	28.16
39	T.C. Madanapalle	8,595	196	163	359	41.74	...	16	...	84	17	52	1	1	4	...	...	6	8	43	226	...	1.86	...	9.77	1.28	6.05	0.69	0.93	5.0	26.28	18.62
40	T.C. Punganur	7,246	227	186	413	56.97	...	...	...	48	9	23	...	...	3	...	...	3	6	128	217	...	...	...	6.62	1.24	3.17	0.41	0.83	17.66	29.93	24.54
41	T.C. Tiruttani	5,815	76	66	142	24.4	...	...	...	20	8	4	...	1	2	...	...	3	4	72	111	...	...	...	3.44	1.37	0.69	0.52	0.69	12.37	19.07	24.76
	Coimbatore—																															
42	M.T.C. Coimbatore	65,788	1,446	1,371	2,817	42.81	9	25	...	204	285	235	2	2	32	2	2	40	27	1,182	2,005	0.137	0.38	...	3.1	4.3	3.57	0.6	0.41	17.96	30.47	29.5
43	M.T.C. Erode	22,911	178	146	324	14.15	...	...	...	94	36	16	...	...	13	...	...	13	...	196	355	...	...	...	4.1	1.57	0.70	0.57	...	8.56	15.5	17.22
44	M.T.C. Dharapuram	16,124	315	325	640	39.75	108	2	...	24	112	88	...	...	5	...	...	5	5	203	547	6.7	0.12	...	1.5	6.96	5.47	0.31	0.31	12.6	33.98	29.66
45	M.T.C. Pollachi	11,875	295	236	531	44.62	8	9	...	48	52	83	...	...	13	1	1	21	12	234	467	0.67	0.76	...	4.03	4.37	6.97	1.76	1.0	19.66	39.24	37.08
46	M.T.C. Tiruppur	10,851	198	169	367	33.67	...	...	...	32	28	32	...	...	5	1	[illegible]	6	8	138	264	...	...	...	4.77	2.57	2.93	0.55	0.73	12.66	24.22	23.88
47	M.T.C. Udamalpet	10,236	220	186	406	39.8	3	...	...	52	18	36	...	...	11	1	...	12	3	115	239	0.29	...	...	5.09	1.76	3.53	1.18	0.29	11.27	23.43	29.02
48	T.C. Gobichettipalaiyam	14,102	287	314	601	42.62	...	...	...	129	38	27	...	...	6	...	...	6	...	152	352	...	...	...	9.15	2.69	1.91	0.43	...	10.78	24.96	23.46

No. VI.—*Births and Deaths registered from different causes in the districts and towns of the Madras Presidency during the year 1929—cont.*

1	2	3	4				5	6	7	8	9	10	11						12	13	14	15										
Number.	Districts and towns.	Population for which returns were received.	Births. Males.	Births. Females.	Births. Total.	Birth-rate per mille of population.	Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries. Suicides. Males.	Injuries. Suicides. Females.	Injuries. Wounds and accidents.	Injuries. Snake-bite and killed by wild beasts.	Injuries. Rabies.	Injuries. Total.	Deaths from child births.	All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population. Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	Deaths from child births.	All other causes.	From all causes. For the year.	From all causes. Mean for the previous 5 years.
	B.—Towns—cont.																															
	Coimbatore—*cont.*																															
49	T.C. Koliegal	13,266	197	229	426	32.03	...	...	...	48	38	30	...	...	4	1	...	5	...	175	286	...	...	...	3.61	2.86	2.26	0.38	...	13.16	21.5	21.2
50	T.C. Mettupalaiyam	11,118	190	205	395	35.59	...	3	...	80	91	10	...	...	1	...	...	1	...	162	347	...	0.27	...	7.21	8.2	0.9	0.09	...	14.59	31.26	29.64
51	T.C. Kurichchi	9,703	168	156	324	33.4	...	1	...	12	3	14	1	...	1	...	...	2	1	109	143	...	0.1	...	1.23	0.31	1.4	0.21	0.1	11.24	14.64	15.22
52	T.C. Kottur	7,108	147	138	285	40.08	3	...	...	36	33	21	...	...	...	...	...	...	1	78	172	0.42	...	...	5.06	4.64	2.95	...	0.14	10.97	24.19	31.20
53	T.C. Palladam	6,506	114	105	219	33.64	...	...	...	25	19	8	1	...	...	...	...	1	1	65	119	...	...	...	3.84	2.92	1.23	0.15	0.15	9.98	18.28	21.34
54	T.C. Bhavani	5,536	180	167	347	62.64	...	...	...	13	18	73	...	...	...	...	...	...	...	132	236	...	...	...	2.35	3.25	13.18	...	...	23.83	42.6	33.34
	Cuddapah—																															
55	M.T.C. Cuddapah	19,517	353	328	681	34.93	15	...	...	79	43	104	2	...	19	2	...	23	14	262	540	0.77	...	...	4.05	2.2	5.33	1.18	0.72	13.44	27.69	23.84
56	M.T.C. Proddatur	15,906	331	334	665	41.82	...	5	...	107	85	61	...	...	8	5	1	14	13	203	438	...	0.31	...	6.73	2.2	3.84	0.88	0.82	12.77	27.55	20.68
57	T.C. Jammalamadugu	14,584	201	181	382	26.16	...	2	...	596	6	18	1	...	1	...	...	2	6	230	860	...	0.14	...	40.82	0.41	1.23	0.14	0.41	15.75	58.9	28.90
58	T.C. Rayachoti	8,072	161	150	311	38.54	...	...	...	36	4	4	...	...	1	...	...	1	2	55	102	...	...	...	4.46	0.5	0.5	0.12	0.25	6.82	12.64	16.24
59	T.C. Kamalapuram	6,902	69	87	156	22.61	...	...	...	67	1	...	...	...	...	...	...	...	2	24	94	...	...	...	9.71	0.14	...	...	0.29	3.48	13.62	18.28
60	T.C. Razampeta	5,921	94	87	181	30.57	...	...	...	89	...	8	...	...	...	...	...	...	1	14	112	...	...	...	15.03	...	1.35	...	0.17	2.36	18.92	22.10
61	T.C. Vempalli	5,596	92	92	184	32.86	...	...	...	29	18	18	...	...	...	...	...	...	...	33	98	...	...	...	5.18	3.21	3.21	...	...	5.89	17.5	19.70
62	T.C. Badvel	5,246	83	79	162	30.86	...	...	...	40	5	29	...	...	...	...	...	...	...	43	117	...	...	...	7.63	0.95	5.52	...	...	8.19	22.29	27.50
	Ganjām—																															
63	M.T.C. Berhampur	32,731	631	517	1,148	35.11	4	1	...	191	112	43	...	4	11	3	...	18	11	273	653	0.12	0.03	...	5.84	3.43	1.31	0.55	0.34	8.35	19.97	19.3
64	M.T.C. Parlakimedi	18,719	314	317	831	33.74	3	...	...	107	106	53	1	...	9	1	1	12	10	176	467	0.16	...	...	5.72	5.67	2.83	0.64	0.53	9.41	24.97	23.52
65	M.T.C. Chicacole	16,298	260	257	517	31.72	...	1	...	139	108	19	...	...	12	...	...	12	11	98	388	...	0.06	...	8.53	6.63	1.17	0.74	0.67	6.01	33.8	22.40
66	T.C. Ichchapuram	9,552	132	83	215	22.51	3	...	...	86	3	...	...	...	...	1	...	1	...	8	101	0.31	...	...	9.0	0.31	...	0.1	...	0.84	10.58	13.28
67	T.C. Tekkali	7,898	101	106	207	26.2	...	...	...	74	17	7	...	...	1	1	...	2	5	43	148	...	...	...	9.37	2.15	0.89	0.25	0.63	5.44	18.73	22.58
68	T.C. Sompeta	6,949	124	122	246	35.4	57	...	...	80	11	7	...	...	2	...	...	2	6	44	207	8.2	...	...	11.51	1.58	1.0	0.29	0.86	6.33	29.78	20.00
69	T.C. Russellkonda	6,134	123	91	214	34.91	...	...	...	100	1	2	...	...	...	...	...	...	...	27	130	...	...	...	16.31	0.16	0.33	...	...	4.4	21.2	16.70
70	T.C. Narasimmapeta	5,684	102	103	205	36.09	3	...	...	74	...	...	...	...	1	3	...	4	2	23	106	0.53	...	...	13.03	...	...	0.7	0.35	4.04	18.67	21.54
	Godāvari, East—																															
71	M.T.C. Rajahmundry	53,791	967	927	1,894	35.2	...	...	...	464	92	96	3	1	26	2	2	34	53	852	1,591	...	...	...	8.62	1.71	1.78	0.63	0.98	15.84	29.57	34.66
72	M.T.C. Cocanada	53,348	969	955	1,924	37.0	...	1	...	423	89	97	1	...	14	1	1	17	25	790	1,442	...	0.02	...	7.94	1.67	1.82	0.32	0.47	14.82	27.05	29.18
73	M.T.C. Peddapuram	14,620	223	224	447	30.62	...	...	...	112	7	13	2	3	3	1	...	9	15	129	295	...	...	...	7.67	0.48	0.89	0.02	1.03	9.52	20.2	20.68
74	T.C. Pithapuram	15,790	280	237	517	32.72	...	...	...	152	11	9	...	...	7	...	...	7	4	225	408	...	...	...	9.62	0.7	0.57	0.44	0.25	14.24	25.82	27.22
75	T.C. Samalkot	15,326	194	200	394	25.75	...	2	...	174	5	1	2	...	1	...	...	3	...	54	239	...	0.13	...	11.37	0.33	0.07	0.20	...	3.53	15.62	20.02
76	T.C. Amalapuram	13,619	265	247	512	37.65	...	...	...	81	32	42	...	...	3	...	...	3	10	138	306	...	...	...	5.96	2.35	3.09	0.22	0.74	10.15	22.5	19.88
77	T.C. Mandapeta	10,251	194	180	374	36.31	...	2	...	89	...	64	...	...	4	...	...	4	6	115	280	...	0.19	...	8.64	...	6.21	0.39	0.58	11.14	27.18	29.26
78	T.C. Tuni	9,905	138	129	267	26.97	...	...	...	157	16	33	...	...	2	...	...	2	3	27	238	...	...	...	15.86	1.62	3.33	0.2	0.3	2.73	24.04	17.96
79	T.C. Dowlaishweram	9,799	119	106	225	22.96	...	...	...	43	1	...	...	...	...	...	...	...	...	82	126	...	...	...	4.39	0.1	...	...	...	8.37	12.86	17.74
80	T.C. Ramachandrapuram	6,149	127	111	238	38.7	...	...	...	79	3	22	...	...	1	...	...	1	3	5	113	...	...	...	12.85	0.49	3.58	0.16	0.49	0.81	18.37	25.9
81	T.C. Bikkavolu	5,559	70	52	122	21.94	...	...	...	36	2	5	...	...	...	...	...	...	...	11	54	...	...	...	6.47	0.36	0.9	...	...	1.98	9.71	15.44
	Godāvari, West—																															
82	M.T.C. Ellore	45,862	923	924	1,847	40.24	4	9	...	203	47	148	1	3	5	...	1	10	20	422	863	0.09	0.2	...	4.42	1.03	3.22	0.22	0.44	9.2	18.8	18.60
83	M.T.C. Palakollu	14,535	243	197	440	30.34	1	20	...	81	32	36	...	...	2	...	...	2	6	108	286	0.07	1.38	...	5.59	2.21	2.48	0.14	0.41	7.45	19.72	22.78
84	T.C. Penukonda	13,476	285	294	579	42.89	...	...	...	97	30	40	1	2	4	1	...	8	1	278	454	...	...	...	7.19	2.22	2.96	0.59	0.07	20.59	33.63	32.02
85	T.C. Narasapur	13,159	284	292	576	43.64	...	...	...	191	2	31	...	1	1	...	...	2	17	158	401	...	...	...	14.47	0.15	2.35	0.15	1.29	11.97	30.38	25.90
86	T.C. Attili	11,375	265	262	527	46.23	...	...	...	159	6	88	...	2	...	...	...	2	4	132	391	...	...	...	13.95	0.53	7.72	0.18	0.35	11.58	34.3	34.00
87	T.C. Achanta	8,315	183	182	365	43.87	...	...	...	60	8	59	...	1	...	...	...	1	5	103	236	...	...	...	7.21	0.96	7.09	0.12	0.6	12.38	28.37	24.30
88	T.C. Tanuku	8,071	195	183	378	46.84	...	...	...	53	23	18	...	1	...	...	1	2	1	152	249	...	...	...	6.57	2.85	2.23	0.25	0.12	18.84	30.80	31.40
89	T.C. Nidadavolu	7,854	168	155	323	41.15	...	...	...	75	9	25	...	...	...	...	...	...	4	77	190	...	...	...	9.55	1.15	3.18	...	0.51	9.8	24.2	21.60

No. VI.—*Births and Deaths registered from different causes in the districts and towns of the Madras Presidency during the year 1929*—cont.

1	2	3	4				5	6	7	8	9	10	11						12	13	14	15										
Number.	Districts and towns.	Population for which returns were received.	Births. Males.	Births. Females.	Births. Total.	Births. Birth-rate per mille of population.	Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries. Suicides. Males.	Injuries. Suicides. Females.	Injuries. Wounds and accidents.	Injuries. Snake-bite and killed by wild beasts.	Injuries. Rabies.	Injuries. Total.	Deaths from child births.	All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population. Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	Deaths from child births.	All other causes.	From all causes. For the year.	From all causes. Mean for the previous 5 years.
	B.—Towns—cont.																															
	Guntūr—																															
90	M.T.C. Guntūr	48,184	1,297	1,223	2,520	52·28	...	...	...	271	77	173	4	4	47	2	6	63	103	1,080	1,767	...	...	...	5·62	1·60	3·59	1·31	2·14	22·41	36·66	37·82
91	M.T.C. Tenali	23,230	356	314	670	28·88	...	1	...	162	91	123	1	1	4	...	...	6	14	108	505	...	0·04	...	6·98	3·92	5·3	0·26	0·6	4·66	21·77	20·58
92	M.T.C. Chirala	15,323	220	209	429	28·04	...	1	...	76	39	19	...	...	4	...	...	4	7	180	326	...	0·07	...	4·97	2·55	1·24	0·26	0·46	11·76	21·3	21·99
93	M.T.C. Ongole	14,276	314	290	604	42·24	...	...	...	56	38	44	...	...	9	...	...	9	6	241	394	...	...	...	3·92	2·66	3·98	0·63	0·42	16·85	27·55	30·74
94	M.T.C. Narasaraopet	11,308	168	177	345	30·53	...	...	...	104	31	62	...	1	3	...	...	4	...	52	253	...	...	...	9·2	2·74	5·49	0·35	...	4·6	22·39	24·38
95	T.C. Bapatla	10,501	199	173	369	35·14	...	...	...	110	15	10	...	...	...	...	...	...	8	73	216	...	...	...	10·48	1·43	0·95	...	0·76	6·95	20·57	23·36
96	T.C. Vetapalem	10,288	180	166	346	33·59	...	...	...	84	3	60	...	...	...	...	...	...	4	61	212	...	...	...	8·16	0·29	5·83	...	0·39	5·92	20·58	24·50
97	T.C. Mangalagiri	9,953	151	180	331	33·23	...	...	...	94	4	19	...	...	1	...	...	1	...	122	240	...	...	...	9·44	0·4	1·91	0·1	...	12·25	24·1	26·96
98	T.C. Alluru-Kotapatnam	9,671	122	117	239	24·72	...	...	...	59	1	35	...	...	1	...	...	1	2	44	142	...	...	...	6·10	0·1	3·62	0·1	0·21	4·55	14·68	15·48
99	T.C. Ponnur	9,607	112	111	223	23·21	...	...	...	33	2	8	...	...	1	...	...	1	4	73	121	...	...	...	3·43	0·21	0·83	0·1	0·42	7·6	12·6	17·84
100	T.C. Chebrolu	9,461	164	143	307	32·45	...	...	...	115	1	65	...	...	7	1	2	10	4	69	264	...	...	...	12·15	0·1	6·87	1·06	0·42	7·29	27·9	20·90
101	T.C. Adanki	8,485	106	94	200	23·56	...	...	...	81	9	19	...	...	...	1	...	1	2	33	145	...	...	...	9·54	1·06	2·23	0·12	0·23	3·88	17·08	20·96
102	T.C. Vinukonda	8,349	142	171	313	37·49	...	...	...	100	22	25	2	1	...	...	...	3	3	154	207	...	...	...	11·98	2·63	2·99	0·35	0·35	18·44	36·77	27·70
103	T.C. Chilakalurpet	7,032	127	126	253	33·98	...	...	...	59	9	46	1	...	...	1	...	2	...	109	225	...	...	...	8·39	1·28	6·54	0·28	...	15·5	32·0	28·24
104	T.C. Kollipara	6,616	140	140	280	42·29	...	...	...	63	16	9	...	...	3	...	...	3	2	79	172	...	...	...	9·51	2·41	1·35	0·45	0·3	11·93	25·98	23·30
105	T.C. Kolluru	6,215	108	96	204	32·96	...	...	...	49	...	34	...	...	1	1	...	2	2	17	104	...	...	...	8·04	...	5·63	0·48	0·48	2·89	16·88	16·88
106	T.C. Suttenapalle	5,830	122	119	241	41·34	...	...	...	37	4	35	...	...	2	6	...	8	2	69	155	...	...	...	6·35	0·69	6·0	1·37	0·34	11·84	26·59	29·54
107	T.C. Nizampatnam	5,600	141	141	282	50·36	...	...	...	21	2	28	...	...	...	4	...	4	...	75	130	...	...	...	3·75	0·36	5·0	0·71	...	13·39	23·21	23·98
108	T.C. Gurzala	5,130	123	98	221	43·08	...	...	...	18	7	11	...	...	...	...	...	...	...	111	147	...	...	...	3·5	1·36	2·14	...	...	21·64	28·66	34·04
109	T.C. Repalle	5,080	124	126	250	49·21	...	...	...	15	5	6	...	...	1	...	...	1	...	120	147	...	...	...	2·95	0·98	1·18	0·19	...	23·62	28·94	31·34
	Kistna—																															
110	M.T.C. Bezwada	44,159	1,135	1,059	2,194	49·64	...	...	...	220	62	124	...	...	30	1	1	32	28	912	1,378	...	...	...	4·98	1·4	2·8	0·72	0·63	20·63	31·17	35·90
111	M.T.C. Masulipatam	43,940	818	795	1,613	36·74	...	...	...	87	232	85	1	...	5	1	1	8	29	638	1,079	...	...	...	1·98	5·28	1·94	0·18	0·66	14·53	24·58	29·04
112	T.C. Gudivada	10,621	253	222	475	44·81	...	...	...	102	20	12	...	...	7	6	...	13	9	126	282	...	...	...	9·62	1·89	1·13	1·23	8·5	11·89	26·60	34·16
113	T.C. Nuzvid	10,052	211	197	408	40·4	...	...	...	56	10	27	...	1	3	...	...	4	4	152	253	...	...	...	0·55	0·99	2·07	0·4	0·4	15·05	25·05	28·14
114	T.C. Jaggayyapeta	9,027	163	123	285	31·56	...	...	...	72	13	20	...	...	...	...	1	1	3	69	178	...	...	...	7·97	1·44	2·21	0·11	0·33	7·64	19·71	23·78
115	T.C. Valuru	7,348	71	69	140	19·04	...	...	...	33	8	9	...	...	...	...	...	...	1	22	73	...	...	...	4·49	1·10	1·22	...	0·14	2·99	9·93	21·94
116	T.C. Pedana	6,535	107	96	203	31·04	...	...	...	50	6	8	...	...	...	1	7	8	1	47	120	...	...	...	7·64	0·92	1·22	1·22	0·15	7·19	18·35	27·06
	Kurnool—																															
117	M.T.C. Kurnool	27,908	667	663	1,330	47·67	...	1	1	168	90	127	...	...	7	3	...	10	29	513	939	...	0·04	0·04	6·03	3·23	4·55	0·36	1·04	18·39	33·66	30·82
118	M.T.C. Nandyal	18,124	234	195	429	23·70	...	3	...	344	15	11	1	...	4	...	...	5	14	130	522	...	0·17	...	19·0	0·83	0·61	0·28	7·73	7·18	28·84	27·48
	Madras—																															
119	M.T.C. Madras	516,837	11,666	11,032	22,698	43·9	15	503	...	2,511	3,085	8,695	17	9	81	5	...	112	304	8,898	22,123	0·03	1·0	...	4·9	6·0	12·9	0·2	0·6	17·2	42·8	45·75
	Madura—																															
120	M.T.C. Madura	138,896	2,922	2,869	5,791	41·66	175	3	...	183	619	1,397	3	1	79	5	3	91	74	2,426	4,968	1·26	0·02	...	1·31	4·46	10·06	0·66	0·53	17·46	35·77	35·46
121	M.T.C. Dindigul	30,922	718	647	1,365	44·17	142	...	...	13	217	143	...	1	9	...	1	11	15	542	1,083	4·6	...	...	0·42	7·02	4·63	0·36	0·49	17·54	35·05	29·40
122	M.T.C. Bodinayakkanur	20,341	546	414	1,030	50·74	317	...	...	95	86	44	...	3	2	1	...	6	11	204	763	15·62	...	...	4·63	4·24	2·17	0·3	0·54	10·05	37·59	28·74
123	M.T.C. Palni	17,501	361	329	690	39·43	20	...	...	83	108	31	...	1	8	...	...	9	7	334	529	1·14	...	...	4·74	6·17	1·77	0·51	0·4	19·09	33·83	30·38
124	M.T.C. Periyakulam	16,478	436	361	797	48·3	32	...	70	41	74	76	...	...	8	...	2	10	9	363	675	1·94	...	4·24	2·48	4·48	4·61	0·61	0·55	22·0	40·91	39·04
125	M.T.C. Kodaikanal	4,283	127	119	246	57·48	...	...	...	6	4	40	...	...	2	...	...	2	2	62	116	...	...	...	1·4	0·93	9·35	0·47	0·47	14·49	27·10	23·82
126	T.C. Kambam	16,481	296	278	574	34·79	71	2	102	25	21	6	1	...	2	...	...	3	1	259	490	4·3	0·12	6·18	1·51	1·27	0·36	0·18	0·06	15·7	29·7	26·12
127	T.C. Chinnamanur	11,812	205	225	430	36·44	64	...	...	4	28	...	...	...	...	...	...	...	1	245	312	5·43	...	...	0·34	2·37	...	...	0·08	20·76	28·98	26·76
128	T.C. Tirumangalam	10,715	198	170	368	34·39	21	...	...	175	42	21	...	1	...	...	...	1	1	26	287	1·96	...	...	16·36	3·93	1·96	0·09	0·09	2·43	26·82	27·28
129	T.C. Nattam	9,624	160	168	328	34·1	...	...	...	45	21	8	...	...	...	1	...	1	2	118	195	...	...	...	4·68	2·18	0·83	0·1	0·21	12·27	20·27	22·00
130	T.C. Sholavandan	9,500	165	149	314	33·05	60	...	...	20	4	3	...	...	1	...	...	1	3	237	328	6·32	...	...	2·1	0·42	0·32	0·11	0·32	24·95	34·63	33·60
131	T.C. Uttamapalaiyam	9,357	178	180	358	38·25	24	...	36	10	43	54	1	...	8	...	...	9	1	77	254	2·56	...	3·85	1·07	4·59	5·77	0·96	0·11	8·23	27·14	25·38
132	T.C. Tirupparankunram	5,254	70	75	154	29·33	5	...	...	7	20	44	...	...	...	2	1	3	2	49	130	0·95	...	...	1·33	3·81	8·38	0·57	0·38	9·33	24·76	20·72

No. VI.—*Births and Deaths registered from different causes in the districts and towns of the Madras Presidency during the year 1929*—cont.

1	2	3	4				5	6	7	8	9	10	11						12	13	14	15										
Number.	Districts and towns.	Population for which returns were received.	Births. Males.	Births. Females.	Births. Total.	Births. Birth-rate per mille of population.	Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries. Suicides. Males.	Injuries. Suicides. Females.	Injuries. Wounds and accidents.	Injuries. Snake-bite and killed by wild beasts.	Injuries. Rabies.	Injuries. Total.	Deaths from child births.	All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population. Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	Deaths from child births.	All other causes.	From all causes. For the year.	From all causes. Mean for the previous 5 years.
	B.—Towns—cont.																															
	Malabar—																															
133	M.T.C. Calicut	82,334	1,354	1,338	2,692	32·71	9	254	21	231	177	265	2	3	7	...	1	13	33	1,390	2,393	0·11	3·09	0·26	2·81	2·15	3·22	0·16	0·4	16·89	29·08	31·36
134	M.T.C. Palghat	45,487	902	902	1,840	40·44	2	98	...	63	122	238	...	1	30	1	3	35	19	671	1,248	0·09	2·15	...	1·38	2·68	5·23	0·77	0·42	14·75	27·43	28·62
135	M.T.C. Cannanore	27,705	534	493	1,027	37·08	1	103	...	106	83	130	1	...	4	...	1	6	13	489	931	0·04	3·72	...	3·83	3·0	4·69	0·22	0·47	17·65	33·61	27·40
136	M.T.C. Tellicherry	27,576	512	448	960	34·78	...	146	...	88	88	166	4	...	15	...	1	20	9	448	965	...	5·29	...	3·19	3·19	6·01	0·72	0·33	16·23	34·96	27·74
137	M.T.C. Cochin	20,637	449	437	880	42·72	...	50	...	130	70	115	...	...	5	...	...	5	5	293	668	...	2·43	...	6·31	3·4	5·58	0·24	0·24	14·22	32·43	25·52
138	T.C. Ponnani	13,345	309	348	657	49·21	...	...	...	102	70	31	...	...	3	...	...	3	4	253	463	...	...	...	7·65	5·25	2·33	0·23	0·3	18·47	34·73	32·48
139	T.C. Badagara	9,804	180	159	339	34·58	...	...	...	59	49	43	1	...	2	...	...	3	1	109	264	...	...	...	6·01	5·00	4·32	0·3	0·1	10·95	26·4	24·36
	Nellore—																															
140	M.T.C. Nellore	35,863	1,004	921	1,925	53·62	2	2	...	201	74	104	2	2	16	1	3	24	35	784	1,226	0·06	0·06	...	5·6	2·06	2·9	0·67	0·97	21·84	34·15	38·98
141	T.C. Venkatagiri	14,289	244	256	500	34·97	...	28	...	114	11	23	...	...	3	...	2	5	21	140	342	...	1·96	...	7·97	0·77	1·61	0·35	1·47	9·79	23·92	18·26
142	T.C. Alluru	9,072	168	163	331	36·49	1	...	...	27	19	18	...	...	...	1	...	1	5	89	160	0·11	...	...	2·98	2·09	1·98	0·11	0·55	9·81	17·64	17·00
143	T.C. Kavali	8,800	158	147	305	34·66	...	...	...	58	8	18	...	...	3	...	...	3	2	35	122	...	...	...	6·6	0·91	1·82	0·34	0·23	3·98	13·86	15·82
144	T.C. Gudur	8,373	156	131	287	34·29	...	10	...	60	16	32	...	...	5	...	...	5	2	12	137	...	1·19	...	7·17	1·91	3·82	0·6	0·24	1·43	16·37	25·74
145	T.C. Kandukur	8,333	149	143	292	35·05	...	...	...	78	5	4	...	2	3	...	...	5	8	98	198	...	...	...	9·36	0·6	0·48	1·6	0·96	11·76	23·77	21·10
146	T.C. Nayudupet	6,442	140	118	258	40·06	...	...	...	82	...	...	...	...	...	1	1	2	3	54	141	...	...	...	12·73	...	...	0·31	0·47	8·39	21·89	15·48
	Nilgiris, The—																															
147	M.T.C. Ootacamund	19,467	426	428	854	43·79	...	2	...	10	67	205	...	...	13	...	...	13	10	269	576	...	0·1	...	0·51	3·44	10·51	0·67	0·51	13·79	29·54	30·24
148	M.T.C. Coonoor	12,215	240	222	462	37·87	...	...	...	16	47	86	...	...	4	...	2	6	3	104	262	...	...	...	1·31	3·85	7·05	0·49	0·25	8·52	21·48	24·70
149	T.C. Wellington	6,817	49	47	96	14·08	...	1	...	3	14	...	...	...	...	...	...	...	...	68	86	...	0·15	...	0·44	2·05	...	...	...	9·97	12·61	19·28
	North Arcot—																															
150	M.T.C. Vellore	50,210	1,124	1,035	2,159	43·01	48	126	1	111	138	211	2	...	17	1	2	22	39	589	1,285	0·96	2·51	0·02	2·21	2·75	4·2	0·44	0·78	11·73	25·6	18·46
151	M.T.C. Gudiyattam	22,803	444	405	849	37·24	...	44	...	99	69	42	...	...	9	...	...	9	11	329	603	...	1·93	...	4·34	3·03	1·84	0·39	0·48	14·43	26·45	21·62
152	M.T.C. Tiruvannamalai	21,912	516	533	1,048	47·85	22	30	...	218	116	4	1	4	7	2	...	14	17	274	695	1·0	1·37	...	9·95	5·3	0·18	0·64	0·78	12·51	31·74	30·84
153	M.T.C. Vaniyambadi	20,090	302	274	576	28·66	2	13	...	7	21	86	...	1	2	...	...	3	9	238	379	0·1	0·65	...	0·35	1·04	4·28	0·15	0·45	11·84	18·86	19·62
154	M.T.C. Tiruppattur	16,275	435	382	817	50·12	7	19	1	69	49	31	...	...	3	...	1	4	10	240	430	0·43	1·17	0·06	4·23	3·01	1·9	0·25	0·61	14·72	26·38	20·28
155	M.T.C. Walajapet	10,013	228	231	459	45·9	...	4	...	29	46	40	...	...	5	...	1	6	6	212	343	...	0·4	...	2·9	4·6	4·0	0·6	0·6	21·2	34·3	29·74
156	T.C. Ambur	19,220	511	501	1,012	52·71	2	24	8	89	24	22	...	...	...	...	...	...	8	432	619	0·1	1·25	0·42	4·64	1·25	1·15	...	0·42	22·5	32·24	27·00
157	T.C. Arni	14,286	342	341	683	47·76	10	2	...	79	53	67	...	1	6	...	...	7	4	184	406	0·7	0·14	...	5·52	3·71	4·69	0·49	0·28	12·89	28·4	30·16
158	T.C. Arcot	11,450	260	227	487	42·35	44	...	...	40	37	27	...	...	2	...	...	2	...	115	265	3·83	...	...	3·48	3·22	2·35	0·17	...	10·0	23·04	25·40
159	T.C. Tiruvattur	10,327	223	210	433	42·04	...	...	...	52	26	9	...	...	...	...	...	...	2	165	254	...	...	...	5·05	2·52	0·87	...	0·19	16·02	24·67	30·68
160	T.C. Arkonam	9,954	188	171	359	36·08	...	1	...	56	21	21	...	...	2	...	...	2	3	142	246	...	0·1	...	5·63	2·11	2·11	0·2	0·3	14·27	24·72	25·52
161	T.C. Polur	9,903	262	236	498	50·82	9	...	...	41	17	14	...	...	...	...	...	...	1	167	249	0·92	...	...	4·18	1·73	1·43	...	0·1	17·04	25·41	24·90
162	T.C. Ranipettai	8,307	230	223	453	54·51	29	2	...	58	32	46	...	...	4	...	...	4	18	107	296	3·49	0·24	...	6·98	3·85	5·54	0·48	2·17	12·88	35·62	24·94
163	T.C. Sholinghur	8,139	172	135	307	37·71	20	...	...	29	12	22	...	...	5	...	...	5	5	104	197	2·46	...	...	3·56	1·47	2·7	0·61	0·61	12·78	24·2	25·64
164	T.C. Visharam	7,975	154	150	304	38·1	11	...	...	38	16	16	...	...	...	...	...	...	5	123	209	1·38	...	...	4·76	2·0	2·0	...	0·63	15·41	26·19	23·90
165	T.C. Pallikonda	7,755	154	185	339	43·69	1	8	...	48	10	18	1	1	1	...	...	3	2	133	223	0·13	1·03	...	6·19	1·29	2·32	0·39	0·25	17·14	28·74	24·56
166	T.C. Kaverippakkam	7,717	134	131	265	34·33	...	...	...	21	5	16	...	...	1	2	...	3	4	110	159	...	...	...	2·72	0·65	2·07	0·39	0·52	14·25	20·6	21·18
167	T.C. Allizabad	7,156	132	147	279	38·97	...	11	...	23	33	3	...	...	2	...	...	2	3	121	196	...	1·54	...	3·21	4·61	0·42	0·28	0·42	16·9	27·37	21·46
168	T.C. Pernampattu	6,954	145	150	295	42·45	...	60	...	18	11	3	...	...	...	...	...	...	7	63	162	...	8·63	...	2·59	1·58	0·43	...	1·0	9·06	23·31	18·94
169	T.C. Chetput	6,823	155	179	334	48·97	7	1	...	7	33	12	...	...	...	...	...	...	...	80	140	1·03	0·14	...	1·03	4·83	1·76	...	...	11·73	20·53	20·50
170	T.C. Wandiwash	6,770	135	131	266	39·29	...	3	...	10	25	23	...	...	1	...	...	1	5	62	129	...	0·43	...	1·48	3·69	3·4	0·14	0·74	9·16	19·05	21·94
	Ramnad—																															
171	M.T.C. Srivilliputtur	31,195	610	590	1,200	38·46	13	...	...	225	128	55	...	...	10	5	2	17	14	396	848	0·42	...	...	7·21	4·1	1·76	0·54	0·45	12·69	27·18	28·20
172	M.T.C. Virudhunagar	21,821	470	409	879	40·32	109	...	...	243	118	72	...	...	11	...	...	11	11	337	901	5·0	...	...	11·15	5·41	3·3	0·5	0·5	15·46	41·03	35·02
173	M.T.C. Sivakasi	14,617	221	217	438	30·0	44	...	...	77	32	25	...	...	3	...	...	3	1	121	303	3·01	...	...	5·15	2·19	1·71	0·21	0·07	8·29	20·75	20·22
174	T.C. Karaikkudi	15,350	187	180	367	23·83	21	14	...	124	73	25	...	...	...	...	...	...	...	260	517	1·36	0·91	...	8·05	4·74	1·62	...	...	16·88	33·57	31·85
175	T.C. Rajapalaiyam	33,184	652	600	1,252	37·71	126	...	...	532	7	...	...	...	...	...	...	...	...	147	812	3·80	...	...	16·02	0·21	...	...	...	4·43	24·46	22·28
176	T.C. Aruppukottai	31,579	543	522	1,065	33·7	15	...	...	256	107	...	...	...	2	...	...	2	...	395	775	·47	...	...	8·1	3·39	...	0·06	...	12·5	24·53	23·56
177	T.C. Paramagudi	19,437	202	207	409	21·08	45	...	...	81	19	2	...	...	1	...	...	1	2	188	338	2·32	...	...	4·17	0·98	0·1	0·05	0·1	9·69	17·42	18·84
178	T.C. Devakottai	16,143	66	83	149	9·25	...	...	...	27	17	15	...	...	2	...	...	2	3	179	243	...	...	...	1·68	1·06	0·93	0·12	0·19	11·12	15·09	18·06
179	T.C. Rāmnād	15,281	259	238	497	32·48	14	...	...	104	29	18	...	...	6	...	...	6	3	218	392	0·92	...	...	6·8	1·9	1·18	0·39	0·2	14·25	25·62	25·90
180	T.C. Ilaiyangudi	11,147	121	118	239	21·53	20	...	...	32	26	16	...	...	...	...	...	...	1	43	138	1·8	...	...	2·89	2·34	1·44	...	0·09	3·87	12·43	20·86
181	T.C. Sivaganga	9,768	119	101	220	22·52	6	...	...	97	32	100	...	...	6	...	...	6	...	27	268	0·61	...	...	9·93	3·28	10·24	0·61	...	2·76	27·43	25·40
182	T.C. Tiruppattur	9,687	82	64	146	15·07	43	...	...	6	51	54	...	...	5	...	...	5	...	2	161	4·44	...	...	0·62	5·26	5·57	0·52	...	0·27	16·62	22·66

No. VI.—*Births and Deaths registered from different causes in the districts and towns of the Madras Presidency during the year 1929*—cont.

Number. (1)	Districts and towns. (2)	Population for which returns were received. (3)	Births (4): Males.	Births: Females.	Births: Total.	Births: Birth-rate per mille of population.	Cholera. (5)	Smallpox. (6)	Plague. (7)	Fevers. (8)	Dysentery and diarrhœa. (9)	Respiratory diseases. (10)	Injuries (11): Suicides, Males.	Suicides, Females.	Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.	Deaths from child births. (12)	All other causes. (13)	Total deaths from all causes. (14)	Ratio of deaths per 1,000 of population (15): Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	Deaths from child births.	All other causes.	From all causes: For the year.	Mean for the previous 5 years.
	B.—Towns—cont.																															
	Ramnad—*cont.*																															
183	T.C. Kandanur	9,067	68	57	125	13.78	2	...	...	14	23	17	...	...	...	...	...	...	1	46	103	0.22	...	...	1.54	2.53	1.87	0.11	...	5.07	1.36	23.10
184	T.C. Settur	8,681	242	250	492	56.68	110	12	...	199	44	22	...	...	...	1	...	1	2	65	455	12.67	1.38	...	22.93	5.07	2.53	0.12	0.23	7.49	52.42	32.06
185	T.C. Sattur	8,582	125	126	251	29.25	57	1	...	45	15	4	...	...	1	...	...	1	2	152	277	6.64	0.12	...	5.24	1.75	0.47	0.12	0.23	17.72	32.28	23.76
186	T.C. Kamudi	8,356	78	74	152	18.18	74	...	...	27	11	...	...	...	...	...	...	...	...	45	157	8.85	...	...	3.23	1.32	...	...	...	5.38	18.78	17.54
187	T.C. Watrap	8,346	187	135	322	38.58	2	...	...	19	28	...	...	...	...	...	...	...	2	160	211	0.24	...	...	2.28	3.35	...	...	0.24	19.17	25.28	19.34
188	T.C. Abiramam	8,265	156	146	302	36.56	...	...	...	19	4	6	...	...	...	...	...	...	...	144	173	...	...	...	2.3	0.48	0.73	...	...	17.43	20.94	22.46
189	T.C. Rameswaram ...	7,682	129	158	287	37.86	23	...	...	55	27	65	...	...	1	...	...	1	3	93	267	3.03	...	...	7.26	3.56	8.58	0.13	0.4	12.27	35.22	34.22
190	T.C. Tiruppuvanam ...	7,214	127	106	333	32.32	17	...	...	56	9	...	...	...	2	1	...	3	...	121	206	2.36	...	...	7.77	1.25	...	0.42	...	16.78	28.57	27.86
191	T.C. Tondi	7,162	80	89	169	23.60	...	...	...	23	8	21	...	...	...	...	...	...	6	65	123	...	...	...	3.21	1.25	3.07	...	0.98	9.21	17.31	23.92
192	T.C. Kottayur	6,551	55	37	92	14.05	...	...	...	12	12	7	...	...	...	...	...	...	1	53	85	...	...	...	1.83	1.83	1.06	...	0.15	8.09	12.98	...
193	T.C. Manamadura ...	6,527	97	82	179	27.41	23	2	...	23	10	15	...	...	3	...	...	3	1	70	147	3.09	0.28	...	3.11	1.53	2.29	0.46	0.15	10.72	33.23	14.90
194	T.C. Puliyampatti ...	6,078	103	87	190	31.25	4	...	...	59	22	5	...	...	...	...	...	...	2	81	173	0.66	...	...	9.73	3.62	0.82	...	0.33	13.32	28.45	26.96
195	T.C. Kilakkarai	6,034	161	171	332	55.02	...	...	...	57	38	21	...	...	...	...	...	...	6	95	217	...	...	...	9.45	6.3	3.48	...	0.10	15.74	35.96	43.24
196	T.C. Pandalgudi	6,029	68	75	143	23.72	...	...	...	40	3	8	...	...	...	...	...	...	2	19	71	...	...	...	6.63	0.33	1.33	...	0.33	3.15	11.78	15.20
	Salem—																															
197	M.T.C. Salem	52,244	1,819	1,825	3,644	69.75	38	6	...	358	265	208	7	10	52	3	2	74	50	1,384	2,383	0.73	0.11	...	6.85	5.07	3.98	1.42	0.96	26.49	45.61	50.14
198	T.C. Dharmapuri ...	14,393	169	155	324	22.51	...	...	26	56	19	10	...	...	...	...	...	...	3	122	233	...	...	1.81	3.68	1.32	0.69	...	0.21	8.48	16.18	22.66
199	T.C. Rasipuram	13,978	251	256	507	36.27	...	...	...	57	7	29	...	...	2	...	...	2	7	204	306	...	...	...	4.07	0.5	2.08	0.14	0.5	14.59	21.89	19.92
200	T.C. Sendamangalam ...	12,972	196	170	366	28.21	...	...	...	69	24	8	...	...	...	...	...	...	...	124	225	...	...	...	5.32	1.85	0.62	...	...	9.55	17.35	22.18
201	T.C. Tiruchengodu ...	10,513	223	224	446	42.42	3	...	...	58	54	10	...	...	...	...	...	...	4	114	243	0.29	...	...	5.52	5.14	0.95	...	0.38	10.84	23.11	22.80
202	T.C. Namakkal	9,293	168	162	330	35.51	2	...	...	52	16	43	...	...	8	...	...	8	...	53	174	0.22	...	...	5.6	1.72	4.63	0.86	...	5.7	18.72	22.90
203	T.C. Atur	9,028	196	162	358	39.65	42	...	...	45	13	20	...	...	...	...	...	...	2	58	180	4.65	...	...	4.98	1.44	2.21	...	0.22	6.42	19.93	23.94
204	T.C. Krishnagiri	6,947	80	96	176	25.33	...	...	...	14	22	11	...	...	1	...	...	1	1	45	94	...	...	...	2.01	3.17	1.58	0.14	0.14	6.48	13.53	18.50
205	T.C. Hosur	5,519	101	89	190	34.43	...	1	2	3	8	11	...	...	...	...	...	...	...	79	104	...	0.18	0.36	0.54	1.45	1.99	...	...	14.31	18.84	23.02
	South Arcot—																															
206	M.T.C. Cuddalore ...	50,527	1,029	976	2,005	39.68	49	16	...	134	109	108	2	1	27	4	4	38	64	895	1,413	0.97	0.32	...	2.65	2.16	2.14	0.75	1.27	17.71	27.97	30.52
207	M.T.C. Chidambaram ...	22,501	333	318	651	28.93	14	4	...	56	70	67	...	...	14	2	...	16	21	377	625	0.62	0.18	...	2.49	3.11	2.98	0.71	0.93	16.75	27.78	28.72
208	M.T.C. Villupuram ...	17,423	260	240	500	28.70	23	1	...	101	48	30	2	...	17	...	...	19	7	131	360	1.32	0.06	...	5.8	2.75	1.72	1.09	0.41	7.51	20.66	23.32
209	T.C. Panruti	15,293	201	186	387	25.31	33	11	...	66	40	35	...	...	6	1	...	7	8	125	325	2.07	0.72	...	4.15	2.61	2.29	0.46	0.53	8.17	21.25	20.18
210	T.C. Tindivanam	14,236	187	190	377	26.28	...	1	...	54	27	7	...	...	1	1	...	2	3	147	241	...	0.07	...	3.79	1.90	0.49	0.14	0.21	10.32	16.93	26.72
211	T.C. Porto Novo	12,940	186	187	373	28.83	2	9	...	46	35	56	...	...	4	...	...	4	5	136	293	0.15	0.70	...	3.55	2.70	4.33	0.31	0.39	10.51	22.64	23.28
212	T.C. Nellikuppam ...	12,512	233	209	412	35.33	62	33	...	85	14	13	...	...	6	5	...	11	3	112	353	4.96	2.64	...	6.79	1.12	1.04	0.88	0.23	8.95	26.61	21.16
213	T.C. Tirukkoyilur ...	10,154	128	135	263	25.88	9	1	...	22	7	6	...	...	...	...	...	...	7	145	197	0.88	0.09	...	2.16	0.69	0.59	...	0.69	14.27	19.38	17.98
214	T.C. Bhuvanagiri ...	9,516	157	120	277	29.09	9	12	...	26	15	25	...	...	1	1	...	2	5	92	186	0.95	1.26	...	2.73	1.58	2.63	0.21	0.53	9.66	19.53	31.82
215	T.C. Kallakurchi	8,655	171	139	310	35.8	12	...	...	118	7	5	...	...	1	4	...	5	4	74	225	1.39	...	...	13.63	0.81	0.58	0.58	0.46	8.55	25.99	19.84
216	T.C. Valavanur	7,697	82	78	160	20.78	17	...	...	7	13	3	...	...	...	1	...	1	...	71	112	2.21	...	...	0.92	1.69	0.39	0.13	...	9.22	14.55	19.94
217	T.C. Vriddhachalam ...	6,540	83	63	146	22.19	7	...	...	20	15	2	...	...	...	...	...	...	...	72	116	1.06	...	...	3.04	2.28	0.3	...	...	10.94	17.63	30.42
	South Kanara—																															
218	M.T.C. Mangalore ...	53,877	1,016	1,002	2,018	37.53	45	41	...	71	79	277	3	3	24	1	2	33	25	664	1,235	0.84	0.76	...	1.32	1.47	5.15	0.61	0.46	12.35	22.97	21.38
219	T.C. Udipi	11,882	285	280	565	47.52	...	...	...	73	9	40	2	...	6	...	1	9	12	141	284	...	...	...	6.14	0.76	3.36	0.76	1.0	11.88	23.88	23.28
220	T.C. Coondapoor	7,575	188	180	368	48.58	...	...	...	73	12	18	...	...	1	...	...	1	3	80	187	...	...	...	9.64	1.58	2.38	0.13	0.4	10.56	24.68	18.08
221	T.C. Kasaragod	7,314	223	202	425	58.22	...	1	...	54	32	16	...	...	...	5	...	5	2	101	211	...	0.14	...	7.4	4.38	2.19	0.69	0.27	13.84	28.91	25.16
222	T.C. Karkala	6,025	139	127	266	44.16	...	...	...	53	5	9	...	...	...	2	...	2	4	45	118	...	...	...	8.8	0.83	1.49	0.33	0.66	7.47	19.59	21.14
223	T.C. Mulki	5,419	129	88	217	39.93	...	...	...	23	6	18	...	...	3	...	1	4	2	66	119	...	...	...	4.23	1.1	3.31	0.74	0.37	12.14	21.95	25.74
	Tanjore—																															
224	M.T.C. Kumbakonam ..	60,700	975	970	1,945	32.09	91	41	...	275	104	190	4	...	26	2	1	33	33	1,245	2,012	1.5	0.68	...	4.54	1.71	3.14	0.54	0.54	20.54	33.20	28.36
225	M.T.C. Tanjore ...	59,913	963	1,075	2,038	34.04	28	27	...	259	305	230	4	3	29	1	4	41	67	1,269	2,226	0.47	0.45	...	4.33	5.09	3.84	0.67	0.69	21.19	37.17	32.78
226	M.T.C. Negapatam ...	54,016	760	805	1,565	28.95	25	11	...	161	185	301	3	...	8	4	...	15	31	716	1,445	0.46	0.20	...	2.98	3.42	5.57	0.28	0.57	13.25	26.73	29.68
227	M.T.C. Mayavaram ...	28,617	437	431	868	30.29	47	4	...	194	40	30	...	...	2	3	...	5	25	558	903	1.64	0.14	...	6.77	1.40	1.05	0.17	0.87	19.47	31.51	29.72
228	M.T.C. Tiruvarur ...	24,124	207	198	405	16.78	20	10	...	127	69	24	1	...	4	3	...	8	10	209	477	0.83	0.41	...	5.26	2.86	0.99	0.33	0.41	8.65	19.75	20.74
229	M.T.C. Mannargudi ...	21,636	378	362	740	34.19	22	108	...	10	91	87	...	...	4	...	...	4	12	390	724	1.02	4.99	...	0.46	4.2	4.02	0.18	0.55	18.02	33.45	30.54
230	T.C. Vedaranniyam ...	14,475	236	234	470	32.48	1	...	...	24	5	5	...	...	3	...	...	3	10	329	377	0.69	...	...	1.66	0.35	0.35	0.21	0.69	22.73	26.05	22.98
231	T.C. Shiyali	12,360	215	169	384	31.07	22	...	...	67	14	11	...	...	4	...	...	4	10	199	318	1.78	...	...	5.4	1.13	0.89	0.32	0.81	15.37	25.73	26.48
232	T.C. Tranquebar	11,520	193	153	346	30.03	1	1	...	33	9	15	...	...	3	1	...	4	6	170	239	0.087	0.087	...	2.86	0.78	1.30	0.35	0.52	14.76	20.75	25.22

No. VI.—*Births and Deaths registered from different causes in the districts and towns of the Madras Presidency during the year* 1929—cont.

Number. (1)	Districts and towns. (2)	Population for which returns were received. (3)	Births (4): Males.	Births: Females.	Births: Total.	Births: Birth-rate per mille of population.	Cholera. (5)	Smallpox. (6)	Plague. (7)	Fevers. (8)	Dysentery and diarrhœa. (9)	Respiratory diseases. (10)	Injuries (11): Suicides, Males.	Suicides, Females.	Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.	Deaths from child births. (12)	All other causes. (13)	Total deaths from all causes. (14)	Ratio of deaths per 1,000 of population (15): Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	Deaths from child births.	All other causes.	From all causes: For the year.	Mean for the previous 5 years.
	B.—Towns—cont.																															
	Tanjore—*cont.*																															
233	T.C. Tiruvadamarudur ...	11,511	171	147	318	27.06	34	4	...	70	14	8	1	...	2	3	...	6	8	152	296	2.95	0.35	...	6.08	1.22	0.69	0.52	0.69	13.19	25.69	26.30
234	T.C. Adirampatnam ...	10,274	135	138	273	26.56	72	...	...	11	1	...	...	...	...	...	1	1	...	211	296	7.0	...	...	1.07	0.10	0.10	0.10	...	20.53	28.80	29.74
235	T.C. Ayyampettai ...	9,796	41	37	78	7.96	3	...	...	13	4	2	...	...	...	...	...	...	2	53	77	0.93	...	...	1.05	0.41	0.20	...	0.02	5.41	7.85	19.94
236	T.C. Pattukkottai ...	9,623	132	136	268	27.87	...	...	...	41	11	2	...	...	3	...	...	3	5	171	233	...	...	...	4.26	1.14	0.21	0.31	0.52	17.78	24.23	26.02
237	T.C. Tiruvadi	8,494	128	119	247	29.14	14	1	...	...	...	...	...	...	...	...	...	...	3	246	264	1.64	0.12	...	...	...	...	...	0.35	29.03	31.15	28.30
238	T.C. Vallam	7,647	180	157	337	44.15	9	...	...	32	28	8	...	...	...	...	...	...	2	211	290	1.18	...	...	4.19	3.67	1.05	...	0.26	27.64	37.99	26.70
239	T.C. Muttupet	6,946	112	87	199	28.66	5	...	...	48	38	12	...	...	2	...	1	3	...	78	184	0.72	...	...	6.91	5.47	1.73	0.43	...	11.23	26.05	34.24
240	T.C. Vaidiswarankoyil ...	6,708	72	97	169	25.18	1	1	...	10	13	5	...	...	...	...	1	1	8	67	106	0.15	0.15	...	1.49	1.92	0.75	0.15	1.19	9.98	15.79	24.04
241	T.C. Tirutturaippundi ...	6,487	138	116	254	39.12	17	...	...	50	30	7	...	...	4	...	...	4	4	127	239	2.62	...	...	7.07	4.62	1.08	0.62	0.62	19.56	36.81	33.38
242	T.C. Tirukkattuppalli ...	5,538	51	58	109	19.73	...	3	...	5	1	...	...	...	...	...	...	...	1	71	81	...	0.54	...	0.91	0.18	...	...	0.18	12.85	14.66	20.94
	Tinnevelly—																															
243	M.T.C. Tinnevelly ...	53,783	910	863	1,773	32.98	175	7	...	191	119	176	...	...	17	...	2	19	25	861	1,573	3.26	0.13	...	3.55	2.21	3.27	0.35	0.47	16.01	29.26	29.22
244	M.T.C. Palamcottah ...	46,643	937	808	1,745	37.34	92	4	...	88	162	299	...	1	14	1	...	16	24	833	1,516	1.97	0.09	...	1.84	3.47	6.40	0.34	0.51	17.83	32.44	31.82
245	M.T.C. Tuticorin ...	44,522	837	853	1,690	37.86	141	1	...	182	249	321	1	...	7	...	...	8	32	901	1,835	3.16	0.02	...	4.08	5.58	7.19	0.18	0.72	20.18	41.10	37.40
246	T.C. Tenkasi	22,071	477	458	935	42.36	203	...	...	69	122	43	...	...	4	...	...	4	...	368	809	9.02	...	...	3.13	5.53	1.95	0.18	...	16.67	36.65	28.64
247	T.C. Kandayanallur ...	19,693	607	559	1,166	59.47	28	...	...	138	59	20	...	...	4	...	...	4	5	306	560	1.43	...	...	7.04	3.01	1.02	0.20	0.26	15.61	28.56	26.04
248	T.C. Puliyangudi ...	18,437	452	442	894	48.45	40	3	...	123	37	16	...	...	...	...	...	...	3	284	506	2.17	0.16	...	6.67	2.01	0.87	...	0.16	[illegible]	27.43	21.54
249	T.C. Kallidaikurchi ...	16,996	308	304	612	36.01	11	...	...	151	46	25	...	...	1	...	...	1	7	240	481	0.65	...	...	8.91	2.71	1.47	0.06	0.41	14.16	28.38	25.16
250	T.C. Viravanallur ...	16,875	334	315	649	38.29	58	...	...	115	55	22	...	...	...	...	...	...	13	364	627	3.42	...	...	6.79	3.25	1.30	...	0.78	21.48	36.99	34.10
251	T.C. Surandai	14,510	247	250	497	34.29	1	...	...	103	23	7	...	...	1	...	...	1	...	144	279	0.07	...	...	7.10	1.59	0.48	0.07	...	9.94	19.25	17.88
252	T.C. Kadayam	14,232	286	298	584	40.88	66	...	...	44	4	...	...	...	3	...	...	3	1	292	410	4.62	...	...	3.04	0.28	...	0.21	0.07	20.44	28.07	19.42
253	T.C. Ambasamudram ...	14,118	260	226	486	34.51	90	...	...	68	29	5	1	...	4	...	...	5	1	343	541	6.39	...	...	4.83	2.06	0.36	0.36	0.07	24.35	38.41	32.20
254	T.C. Kayalpatnam ...	13,105	213	223	436	33.14	6	...	...	209	34	34	...	...	1	...	...	1	23	161	467	0.38	...	...	15.88	2.58	2.58	0.08	1.75	12.24	35.49	27.44
255	T.C. Kulasekarapatnam.	12,691	164	156	320	25.28	...	27	...	58	3	10	...	...	1	...	...	1	4	171	274	...	2.13	...	4.58	0.24	0.79	0.08	0.32	13.51	21.65	19.68
256	T.C. Sankaranayinarkoyil	12,655	264	281	545	42.51	26	...	...	43	33	20	...	...	...	...	...	...	...	203	325	2.03	...	...	3.35	2.57	1.56	...	...	15.83	25.35	19.24
257	T.C. Sivagiri	12,367	255	276	531	43.01	158	...	...	117	120	7	...	...	...	...	...	...	...	83	485	12.80	...	...	9.48	9.72	0.57	...	...	6.72	39.29	17.28
258	T.C. Sermadevi	11,911	245	224	469	39.40	17	...	...	39	39	15	...	...	2	...	...	2	5	259	376	1.43	...	...	3.28	3.28	1.26	0.17	0.42	21.76	31.58	33.48
259	T.C. Vasudevanallur ...	10,793	290	248	538	49.87	173	...	...	90	50	1	...	...	...	...	...	...	...	197	511	16.04	...	...	8.34	4.64	0.10	...	...	18.26	47.37	21.70
260	T.C. Srivaikuntam ...	10,073	151	150	301	29.86	20	...	...	2	...	1	...	...	...	...	...	...	...	254	277	1.98	...	...	0.20	...	0.10	...	...	25.15	27.48	29.38
261	T.C. Nanguneri	9,842	156	158	314	32.03	33	...	...	51	9	6	...	...	2	...	...	2	...	212	313	3.37	...	...	5.20	0.92	0.61	0.204	...	21.62	31.93	25.24
262	T.C. Tiruchendur ...	8,883	165	153	318	35.93	44	...	...	47	36	29	...	...	3	...	...	3	4	144	307	4.97	...	...	5.03	4.07	3.28	0.34	0.45	16.27	34.69	26.00
263	T.C. Ettaiyapuram ...	8,662	164	172	336	38.64	1	...	...	66	28	16	...	...	2	...	...	2	...	148	261	0.12	...	...	7.59	3.22	1.84	0.23	...	17.02	30.02	37.36
264	T.C. Kovilpatti	8,448	168	146	314	37.06	...	...	...	64	28	29	...	...	5	...	...	5	2	97	225	...	...	...	7.55	3.30	3.43	0.59	0.24	11.45	26.55	29.32
265	T.C. Udangudi	7,624	196	182	378	49.52	9	10	...	114	12	57	...	...	1	...	...	1	10	135	348	1.18	1.31	...	14.93	1.57	7.47	0.13	1.31	17.69	45.69	28.10
266	T.C. Vadakku Valliyur.	7,179	114	118	233	32.39	4	1	...	53	2	3	...	...	1	...	...	1	...	69	133	0.56	0.14	...	7.37	0.28	0.42	0.14	...	9.59	18.49	24.14
267	T.C. Alwartirunagari ...	7,090	114	117	231	32.57	47	...	...	62	10	20	...	...	1	...	...	1	4	132	276	6.63	...	...	8.74	1.41	2.83	0.14	0.56	17.42	38.92	31.08
268	T.C. Pattamadai	6,809	123	107	230	33.81	15	...	...	9	10	1	...	...	...	...	...	...	...	172	207	2.21	...	...	1.32	1.47	0.15	...	...	25.28	30.43	32.66
269	T.C. Sattangulam ...	5,616	148	144	292	51.68	...	...	...	8	18	32	1	...	2	...	...	3	6	122	189	...	...	...	1.42	3.19	5.66	0.53	1.06	21.59	33.45	38.92
270	T.C. Eral	5,012	109	86	195	23.04	20	4	...	47	1	1	...	...	...	...	...	...	1	142	216	2.04	0.48	...	5.64	0.12	0.12	...	0.12	17.04	25.92	39.34
	Trichinopoly—																															
271	M.T.C. Trichinopoly ...	120,422	2,273	2,256	4,529	37.59	32	4	...	260	442	599	4	2	36	3	3	48	56	2,529	3,970	0.27	0.03	...	2.16	3.67	4.97	0.40	0.46	20.99	32.95	37.60
272	M.T.C. Srirangam ...	23,153	334	298	632	27.30	20	2	...	50	56	78	1	...	4	1	...	6	14	490	716	0.86	0.09	...	2.16	2.42	3.37	0.26	0.60	21.17	30.93	33.42
273	M.T.C. Karur	18,249	305	245	550	30.14	20	1	...	68	56	136	...	...	6	2	3	11	14	160	466	1.01	0.05	...	3.73	3.07	7.45	0.60	0.77	8.77	25.54	24.06
274	T.C. Turaiyur	13,546	255	221	476	35.13	5	...	...	59	34	41	...	...	1	2	...	3	5	169	316	0.37	...	...	4.35	2.51	3.03	0.22	0.37	12.47	23.32	22.14
275	T.C. Pallapatti	8,862	155	146	301	34.62	...	...	...	29	39	47	...	...	1	1	...	2	6	72	195	...	...	...	3.34	4.49	5.41	0.23	0.69	8.28	22.43	23.18
276	T.C. Lalgudi	8,346	154	138	292	35.04	3	8	...	96	5	8	...	...	...	...	...	...	2	138	260	0.36	0.96	...	11.52	0.60	0.96	...	0.24	16.56	31.20	28.34
277	T.C. Ariyalur	7,973	160	161	321	40.13	6	2	...	55	33	3	...	1	5	...	...	6	8	127	240	0.75	0.25	...	6.88	4.13	0.38	0.75	1.00	15.88	30.00	24.20
278	T.C. Udaiyarpalaiyam ...	7,817	141	123	264	33.79	2	...	...	78	38	24	...	...	1	...	...	1	1	46	190	0.26	...	...	9.98	4.86	2.07	0.13	0.13	5.89	24.32	24.56
279	T.C. Kulittalai	7,696	137	110	247	32.01	33	...	...	8	3	1	...	...	2	...	...	2	...	175	222	4.29	...	...	1.04	0.39	0.13	0.26	...	23.75	28.86	25.76
280	T.C. Manachanallur ...	6,058	90	91	181	29.87	...	1	...	41	2	1	...	...	...	...	...	...	1	74	120	...	0.17	...	6.77	0.33	0.17	...	0.17	12.21	19.8	21.56

No. VI.—*Births and Deaths registered from different causes in the districts and towns of the Madras Presidency during the year* 1929—cont.

1	2	3	4			5	6	7	8	9	10	11						12	13	14	15										
			Births.									Injuries.									Ratio of deaths per 1,000 of population.										
												Suicides.																	From all causes.	
Number.	Districts and towns.	Population for which returns were received.	Males.	Females.	Total.	Birth-rate per mille of population.	Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Males.	Females.	Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.	Deaths from child births.	All other causes.	Total deaths from all causes.	Cholera.	Smallpox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory dis. eases.	Injuries	Deaths from child births.	All other causes.	For the year.	Mean for the previous 5 years.
	B.—Towns—cont.																														
	Vizagapatam—																														
281	M.T.C. Vizagapatam ...	44,711	712	685	1,397	31·29	2	34	...	242	266	154	...	1	30	...	5	36	16	750	1,500	0·04	0·76	...	5·40	5·96	3·45	0·81	0·36	16·89	33·60	33·52
282	M.T.C. Vizianagram ...	39,209	699	687	1,386	35·34	6	6	...	201	183	135	...	1	10	1	1	13	12	523	1,029	0·15	0·15	...	5·13	3·39	3·44	0·33	0·21	13·34	26·24	23·92
283	M.T.C. Anakapalle ...	20,360	332	322	654	32·11	...	6	...	117	98	103	...	...	11	1	1	13	3	133	473	...	0·29	...	5·74	4·81	5·06	0·64	0·15	6·53	23·22	26·50
284	M.T.C. Bimlipatam ...	7,495	155	176	331	44·02	...	...	...	41	39	23	...	1	2	...	...	3	4	113	222	...	...	...	5·45	5·19	3·06	0·40	0·53	14·90	29·53	29·58
285	T.C. Bobbili	18,179	303	288	591	32·51	15	1	...	126	11	11	...	...	...	...	...	...	...	219	388	0·83	0·06	...	6·93	0·61	0·61	...	2·08	12·05	21·34	24·10
286	T.C. Parvatipuram ...	15,604	202	201	403	25·83	...	95	...	154	2	...	...	...	...	1	...	1	...	166	418	...	6·09	...	9·87	0·13	...	0·06	...	10·64	26·79	27·18
287	T.C. Salur	15,454	317	292	609	39·40	97	...	...	415	12	13	...	...	...	1	...	1	2	51	591	6·28	...	...	26·85	0·78	0·84	0·06	0·13	3·30	38·24	27·76
288	T.C. Narasapatnam ...	11,531	254	203	457	39·62	...	...	...	196	19	18	...	...	1	2	...	3	1	58	295	...	...	...	16·99	1·65	1·56	0·26	0·09	5·03	25·58	19·44
289	T.C. Palkonda	10,805	219	171	381	35·24	...	...	...	170	1	...	...	...	...	...	...	...	2	115	288	...	...	...	15·73	0·09	...	...	0·19	10·64	26·64	24·96
290	T.C. Yellamanchilli ...	7,586	176	152	328	43·30	...	...	...	42	13	16	...	...	4	2	...	6	...	104	181	...	...	...	5·54	1·72	2·11	0·79	...	13·73	23·89	23·28
291	T.C. Viraghattam ...	6,391	139	114	253	39·47	...	10	...	103	1	1	...	...	...	...	...	...	2	50	167	...	1·56	...	16·07	0·16	0·16	...	0·31	7·08	26·05	22·72
292	T.C. Srungavarapukota...	6,049	128	119	247	40·76	...	...	...	74	27	30	...	...	2	...	...	2	2	11	146	...	...	...	12·21	4·46	4·95	0·33	0·33	1·86	24·09	23·10
293	T.C. Mudugula	5,966	98	88	186	32·93	...	...	...	75	7	8	...	...	2	...	...	2	...	24	116	...	...	...	12·06	1·18	1·34	0·34	...	4·03	19·49	18·86
294	T.C. Chodavaram ...	5,853	93	75	168	28·73	...	...	...	109	3	3	...	...	5	1	...	6	1	24	146	...	...	...	18·64	0·51	0·61	1·03	0·17	4·10	24·97	21·50
295	T.C. Chinnamerangi ...	5,617	93	100	193	34·35	...	2	...	49	11	9	...	...	3	...	1	4	1	52	128	...	0·36	...	8·72	1·92	1·60	0·71	0·18	9·26	22·78	18·60
	Total, town circles ...	5,140,708	98,497	93,847	192,344	37·42	4,721	2,366	399	27,861	15,514	21,430	111	95	1,413	160	96	1,875	2,494	73,461	150,061	0·92	0·46	0·078	5·41	3·02	4·16	0·37	0·49	14·29	29·16	29·1
	Total, rural districts ...	35,861,988	695,806	667,511	1,363,317	38·02	21,125	7,342	1,402	311,251	60,073	68,729	608	745	5,052	2,539	323	9,267	8,593	399,609	887,591	0·59	0·21	0·04	8·68	1·67	1·92	0·26	0·24	11·14	24·74	24·4
	Total, Madras Presidency...	41,002,696	794,303	761,358	1,555,661	37·9	25,846	9,708	1,801	339,052	75,587	90,159	719	84	6,465	2,699	419	11,142	11,087	473,070	1,037,452	0·63	0·24	0·04	8·27	1·84	2·20	0·27	0·27	11·55	25·3	25·

No. VII.—*Deaths registered from Cholera in the districts of the Madras Presidency during each month of the year* 1929.

1	2	3		4		5												6			7			8
		Circles of registration.		Villages.														Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 for previous 5 years.
Number.	Districts.	Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	
1	Anantapur	21	7	850	17	56	30	8	...	...	...	...	...	..	...	...	...	46	48	94	0·1	0·1	0·1	1·2
2	Bellary	20	2	939	8	6	...	36	31	2	...	.	...	...	...	...	..	38	37	75	0·1	0 1	0·1	1·6
3	Chingleput	21	12	2,145	77	188	87	40	9	...	3	...	1	...	...	1	...	167	162	329	0·2	0·2	0·2	0·5
4	Chittoor	15	8	1,996	105	390	87	5	...	...	.	...	...	...	...	..	...	278	204	482	0·4	0·3	0·4	0·2
5	Coimbatore	23	21	1,109	55	98	67	61	1	3	...	3	...	...	2	32	353	339	281	620	0·3	0·3	0·3	1·3
6	Cuddapah	17	6	894	59	140	103	19	...	6	...	...	...	2	...	...	...	157	113	270	0·3	0·3	0·3	0·4
7	Ganjām	20	13	4,130	129	15	1	15	34	22	16	125	341	94	10	25	49	376	371	747	0 4	0.3	0·4	0·2
8	Gōdāvari, East ...	24	2	1,943	2	...	...	1	...	...	1	...	...	...	...	...	...	...	2	2	...	0·002	0·001	0·02
9	Gōdāvari, West ..	13	4	723	4	...	...	...	...	...	...	6	1	...	...	...	...	2	5	7	0·004	0·009	0·01	0·3
10	Guntūr	29	10	944	..	...	..	...	...	...	...	...	.	...	...	...	...	...	...	..	...	...	..	0·3
11	Kistna	16	5	1,013	4	...	...	..	...	1	1	3	1	...	.	...	...	4	2	6	0·007	0·004	0·01	0·4
12	Kurnool	11	6	781	6	53	16	...	...	...	...	...	...	...	...	...	..	41	28	69	0·1	0·1	0·1	0·4
13	Madras	1	1	1	1	8	4	...	...	...	1	...	...	...	...	2	...	9	6	15	0·03	0·03	0·03	0·4
14	Madura	21	18	1,071	282	118	128	145	108	217	520	544	334	101	36	654	1,196	2,119	1,982	4,101	2·1	1·9	2·0	1·8
15	Malabar	18	8	2,208	15	1	10	8	...	1	...	1	...	...	...	13	44	44	34	78	0·03	0·02	0·03	0·3
16	Nellore	20	12	1,624	19	55	61	39	...	...	1	1	...	...	...	...	...	89	68	157	0·1	0·1	0·1	0·5
17	Nilgiris, The	6	2	57	58	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...	.	...	...	0·2
18	North Arcot	32	23	2,268	311	653	316	106	87	5	1	...	...	3	2	...	2	616	559	1,175	0·6	0·5	0·6	0·7
19	Rāmnād	34	24	3,530	380	298	284	80	32	64	123	264	308	321	129	546	917	1,696	1,620	3,316	2·1	1·8	1·9	1·7
20	Salem	19	16	2,303	156	347	110	84	101	3	1	1	...	1	1	...	3	361	291	652	0·3	0·3	0·3	1·0
21	South Arcot	20	20	2,347	536	1,327	693	954	24	27	15	9	7	2	...	2	9	1,718	1,351	3,069	1·5	1·2	1·3	1·8
22	South Kanara	13	6	805	63	153	27	15	4	...	...	1	...	1	...	4	1	103	103	206	0·2	0·2	0·2	0·1
23	Tanjore	30	30	2,531	723	2,898	678	143	2	3	13	8	13	10	10	16	165	2,044	1,915	3,959	1·8	1·6	1·7	2·7
24	Tinnevelly	35	35	984	421	613	243	237	62	27	72	30	26	120	259	1,312	1,818	2,423	2,396	4,819	2·6	2·5	2·5	2·1
25	Trichinopoly	17	15	1,055	396	634	226	55	71	21	3	13	11	13	10	16	157	685	545	1,230	0·7	0·6	0·7	1·3
26	Vizagapatam	29	9	2,599	254	82	158	103	7	...	3	1	14	...	...	...	...	206	162	368	0·2	0·1	0·1	0·1
	Total, Madras Presidency ...	526	315	40,850	4,081	8,133	3,279	2,154	573	402	773	1,011	1,057	668	459	2,623	4,714	13,561	12,285	25,846	0·7	0·6	0 6	0·9

No. VIII.—*Deaths registered from Smallpox in the districts of the Madras Presidency during each month of the year* 1929.

1	2	3		4		5												6			7		8			9
		Circles of registration.		Villages.														Total.			Number of deaths among children.		Ratio of deaths per 1,000 of population.			
Number.	Districts.	Number in each district.	Number from which deaths from smallpox were reported.	Number in each district.	Number from which deaths from smallpox were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Under 1 year.	From 1 to 10 years.	Males.	Females.	Total.	Mean ratio per 1,000 for previous 5 years.
1	Anantapur	21	11	850	3	1	3	3	2	4	5	6	11	3	...	...	...	14	24	38	15	15	0·03	0·05	0·04	0·5
2	Bellary	20	8	939	24	8	10	6	10	18	1	2	...	...	...	...	...	23	32	55	10	22	0·05	0·07	0·1	0·8
3	Chinglepat	21	15	2,145	274	45	55	103	90	60	83	64	82	61	53	47	60	402	401	803	308	197	0·5	0·5	0·5	0·2
4	Chittoor	15	11	1,996	160	7	7	11	18	18	15	21	14	16	19	21	29	100	96	196	59	48	0·2	0·2	0·2	0·2
5	Coimbatore	23	17	1,109	30	12	2	8	37	34	39	34	43	6	20	10	14	140	119	259	149	77	0·1	0·1	0·1	0·2
6	Cuddapah	17	11	894	7	7	3	5	1	2	4	5	9	5	1	7	4	24	29	53	16	17	0·1	0·1	0·1	0·3
7	Ganjām	20	13	4,130	56	28	12	15	11	10	8	18	19	16	2	15	30	98	86	184	95	73	0·01	0·01	0·01	0·4
8	Gōdāvari, East	24	15	1,943	68	16	16	11	18	23	10	15	17	6	16	7	18	96	77	173	81	52	0·12	0·09	0·1	0·6
9	Gōdāvari, West ...	13	10	723	36	7	4	2	7	6	11	8	1	11	6	12	19	43	51	94	30	43	0·1	0·1	0·1	0·5
10	Guntūr.	29	15	944	42	19	8	12	12	5	3	2			30	...	12	48	55	103	61	36	0·1	0·1	0·1	0·4
11	Kistna	16	12	1,013	83	29	17	28	24	26	20	29	17	13	...	...	1	116	88	204	116	76	0·2	0·2	0·2	0·5
12	Kurnool	11	9	781	47	11	12	5	6	13	8	8	15	7	9	10	4	53	55	108	78	28	0·1	0·1	0·1	0·4
13	Madras	1	1	1	1	45	50	93	108	67	26	32	20	23	7	12	20	245	258	503	80	169	0·9	1·0	1·0	0·5
14	Madura	21	11	1,071	17	5	6	1	2	2	6	8	7	8	10	17	33	51	52	103	43	32	0·1	0·1	0·1	0·2
15	Malabar	18	10	2,208	269	180	216	252	204	105	76	96	52	52	55	74	96	722	736	1,458	203	322	0·5	0·5	0·5	0·2
16	Nellore	20	14	1,624	123	40	27	19	53	25	36	29	28	10	10	15	6	149	149	298	113	82	0·2	0·2	0·2	0·4
17	Nilgiris, The	6	5	57	8	...	2	...	...	4	2	2	1	...	1	1	...	10	3	13	2	6	0·15	0·05	0·1	0·2
18	North Arcot	32	19	2,268	431	91	76	110	99	96	105	92	89	71	86	89	94	580	518	1,098	490	454	0·6	0·5	0·5	0·5
19	Rāmnād	34	21	3,530	34	6	6	9	8	17	4	5	3	9	2	5	...	41	33	74	32	28	0·05	0·04	0·04	0·2
20	Salem	19	15	2,303	58	13	20	15	12	26	24	13	9	11	24	...	22	83	106	189	104	45	0·1	0·1	0·1	0·5
21	South Arcot	20	16	2,347	157	155	144	168	90	76	75	116	97	91	60	112	113	672	625	1,297	412	440	0·6	0·5	0·6	0·7
22	South Kanara	13	7	805	140	11	18	22	22	26	26	28	31	20	19	13	25	127	134	261	58	69	0·2	0·2	0·2	0·2
23	Tanjore	30	19	2,531	142	146	107	105	106	76	62	72	50	68	79	71	72	527	517	1,044	433	237	0·5	0·4	0·5	0·3
24	Tinnevelly	36	18	984	69	26	16	11	15	13	3	7	13	22	19	22	33	96	109	205	79	60	0·1	0·1	0·1	0·2
25	Trichinopoly	17	11	1,055	134	32	5	8	25	40	40	42	28	25	16	25	34	142	178	320	132	66	0·2	0·2	0·2	0·3
26	Vizagapatam	29	22	2,599	167	65	42	43	36	53	29	70	29	39	36	84	49	292	283	575	212	223	0·3	0·2	0·3	0·2
	Total, Madras Presidency ...	526	336	40,850	2,580	1,003	884	1,065	1,016	845	721	824	715	593	580	669	793	4,894	4,814	9,708	2,431	2,917	0·2	0·2	0·2	0·4

No. IX.—*Deaths registered from Fevers in the districts of the Madras Presidency during each month of the year* 1929.

1.	2	3		4		5												6			7			8
		Circles of registration.		Villages.														Total.			Ratio of deaths per 1,000 of population.			
Number.	Districts.	Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 for previous 5 years.
1	Anantapur	21	21	850	546	930	610	710	572	557	462	469	414	419	567	735	767	3,615	3,597	7,212	7·3	7·7	7·5	4·8
2	Bellary	20	20	939	350	518	414	643	686	625	435	445	434	384	463	469	422	3,123	2,815	5,938	7·0	6·6	6·8	7·0
3	Chingleput	21	21	2,145	1,172	575	395	485	429	455	437	484	443	491	498	652	693	3,085	2,952	6,037	4·1	4·0	4·1	3·9
4	Chittoor	15	15	1,996	1,996	988	733	659	568	660	604	632	666	712	771	1,085	1,368	4,816	4,630	9,446	7·4	7·5	7·5	6·3
5	Coimbatore	23	23	1,109	589	800	613	672	569	560	580	629	579	622	730	1,117	1,344	4,523	4,392	8,915	4·1	3·9	4·0	3·9
6	Cuddapah	17	17	894	894	1,699	1,259	1,247	1,050	1,087	777	959	940	914	1,269	1,504	1,522	7,218	6,950	14,168	16·0	16·0	16·0	14·8
7	Ganjām	20	20	4,130	4,130	2,757	2,195	2,559	2,724	3,069	2,798	3,180	3,783	2,942	2,836	2,452	2,678	17,046	16,927	33,973	20·5	16·6	18·5	18·5
8	Gōdāvari, East ...	24	24	1,943	1,354	2,279	1,535	1,496	1,351	1,491	1,419	1,622	1,854	1,628	1,972	2,041	2,174	10,679	10,183	20,862	13·0	11·9	12·5	11·2
9	Gōdāvari, West ...	13	13	723	627	1,196	754	763	624	873	748	955	1,071	886	1,015	1,303	1,261	5,900	5,549	11,449	11·5	10·4	10·9	9·0
10	Guntūr	29	29	944	944	1,942	1,352	1,340	1,375	1,680	1,435	1,709	1,796	1,708	1,804	1,675	1,883	9,892	9,807	19,699	10·8	10·9	10·9	10·6
11	Kistna	16	16	1,013	763	844	551	626	547	745	678	838	935	842	828	576	888	4,518	4,38	8,898	8·2	8·2	8·2	9·6
12	Kurnool	11	11	781	730	2,218	1,578	1,822	1,704	1,551	1,137	1,329	1,299	1,232	1,296	1,427	1,498	9,236	8,855	18,091	19·9	19·6	19·8	13·3
13	Madras	1	1	1	1	262	241	236	210	195	168	175	129	186	233	239	237	1,286	1,225	2,511	4·8	5·0	4·9	4·3
14	Madura	21	21	1,071	772	490	345	393	333	371	391	448	417	354	418	600	908	2,852	2,616	5,468	2·9	2·5	2·7	3·7
15	Malabar	18	18	2,208	612	2,057	1,956	2,177	2,006	2,079	1,965	2,057	1,756	1,642	1,626	1,544	1,866	11,523	11,208	22,731	7·7	7·1	7·4	8·3
16	Nellore	20	20	1,624	1,452	1,347	1,001	685	809	1,161	925	1,124	1,175	1,171	1,436	1,820	1,751	7,625	7,180	14,805	10·9	10·5	10·7	10·6
17	Nilgiris, The	6	6	57	55	95	62	138	124	138	151	140	111	74	115	104	108	726	634	1,360	11·2	11·3	11·2	14·0
18	North Arcot	32	32	2,268	1,694	957	662	648	604	640	594	665	654	735	865	1,087	1,423	4,805	4,779	9,584	4·7	4·6	4·7	3·6
19	Rāmnād	34	34	3,530	1,071	1,457	1,092	899	898	1,175	1,229	1,301	1,094	1,042	1,258	1,570	1,878	7,457	7,536	14,993	9·1	8·3	8·7	8·1
20	Salem	19	19	2,303	1,249	1,230	936	994	916	1,128	1,096	1,182	1,095	1,024	1,235	1,625	2,138	7,257	7,342	14,599	6·9	7·0	6·9	7·4
21	South Arcot	20	20	2,347	973	1,116	913	890	562	660	617	778	851	905	971	1,185	1,488	5,595	5,341	10,936	4·9	4·6	4·7	4·5
22	South Kanara ...	13	13	805	589	1,253	1,044	907	878	885	1,175	1,109	861	739	722	672	991	5,605	5,631	11,236	9·2	8·8	9·0	10·2
23	Tanjore	30	29	2,531	973	626	411	419	361	462	382	435	422	371	406	604	607	2,781	2,725	5,506	2·5	2·3	2·4	2·2
24	Tinnevelly	36	36	984	496	1,448	933	920	631	841	858	767	753	633	749	1,105	1,553	5,518	5,573	11,091	6·0	5·7	5·8	4·3
25	Trichinopoly	17	17	1,055	4,301	917	617	567	528	780	658	637	668	607	717	970	1,151	4,350	4,367	8,717	4·7	4·5	4·6	3·5
26	Vizagapatam	29	29	2,599	2,335	3,853	3,202	3,266	2,973	3,075	2,880	3,230	3,751	3,084	3,767	3,720	3,476	20,976	19,851	40,827	19·4	17·2	18·3	22·0
	Total, Madras Presidency ...	526	526	40,850	30,648	33,854	25,404	26,561	24,132	26,943	24,549	27,299	27,961	25,947	28 558	31,781	36,073	172,007	167,045	339,052	8·5	8·0	8·3	7·9

No. X.—*Deaths registered from Dysentery and Diarrhœa in the districts of the Madras Presidency during each month of the year* 1929.

1	2	3		4		5												6			7			8
		Circles of registration.		Villages.														Total.			Ratio of deaths per 1,000 of population.			
Number.	Districts.	Number in each district.	Number from which deaths from dysentery and diarrhœa were reported.	Number in each district.	Number from which deaths from dysentery and diarrhœa were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 for previous 5 years.
1	Anantapur	21	20	850	225	225	141	110	76	113	109	147	122	118	181	323	272	1,014	923	1,937	2·1	2·0	2·0	1·4
2	Bellary	20	20	939	268	181	129	219	216	207	171	226	229	191	231	271	231	1,282	1,220	2,502	2·9	2·9	2·9	2·2
3	Chingleput	21	21	2,145	919	289	239	251	174	201	211	233	242	259	245	292	364	1,584	1,426	3,010	2·1	1·9	2·0	3·1
4	Chittoor	15	15	1,996	1,996	414	285	262	216	256	226	237	291	272	326	463	603	1,897	1,954	3,851	2·9	3·1	3·0	2·4
5	Coimbatore	23	22	1,109	460	696	476	479	407	635	601	568	590	628	703	910	907	3,863	3,737	7,600	3·5	3·4	3·4	3·1
6	Cuddapah	17	15	894	84	92	54	62	32	47	39	62	54	77	79	138	107	457	386	843	1·0	0·9	0·9	1·0
7	Ganjām	20	20	4,130	195	153	129	131	212	321	307	339	467	333	263	255	155	1,638	1,387	3,025	1·9	1·4	1·6	1·7
8	Gōdāvari, East ...	24	21	1,943	367	64	58	71	67	92	96	154	183	141	119	111	73	640	589	1,229	0·8	0·7	0·7	0·8
9	Gōdāvari, West ...	13	13	723	288	52	48	48	77	78	60	136	124	103	120	64	67	509	468	977	1·0	0·9	1·0	0·9
10	Guntūr	29	28	944	374	117	99	127	113	121	119	167	218	153	189	166	146	901	834	1,735	1·0	0·9	1·0	0·9
11	Kistna	16	16	1,013	190	108	87	108	138	104	87	158	175	142	118	67	86	704	675	1,379	1·3	1·3	1·3	1·0
12	Kurnool	11	11	781	306	127	142	114	92	86	78	123	141	107	146	135	105	749	647	1,396	1·6	1·4	1·5	1·1
13	Madras	1	1	1	1	303	259	289	245	238	252	225	221	237	246	281	309	1,491	1,594	3,085	5·4	6·5	6·0	7·1
14	Madura	21	21	1,071	516	477	329	272	234	318	364	352	329	277	327	693	815	2,469	2,318	4,787	2·5	2·3	2·4	2·3
15	Malabar	18	18	2,208	475	401	413	405	437	534	623	773	568	389	279	262	350	2,620	2,814	5,434	1·7	1·8	1·8	2·3
16	Nellore	20	20	1,624	546	108	76	93	77	73	59	93	92	96	178	127	119	690	601	1,291	1·0	0·9	0·9	0·8
17	Nilgiris, The	6	6	57	46	53	44	64	49	69	73	60	53	42	58	48	85	344	355	699	5·3	6·3	5·7	5·7
18	North Arcot	32	32	2,268	662	465	297	252	231	298	313	294	329	277	361	491	852	2,238	2,222	4,460	2·2	2·2	2·2	2·7
19	Rāmnād	34	34	3,530	750	381	226	207	161	232	215	213	241	216	229	365	5 3	1,604	1,615	3,2 9	2·0	1·8	1·9	2·0
20	Salem	19	19	2,303	625	343	206	215	180	296	219	258	263	243	303	387	535	1,709	1,739	3,448	1·6	1·6	1·6	1·7
21	South Arcot	20	17	2,347	517	550	394	425	308	217	238	316	282	306	319	354	432	2,128	2,013	4,141	1·9	1·7	1·8	2·2
22	South Kanara	13	12	805	308	402	217	157	94	137	179	190	167	160	144	119	196	1,104	1,058	2,162	1·8	1·6	1·7	2·7
23	Tanjore	30	28	2,531	639	493	251	198	135	166	150	172	200	231	208	289	265	1,388	1,370	2,758	1·2	1·1	1·2	1·4
24	Tinnevelly	36	35	984	281	810	355	274	216	249	219	250	221	223	198	552	886	2,278	2,275	4,553	2·5	2·3	2·4	2·8
25	Trichinopoly	17	17	1,055	1,857	508	253	188	142	209	198	240	240	275	288	403	527	1,839	1,632	3,471	2·0	1·6	1·8	1·6
26	Vizagapatam	29	27	2,599	274	196	179	161	161	151	175	223	298	336	252	201	262	1,378	1,217	2,595	1·3	1·1	1·2	1·2
	Total, Madras Presidency ...	526	509	40,850	13,169	8,008	5,386	5,162	4,491	5,448	5,381	6,209	6,340	5,832	6,221	7,797	9,312	38,518	37,069	75,587	1·9	1·8	1·84	1·9

No. XI.—*Deaths registered from Respiratory Diseases in the districts of the Madras Presidency during each month of the year* 1929.

1	2	3		4		5												6			7			8
		Circles of registration.		Villages.														Total.			Ratio of deaths per 1,000 of population.			
Number.	Districts.	Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 for previous 5 years.
1	Anantapur	21	19	850	295	332	253	273	250	234	200	228	226	233	271	285	302	1,702	1,385	3,087	3·5	3·0	3·2	2·3
2	Bellary	20	17	939	272	280	234	305	278	280	178	225	201	227	254	225	233	1,531	1,389	2,920	3·4	3·2	3·3	2·3
3	Chingleput	21	21	2,145	715	207	217	207	183	174	147	182	201	197	224	234	259	1,323	1,109	2,432	1·8	1·5	1·6	1·8
4	Chittoor	15	15	1,996	1,996	375	286	302	236	306	272	308	340	291	345	443	483	2,154	1,833	3,987	3·3	2·9	3·1	2·6
5	Coimbatore	23	22	1,109	370	496	381	387	383	412	435	467	432	485	554	685	856	3,196	2,777	5,973	2·9	2·5	2·7	1·7
6	Cuddapah	17	14	894	674	154	138	147	129	122	108	131	151	137	202	169	193	960	821	1,781	2·1	1·9	2·0	1·6
7	Ganjām	20	20	4,130	103	93	85	65	99	99	102	99	120	114	87	106	106	654	521	1,175	0·7	0·5	0·6	0·8
8	Gōdāvari, East ...	24	21	1,943	567	307	228	272	243	275	261	348	346	301	442	346	367	1,965	1,711	3,676	2·4	2·0	2·2	2·0
9	Gōdāvari, West ...	13	13	723	455	395	279	291	258	301	283	415	433	417	471	366	372	2,248	2,023	4,271	4·4	3·8	4·1	3·4
10	Guntūr	29	28	944	545	393	320	340	366	383	367	462	492	528	506	455	403	2,808	2,207	5,015	3·1	2·5	2·8	2·2
11	Kistna	16	16	1,013	475	300	217	265	236	285	293	375	421	423	354	226	268	1,967	1,686	3,653	3·6	3·1	3·4	3·7
12	Kurnool	11	11	781	429	302	234	266	217	218	184	214	188	190	184	202	204	1,446	1,157	2,603	3·1	2·5	2·8	2·8
13	Madras	1	1	1	1	592	542	646	523	585	494	535	502	531	556	612	577	3,395	3,300	6,695	12·5	13·5	12·9	12·1
14	Madura	21	21	1,071	338	546	436	441	345	460	440	445	415	393	479	622	883	3,164	2,741	5,905	2·2	2·7	2·9	2·3
15	Malabar	18	18	2,208	507	670	529	580	486	510	600	715	671	595	614	6 9	671	4,160	3,140	7,300	2·8	2·0	2·4	1·7
16	Nellore	20	19	1,624	620	198	148	182	160	179	143	158	173	160	187	214	224	1,170	956	2,126	1·7	1·4	1 5	1·0
17	Nilgiris, The	6	6	57	38	60	72	67	76	56	60	80	40	81	63	117	105	467	410	877	7·2	7·3	7·2	5·0
18	North Arcot	32	31	2,268	520	317	188	192	217	221	200	226	237	275	314	356	469	1,739	1,473	3,212	1·7	1·4	1·6	1·3
19	Rāmnād	34	29	3,530	757	327	304	217	219	261	234	247	265	265	282	407	370	1,824	1,574	3,398	2·2	1·7	2·0	1·6
20	Salem	19	19	2,303	529	253	177	200	185	204	187	217	219	221	233	265	312	1,480	1,193	2,673	1·4	1·1	1·3	1·1
21	South Arcot	20	18	2,347	471	320	265	299	271	198	221	260	284	235	276	356	389	1,804	1,570	3,374	1·6	1·4	1·5	1·3
22	South Kanara	13	12	805	183	247	212	162	150	156	161	231	174	208	191	171	230	1 207	1,086	2,293	2·0	1·7	1·8	1·9
23	Tanjore	30	29	2,531	457	202	187	194	191	164	182	156	155	164	232	278	209	1,380	1,044	2,374	1·2	0·9	1·0	0·9
24	Tinnevelly	36	31	984	174	425	299	289	277	293	309	307	306	296	322	411	520	2,185	1,869	4,054	2 4	1 9	2·1	1·3
25	Trichinopoly	17	17	1,055	898	271	199	170	180	190	174	190	229	210	214	296	338	1,454	1,207	2,661	1·6	1·2	1·4	1·2
26	Vizagapatam	29	29	2,599	194	266	218	209	171	180	177	210	207	256	251	265	234	1,473	1,171	2,644	1·4	1·0	1·2	1·1
	Total, Madras Presidency ...	526	497	40,850	12,583	8,388	6,633	6,968	6,329	6,746	6,412	7,431	7,408	7,433	8,108	8,791	9,507	48,806	41,353	90,159	2 4	2·0	2·2	1·5

No. XII.—*Deaths registered from Plague in the districts of the Madras Presidency during each month of the year* 1929.

1	2	3		4		5												6			7			8
		Circles of registration.		Villages.														Total.			Ratio of deaths per 1,000 of population.			
Number.	Districts.	Number in each district.	Number from which deaths from plague were reported.	Number in each district.	Number from which deaths from plague were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 for previous 5 years.
1	Anantapur	21	7	850	14	52	15	4	...	...	...	...	12	1	1	1	...	43	43	86	0·1	0·1	0·1	0·001
2	Bellary	20	10	939	114	18	45	17	2	1	6	43	53	64	116	118	127	316	294	610	0·7	0·7	0·7	0·7
3	Chingleput	21	...	2,145	...	...	...	...	...	..	...	...	...	...	...	..	...	..	...	...	...	...	...	...
4	Chittoor	15	1	1,996	1	...	1	...	...	...	...	...	...	...	3	...	3	1	3	4	0·002	0·004	0·003	0·001
5	Coimbatore	23	1	1,109	2	7	2	2	3	1	...	...	...	...	3	1	...	9	10	19	0·008	0·008	0 01	0·4
6	Cuddapah	17	...	394	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0004
7	Ganjām	20	...	4,130	...	...	...	...	...	..	...	...	...	...	...	..	...	...	...	...	...	..	..	...	...
8	Gōdāvari, East ...	24	...	1,943	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Gōdāvari, West ...	13	.	723	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0002
10	Guntūr	29	...	944	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·003
11	Kistna	16	...	1,013	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·001
12	Karnool	11	1	781	1	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	0·002	0·001	...
13	Madras	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0004
14	Madura	21	5	1,071	24	90	55	27	2	15	1	29	54	37	26	30	95	176	285	461	0·2	0·2	0·2	0·4
15	Malabar	18	1	2,208	2	10	3	2	...	...	...	1	...	1	2	1	5	15	10	25	0·01	0·01	0·01	0·02
16	Nellore	20	...	1,624	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	Nilgiris, The	6	2	57	2	...	...	...	...	...	...	...	...	9	1	...	1	6	5	11	0·1	0·1	0·1	0·2
18	North Arcot	32	2	2,268	2	7	1	..	...	...	...	...	...	1	...	...	1	6	4	10	0·001	0·001	0·001	0·5
19	Rāmnād	34	...	3,530	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·07
20	Salem	19	4	2,303	130	124	97	78	12	12	30	23	8	37	47	35	71	281	293	574	0·3	0·3	0·3	0·3
21	South Arcot	20	...	2,347	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...
22	South Kanara... ..	13	...	805	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	0·1
23	Tanjore	30	...	2,531	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0001
24	Tinnevelly	36	...	984	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·02
25	Trichinopoly	17	...	1,056	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·004
26	Vizagapatam	29	...	2,599	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0007
	Total, Madras Presidency ...	526	34	40,850	292	308	219	180	19	29	37	96	127	150	196	187	303	853	948	1,801	0 04	0·04	0·04	0·08

No. XIII.—*Statement prescribed by the Government of India, Home Department (Sanitary), in Letter No.* 10–326, *dated 8th December* 1894, *communicated with G.O. Mis. No.* 2654 *L., dated 20th December* 1894.

No. XIII.—*Statement prescribed by the Government of India, Home Department (Sanitary), in Letter No. 10—326, dated 8th December 1894, communicated with G.O. Mis. No. 2654 L., dated 20th December 1894.*

(Comparative table showing percentage of mortality to total mortality from year to year under each head of death causation.)

1	2		3		4					5		6				
Name of municipality.	Date of completion of works of		Average annual death-rate since the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					Average annual death-rate for the five-year period preceding the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.				
	Drainage.	Water-supply.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.
Adoni	...	1895	1895	23·6	0·3	...	38·1	0·3	61·3	...	...	...	...	...	...	...
			1896	25·4	1·0	0·1	31·2	0·9	66·8	1890	19·2	...	...	51·6	...	48·4
			1897	37·9	9·3	...	31·7	3·9	55·1	1891	38·1	41·9	...	31·0	0·4	26·7
			1898	26·5	...	0·3	29·7	5·3	64·7	1892	34·7	13·1	...	38·1	3·0	45·8
			1899	24·1	0·1	...	22·1	2·4	75·4	1893	22·2	...	...	51·7	0·3	48·0
			1900	24·4	...	...	34·9	5·3	59·8	1894	24·3	0·3	...	37·0	...	62·7
			1901	20·1	0·3	...	30·0	2·9	66·8	...	...	...	...	...	...	...
			1902	56·5	11·2	...	2·4	0·9	85·5	...	...	...	...	...	...	...
			1903	23·1	...	0·6	6·0	10·9	82·5	...	...	...	...	...	...	...
			1904	71·3	...	...	2·8	2·6	94·6	...	...	...	...	...	...	...
			1905	31·1	0·3	17·2	5·7	11·3	65·5	...	...	...	...	...	...	...
			1906	39·8	13·4	0·4	5·1	16·8	64·3	...	...	...	...	...	...	...
			1907	24·2	0·3	1·2	3·8	13·2	81·5	...	...	...	...	...	...	...
			1908	26·3	6·6	...	10·9	10·4	72·1	...	...	...	...	...	...	...
			1909	25·5	1·2	1·9	13·5	11·9	71·5	...	...	...	...	...	...	...
			1910	30·1	...	0·3	9·5	6·6	83·6	...	...	...	...	...	...	...
			1911	33·6	...	0·4	8·9	6·5	84·2	...	...	...	...	...	...	...
			1912	33·3	6·9	...	12·7	10·6	69·8	...	...	...	...	...	...	...
			1913	29·4	...	4·6	11·6	8·3	75·5	...	...	...	...	...	...	...
			1914	55·2	16·2	23·3	6·4	6·0	48·1	...	...	...	...	...	...	...
			1915	29·3	0·2	...	8·7	8·0	83·1	...	...	...	...	...	...	...
			1916	25·7	0·1	...	12·5	10·5	76·9	...	...	...	...	...	...	...
			1917	67·9	0·1	...	7·9	3·0	89·0	...	...	...	...	...	...	...
			1918	39·9	1·8	0·2	72·1	1·4	24·5	...	...	...	...	...	...	...
			1919	10·3	1·5	13·2	33·1	3·7	48·5	...	...	...	...	...	...	...
			1920	12·8	...	1·0	52·7	4·9	41·4	...	...	...	...	...	...	...
			1921	17·1	0·8	2·1	30·0	10·4	56·7	...	...	...	...	...	...	...
			1922	21·0	21·9	11·0	2·2	5·0	59·9	...	...	...	...	...	...	...
			1923	18·9	...	...	5·8	14·3	79·9	...	...	...	...	...	...	...
			1924	17·8	0·3	1·1	5·8	11·0	81·8	...	...	...	...	...	...	...
			1925	14·7	...	...	13·8	15·1	71·6	...	...	...	...	...	...	...
			1926	15·4	...	...	6·5	27·0	66·5	...	...	...	...	...	...	...
			1927	30·1	42·7	...	0·9	9·2	47·2	...	...	...	...	...	...	...
			1928	20·9	0·2	...	4·7	17·1	78·0	...	...	...	...	...	...	...
			1929	25·5	...	...	2·5	19·7	77·8	...	...	...	...	...	...	...
										1919	23·2	1·0	3·1	27·6	6·1	62·2
										1920	33·3	8·5	1·4	54·3	3·9	31·9
										1921	20·2	0·4	6·0	48·3	2·6	42·7
			1924	25·7	7·1	1·4	27·9	8·1	55·5	1922	20·1	2·6	14·7	32·0	1·3	49·4
Anantapur—*cont.* ...	...	1924	1926	23·5	...	...	32·4	10·4	57·2	1923	19·8	...	...	31·3	10·1	58·6
			1927	20·6	0·9	...	31·4	8·0	59·7	...	...	...	...	...	...	...
			1928	25·8	1·0	...	36·5	4·1	58·4	...	...	...	...	...	...	...
			1929	29·3	...	...	33·0	8·0	59·0	...	...	...	...	...	...	...
Berhampur	..	1914	1914	28·6	0·7	10·4	25·7	18·0	50·2	...	...	...	...	...	...	...
			1915	28·1	0·6	2·4	24·0	15·8	57·2	1909	31·6	4·5	0·2	25·4	11·7	58·2
			1916	24·0	2·5	2·4	24·5	14·4	56·2	1910	31·5	5·1	0·1	30·4	15·2	49·2
			1917	26·6	0·5	0·2	23·4	16·4	59·5	1911	22·7	...	...	26·3	10·8	62·9
			1918	37·5	0·3	0·7	38·4	14·8	45·8	1912	31·0	19·2	0·1	24·4	9·8	46·5
			1919	41·9	6·5	11·3	24·1	9·2	48·9	1913	21·0	0·5	0·9	29·5	7·9	61·2
			1920	30·5	1·5	0·4	41·5	11·4	45·2	...	...	...	...	...	...	...
			1921	24·7	6·4	0·4	49·6	11·4	32·2	...	...	...	...	...	...	...
			1922	15·0	2·7	1·2	41·8	5·5	48·8	...	...	...	...	...	...	...
			1923	19·2	4·9	1·3	36·4	12·4	45·0	...	...	...	...	...	...	...
			1924	18·8	0·2	1·5	29·4	18·5	50·4	...	...	...	...	...	...	...
			1925	21·7	...	0·6	29·8	21·4	48·2	...	...	...	...	...	...	...
			1926	20·4	...	0·3	26·2	16·1	57·4	...	...	...	...	...	...	...
			1927	20·1	0·8	..	34·9	12·0	52·3	...	...	...	...	...	...	...
			1928	15·5	0·6	0·4	35·4	8·8	54·8	...	...	...	...	...	...	...
			1929	20·0	0·6	0·1	29·3	17·2	52·8	...	...	...	...	...	...	...
Bezwada	...	1909	1909	38·7	...	1·7	11·9	8·9	76·5	...	...	...	...	...	...	...
			1910	42·6	1·9	0·1	13·4	15·0	69·6	1904	38·4	0·1	...	15·1	10·1	74·7
			1911	30·5	12·2	0·6	13·7	10·8	62·7	1905	45·8	14·8	...	8·6	8·3	68·3
			1912	30·4	1·0	...	11·3	10·3	77·4	1906	46·8	11·6	0·3	11·4	8·0	68·7
			1913	26·1	...	..	10·3	9·2	80·5	1907	35·2	4·2	0·3	14·6	8·2	72·7
			1914	37·0	0·7	3·1	12·9	9·0	74·3	1908	56·3	21·9	0·4	8·7	10·3	58·7
			1915	37·4	0·8	0·7	12·5	7·3	78·7	...	...	...	...	...	...	...
			1916	33·5	4·7	...	12·8	9·2	73·3	...	...	...	...	...	...	...
			1917	48·2	3·7	0·1	11·5	8·5	76·2	...	...	...	...	...	...	...
			1918	67·6	2·9	8·1	17·5	6·8	64·7	...	...	...	...	...	...	...
			1919	63·8	2·0	0·6	17·5	6·5	73·4	...	...	...	...	...	...	...
			1920	55·9	2·6	0·1	9·9	8·6	78·8	...	...	...	...	...	...	...
			1921	41·0	3·5	...	7·2	10·2	79·1	...	...	...	...	...	...	...
			1922	34·7	2·0	0·3	10·0	5·8	81·9	...	...	...	...	...	...	...
			1923	35·3	0·1	0·9	20·1	5·1	73·8	...	...	...	...	...	...	...
			1924	34·5	...	0·6	14·7	7·0	77·7	...	...	...	...	...	...	...
			1925	34·0	...	0·9	13·8	9·0	76·1	...	...	...	...	...	...	...
			1926	38·6	0·1	0·1	10·8	7·4	81·6	...	...	...	...	...	...	...
			1927	33·6	2·4	0·5	11·4	5·7	80·0	...	...	...	...	...	...	...
			1928	38·8	2·0	1·2	12·6	6·4	77·8	...	...	...	...	...	...	...
			1929	31·2	...	...	16·0	4·5	79·5	...	...	...	...	...	...	...
Bellary	...	1928 ...	1928	34·5	0·2	...	6·3	14·4	79·1	1923	29·7	...	6·2	17·1	7·1	69·6
			1929	39·5	...	0·1	10·1	9·7	80·1	1924	24·3	7·9	4·0	11·0	7·5	69·6
										1925	27·3	...	...	13·7	8·9	77·4
										1926	30·9	...	...	9·5	9·2	81·3
										1927	31·7	0·7	...	9·6	11·3	78·4
Chidambaram	...	1915	1915	28·5	1·3	0·7	17·4	7·2	73·4	...	...	...	...	...	...	...
			1916	32·6	0·6	10·8	17·4	4·9	66·3	1910	39·2	9·2	..	16·4	14·1	60·3
			1917	36·2	1·2	8·9	7·9	4·4	77·6	1911	40·0	8·1	0·4	13·0	16·6	61·9
			1918	41·4	2·8	1·4	23·4	3·7	68·7	1912	37·6	10·0	...	12·5	10·2	67·3
			1919	36·5	0·5	1·3	14·0	5·5	78·7	1913	33·6	...	...	16·4	13·7	69·6
			1920	32·4	2·3	0·4	13·7	9·0	74·6	1914	36·4	7·1	...	13·3	13·5	66·1
			1921	28·7	2·5	0·2	15·7	10·5	71·1	...	...	...	...	...	...	...
			1922	28·2	...	4·6	20·2	6·6	68·6	...	...	...	...	...	...	...
			1923	27·8	...	3·2	13·9	14·0	68·9	...	...	...	...	...	...	...
			1924	29·1	3·5	12·4	10·2	9·6	64·3		...	...	...	...	...	...

No. XIII.—*Statement prescribed by the Government of India, Home Department (Sanitary), in Letter No.* 10—326, *dated* 8*th December* 1894, *communicated with G. O. Mis. No.* 2654 *L., dated* 20*th December* 1894—cont.

(Comparative table showing percentage of mortality to total mortality from year to year under each head of death causation.)

1	2		3		4					5		6				
Name of municipality.	Date of completion of works of		Average annual death-rate since the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					Average annual death-rate for the five-year period preceding the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.				
	Drainage.	Water-supply.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.
Chidambaram—*cont.*	...	1915	1925	30·8	5·3	0·3	10·2	13·7	70·5	...	...	...	...	...	...	...
			1926	29·3	1·7	...	6·2	8·8	83·3	...	...	...	...	...	...	...
			1927	25·9	1·2	0·2	8·7	9·8	80·1	...	...	...	...	...	...	...
			1928	26·5	0·5	...	11·6	9·0	78·9	...	...	...	...	...	...	...
			1929	27·8	2·2	0·6	9·0	11·2	77·0	...	...	...	...	...	...	...
										1921	30·2	7·3	0·6	11·3	23·1	57·7
										1922	28·7	...	...	6·5	22·3	71·2
			1926	40·2	0·9	...	12·9	14·8	71·4	1923	29·9	0·6	0·3	8·0	22·7	68·4
										1924	35·5	5·3	0·2	11·0	15·6	67·9
Chingleput...	...	1926 ...								1925	42·5	13·8	1·6	11·6	10·0	63·0
			1927	29·8	1·4	...	12·3	13·7	72·6	...	...	...	...	...	...	...
			1928	36·7	2·3	...	11·8	11·8	74·1	...	...	...	...	...	...	...
			1929	32·9	0·5	1·5	9·6	12·2	76·2	...	...	...	...	...	...	...
			1903	20·4	1·0	...	19·9	12·2	66·9	...	...	...	...	...	...	...
			1904	25·8	...	...	23·9	13·3	62·8	1898	20·5	...	...	15·7	6·3	78·0
			1905	28·8	2·3	...	18·8	11·3	67·6	1899	23·1	...	1·3	19·2	9·1	70·4
			1906	37·5	11·0	1·1	12·6	12·5	62·8	1900	26·1	9·6	0·8	18·8	10·1	60·7
			1907	29·9	1·3	0·1	10·5	16·3	71·8	1901	23·8	2·1	5·4	18·9	10·5	63·1
			1908	30·6	2·2	1·8	12·9	13·7	69·4	1902	21·8	...	0·1	22·6	12·5	64·8
			1909	35·4	...	17·1	13·2	10·7	59·0	...	...	...	...	...	...	...
			1910	30·8	...	0·2	14·5	14·3	71·0	...	...	...	...	...	...	...
			1911	23·1	0·6	0·2	21·6	11·6	66·0	...	...	...	...	...	...	...
			1912	29·9	2·0	...	26·4	15·1	56·5	...	...	...	...	...	...	...
			1913	21·3	...	0·1	24·8	9·9	65·2	...	...	...	...	...	...	...
			1914	28·2	3·1	1·2	25·8	9·2	60·7	...	...	...	...	...	...	...
Cocanada	...	1903	1915	35·2	...	13·8	28·0	8·3	49·9	...	...	...	...	...	...	...
			1916	30·2	1·0	1·6	20·3	12·8	64·3	...	...	...	...	...	...	...
			1917	32·4	1·5	...	22·7	13·9	61·9	...	...	...	...	...	...	...
			1918	42·7	1·4	0·6	31·5	9·5	57·0	...	...	...	...	...	...	...
			1919	38·9	0·8	9·6	32·0	7·6	50·0	...	...	...	...	...	...	...
			1920	28·1	2·6	1·1	26·1	7·2	63·0	...	...	...	...	...	...	...
			1921	35·0	6·1	...	35·9	10·5	47·5	...	...	...	...	...	...	...
			1922	24·2	...	2·5	29·5	6·1	61·9	...	...	...	...	...	...	...
			1923	27·9	1·9	3·9	32·0	7·3	54·9	...	...	...	...	...	...	...
			1924	27·5	...	3·1	20·0	11·3	65·6	...	...	...	...	...	...	...
			1925	29·0	...	8·0	15·9	7·7	68·4	...	...	...	...	...	...	...
			1926	31·3	0·1	0·2	22·0	6·2	71·5	...	...	...	...	...	...	...
			1927	28·4	0·1	0·3	36·6	8·1	54·9	...	...	...	...	...	...	...
Cocanada—*cont.*	...	1903	1928	29·7	2·7	...	30·6	6·6	60·1	...	...	...	...	...	...	...
			1929	27·1	...	0·1	29·4	6·2	64·3	...	...	...	...	...	...	...
Coimbatore	...	1929								1924	33·5	8·7	...	10·1	18·4	62·8
										1925	28·6	4·6	0·1	11·1	17·3	66·9
										1926	28·6	5·4	4·0	11·2	17·3	62·1
										1927	27·8	5·7	0·4	10·8	14·1	69·0
										1928	22·2	0·3	0·3	12·2	14·8	72·4
		Advance Scheme.	1929	30·5	0·5	1·2	10·2	14·1	74·0	...	...	...	...	...	...	...
			1897	22·3	6·6	0·4	21·3	10·7	61·0	...	...	...	...	...	...	...
			1898	29·4	1·1	0·6	13·5	13·0	71·8	1892	32·5	2·7	1·5	24·1	12·2	59·5
			1899	29·8	1·9	0·7	2·1	16·5	78·8	1893	33·0	1·3	2·2	26·0	13·0	57·5
			1900	31·2	2·0	1·6	4·5	14·2	77·7	1894	30·6	4·5	0·5	26·8	10·5	57·7
			1901	35·5	2·8	1·0	10·8	17·7	67·7	1895	33·6	5·3	0·8	25·2	11·7	57·0
			1902	32·8	0·1	1·0	11·6	25·9	61·4	1896	33·3	9·6	0·1	23·8	10·6	55·9
			1903	32·4	...	0·7	11·0	19·7	68·6	...	...	...	...	...	...	...
			1904	32·0	1·2	0·1	6·9	19·7	72·1	...	...	...	...	...	...	...
			1905	28·8	0·3	6·0	5·8	18·3	69·6	...	...	...	...	...	...	...
			1906	34·3	6·6	5·3	5·1	18·2	64·8	...	...	...	...	...	...	...
			1907	26·8	1·1	...	8·8	17·5	72·6	...	...	...	...	...	...	...
			1908	28·5	9·3	0·1	4·0	13·8	72·8	...	...	...	...	...	...	...
			1909	30·4	...	0·3	8·5	18·4	72·8	...	...	...	...	...	...	...
			1910	37·2	...	...	6·8	20·5	72·7	...	...	...	...	...	...	...
			1911	3·00	0·2	0·1	8·6	20·3	69·8	...	...	...	...	...	...	...
			1912	34·4	4·0	0·1	4·1	13·7	78·1	...	...	...	...	...	...	...
Conjeeveram	...	1897	1913	33·4	0·2	1·3	3·6	16·7	78·2	...	...	...	...	...	...	...
			1914	37·7	7·1	..	3·3	14·6	75·0	...	...	...	...	...	...	...
			1915	31·4	...	0·3	3·6	17·2	78·9	...	...	...	...	...	...	...
			1916	32·7	0·7	3·1	2·7	15·3	78·2	...	...	...	...	...	...	...
			1917	39·6	0·7	2·8	3·8	18·4	74·3	...	...	...	...	...	...	...
			1918	59·2	3·2	1·5	19·2	11·2	64·9	..	...	...	...	...	...	...
			1919	37·4	7·8	1·4	4·4	11·1	75·3	...	...	...	...	...	...	...
			1920	34·2	1·2	1·2	2·7	12·0	82·9	...	...	...	...	...	...	...
			1921	25·8	1·2	1·8	1·0	11·6	84·4	..	...	...	...	...	...	...
			1922	27·4	...	6·2	0·8	8·9	84·1	...	...	...	...	...	...	...
			1923	23·1	0·8	1·8	3·2	9·1	85·1	...	...	...	...	...	...	...
			1924	21·8	2·4	0·2	2·1	9·4	85·9	...	...	...	...	...	...	...
			1925	26·3	0·6	5·5	0·7	9·8	83·4	...	...	...	...	...	...	...
			1926	32·6	0·7	0·1	4·3	11·8	83·1	...	...	...	...	...	...	...
			1927	25·8	0·1	...	5·4	9·0	85·5	...	...	...	...	...	...	...
			1928	26·7	5·3	...	5·6	9·0	80·1	...	...	...	...	...	...	...
			1929	25·2	0·1	2·8	11·6	11·2	74·3	...	...	...	...	...	...	...
			1893	31·9	1·6	...	30·6	17·6	50·2	...	...	...	...	...	...	...
			1894	31·9	2·6	...	28·0	19·7	49·7	1888	28·4	...	1·5	34·6	17·6	46·3
			1895	27·9	...	...	21·9	13·6	64·5	1889	26·9	5·4	...	27·1	14·7	52·88
			1896	41·3	2·8	0·4	22·4	17·6	56·8	1890	42·7	1·5	1·5	39·2	13·7	44·1
			1897	43·8	5·6	0·4	20·8	15·5	57·7	1891	29·4	5·6	2·2	22·5	14·1	55·6
			1898	34·6	...	...	14·8	17·2	68·0	1892	37·0	0·5	1·3	44·2	15·2	38·8
			1899	28·6	...	...	9·4	22·9	67·7	...	...	...	...	...	...	...
			1900	36·5	...	1·4	20·4	19·4	58·8	...	...	...	...	...	...	...
Coonoor	...	1893	1901	24·4	1·0	...	20·2	14·9	63·9	...	...	...	..	...	...	...
			1902	29·0	...	...	25·1	19·0	55·9	...	...	...	...	...	...	...
			1903	46·0	...	...	8·2	16·3	75·5	...	...	...	...	...	...	...
			1904	27·6	...	...	3·0	23·4	73·6	..	...	...	...	...	...	...
			1905	37·0	...	...	1·6	19·7	78·7	...	...	...	...	...	...	...
			1906	44·4	1·1	22·4	0·8	16·6	59·1	...	...	...	...	...	...	...
			1907	31·4	...	...	1·1	17·2	81·7	.	...	...	..	...	...	..
			1908	26·6	0·4	...	4·8	20·3	74·5	...	...	...	...	...	...	..
			1909	32·5	0·7	...	4·0	15·9	79·4	...	...	...	...	...	...	...
			1910	29·0	..	...	0·8	14·2	85·0	...	...	...	...	...	...	...

No. XIII.—*Statement prescribed by the Government of India, Home Department (Sanitary), in Letter No.* 10—326, *dated 8th December* 1894, *communicated with G.O. Mis. No.* 2654 *L., dated 20th December* 1894—cont.

(Comparative table showing percentage of mortality to total mortality from year to year under each head of death causation.)

1	2		3		4					5		6				
Name of municipality.	Date of completion of works of		Average annual death-rate since the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					Average annual death-rate for the five-year period preceding the introduction of drainage system of water-supply.		Percentage of deaths to total mortality under each head of death causation.				
	Drainage.	Water-supply.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.
Coonoor—*cont.*	...	1893	1911	31·4	1·6	0·3	1·6	16·3	80·2	...	...	...	...	...	...	...
			1912	26·0	0·4	1·9	0·8	14·7	82·2	...	...	...	...	...	...	...
			1913	30·4	0·3	...	3·0	15·2	81·5	...	...	...	...	...	...	...
			1914	28·7	...	...	2·1	17·2	80·7	...	...	...	...	...	...	...
			1915	21·6	...	...	5·1	17·7	77·2	...	...	...	...	...	...	...
			1916	28·7	...	1·4	3·8	13·8	81·0	...	...	...	...	...	...	...
			1917	32·4	...	9·0	2·5	15·2	73·3	...	...	...	...	...	...	...
			1918	63·2	1·7	2·9	2·4	9·8	83·1	...	...	...	...	...	...	...
			1919	40·0	...	13·9	2·8	13·1	70·2	...	...	...	...	...	...	...
			1920	29·2	0·3	0·7	2·8	15·9	80·3	...	...	...	...	...	...	...
			1921	20·6	17·9	...	2·8	11·5	67·8	...	...	...	...	...	...	...
			1922	25·6	...	9·9	9·6	10·5	70·0	...	...	...	...	...	...	...
			1923	26·0	1·3	1·9	11·3	12·6	72·9	...	...	...	...	...	...	...
			1924	33·0	0·2	...	14·4	11·6	73·8	...	...	...	...	...	...	...
			1925	22·2	...	...	6·0	14·1	79·9	...	...	...	...	...	...	...
			1926	21·7	...	0·8	2·6	17·0	79·6	...	...	...	...	...	...	...
			1927	25·2	0·7	0·3	5·2	9·2	84·6	...	...	...	...	...	...	...
			1928	21·6	0·4	0·4	3·4	16·2	79·5	...	...	...	...	...	...	...
			1929	21·5	...	...	6·1	17·9	76·0	...	...	...	...	...	...	...
Cuddapah	...	1893	1893	46·9	...	1·5	68·0	2·0	28·5	...	...	...	...	...	...	...
			1894	33·9	...	1·9	49·9	4·4	43·8	1888	31·7	15·4	2·5	26·6	5·8	49·7
			1895	32·9	...	0·3	54·9	5·2	39·6	1889	30·5	13·6	1·0	30·2	8·3	46·9
			1896	21·7	0·5	5·6	46·6	3·7	43·6	1890	43·0	9·4	0·9	50·1	3·0	36·6
			1897	28·5	4·3	0·2	42·0	2·6	50·9	1891	29·3	7·8	1·6	49·4	6·2	35·0
			1898	29·7	0·2	1·8	49·4	2·1	46·5	1892	38·3	10·6	0·3	43·8	3·4	41·9
			1899	29·0	...	1·2	47·2	5·4	46·2	...	...	...	...	...	...	...
			1900	31·7	4·0	2·4	31·2	7·6	54·8	...	...	...	...	...	...	...
			1901	29·5	5·8	3·3	32·0	2·7	56·2	...	...	...	...	...	...	...
			1902	21·2	0·3	1·2	31·0	5·5	62·0	...	...	...	...	...	...	...
			1903	27·3	...	0·7	26·6	5·6	67·1	...	...	...	...	...	...	...
			1904	25·3	...	0·2	26·9	5·8	67·1	...	...	...	...	...	...	...
			1905	28·4	...	...	28·3	5·8	65·9	...	...	...	...	...	...	...
			1906	34·5	0·9	...	35·3	7·4	56·4	...	...	...	...	...	...	...
			1907	37·1	0·3	0·2	25·9	10·8	62·8	...	...	...	...	...	...	...
			1908	50·4	19·6	2·8	21·7	5·5	51·0	...	...	...	...	...	...	...
			1909	30·2	0·6	0·4	24·8	10·5	63·7	...	...	...	...	...	...	...
			1910	36·5	0·5	...	22·5	14·0	63·0	...	...	...	...	...	...	...
			1911	23·0	1·0	...	21·7	9·0	68·3	...	...	...	...	...	...	...
			1912	35·4	13·2	...	11·3	10·3	65·2	...	...	...	...	...	...	...
			1913	18·3	0·6	0·3	10·8	10·2	78·1	...	...	...	...	...	...	...
			1914	25·7	3·9	7·2	15·1	7·9	65·9	...	...	...	...	...	...	...
			1915	23·5	2·4	0·7	26·3	8·1	62·5	...	...	...	...	...	...	...
			1916	23·4	1·0	0·5	21·8	10·1	66·6	...	...	...	...	...	...	...
			1917	42·4	1·6	6·5	30·4	6·5	55·0	...	...	...	...	...	...	...
			1918	62·7	2·4	1·3	33·6	7·5	55·2	...	...	...	...	...	...	...
			1919	32·6	3·4	0·2	15·5	10·5	70·4	...	...	...	...	...	...	...
			1920	28·8	0·2	0·6	22·4	8·8	68·0	...	...	...	...	...	...	...
Cuddapah—*cont.*	...	1893	1921	19·4	0·3	2·1	33·1	7·9	56·6	...	...	...	...	...	...	...
			1922	25·5	4·6	7·4	24·5	8·7	54·8	...	...	...	...	...	...	...
			1923	25·8	0·6	0·4	17·1	11·9	70·0	...	...	...	...	...	...	...
			1924	24·9	1·0	3·5	13·8	11·1	70·6	...	...	...	...	...	...	...
			1925	22·0	...	7·0	27·0	4·7	61·3	...	...	...	...	...	...	...
			1926	22·3	0·5	...	20·0	8·0	71·5	...	...	...	...	...	...	...
			1927	23·0	4·5	...	19·9	5·1	70·5	...	...	...	...	...	...	...
			1928	27·0	9·5	...	18·0	6·6	65·9	...	...	...	...	...	...	...
			1929	27·7	2·8	...	14·7	8·0	74·5	...	...	...	...	...	...	...
Dindigul	...	1896	1896	23·1	9·0	1·1	25·4	11·3	53·2	...	...	...	...	...	...	...
			1897	22·1	47·3	2·2	14·8	7·0	28·7	1891	29·1	25·8	2·6	3·1	1·7	66·8
			1898	18·9	15·7	1·1	22·3	13·6	47·3	1892	20·5	4·3	0·5	7·7	1·5	86·0
			1899	18·9	...	10·7	22·0	11·5	55·8	1893	23·5	10·8	0·2	5·4	5·9	77·7
			1900	25·6	25·2	4·4	15·6	16·0	38·8	1894	23·7	4·8	...	14·6	8·8	71·8
			1901	16·6	11·9	1·2	20·3	18·4	48·2	1895	21·7	0·9	...	19·2	12·3	67·6
			1902	17·5	...	0·2	11·1	20·0	68·7	...	...	...	...	...	...	...
			1903	25·5	0·2	...	18·3	21·5	60·0	...	...	...	...	...	...	...
			1904	33·1	0·8	0·8	15·4	16·9	66·1	...	...	...	...	...	...	...
			1905	39·9	0·1	19·9	15·0	14·7	50·3	...	...	...	...	...	...	...
			1906	39·6	15·3	2·1	17·3	12·7	52·6	...	...	...	...	...	...	...
			1907	37·1	0·8	...	22·7	16·0	60·5	...	...	...	...	...	...	...
			1908	38·9	10·7	...	22·1	13·8	53·4	...	...	...	...	...	...	...
			1909	34·9	0·7	...	25·3	14·4	59·6	...	...	...	...	...	...	...
			1910	34·4	0·5	...	7·6	19·2	72·7	...	...	...	...	...	...	...
			1911	34·4	5·4	5·3	0·5	17·4	71·4	...	...	...	...	...	...	...
			1912	33·1	8·1	0·5	5·8	17·2	68·4	...	...	...	...	...	...	...
			1913	31·7	1·1	0·3	10·2	17·8	70·8	...	...	...	...	...	...	...
			1914	39·7	3·7	0·6	14·3	16·8	64·6	...	...	...	...	...	...	...
			1915	33·9	1·5	...	14·3	15·3	68·9	...	...	...	...	...	...	...
			1916	34·1	...	...	12·2	13·9	73·9	...	...	...	...	...	...	...
			1917	40·6	1·5	3·5	14·5	17·9	62·6	...	...	...	...	...	...	...
			1918	67·1	7·2	10·6	25·7	9·9	46·6	...	...	...	...	...	...	...
			1919	51·3	5·2	1·6	8·1	18·2	66·9	...	...	...	...	...	...	...
			1920	42·5	0·6	...	8·2	20·6	70·6	...	...	...	...	...	...	...
			1921	27·3	0·6	0·1	14·7	22·3	62·3	...	...	...	...	...	...	...
			1922	29·8	0·8	1·3	6·8	16·9	74·2	...	...	...	...	...	...	...
			1923	23·3	0·1	...	5·1	22·2	72·6	...	...	...	...	...	...	...
			1924	28·4	1·6	...	13·8	22·1	64·5	...	...	...	...	...	...	...
			1925	30·1	8·6	...	4·6	23·8	63·0	...	...	...	...	...	...	...
			1926	29·7	0·4	0·5	2·6	23·0	73·5	...	...	...	...	...	...	...
			1927	31·5	0·4	0·8	2·6	24·4	71·8	...	...	...	...	...	...	...
			1928	27·3	0·8	...	1·2	22·0	76·0	...	...	...	...	...	...	...
			1929	35·1	13·1	...	1·2	20·0	65·7	...	...	...	...	...	...	...
Ellore	...	1919	1914							1914	43·5	4·8	5·1	28·1	9·9	52·1
			1915							1915	40·7	1·3	5·4	18·7	11·4	63·2
			1916							1916	36·1	14·9	1·4	22·0	6·6	54·8
			1917							1917	34·7	14·0	2·4	21·9	5·6	56·1
			1918							1918	43·4	13·1	6·1	26·0	5·7	49·1
			1919	27·5	...	1·4	25·2	6·8	66·6	...	...	...	...	...	...	...
			1920	25·9	2·1	2·4	24·4	6·0	65·1	...	...	...	...	...	...	...
			1921	21·0	1·5	3·8	29·9	5·9	58·9	...	...	...	...	...	...	...
			1922	19·9	0·1	3·5	23·6	8·3	64·5	...	...	...	...	...	...	...
			1923	21·4	...	5·0	18·4	12·5	64·1	...	...	...	...	...	...	...

No. XIII.—*Statement prescribed by the Government of India, Home Department (Sanitary), in Letter No.* 10—826, *dated 8th December* 1894, *communicated with G.O. Mis. No.* 2654 *L., dated 20th December* 1894—cont.

(Comparative table showing percentage of mortality to total mortality from year to year under each head of death causation.)

1	2		3		4					5		6					
Name of municipality.	Date of completion of works of		Average annual death-rate since the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					Average annual death-rate for the five-year period preceding the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					
	Drainage.	Water-supply.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	
Ellore—*cont.*		1919	1924	20·9	...	1·1	22·0	11·6	65·3	...	...	...	...	...	...	...	
			1925	18·8	0·1	2·2	25·7	13·8	58·2	...	...	...	...	...	...	...	
			1926	18·2	0·1	1·2	30·5	8·4	59·8	...	...	...	...	...	...	...	
			1927	16·5	4·1	0·3	32·4	4·0	59·2	..	...	...	...	...	...	...	
			1928	18·6	4·2	0·3	26·5	7·0	62·0	...	...	...	...	...	...	...	
			1929	18·8	0·5	1·0	23·5	5·5	69·5	...	...	...	...	...	...	...	
Erode		1919	1919	32·6	3·9	3·5	21·3	19·3	52·0	1914	33·7	·60	1·8	6·2	29·5	56·5	
										1915	29·2	10·1	0·2	8·8	24·6	56·3	
										1916	33·8	6·0	14·7	9·2	20·7	49·4	
										1917	41·1	17·4	7·4	4·5	20·4	50·3	
										1918	53·8	10·0	4·7	32·4	12·7	40·2	
			1920	28·7	0·2	0·4	11·3	18·0	70·1	...	...	...	...	...	...	...	
			1921	22·0	1·4	0·8	20·0	16·9	60·9	...	...	...	...	...	...	...	
			1922	22·5	...	3·5	15·3	8·3	72·9	...	...	...	...	...	...	...	
			1923	17·5	3·0	9·0	19·0	13·8	55·2	...	...	...	...	...	...	...	
			1924	14·1	0·6	3·1	18·9	10·9	66·5	...	...	...	...	...	...	...	
			1925	20·2	7·4	5·8	8·0	11·3	67·5	...	...	...	...	...	...	...	
			1926	16·6	2·9	0·8	13·7	10·0	72·6	...	...	...	...	...	...	...	
			1927	20·7	2·1	...	15·0	8·4	74·5	...	...	...	...	...	...	...	
			1928	14·5	0·6	...	16·2	9·6	73·6	...	...	...	...	...	...	...	
			1929	15·5	...	...	26·5	10·2	63·3	...	...	...	...	...	...	...	
Gudiyattam		1908	1908	31·6	21·8	...	...	25·2	13·4	1902	39·6	...	...	...	...	...	
			1909	25·8	7·5	...	25·3	12·9	54·3	1903	29·6	...	4·6	7·9	24·2	63·3	
			1910	26·6	...	...	27·1	19·5	53·4	1904	27·8	16·5	0·2	7·4	17·2	58·7	
			1911	22·1	...	...	30·2	19·3	50·5	1905	23·0	...	2·0	6·1	25·3	66·6	
			1912	54·4	8·5	...	10·0	13·5	68·0	1906	37·1	16·2	13·6	11·8	16·2	42·2	
			1913	19·4	0·2	...	5·7	22·9	71·2	1907	23·9	10·4	...	15·9	17·5	56·2	
			1914	25·1	2·9	4·8	12·7	28·6	51·0	...	...	...	...	...	...	...	
			1915	22·7	3·9	6·8	17·5	21·8	50·0	...	...	...	...	...	...	...	
			1916	30·6	...	12·0	2·8	18·2	67·0	...	...	...	...	...	...	...	
			1917	34·8	5·1	0·7	3·6	17·7	72·9	...	...	...	...	...	...	...	
			1918	43·1	14·2	3·6	34·8	14·2	33·2	...	...	...	...	...	...	...	
			1919	31·2	12·1	18·2	22·2	16·2	31·3	...	...	...	...	...	...	...	
			1920	21·5	4·0	3·4	24·6	20·3	47·7	...	...	...	...	...	...	...	
			1921	41·9	...	0·3	8·6	6·6	84·5	...	...	...	...	...	...	...	
			1922	22·2	...	0·6	12·5	12·8	74·1	...	...	...	...	...	...	...	
			1923	23·5	7·1	0·6	22·5	22·6	47·2	...	...	...	...	...	...	...	
			1924	23·1	7·2	1·9	21·8	20·3	48·8	...	...	...	...	...	...	...	
Guntur		1908	1925	23·5	0·4	6·1	24·4	10·2	58·9	...	...	...	...	...	...	...	
			1926	21·2	1·7	...	20·7	15·5	62·1	...	...	...	...	...	...	...	
			1927	20·3	...	...	25·4	13·9	60·7	...	...	...	...	...	...	...	
			1928	20·1	0·9	..	19·0	14·2	65·9	...	...	...	...	...	...	...	
			1929	26·5	...	7·3	16·4	11·4	64·9	...	...	...	...	...	...	...	
Kodaikanal		1914	1908	50·7	11·5	4·4	15·8	8·2	60·1	...	...	...	...	...	...	...	
			1909	37·4	...	3·2	19·0	4·2	73·6	1908	33·3	...	...	15·0	9·6	75·4	
			1910	47·1	..	1·0	23·8	9·1	66·1	1904	31·8	...	...	15·3	10·4	74·3	
			1911	30·5	1·3	0·7	23·2	5·4	69·4	1905	34·2	0·7	...	15·4	9·6	74·3	
			1912	34·7	0·2	0·1	20·6	5·8	73·3	1906	56·0	11·2	...	17·2	11·1	60·5	
			1913	34·4	...	7·5	18·0	3·2	71·3	1907	38·6	0·6	0·3	15·3	7·6	76·2	
			1914	46·1	2·9	17·2	15·5	3·4	61·0	...	...	...	...	...	...	...	
			1915	34·8	0·5	0·5	19·5	3·2	76·3	...	...	...	...	...	...	...	
			1916	36·9	0·1	0·1	23·1	5·7	71·0	...	...	...	...	...	...	...	
			1917	44·7	2·3	...	22·4	4·8	70·5	...	...	...	...	...	...	...	
			1918	58·9	2·3	0·6	33·7	3·2	60·2	...	...	...	...	...	...	...	
			1919	45·8	0·3	0·9	24·4	3·1	71·3	...	...	...	...	...	...	...	
			1920	47·0	4·4	0·8	18·7	5·6	70·5	...	...	...	...	...	...	...	
			1921	37·7	4·1	1·8	24·8	8·5	61·0	...	...	...	...	...	...	...	
			1922	30·2	...	0·7	20·0	4·8	74·5	...	...	...	...	...	...	...	
			1923	34·4	..	0·5	27·7	4·0	67·8	...	...	...	...	...	...	...	
			1924	32·6	...	0·1	30·6	2·0	67·3	...	...	...	...	...	...	...	
			1925	34·3	0·1	5·2	20·3	5·1	69·3	...	...	...	...	...	...	...	
			1926	39·5	1·9	0·1	14·3	8·4	75·3	...	...	...	...	...	...	...	
			1927	39·8	6·2	1·0	11·2	6·2	75·4	...	...	...	...	...	...	...	
			1928	42·9	7·2	0·2	15·6	6·4	70·6	...	...	...	...	...	...	...	
			1929	19·7	...	...	15·3	4·4	80·3	...	...	...	...	...	...	...	
Kumbakōnam		1894	1914	19·3	...	...	16·1	14·3	69·6	1909	26·7	...	...	5·9	15·7	78·4	
			1915	20·3	...	3·4	13·5	13·6	69·5	1910	32·4	...	...	9·7	9·7	80·6	
			1916	21·0	...	...	19·7	9·8	70·5	1911	23·7	4·3	1·5	8·7	10·1	75·4	
			1917	22·7	...	3·0	7·6	10·6	78·8	1912	17·5	...	...	21·6	7·8	70·6	
			1918	35·4	...	...	29·1	2·9	68·0	1913	22·4	...	...	20·0	24·6	55·4	
			1919	33·0	...	6·3	26·0	8·3	59·4	...	...	...	...	...	...	...	
			1920	38·2	...	...	35·1	9·0	55·9	...	...	...	...	...	...	...	
			1921	15·2	...	1·5	13·8	3·1	81·6	...	...	...	...	...	...	...	
			1922	19·1	...	...	6·1	7·3	86·6	...	...	...	...	...	...	...	
			1923	20·1	...	...	15·1	16·3	68·6	...	...	...	...	...	...	...	
			1924	19·6	...	...	26·2	4·8	69·0	...	..	...	...	...	...	...	
			1925	19·4	...	...	30·1	3·6	66·3	...	...	...	...	...	...	...	
			1926	25·4	...	...	16·5	6·5	77·1	...	...	...	...	...	...	...	
			1927	28·5	...	...	13·9	6·6	79·5	...	...	...	...	...	...	...	
			1928	26·2	...	...	16·1	7·1	76·8	...	...	...	...	...	...	...	
			1929	27·1	...	...	5·2	3·5	91·3	...	...	...	...	...	...	...	
Kumbakōnam		1894	1894	37·5	17·3	0·5	18·9	10·0	53·3	...	...	...	...	...	...	...	
			1895	31·2	3·2	0·7	21·9	11·4	62·8	1889	34·8	6·9	9·7	14·8	16·2	52·4	
			1896	34·2	9·3	...	20·0	11·6	59·1	1890	31·6	8·1	10·2	17·2	13·4	51·1	
			1897	39·9	26·2	...	16·2	11·5	46·1	1891	30·5	11·3	1·6	20·2	13·0	53·9	
			1898	30·0	11·8	...	15·1	10·3	62·8	1892	29·1	9·2	1·3	20·1	13·4	56·0	
			1899	36·4	13·0	...	14·7	9·3	63·0	1893	36·2	19·8	1·3	14·5	11·6	52·8	
			1900	30·3	3·4	...	14·6	6·9	75·1	...	...	...	...	...	...	...	
			1901	31·9	10·2	0·1	15·9	7·4	66·4	...	...	...	...	...	...	...	
			1902	29·1	5·5	0·1	9·6	6·8	78·0	...	...	...	...	...	...	...	
			1903	31·2	6·7	...	10·0	5·9	77·4	...	...	...	...	...	...	...	
			1904	31·6	11·2	...	8·5	9·0	71·3	...	...	...	...	...	...	...	
			1905	27·3	...	...	11·0	9·5	79·5	...	...	...	...	...	...	...	
			1906	38·8	13·4	7·2	9·6	9·0	60·8	...	...	...	...	...	...	...	
			1907	31·9	7·1	2·7	14·4	9·0	66·8	...	...	...	...	...	...	...	
			1908	29·9	9·8	0·1	14·5	7·3	68·3	...	...	...	...	...	...	...	
			1909	29·7	2·7	0·3	15·5	9·7	71·8	...	...	...	...	...	...	...	

No. XIII.—*Statement prescribed by the Government of India, Home Department (Sanitary), in Letter No. 10—326, dated 8th December 1894, communicated with G.O. Mis. No. 2654 L., dated 20th December 1894*—cont.

(Comparative table showing percentage of mortality to total mortality from year to year under each head of death causation.)

1	2		3		4					5		6					
Name of municipality.	Date of completion of works of		Average annual death-rate since the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					Average annual death-rate for the five-year period preceding the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					
	Drainage.	Water-supply.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	
Kumbakónam—*cont.*		1894	1910	31·0	3·3	0·9	12·0	10·0	73·8	...	...	...	...	...	...	...	
			1911	29·2	4·7	1·9	14·3	9·7	69·4	...	...	...	...	...	...	...	
			1912	31·1	4·3	1·5	15·7	9·7	68·8	...	...	...	...	...	...	...	
			1913	29·4	3·6	0·7	13·3	9·0	72·5	...	...	...	...	...	...	...	
			1914	34·3	7·3	0·9	7·8	12·7	71·3	...	...	...	...	...	...	...	
			1915	27·9	1·2	1·9	11·0	10·8	75·1	...	...	...	...	...	...	...	
			1916	29·5	1·7	6·0	11·6	8·7	72·0	...	...	...	...	...	...	...	
			1917	21·4	3·4	2·0	10·8	6·3	77·5	...	...	...	...	...	...	...	
			1918	40·4	1·6	5·4	29·6	6·7	56·7	...	...	...	...	...	...	...	
			1919	31·2	1·0	4·4	29·2	7·3	58·1	...	...	...	...	...	...	...	
			1920	32·9	6·0	1·6	20·8	9·2	62·4	...	...	...	...	...	...	...	
			1921	35·2	15·0	0·5	21·3	6·3	56·9	...	...	...	...	...	...	...	
			1922	27·5	...	9·3	17·9	4·6	68·2	...	...	...	...	...	...	...	
			1923	28·2	0·5	4·8	15·9	5·9	72·9	...	...	...	...	...	...	...	
			1924	25·7	2·2	0·3	7·1	6·1	84·3	...	...	...	...	...	...	...	
			1925	30·3	1·4	..	4·7	10·3	83·6	...	...	...	...	...	...	...	
			1926	30·1	5·1	0·1	13·9	9·4	71·5	...	...	...	...	...	...	...	
			1927	25·6	1·0	...	16·7	4·2	78·1	...	...	...	...	...	...	...	
			1928	30·3	6·9	1·3	14·1	4·2	73·5	...	...	...	...	...	...	...	
			1929	33·2	4·5	2·0	13·7	5·2	74·6	...	...	...	...	...	...	...	
Kurnool		1897	1897	53·2	11·3	3·2	40·6	12·7	32·2	...	...	...	...	...	...	...	
			1898	24·6	...	...	50·8	6·0	43·2	1892	55·2	10·0	...	56·7	3·3	30·0	
			1899	27·0	...	...	48·2	15·7	36·1	1893	30·2	...	...	57·9	4·2	37·9	
			1900	29·3	...	0·3	45·6	16·8	37·3	1894	31·3	3·1	0·1	47·0	4·6	45·2	
			1901	32·0	...	...	49·9	15·8	34·3	1895	30·5	6·2	0·4	44·0	3·4	46·0	
			1902	30·0	2·0	...	37·4	13·9	46·7	1896	30·4	4·0	1·9	44·1	3·6	46·4	
			1903	29·4	...	0·1	24·8	17·9	57·2	...	...	...	...	...	...	...	
			1904	26·1	...	...	19·9	22·0	58·1	...	...	...	...	...	...	...	
			1905	35·5	...	2·8	25·7	18·7	52·8	...	...	...	...	...	...	...	
			1906	43·5	16·9	1·9	29·3	11·1	40·8	...	...	...	...	...	...	...	
			1907	29·5	...	0·1	40·1	25·7	34·1	...	...	...	...	...	...	...	
			1908	36·8	2·5	0·4	45·7	22·8	28·6	...	...	...	...	...	...	...	
			1909	34·4	0·1	0·1	46·9	19·8	33·1	...	...	...	...	...	...	...	
			1910	37·6	...	...	46·0	19·1	34·9	...	...	...	...	...	...	...	
			1911	27·5	0·1	...	42·6	19·9	38·0	...	...	...	...	...	...	...	
			1912	39·6	4·1	0·2	38·9	20·1	36·7	...	...	...	...	...	...	...	
			1913	34·6	1·6	0·7	44·9	18·6	34·2	...	...	...	...	...	...	...	
			1914	48·8	4·2	4·2	37·4	12·4	41·8	...	...	...	...	...	...	...	
			1915	33·0	...	0·1	32·5	7·6	59·8	...	...	...	...	...	...	...	
Kurnool—*cont.*		1897	1917	38·2	2·6	3·2	40·8	6·9	46·5	...	...	...	...	...	...	...	
			1918	63·0	0·8	3·7	51·9	3·9	39·7	...	...	...	...	...	...	...	
			1919	29·3	0·3	...	39·1	5·2	55·4	...	...	...	...	...	...	...	
			1920	31·7	0·1	0·2	51·9	7·5	40·3	...	...	...	...	...	...	...	
			1921	29·6	...	0·1	47·1	7·7	45·1	...	...	...	...	...	...	...	
			1922	32·3	7·7	1·1	41·8	6·5	42·9	...	...	...	...	...	...	...	
			1923	36·6	..	10·9	39·3	5·4	44·4	...	...	...	...	...	...	...	
			1924	29·6	0·4	0·1	38·1	5·6	55·8	...	...	...	...	...	...	...	
			1925	30·8	...	0·8	31·3	5·1	62·8	...	...	...	...	...	...	...	
			1926	30·2	...	...	18·3	8·1	73·6	...	...	...	...	...	...	...	
			1927	30·8	0·8	...	23·7	10·0	65·5	...	...	...	...	...	...	...	
			1928	32·7	1·4	0·3	20·8	8·3	69·2	...	...	...	...	...	...	...	
			1929	33·7	...	0·1	18·0	9·7	72·2	...	...	...	...	...	...	...	
Madras		1872	1872	35·2	...	...	...	...	...	...	...	...	...	...	...	...	
			1873	36·7	...	...	...	...	...	1867	27·2	5·0	5·1	20·1	18·5	51·3	
			1874	36·6	...	...	...	...	...	1868	23·7	0·1	6·5	18·3	15·0	60·1	
			1875	65·6	...	...	...	...	...	1869	17·5	5·0	0·3	17·9	...	76·8	
			1876	39·6	...	...	...	...	...	1870	26·4	7·2	0·2	19·3	...	73·3	
			1877	(Famine	year.)	...	...	..	...	1871	28·9	3·8	1·8	19·0	14·5	60·9	
			1878	47·1	...	...	...	...	...	...	...	...	...	...	...	...	
			1879	34·7	...	...	..	...	...	...	...	...	...	...	...	...	
			1880	37·4	...	...	...	...	...	...	...	...	...	...	...	...	
			1881	38·9	...	...	...	...	...	...	...	...	...	...	...	...	
			1882	35·6	...	...	...	...	...	...	...	...	...	...	...	...	
			1883	39·1	...	...	...	...	...	...	...	...	...	...	...	...	
			1884	49·5	...	...	...	...	...	...	...	...	...	...	...	...	
			1885	36·8	...	...	...	...	...	...	...	...	...	...	...	...	
			1886	36·2	...	...	...	...	...	...	...	...	...	...	...	...	
			1887	39·8	...	...	...	...	...	...	...	...	...	...	...	...	
			1888	37·4	...	...	...	...	...	...	...	...	...	...	...	...	
			1889	42·0	...	...	...	...	...	...	...	...	...	...	...	...	
			1890	42·4	...	...	...	...	...	...	...	...	...	...	...	...	
			1891	52·6	...	...	...	...	...	...	...	...	...	...	...	...	
			1892	46·0	...	...	...	...	...	...	...	...	...	...	...	...	
			1893	41·1	...	...	...	...	...	...	...	...	...	...	...	...	
			1894	36·6	...	...	...	...	...	...	...	...	...	...	...	...	
			1895	37·7	...	...	...	...	...	...	...	...	...	...	...	...	
			1896	37·8	...	...	...	...	...	...	...	...	...	...	...	...	
			1897	35·5	...	...	...	...	...	...	...	...	...	...	...	...	
			1898	44·8	...	...	...	...	...	...	...	...	...	...	...	...	
			1899	38·5	...	...	...	...	...	...	...	...	...	...	...	...	
			1900	46·3	...	...	...	...	...	...	...	...	...	...	...	...	
			1901	55·0	...	...	...	...	...	...	...	...	...	...	...	...	
			1902	42·0	0·2	0·3	34·3	15·7	49·5	...	...	...	...	...	...	...	
			1903	37·7	0·1	0·04	31·9	13·9	54·1	...	...	...	...	...	...	...	
			1904	37·9	0·3	0·1	26·1	16·8	56·7	...	...	...	...	...	...	...	
			1905	59·0	12·3	1·1	18·7	18·6	49·3	...	...	...	...	...	...	...	
			1906	46·9	2·3	2·5	23·1	19·0	53·1	...	...	...	...	...	...	...	
			1907	40·8	3·3	0·2	25·8	15·6	55·1	...	...	...	...	...	...	...	
			1908	44·1	5·4	0·1	27·8	13·5	53·2	...	...	...	...	...	...	...	
			1909	38·3	0·1	0·4	29·9	13·6	56·0	...	...	...	...	...	...	...	
			1910	40·3	0·7	0·6	25·4	18·0	55·3	...	...	...	...	...	...	...	
			1911	42·3	3·3	2·2	18·8	22·4	53·3	...	...	...	...	...	...	...	
			1912	39·2	1·8	0·5	19·7	24·5	53·5	...	...	...	...	...	...	...	
			1913	40·3	0·1	0·2	18·7	25·2	55·8	...	...	...	...	...	...	...	
			1914	47·1	7·2	0·3	14·3	22·9	55·3	...	...	...	...	...	...	...	
			1915	36·4	0·2	0·5	12·6	22·6	64·1	...	...	...	...	...	...	...	
			1916	34·9	0·2	2·7	7·2	20·6	69·3	...	...	...	...	...	...	...	
			1917	38·9	0·4	1·0	7·4	20·8	70·4	...	...	...	...	...	...	...	
			1918	61·2	1·6	0·9	18·3	17·7	61·5	...	...	...	...	...	...	...	

No. XIII.—*Statement prescribed by the Government of India, Home Department (Sanitary), in Letter No.* 10—326, *dated 8th December* 1894, *communicated with G.O. Mis. No.* 2654 *L., dated 20th December* 1894—cont.

(Comparative table showing percentage of mortality to total mortality from year to year under each head of death causation.)

1	2		3		4					5		6				
Name of municipality.	Date of completion of works of		Average annual death-rate since the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					Average annual death-rate for the five-year period preceding the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.				
	Drainage.	Water-supply.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.
Madras—*cont.*	...	1872	1919	53·1	2·4	2·3	12·1	21·5	61·7	...	...	...	...	...	...	...
			1920	41·8	0·1	0·5	11·2	22·0	66·2	...	...	...	...	...	...	...
			1921	38·6	0·7	0·9	10·9	20·5	67·0	...	...	...	...	...	...	...
			1922	43·1	0·1	5·0	9·6	18·5	66·8	...	...	...	...	...	...	...
			1923	38·1	0·1	0·7	8·0	19·0	72·2	...	...	...	...	...	...	...
			1924	41·9	0·4	1·0	7·5	16·9	74·2	...	...	...	...	...	...	...
			1925	47·9	0·8	3·1	9·3	16·1	70·7	...	...	...	...	...	...	...
			1926	45·1	0·4	0·3	11·2	16·3	71·8	...	...	...	...	...	...	...
			1927	42·7	2·3	0·1	11·7	14·6	71·3	...	...	...	...	...	...	...
			1928	51·0	2·6	0·9	12·5	14·8	69·2	...	...	...	...	...	...	...
			1929	42·8	0·1	2·3	11·4	13·3	72·9	...	...	...	...	...	...	...
Madura	...	1894	1894	32·6	13·6	0·9	15·8	11·7	58·1	...	...	...	...	...	...	...
			1895	26·1	1·2	0·6	17·6	9·3	71·3	1889	31·2	9·0	3·0	15·1	19·4	53·5
			1896	23·2	0·4	0·6	22·3	10·6	66·1	1890	32·7	3·0	11·9	18·0	14·2	52·9
			1897	25·6	11·3	0·7	18·7	12·5	56·8	1891	31·4	16·8	7·3	12·8	13·0	50·1
			1898	25·1	4·5	0·5	13·7	15·4	65·9	1892	29·3	0·8	9·9	16·0	9·9	63·4
			1899	24·5	3·0	3·4	18·8	10·9	63·9	1893	29·9	9·8	7·6	14·6	7·3	60·7
			1900	31·9	30·3	1·2	14·3	9·8	44·4	...	...	...	...	...	...	...
			1901	22·7	5·4	0·2	18·7	10·4	65·3	...	...	...	...	...	...	...
			1902	23·7	5·6	0·3	16·6	13·0	64·5	...	...	...	...	...	...	...
			1903	25·1	5·1	0·1	20·2	15·3	59·3	...	...	...	...	...	...	...
			1904	36·4	4·4	13·8	6·2	12·0	53·6	...	...	...	...	...	...	...
			1905	31·2	...	16·3	16·8	9·5	57·4	...	...	...	...	...	...	...
			1906	35·1	11·8	0·7	16·5	10·9	60·1	...	...	...	...	...	...	...
			1907	32·9	19·3	1·0	16·6	12·4	50·7	...	...	...	...	...	...	...
			1908	35·8	17·6	0·6	21·3	15·6	44·9	...	...	...	...	...	...	...
			1909	30·7	7·5	...	22·6	19·1	50·8	...	...	...	...	...	...	...
			1910	34·1	17·1	0·6	13·4	15·6	53·3	...	...	...	...	...	...	...
			1911	37·8	18·9	20·3	10·7	10·9	39·2	...	...	...	...	...	...	...
			1912	30·3	4·0	0·5	19·6	14·3	61·6	...	...	...	...	...	...	...
			1913	32·5	5·2	2·1	20·8	12·4	59·5	...	...	...	...	...	...	...
			1914	35·6	6·6	10·9	20·4	10·4	51·7	...	...	...	...	...	...	...
			1915	31·2	12·0	0·3	18·7	11·4	57·6	...	...	...	...	...	...	...
			1916	26·8	2·5	0·1	19·7	11·5	66·2	...	...	...	...	...	...	...
			1917	36·5	2·9	16·2	19·3	9·5	52·1	...	...	...	...	...	...	...
			1918	35·7	7·1	2·3	31·1	7·9	51·6	...	...	...	...	...	...	...
			1919	37·8	1·9	0·9	28·9	8·3	60·0	...	...	...	...	...	...	...
			1920	37·0	6·2	...	19·9	9·0	64·9	...	...	...	...	...	...	...
			1921	35·3	1·7	0·6	15·8	8·7	73·2	...	...	...	...	...	...	...
Madura—*cont.*	...	1894	1922	36·1	0·1	21·3	8·7	7·5	62·4	...	...	...	...	...	...	...
			1923	31·9	0·02	0·1	13·3	14·1	72·5	...	...	...	...	...	...	...
			1924	35·0	9·8	0·04	10·6	11·4	68·2	...	...	...	...	...	...	...
			1925	38·5	7·6	0·02	11·6	11·3	69·5	...	...	...	...	...	...	...
			1926	39·9	2·0	11·3	10·5	12·0	64·2	...	...	...	...	...	...	...
			1927	33·5	6·3	0·04	9·7	10·5	73·5	...	...	...	...	...	...	...
			1928	32·4	0·3	0·1	5·2	12·6	81·8	...	...	...	...	...	...	...
			1929	35·7	3·5	0·1	3·7	12·5	80·2	...	...	...	...	...	...	...
Masulipatam	...	1918	1918	39·8	6·6	5·7	25·9	3·8	58·0	1913	23·0	...	3·7	23·2	6·8	66·8
			1919	28·7	0·2	0·4	25·0	4·5	69·9	1914	29·6	5·3	0·8	28·5	5·9	59·5
			1920	26·7	1·5	0·2	23·7	7·6	67·0	1915	31·3	0·3	0·8	25·3	5·1	68·5
										1916	33·7	3·8	2·0	21·3	6·2	66·7
										1917	45·0	13·3	12·1	13·3	4·5	56·8
			1921	24·6	0·1	0·1	25·2	6·9	67·7	...	...	...	...	...	...	...
			1922	22·8	1·0	2·7	21·6	5·6	69·1	...	...	...	...	...	...	...
			1923	26·6	...	10·0	22·9	6·5	60·6	...	...	...	...	...	...	...
			1924	25·7	...	3·4	22·2	7·6	66·8	...	...	...	...	...	...	...
			1925	28·1	...	0·1	22·0	6·6	71·3	...	...	...	...	...	...	...
			1926	31·5	...	...	18·9	12·1	69·0	...	...	...	...	...	...	...
			1927	27·9	2·0	0·2	16·4	17·1	64·3	...	...	...	...	...	...	...
			1928	32·0	4·2	0·3	6·6	18·4	70·5	...	...	...	...	...	...	...
			1929	24·6	...	...	8·1	21·5	70·4	...	...	...	...	...	...	...
Negapatam	...	1914	1914	26·0	10·0	2·5	2·4	20·5	64·6	...	...	...	...	...	...	...
			1915	29·5	0·9	3·8	4·7	16·4	74·2	1909	30·4	4·4	0·1	18·2	10·1	67·2
			1916	27·2	3·4	2·0	7·1	11·6	75·9	1910	45·1	16·8	1·1	21·1	9·7	51·3
			1917	31·4	2·1	8·1	8·9	10·2	70·7	1911	33·3	5·3	2·1	22·9	11·0	58·7
			1918	37·1	1·6	8·6	20·9	11·0	57·9	1912	30·2	5·6	0·8	25·2	14·0	54·4
			1919	33·2	2·1	3·2	19·3	12·2	63·2	1913	34·2	4·7	0·05	18·0	15·0	62·3
			1920	31·2	4·8	1·0	18·2	10·3	65·7	...	...	...	...	...	...	...
			1921	30·5	3·2	0·1	15·4	9·9	71·4	...	...	...	...	...	...	...
			1922	30·7	0·4	9·2	8·6	10·0	71·8	...	...	...	...	...	...	...
			1923	32·0	...	9·6	11·1	8·2	71·1	...	...	...	...	...	...	...
			1924	27·1	2·5	0·1	11·2	11·6	74·6	...	...	...	...	...	...	...
			1925	29·4	8·2	0·2	14·1	11·1	66·4	...	...	...	...	...	...	...
			1926	33·5	5·5	1·4	16·0	12·1	65·0	...	...	...	...	...	...	...
			1927	30·8	3·8	1·1	16·3	12·3	66·5	...	...	...	...	...	...	...
			1928	27·7	1·7	4·7	15·2	11·8	66·6	...	...	...	...	...	...	...
			1929	26·8	1·7	0·8	11·1	12·8	73·6	...	...	...	...	...	...	...
Nellore	...	1908	1908	26·1	5·9	0·2	47·1	9·9	36·9	...	...	...	...	...	...	...
			1909	25·9	...	3·1	45·5	2·9	48·5	1903	27·6	7·0	0·2	27·1	5·1	45·5
			1910	35·4	1·9	10·0	39·8	7·3	41·0	1904	31·9	25·1	0·1	24·0	5·3	60·6
			1911	32·7	9·9	0·5	35·9	6·1	47·6	1905	36·6	17·9	2·2	23·8	8·2	47·9
			1912	28·9	1·5	0·3	46·8	6·6	44·8	1906	38·0	20·0	8·4	30·7	6·6	34·3
			1913	32·4	6·4	...	16·1	5·9	71·6	1907	37·4	19·2	0·9	33·4	11·0	35·5
			1914	33·7	1·5	2·1	14·1	7·9	74·4	...	...	...	...	...	...	...
			1915	40·3	2·1	2·2	17·6	6·1	72·0	...	...	...	...	...	...	...
			1916	28·4	0·4	0·1	9·2	5·4	84·9	...	...	...	...	...	...	...
			1917	39·1	0·1	2·2	16·2	7·0	74·5	...	...	...	...	...	...	...
			1918	63·8	17·8	3·0	29·4	4·5	45·3	...	...	...	...	...	...	...
			1919	37·5	5·9	0·3	14·5	7·5	71·8	...	...	...	...	...	...	...
			1920	34·9	2·0	...	14·1	5·9	78·0	...	...	...	...	...	...	...
			1921	30·1	0·2	0·6	17·6	5·1	76·5	...	...	...	...	...	...	...
			1922	29·7	0·2	7·5	15·3	4·5	72·5	...	...	...	...	...	...	...
			1923	36·4	2·5	7·5	12·3	4·7	66·0	...	...	...	...	...	...	...
			1924	32·5	0·2	2·7	11·2	4·5	81·4	...	...	...	...	...	...	...
			1925	35·4	0·4	2·4	12·8	5·3	79·1	...	...	...	...	...	...	...
			1926	36·2	..	...	16·4	6·3	77·3	...	...	...	...	...	...	...
			1927	47·0	11·9	0·1	13·7	5·6	68·7	...	...	...	...	...	...	...
			1928	43·8	5·6	0·1	17·1	6·4	70·8	...	...	...	...	...	...	...
			1929	34·1	0·2	0·2	16·3	6·0	77·3	...	...	...	...	...	...	...

No. XIII.—*Statement prescribed by the Government of India, Home Department (Sanitary), in Letter No.* 10—326, *dated 8th December* 1894, *communicated with G.O. Mis. No.* 2654 *L., dated 20th December* 1894—cont.

(Comparative table showing percentage of mortality to total mortality from year to year under each head of death causation.)

1	2		3		4					5		6				
Name of municipality.	Date of completion of works of		Average annual death-rate since the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					Average annual death-rate for the five-year period preceding the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.				
	Drainage.	Water-supply.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	Year.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.
Ootacamund	1913	1900	1900	29·6	...	0·5	16·2	10·3	73·0	...	...	...	...	...	...	...
			1901	23·0	...	...	26·2	9·3	64·5	1895	23·5	...	...	39·0	9·0	52·0
			1902	28·1	...	0·2	11·8	11·7	76·3	1896	30·1	1·1	...	31·1	9·5	58·3
			1903	37·9	...	...	5·8	10·6	83·6	1897	30·1	1·1	...	28·9	11·7	58·3
			1904	25·0	...	...	2·4	12·5	85·1	1898	39·0	...	...	29·5	10·9	59·6
			1905	31·8	...	...	4·4	12·0	83·6	1899	26·1	...	0·3	15·3	11·2	73·2
			1906	35·4	0·2	0·5	2·6	14·1	82·6	...	...	...	...	...	...	...
			1907	29·6	0·2	...	3·8	15·2	80·8	...	...	...	...	...	...	...
			1908	31·3	0·3	...	5·7	10·8	83·2	...	...	...	...	...	...	...
			1909	35·8	0·2	...	3·3	11·3	85·2	...	...	...	...	...	...	...
			1910	28·4	...	1·5	2·7	15·3	80·5	...	...	...	...	...	...	...
			1911	26·2	...	0·6	2·4	12·0	85·0	...	...	...	...	...	...	...
			1912	29·7	...	0·9	1·1	11·8	86·2	...	...	...	...	...	...	...
			1913	29·1	...	...	2·6	12·0	85·4	...	...	...	...	...	...	...
			1914	32·4	...	0·2	4·4	14·7	80·7	...	...	...	...	...	...	...
			1915	30·7	0·3	...	3·6	10·6	85·5	...	...	...	...	...	...	...
			1916	27·2	...	1·2	5·5	12·5	80·8	...	...	...	...	...	...	...
			1917	30·6	...	0·2	3·8	10·3	76·7	...	...	...	...	...	...	...
			1918	60·8	3·2	0·5	33·0	8·9	54·4	...	...	...	...	...	...	...
			1919	42·8	...	9·2	22·0	7·8	61·0	...	...	...	...	...	...	...
			1920	39·4	...	0·5	5·0	20·4	74·1	...	...	...	...	...	...	...
			1921	29·6	3·6	...	4·5	15·3	76·6	...	...	...	...	...	...	...
			1922	28·1	...	1·5	2·0	11 5	85·0	...	...	...	...	...	...	...
			1923	38·6	0·1	0·3	17·7	13·2	68·7	...	...	...	...	...	...	...
			1924	40·4	0·4	0·1	8·8	13·8	76·9	...	...	...	...	...	...	...
			1925	28·9	...	..	5·7	11·9	82·4	...	...	...	...	...	...	...
			1926	27·0	...	0·4	2·5	12·7	84·4	...	...	...	...	...	...	...
			1927	26·3	...	...	2·6	12·7	84·7	...	...	...	...	...	...	...
			1928	29·5	...	0·3	2·6	14·2	82·9	...	...	...	...	...	...	...
			1929	29 5	...	0·4	1·8	11·8	86 0	...	...	...	...	...	...	...
Periyakulam	...	1907	1907	30·8	0·2	...	...	27·1	45·6	...	...	...	...	...	...	...
			1908	40·8	30·3	...	15·5	15·3	38·9	1902	24·8	1·6	...	21·8	24·7	51·9
			1909	27·4	0·8	...	27·1	20·5	51·6	1903	31·9	15·5	...	16·9	23·6	41·0
			1910	32·0	0·2	...	24·0	21·9	53·9	1904	31·2	3·2	...	17·7	21·2	57·9
			1911	48·2	25·7	0·5	13·3	26·6	33·9	1905	31·8	...	0·2	20·5	27·8	51·5
			1912	29·4	0·2	...	17·6	29·0	53·2	1906	55·9	31·4	0·3	18·3	19·8	30·2
			1913	31·0	0·7	...	13·4	31·2	54·7	...	...	...	...	...	...	...
			1914	31·2	0·3	1·4	20·6	25·2	52·5	...	...	...	...	...	...	...
			1915	33·6	1·0	6·2	21·2	22·6	49·0	...	...	...	...	...	...	...
Periyakulam—*cont.*		1907	1916	31·6	...	0·8	21·8	21·0	56·2	...	...	...	...	...	...	...
			1917	29·5	1·1	1·1	20·1	16·6	61·1	...	...	...	...	...	...	...
			1918	49·9	0·6	1·3	44·4	15·5	38·2	...	...	...	...	...	...	...
			1919	39·3	0·4	15·6	22·5	16·2	45·3	...	...	...	...	...	...	...
			1920	35·0	0·8	0·8	27·3	20·0	51·1	...	...	...	...	...	...	...
			1921	46·8	0·1	...	17·5	15·4	67·0	...	...	...	...	...	...	...
			1922	70·6	...	4·6	10·7	10·1	74·6	...	...	...	...	...	...	...
			1923	37·1	...	...	17·5	18·9	63·6	...	...	...	...	...	...	...
			1924	59·3	2·9	...	21·1	12·7	63·3	...	...	...	...	...	...	...
			1925	40·2	1·7	...	15·9	17·0	65·4	...	...	...	...	...	...	...
			1926	34·0	0·4	...	16·6	19·4	63·6	...	...	...	...	...	...	...
			1927	32·0	...	...	11·8	18·4	69·8	...	...	...	...	...	...	...
			1928	29 7	...	...	6·9	15·1	78·0	...	...	...	...	...	...	...
			1929	40·9	4·7	0·4	6·1	11·0	78·2	...	...	...	...	...	...	...
Salem	...	1914	1914	31·4	...	0·6	10·8	16·9	71·7	...	...	...	...	...	...	...
			1915	42·0	0·4	0·1	3·3	13·2	83·0	1909	34·6	18·8	0·7	25·1	9·5	45·9
			1916	44·6	0·6	11·5	2·8	10·2	74·9	1910	52·6	2·8	...	7·9	10·5	78·8
			1917	56·2	2·2	7·0	2·7	11·0	77·1	1911	41·0	16·1	0·4	4·2	12·9	66·4
			1918	54·5	6·1	1·4	27·6	7·9	57·0	1912	33·9	1·8	1·0	9·8	13·1	74·3
			1919	36·0	12·0	3·6	15·2	8·5	60·7	1913	32·1	0·1	0·1	6·7	14·0	79·1
			1920	35·1	0·8	2·1	10·1	8·0	79·0	...	...	...	...	...	...	...
			1921	58·4	0·4	6·4	5·3	4·0	83·9	...	...	...	...	...	...	...
			1922	34·8	0·2	6·9	16·5	5·3	71·1	...	...	...	...	...	...	...
			1923	45·0	0·1	0·7	11·1	5·8	82·3	...	...	...	...	...	...	...
			1924	58·4	2·8	1·0	11·4	7·4	77·4	...	...	...	...	...	...	...
			1925	60·5	5·3	1·8	7·2	8·7	77·0	...	...	...	...	...	...	...
			1926	44·1	10·7	0·4	11·9	10·9	66·1	...	...	...	...	...	...	...
			1927	40·5	0·04	0·9	15·0	14·2	69·9	...	...	...	...	...	...	...
			1928	47·2	3·8	0·4	15·0	10·2	70·6	...	...	...	...	...	...	...
			1929	45·6	1·6	0·3	15·0	11·1	72·0	...	...	...	...	...	...	...
Tanjore	...	1895	1895	25·5	3·8	0·8	22·1	21·2	50·1	...	...	...	...	...	...	...
			1896	27·0	3·7	2·0	23·5	25·4	45·4	1890	28·2	11·1	6·3	22·6	20·0	40·0
			1897	25·2	12·3	0·6	20·4	22·4	44·3	1891	29·4	3·8	4·4	21·2	23·3	47·3
			1898	25·5	16·3	0·3	13·1	18·2	52·1	1892	29·2	2·7	0·9	19·1	28·4	38·9
			1899	26·0	6·2	3·1	19·2	16·4	55·1	1893	35·7	28·8	2·2	17·6	22·0	29·4
			1900	27·0	4·8	2·5	22·2	19·8	50·7	1894	26·9	15·2	0·9	16·5	26·3	41·1
			1901	26·0	5·2	0·1	18·2	25·7	50·8	...	...	...	...	...	...	...
			1902	29·2	3·5	0·6	9·7	18·0	68·2	...	...	...	...	...	...	...
			1903	29·1	1·7	0·1	10·0	14·0	74·2	...	...	...	...	...	...	...
			1904	30·3	2·9	2·2	12·3	15·0	67·6	...	...	...	...	...	...	...
			1905	30·3	0·1	10·3	13·4	12·4	63·8	...	...	...	...	...	...	...
			1906	33·6	2·5	5·6	15·5	13·6	62·8	...	...	...	...	...	...	...
			1907	35·1	4·7	1·9	15·4	13·3	64·7	...	...	...	...	...	...	...
			1908	33·3	4·3	1·2	12·2	14·4	67·9	...	...	...	...	...	...	...
			1909	34·1	1·7	1·1	11·8	15·4	70·0	...	...	...	...	...	...	...
			1910	39·9	5·1	14·2	8·7	14·6	57·4	...	...	...	...	...	...	...
			1911	32·6	8·3	1·9	6·6	17·8	65·4	...	...	...	...	...	...	...
			1912	32·4	2·2	0·2	7·9	21·6	68·1	...	...	...	...	...	...	...
			1913	32·5	3·7	1·2	8·5	18·2	68·4	...	...	...	...	...	...	...
			1914	33·8	3·9	3·0	7·2	17·6	68·3	...	...	...	...	...	...	...
			1915	37·5	2·0	11·2	11·0	14·9	60·9	...	...	...	...	...	...	...
			1916	30·5	0·3	1·8	11·1	15·2	71·6	...	...	...	...	...	...	...
			1917	34·6	0·1	1·6	8·8	15·2	74·3	...	...	...	...	...	...	...
			1918	50·5	3·1	2·2	30·4	12·0	52·3	...	...	...	...	...	...	...
			1919	37·3	1·8	2·7	16·8	15·4	63·3	...	...	...	...	...	...	...
			1920	34 8	1·7	0·1	15·5	17·2	65·5	...	...	...	...	...	...	...
			1921	35·2	5·1	0·2	19·4	14·5	60·8	...	...	...	...	...	...	...
			1922	34·9	1·0	5·2	21·1	12·6	60·1	...	...	...	...	...	...	...
			1923	29·2	0·1	0·2	14·2	15·1	70·4	...	...	...	...	...	...	...
			1924	30·2	1·5	0·8	13·2	16·1	68·4	...	...	...	...	...	...	...

No. XIII.—*Statement prescribed by the Government of India, Home Department (Sanitary), in Letter No.* 10—326, *dated 8th December* 1894, *communicated with G.O. Mis. No.* 2654 *L., dated 20th December* 1894—cont.

(Comparative table showing percentage of mortality to total mortality from year to year under each head of death causation.)

1	2		3		4					5							
Name of municipality.	Date of completion of works of		Average annual death-rate since the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					Average annual death-rate for the five-year period preceding the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.					
	Drainage.	Water-supply.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	Years.	Death-rate.	Cholera.	Smallpox.	Fevers.	Dysentery and diarrhœa.	All other causes.	
Tanjore—*cont.*	...	1895	1925	31·0	2·8	1·1	13·9	15·0	67·2	...	...	...	...	...	...	...	
			1926	33·1	2·9	0·4	13·1	17·9	65 7	...	...	...	...	...	...	...	
			1927	34·7	7·1	0·2	12·2	13·4	67·1	...	...	...	...	...	...	...	
			1928	35·0	1·3	...	13·2	13·7	71·8	...	...	...	...	...	...	...	
			1929	37·2	1·3	1 2	11·6	13 7	72·2	...	...	...	...	...	...	...	
			1899	31·5	9·4	...	33·4	7·1	50·1	...	...	...	...	...	...	...	
			1900	33·9	0·0	...	19·5	9·9	64·6	1894	31·6	3·8	1·8	31·8	8·0	54·6	
			1901	30·8	3·1	...	22·7	11·1	63·1	1895	29·0	1·2	...	39·7	10·9	48·2	
			1902	35·3	...	4·2	27·4	13·7	54·7	1896	30·2	5·1	0·2	45·5	5·8	43·4	
			1903	30·5	...	0·2	20·9	20·1	58·8	1897	34·2	2·7	0·4	36·5	10·0	50·4	
			1904	28·6	0·2	...	17·6	12·8	69·6	1898	29·6	2·6	0·5	37·7	5·0	54·2	
			1905	35·3	4·2	...	14·3	22·7	58·8	...	...	...	...	...	...	...	
			1906	41·7	4·8	0·8	21·9	20·1	52·4	...	...	...	...	...	...	...	
			1907	36·8	...	...	18·1	21·9	60·0	...	...	...	...	...	...	...	
			1908	40·0	3·4	0·1	20·4	19·7	56·4	...	...	...	...	...	...	...	
			1909	39·3	0·3	0·7	28·1	15·4	55·5	...	...	...	...	...	...	...	
			1910	34·6	1·5	...	33·6	8·0	56·9	...	...	...	...	...	...	...	
			1911	32·2	0·2	0·4	36·5	9·1	53·8	...	...	...	...	...	...	...	
			1912	37·2	13·2	...	25·4	10·0	51·4	...	...	...	...	...	...	...	
			1913	27·3	2·4	0·2	33·3	10·8	53·3	...	...	...	...	...	...	...	
Tirupati	...	1899	1914	34·4	18·3	...	23·3	8·4	50·0	...	...	...	...	...	...	...	
			1915	28·5	0·8	1·9	28·8	25·0	43·5	...	...	...	...	...	...	...	
			1916	31·7	...	2·3	33·5	15·7	48·5	...	...	...	...	...	...	...	
			1917	32·2	0·9	0·4	30·0	11·9	56·8	...	...	...	...	...	...	...	
			1918	49·5	4·0	0·4	16·4	8·7	45·3	...	...	...	...	...	...	...	
			1919	32·5	8·5	2·7	16·5	18·8	53·5	...	...	...	...	...	...	...	
			1920	27·4	1·1	...	16·2	12·5	70·2	...	...	...	...	...	...	...	
			1921	26·4	0·2	0·7	25·0	9·6	64·5	...	...	...	...	...	...	...	
			1922	24·8	1·8	1·2	22·2	11·8	63·0	...	...	...	...	...	...	...	
			1923	30·5	0·4	1·5	15·0	11·5	67·6	...	...	...	...	...	...	...	
			1924	28·7	2·2	...	16·8	10·8	70·2	...	...	...	...	...	...	...	
			1925	28·6	0·4	0·6	18·7	13·2	67·1	...	...	...	...	...	...	...	
			1926	33·1	0·4	0·2	11·3	17·0	71·1	...	...	...	...	...	...	...	
			1927	29·7	0·2	2·5	22·8	11·4	63·1	...	...	...	...	...	...	...	
			1928	35·7	17·1	0·2	16·5	10·8	55·4	...	...	...	...	...	...	...	
			1929	31·7	1·3	0 9	24·5	16·7	57·9	...	...	...	...	...	...	...	
Trichinopoly	..	1896	1896	30·4	19·2	0·8	22·4	11·9	45·7	...	...	...	...	...	...	...	
			1897	23·1	10·6	1·4	19·6	9·2	59·2	1891	29·5	17·1	3·8	19·9	11·4	47·8	
			1898	30·4	24·1	1·4	14·1	6·7	53·7	1892	25·6	13·0	5·9	26·6	13·7	40·8	
			1899	26·6	15·3	0·6	5·9	9·0	69·2	1893	36·6	36·8	3·9	20·8	9·9	28·6	
			1900	30·3	7·7	0·6	10·5	7·9	73·3	1894	24·4	12·6	1·6	29·4	14·0	42·7	
			1901	24·8	11·9	0·5	12·8	10·6	64·2	1895	23·6	14·0	0·4	31·2	15·7	38·4	
			1902	21·2	2·8	0·6	18·3	10·0	68·3	...	...	...	...	...	...	...	
			1903	25·7	12·9	0·7	12·2	10·8	63·4	...	...	...	...	...	...	...	
			1904	20·8	3·9	0·2	2·0	11·7	82·2	...	...	...	...	...	...	...	
			1905	23·5	...	20·7	4·7	9·7	64·9	...	...	...	...	...	...	...	
			1906	21·8	1·1	2·9	10·5	15·4	70·1	...	...	...	...	...	...	...	
			1907	23·1	1·7	0·1	15·6	14·4	68·2	...	...	...	...	...	...	...	
			1908	29·7	7·7	0·3	10·7	13·9	67·4	...	...	...	...	...	...	...	
			1909	29·7	4·2	0·2	13·7	14·4	67·5	...	...	...	...	...	...	...	
			1910	30·2	0·8	2·4	10·9	15·7	70·2	...	...	...	...	...	...	...	
			1911	31·1	6·2	9·2	11·9	13·1	59·6	...	...	...	...	...	...	...	
			1912	28·9	4·5	3·1	11·4	14·4	66·6	...	...	...	...	...	...	...	
			1913	28·2	4·6	0·9	9·4	13·0	72·1	...	...	...	...	...	...	...	
Trichinopoly—*cont.*		1896	1914	25·2	2·3	4·8	7·9	13·5	71·5	...	...	...	...	...	...	...	
			1915	30·8	2·5	4·3	2·2	8·6	82·4	...	...	...	...	...	...	...	
			1916	28·3	1·3	5·2	2·5	7·4	83·6	...	...	...	...	...	...	...	
			1917	32·6	7·5	2·4	4·5	10·8	74·8	...	...	...	...	...	...	...	
			1918	41·7	2·0	5·2	25·7	6·1	61·0	...	...	...	...	...	...	...	
			1919	35 3	3 0	6·3	8·3	10·3	72·4	...	...	...	...	...	...	...	
			1920	31·1	1 2	0·2	10·5	16·7	71·4	...	...	...	...	...	...	...	
			1921	27·7	2·0	0·03	8·6	19·8	69·8	...	...	...	...	...	...	...	
			1922	29·9	0·9	4·9	7·9	19·8	75·5	...	...	...	...	...	...	...	
			1923	28·6	0·1	0·5	6·7	14·4	78·3	...	...	...	...	...	...	...	
			1924	48·7	25·7	0·1	4·2	10·5	59·5	...	...	...	...	...	...	...	
			1925	29·2	1·1	0·5	2·7	13·4	82·3	...	...	...	...	...	...	...	
			1926	35·2	1·5	2·2	4·3	13·6	78·4	...	...	...	...	...	...	...	
			1927	37·8	3·3	0·7	6·9	11·7	77·4	...	...	...	...	...	...	...	
			1928	37·2	3·7	0·6	7·8	11·0	76·9	...	...	...	...	...	...	...	
			1929	33·0	0 8	0·1	6·6	11·1	81·4	...	...	...	...	...	...	...	
Vellore	...	1908	1903	31·3	6·6	1·1	4·3	26·1	61·9	...	...	...	...	...	...	...	
			1909	23·7	0·5	2·8	6·2	21·9	68·6	1903	33·3	1·9	1·1	3·1	19·6	74·3	
			1910	25·6	...	2·0	9·8	19·2	69·0	1904	44·8	16·0	0·8	1·3	19·7	63·6	
			1911	23·9	0·1	...	10·0	20·2	69·0	1905	24·5	0·3	0·7	1·4	31·0	66·2	
			1912	32·3	2·6	...	6·4	19·6	72·0	1906	41·2	7·0	25·5	0·9	24·5	42·1	
			1913	30·5	0·5	3·3	2·8	13·6	79·8	1907	25·8	8·4	3·8	3·2	23·2	61·4	
			1914	29·9	1·3	3·1	1·7	9·3	84·6	...	...	...	...	...	...	...	
			1915	30·2	2·2	5·7	3·3	6·9	81·9	...	...	...	...	...	...	...	
			1916	29·1	0·2	1·2	1·7	7·7	89·2	...	...	...	...	...	...	...	
			1917	28·7	2·7	0·9	2·1	11·6	82·7	...	...	...	...	...	...	...	
			1918	37·8	2·3	5·9	23·6	9·4	58·8	...	...	...	...	...	...	...	
			1919	24·6	7·2	4·5	12·2	8·9	67·2	...	...	...	...	...	...	...	
			1920	21·4	1·5	...	11·7	6·2	80·6	...	...	...	...	...	...	...	
			1921	21·7	...	...	12·6	5·5	81·9	...	...	...	...	...	...	...	
			1922	22·1	0·1	4·5	10·2	5·2	80·0	...	...	...	...	...	...	...	
			1923	19·7	3·7	1·0	12·7	7·5	75·1	...	...	...	...	...	...	...	
			1924	20·4	13·3	0·8	11·3	4·6	70·0	...	...	...	...	...	...	...	
			1925	19·5	0·7	6·6	14·2	7·5	71·0	...	...	...	...	...	...	...	
			1926	18·3	3 9	...	8·6	9·2	78·3	...	...	...	...	...	...	...	
			1927	15·9	0·4	...	9·9	6·6	83·1	...	...	...	...	...	...	...	
			1928	18 2	3·7	...	9·7	9·4	77·2	...	...	...	...	...	...	...	
			1929	25·6	3·7	9·8	8·6	10·8	67·1	...	...	...	...	...	...	...	
Vizagapatam	...	1902	1902	26·6	...	...	19·8	20·1	60·1	...	...	...	...	...	...	...	
			1903	29·5	...	...	19·7	24·7	55·6	1897	29·7	11·7	0·1	19·8	17·9	50·5	
			1904	32·1	...	...	22·9	20·5	56·8	1898	23·6	...	0·2	25·2	20·0	54·6	
			1905	29·8	...	...	20·1	18·9	60·6	1899	31·6	...	0·1	26·8	24·0	49·1	
			1906	33·8	1·8	0·1	25·3	17·3	55·5	1900	33·1	0·8	...	21·3	20·8	57·1	
			1907	25·5	1·4	0·4	32·6	13·1	52·5	1901	25·8	0·4	...	20·3	18·9	59 9	

No. XIII.—*Statement prescribed by the Government of India, Home Department (Sanitary), in Letter No. 10—326, dated 6th December 1894, communicated with G.O. Mis. No. 2654 L., dated 20th December 1894—cont.*

(Comparative table showing percentage of mortality to total mortality from year to year under each head of death causation.)

1	2		3		4	5		6							
Name of municipality.	Date of completion of works of		Average annual death-rate since the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.	Average annual death-rate for the five-year period preceding the introduction of drainage system or water-supply.		Percentage of deaths to total mortality under each head of death causation.							
	Drainage.	Water-supply.	Years.	Death-rate.	Small-pox.	Years.	Death-rate.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhœa.	All other causes.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhœa.	All other causes.
Vizagapatam—*cont.*	...	1902 ...	1908	36·2	3·6	1909	27·7	7·1	3·6	27·0	12·6	49·7					
			1909	27·8	3·5	1910	26·9	0·1	3·5	27·3	10·8	58·3					
			1910	32·9	1·0	1911	30·4	0·2	1·0	25·5	15·7	57·9					
			1911	27·0	0·1	1912	31·2	0·3	0·1	29·7	17·6	52·3					
			1912	32·6	0·1	1913	23·3	8·0	0·1	23·8	13·8	54·3					
			1913	24·3	3·8			...	3·8	20·5	12·3	63·4					
			1914	27·7	0·1			0·2	0·1	27·4	13·8	58·5					
			1915	31·4	1·0			1·1	1·0	28·6	18·4	52·9					
			1916	31·5	0·1			9·4	0·1	27·4	12·6	60·0					
			1917	32·5	2·8			0·4	2·8	25·5	13·3	58·0					
			1918	53·5	2·9			2·2	2·9	24·7	16·3	55·9					
			1919	35·3	6·1			4·2	6·1	20·3	28·4	44·0					
			1920	27·4	3·1			0·2	3·1	20·8	32·4	43·5					
			1921	27·9	...			0·6	...	24·5	32·6	42·0					
			1922	26·0	0·5			0·2	0·5	23·3	15·1	60·9					
			1923	30·1	0·3			0·8	0·3	24·9	7·5	66·5					
			1924	32·0	0·6			0·3	0·6	25·4	14·6	59·1					
			1925	37·5	13·1			...	13·1	22·3	11·4	53·2					
			1926	25·6	0·6			0·1	0·6	13·7	18·4	67·2					
			1927	37·5	1·5			...	1·5	10·6	17·3	70·6					
			1928	33·6	0·8			3·2	0·8	18·5	17·8	59·7					
			1929	38·6	2·3			0·1	2·3	16·1	17·7	63·8					
Vizianagram ...	...	1914 ...	1914	29·2	...	1909	27·7	0·2	...	36·8	32·2	30·8					
			1915	27·1	1·4	1910	26·9	0·1	1·4	35·8	28·8	37·3					
			1916	31·5	0·5	1911	30·4	0·1	0·5	14·6	31·6	52·3					
			1917	34·2	5·3	1912	31·2	...	5·3	21·7	33·1	44·7					
			1918	53·2	2·3	1913	23·3	0·4	2·3	32·1	25·6	36·6					
			1919	35·1	0·3			0·8	0·3	30·8	30·0	36·1					
			1920	32·5	6·0			0·1	6·0	32·2	27·8	39·8					
			1921	34·1	0·1			0·2	0·1	30·5	27·6	35·7					
			1922	25·8	0·1			0·1	0·1	32·6	19·9	47·3					
			1923	24·2	0·1			...	0·1	21·0	21·2	57·7					
			1924	18·8	...			...	...	36·1	18·6	45·3					
			1925	21·8	1·2			...	1·2	20·3	13·6	64·9					
			1926	28·3	0·7			0·4	0·7	20·5	9·4	69·4					
			1927	22·8	0·2			0·8	0·2	21·0	9·2	69·6					
			1928	24·5	0·7			0·1	0·7	23·9	12·6	62·8					
			1929	26·2	0·6			0·6	0·6	19·5	12·9	66·4					

ANNEXURE P.

Financial statement showing the working of the Health Propaganda Section of the office of the Director of Public Health for the Calendar year 1929.

Serial number.	Details.	Amount.	Remarks.
		Rs. A. P.	
1	Establishment charges (including pay of officers of establishment, allowances, honorarium, etc.).	7,184 6 0	
2	Cost of printing	2,440 1 10	
3	Miscellaneous charges including repairs and renewals of equipment, slides, purchase of materials for artist.	975 4 0	
4	Total cost	10,599 11 10	
5	Sale-proceeds of literature	7,423 8 0	
6	Value of literature unsold	4,833 0 0	
7	Receipts from loan of magic lanterns, slides, etc. ...	1,135 0 0	
8	Total of items, 5, 6 and 7	13,396 8 0	
9	Net gain	2,796 12 2	
10	Net extra expenditure deducting Rs. 8,000 being the grant originally made to the Madras Health Council.	Gain 10,796 12 2	
11	Net extra expenditure allowable according to the sanctioned scheme.	3,132 0 0	
12	Capital expenditure (purchase of films, etc.), specially sanctioned from time to time.	822 0 0	

VACCINATION STATEMENTS.

ANNEXURE.

Statement showing Inspection of vaccinated cases by D.H.Os. and M.H.Os. during 1929–30.*

Name of district.	By D.H.Os.* Total number of cases vaccinated during the year.	By D.H.Os.* Total number of cases inspected during the year.	By D.H.Os.* Percentage of cases inspected to total number vaccinated.	Name of municipality.	By M.H.Os. † Total number of cases vaccinated during the year.	By M.H.Os. † Total number of cases inspected during the year.	By M.H.Os. † Percentage of cases inspected to total number vaccinated.
1. Anantapur ...	44,723	934	2·1	1. Adoni	1,576	1,566	99·4
2. Arcot, North ...	93,775	3,263	3·5	2. Bellary	2,854	1,734	60·8
3. Arcot, South ..	82,496	3,552	4·3	3. Berhampur ...	1,680	1,315	78·3
4. Bellary ...	35,784	1,158	3·2	4. Bezwada	2,125	1,597	75·2
5. Chingleput ...	71,003	1,764	2·5	5. Calicut	8,052	5,153	64·0
6. Chittoor	67,110	2,776	4·1	6. Cannanore ...	6,870	5,141	74·8
7. Coimbatore ...	1,00,668	2,451	2·4	7. Cocanada ...	3,440	2,647	76·9
8. Cuddapah ...	40,939	1,444	3·5	8. Cochin	3,700	2,890	78·1
9. Ganjām	74,918	1,256	3·3	9. Coimbatore ...	5,894	4,179	70·9
10. Gōdāvari, East ..	64,542	1,789	2·8	10. Coonoor	1,021	803	78·6
11. Gōdāvari, West...	50,650	1,202	2·4	11. Cuddalore ..	3,447	2,902	84·2
12. Guntūr	87,346	3,214	3·7	12. Conjeeveram ...	2,514	2,238	89·0
13. Kistna	44,253	1,255	2·8	13. Cuddapah ...	1,010	799	79·1
14. Kurnool	42,803	1,490	3·5	14. Ellore	3,719	3,034	81·6
15. Madura	77,851	1,527	2·0	15. Guntūr	2,506	1,946	77·7
16. Malabar	1,70,608	3,296	1·9	16. Hindupur ...	776	620	79·9
17. Nellore	63,302	2,015	3·2	17. Kumbakōnam ...	2,967	2,256	76·6
18. The Nilgiris ...	19,885	1,025	5·2	18. Kurnool	1,806	911	50·4
19. Rāmnād	66,156	884	1·3	19. Madura	19,688	14,844	75·4
20. Salem	92,098	3,277	3·6	20. Mangalore ...	5,955	5,383	90·4
21. South Kanara ...	70,505	5,134	7·3	21. Masulipatam ...	2,576	1,642	63·7
22. Tanjore	71,330	2,550	3·6	22. Negapatam ...	2,268	1,738	76·6
23. Tinnevelly ...	73,978	2,782	3·8	23. Nellore	2,602	2,020	77·6
24. Trichinopoly ...	58,348	1,692	2·9	24. Ootacamund ..	1,683	1,316	78·2
25. Vizagapatam ...	1,04,533	518	0·5	25. Palghat	1,806	1,364	75·5
				26. Periyakulam ...	1,038	895	86·3
				27. Pollachi	1,212	901	74·3
				28. Proddatur ...	804	753	93·7
				29. Rajahmundry ...	2,510	1,920	76·5
				30. Salem	4,133	3,255	78·8
				31. Srirangam ...	1,210	908	75·0
				32. Srivilliputtūr ...	1,407	1,123	79·8
				33. Tanjore	3,258	2,569	78·9
				34. Tellicherry ...	1,771	1,453	82·0
				35. Trichinopoly ...	6,675	5,191	77·8
				36. Tinnevelly ...	2,779	2,493	89·9
				37. Tuticorin... ...	2,231	1,474	66·1
				38. Vellore... ...	3,247	2,725	83·9
				39. Vizagapatam ...	3,896	2,525	64·8
				40. Vizianagram ...	2,621	1,671	63·8

N.B.—No percentage has been fixed for the D.H.O.'s verification of vaccination cases.
* D.H.Os.=District Health Officers.
† M.H.Os.=Municipal Health Officers.

VACCINE DEPARTMENT.

Statement No. 1 showing the particulars of Vaccination in the Madras Presidency for the official year 1929-30.

Number.	District.	Districts.	Population of districts 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.	Primary 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.	
						Males.	Females.	Total.		Total number of operations.	Under 1 year.	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	2	3	4	5	6	7			8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Agency Districts	Ganjām	...	...	14	7,694	7,220	14,914	1,065	13,757	8,379	3,391	12,237	755	1,184	438	109	94·1	40·7	...	5·5	9·2	...	...	...	...
2		Gōdāvari	...	...	14	7,487	6,468	13,955	997	11,487	5,614	3,181	9,627	974	3,060	809	396	91·6	30·4	...	8·5	12·9	...	...	...	...
3		Vizagapatam	...	...	26	27,701	24,542	52,243	2,009	33,648	11,766	14,329	29,338	1,730	19,497	5,801	1,807	91·9	32·8	...	5·9	9·2	...	...	...	...
		Total of agency districts	1,496,358	...	54	42,882	38,230	81,112	1,502	58,892	25,759	20,901	51,202	3,459	23,741	7,048	2,312	92·4	32·9	38·9	5·9	9·7	86,156	57·6	...	...
4		Anantapur	920,716	137	19	25,379	17,224	42,603	2,242	33,414	18,860	9,782	29,561	2,851	11,309	2,308	1,184	96·7	22·8	34·6	8·5	10·5	28,310	30·7	399	0·4
5		Arcot, North	1,549,945	373	24	53,982	38,118	92,100	3,837	67,639	40,329	17,382	59,648	6,080	26,136	6,696	3,000	96·9	28·9	35·9	9·0	11·5	65,689	34·3	581	0·3
6		Arcot, South	2,229,634	530	23	44,432	34,865	79,297	3,447	68,664	33,931	21,919	58,799	6,589	13,832	3,092	1,992	94·8	26·1	27·8	9·6	14·6	60,170	27·0	1,389	0·6
7		Bellary	785,624	138	15	19,253	15,085	34,938	2,329	28,995	18,060	7,897	26,366	1,908	6,789	1,537	751	97·3	25·5	35·5	6·6	11·1	27,657	35·2	556	0·7
8		Chingleput	1,290,635	455	16	39,146	29,892	69,038	4,315	46,930	29,978	10,354	41,467	3,901	24,073	7,730	3,095	96·4	36·8	38·1	8·3	12·9	45,732	32·9	379	0·2
9		Chittoor	1,287,289	217	20	39,417	26,528	65,945	3,879	41,534	23,324	13,147	37,538	3,195	25,576	7,772	3,466	97·9	35·2	35·2	7·7	13·6	39,147	31·7	198	0·2
10		Coimbatore	2,058,298	307	29	53,480	44,420	97,900	3,376	73,745	37,762	24,573	65,910	6,342	26,923	6,533	3,472	97·8	27·9	35·2	8·6	12·9	69,617	33·8	302	0·1
11		Cauvery-Mettur Project.	50,187	...	2	2,319	1,924	4,243	2,122	2,562	730	1,145	2,107	245	1,898	231	213	90·9	13·7	46·8	9·7	11·2	1,191	30·3	...	...
12		Cuddapah	852,506	145	18	23,732	14,782	38,514	2,140	30,502	13,331	11,601	26,012	2,348	10,437	1,548	1,219	92·4	16·8	32·3	7·7	11·7	24,643	28·9	213	0·2
13		Ganjām	1,776,866	...	33	40,705	32,195	72,900	2,269	61,228	28,635	21,895	52,015	4,971	13,690	2,085	1,688	92·5	17·4	30·4	8·1	12·3	52,427	29·5	369	0 2
14		Gōdāvari, East	1,552,207	...	21	35,011	26,199	61,210	2,915	48,448	23,298	15,933	41,200	4,708	16,094	3,208	1 937	94·2	23·4	28·7	9·7	12·0	49,369	31·8	585	0·4
15		Gōdāvari, West ...	877,213	416	16	27,593	22,648	50,241	3,589	37,453	20,059	10,814	32,436	3,934	13,197	3,806	1,775	96·8	33·3	41·3	10·5	13·5	34,377	39·2	562	0·6
16		Guntūr	1,697,253	316	27	47,979	35,887	83,866	3,106	63,361	31,600	22,330	56,342	4,750	23,985	5,198	1,912	96·1	23·5	36·3	7·5	8·0	60,314	35·4	568	0·3
17		Kistna	1,107,605	314	13	23,211	19,353	42,564	3,274	37,209	17,216	13,883	32,665	3,154	7,044	1,688	677	95·9	26·5	31·0	8·5	9·6	32,889	29·7	499	0·5
18		Kurnool	868,858	115	17	24,907	15,677	40,584	2,387	30,178	16,135	8,936	25,795	2,122	12,625	2,824	1,261	91·9	24·9	32 9	7·0	10·0	29,451	53·9	299	0·3
19		Madura	1,778,663	354	21	43,252	31,991	75,243	3,583	59,230	42,035	7,265	50,375	6,270	18,631	4,768	1,866	95·1	28·4	31·0	10·6	10·0	59,375	33·4	250	0·1
20		Malabar	2,891,578	..	36	88,340	80,731	169,071	4,696	111,147	69,723	24,460	104,435	5,827	59,461	25,109	5,634	99·2	46·6	44·8	5·2	9 5	109,843	38·0	359	0·1
21		Nellore	1,349,690	168	25	33,723	25,398	59,121	2,365	47,048	19,815	17,629	40,421	3,277	16,254	4,082	1,830	92·3	28·3	33·0	7·0	11·3	43,662	32·3	495	0·4
22		Nilgiris, The	94,837	73	7	12,105	7,700	19,805	2,829	4,019	2,281	1,146	3,626	342	15,866	5,442	2,836	98·6	41·8	95·6	8·5	17 9	8,827	93·1	24	0·3
23		Rāmnād	1,654,204	...	22	35,625	28,101	63,726	2,897	53,094	20,050	22,076	45,194	5,755	13,057	2,278	1,915	95·5	20·4	28·7	10·8	14·7	54,457	32·9	305	0·2
24		Salem	2,044,306	326	30	50,861	38,639	89,500	2,983	73,917	38,819	24,420	66,691	5,124	18,181	3,570	2,195	97·0	22·3	34·3	6·9	12·0	69,789	34·1	692	0·8
25		South Kanara	1,193,491	296	21	38,317	30,732	69,079	3,289	40,874	19,362	15,507	37,086	3,319	29,631	9,807	3,371	98·8	37·3	39·3	8·1	11·4	42,996	36·0	215	0·2
26		Tanjore	2,077,259	...	26	36,530	30,457	66,987	2,576	59,098	26,469	20,629	50,032	6,437	12,292	3,084	1,809	95·0	29 4	25·6	10·9	14·7	59,928	28·8	653	0·3
27		Tinnevelly	1,756,448	...	19	37,577	31,572	69,449	3,655	62,109	35,308	15,723	54,034	5,449	11,869	3,519	1,584	95·4	34·2	32·8	8·8	13·3	57,561	32·8	306	0·2
28		Trichinopoly	1,741,014	412	18	32,370	25,471	57,841	3,213	45,887	25,564	11,863	39,648	4,574	12,461	3,576	1,558	96·0	32·8	24·8	10·0	12·5	52,610	30·2	358	0·2
29		Vizagapatam	2,120,009	452	29	54,774	45,891	100,655	3,471	68,882	38,164	17,894	58,694	5,773	35,651	9,953	2,819	93·0	30·3	32·4	8·4	7·9	68,022	32·1	461	0·2
		Total of districts ...	39,502,594	...	601	1,007,832	789,700	1,797,532	2,990	1,356,059	716,657	411,104	1,189,299	112,704	500,703	138,592	57,371	95·7	31·3	33·6	8·3	11·5	1,334,249	23·8	11,017	0·8

VACCINE DEPARTMENT—*cont.*

Statement No. 1 showing the particulars of Vaccination in the Madras Presidency for the official year 1929-30—cont.

Number.	Districts.	Municipalities.	Population of municipalities 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 vaccination.		Successful 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.		Number.
						Males.	Females.	Total.		Total number of operations.	Under 1 year.	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.	
1	2	3	4	5	6	7			8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	Municipalities.	Adōni	30,232	8,637	1	852	721	1,573	1,573	1,351	1,247	90	1,346	2	225	79	76	99·8	53·02	47·1	0·1	33·8	1,839	60·9	1	0·03	1
2		Anakāpalle	20,360	2,264	1	515	525	1,040	1,040	649	424	171	647	...	391	260	...	99·7	66·5	44·5	...	...	950	46·8	21	0·1	2
3		Anantapur	11,452	5,559	1	508	243	751	751	466	332	123	463	2	297	95	22	99·8	34·5	48·7	0·4	7·4	482	43·8	2	0·2	3
4		Bellary	39,842	7,245	2	1,560	1,293	2,853	1,427	1,509	1,029	409	1,452	45	1,345	52	112	99·2	4·2	37·7	3 0	8·3	1,501	49·9	2	0·1	4
5		Berhampur	33,731	5,474	1	1,022	647	1,669	1,669	1,167	935	185	1,157	...	513	378	2	99·1	74·0	46·9	...	0·4	1,441	45·0	2	0·1	5
6		Bezwada	44,159	7,360	2	1,195	925	2,120	1,060	1,542	1,282	208	1,517	18	583	264	63	99·5	50·8	40 3	1·2	10·8	2,170	49·3	10	0·2	6
7		Bimlipatam	7,495	14,990	1	269	208	477	477	345	249	52	328	...	227	36	1	95·1	15·9	48·6	...	0·1	372	50·3	1	0·1	7
8		Bōdināyakkanūr	20,341	5,085	1	442	429	871	871	869	780	87	867	...	2	2	...	99·6	100 0	42·7	...	...	903	44·4	...	...	8
9		Calicut	82,334	8,033	5	4,705	3,214	7,919	1,584	3,502	1,994	910	3,273	84	4,550	1,139	589	95·8	28·8	53·6	2·4	12·9	5,431	78·4	80	1·0	9
10		Cannanore	27,705	5,689	3	4,304	2,560	6,864	2,288	1,448	478	550	1,329	88	5,422	1,035	246	97·7	20 0	85·3	6·1	4·5	1,755	64·9	2	0·1	10
11		Chicacole	16,298	5,449	1	453	527	980	980	481	397	66	481	...	499	405	...	100·0	81·2	54·4	...	...	737	46·1	5	0·3	11
12		Chidambaram	22,501	11,251	1	1,302	702	2,004	2,004	1,123	262	624	1,017	91	881	245	314	98·5	43·2	56 1	8·1	35·6	527	24·0	13	0·6	12
13		Chingleput	11,763	7,842	1	1,261	234	1,495	1,495	862	251	99	362	...	1,153	183	22	100·0	16·5	46·3	...	1·9	560	47·9	3	0·3	13
14		Chirala	15,323	7,663	1	297	247	544	544	508	339	168	508	...	36	13	...	100·0	50·0	34·3	...	...	574	37·5	4	0·3	14
15		Chittoor	17,941	2,392	1	408	279	687	687	546	390	131	524	7	151	8	67	97·2	9·5	2·7	1·3	44·4	700	39·1	1	0·1	15
16		Cocanada	53,348	6,668	2	2,260	1,177	3,437	1,719	1,462	1,071	248	1,379	69	1,978	407	177	99·0	22·6	33·5	4·7	8·9	2,573	48·3	35	0·7	16
17		Cochin	20,637	20,637	2	1,999	1,700	3,699	1,850	1,262	594	353	1,190	58	2,438	797	419	98·8	39·5	96·3	4·6	17·2	1,177	57·2	...	...	17
18		Coimbatore	65,788	9,048	4	3,419	2,434	5,853	1,463	3,360	2,003	940	3,139	27	2,534	375	190	94·2	16·0	53·4	0·8	7·5	3,199	48·7	19	0·3	18
19		Conjeeveram	61,376	15,344	2	1,312	1,202	2,514	1,257	2,313	1,544	777	2,335	4	171	91	39	99·8	68·9	36·5	0·2	22·8	1,983	32·3	21	0·3	19
20		Coonoor	12,215	2,041	1	543	478	1,021	1,021	541	379	103	526	7	480	145	9	98·5	30·8	54·9	1·3	1·9	731	59·9	1	0·1	20
21		Cuddalore	50,527	4,210	3	2,073	1,355	3,428	1,143	2,098	1,396	546	2,073	6	1,349	580	138	99·1	47·9	52·5	0·3	10·2	2,204	43·6	3	0·1	21
22		Cuddapah	19,517	4,337	1	655	351	1,006	1,006	566	323	218	547	12	444	91	73	98·7	24·5	32·7	2.1	16·4	629	32·3	7	0·4	22
23		Dhārāpuram	16,124	8,062	2	671	421	1,092	546	631	348	234	623	...	464	60	7	98·7	13·1	42·4	...	1·5	567	35·2	2	0·1	23
24		Dindigul	30,922	3,330	1	711	535	1,246	1,246	1,039	960	52	1,012	9	210	57	26	98·3	31·0	34·6	0·9	12·4	1,174	38·0	3	0·1	24
25		Ellore	45,862	8,338	2	2,145	1,499	3,644	1,822	2,199	1,368	747	2,168	19	1,520	574	88	99·4	40·1	59·8	0 9	5·8	2,260	49·3	9	0·2	25
26		Erode	22,911	6,186	1	414	348	762	762	601	331	222	561	2	171	23	13	93·7	14·6	25·5	0·3	7·6	611	26·7	7	0·3	26
27		Gudiyāttam	22,803	19,002	1	747	508	1,255	1,255	845	410	306	785	43	433	243	39	97·9	61·7	45 1	5·1	9·0	693	30·6	5	0·2	27
28		Guntūr	48,184	9,637	2	1,492	994	2,486	1,243	1,510	1,129	305	1,465	10	996	288	136	97·7	33·5	36·4	0 7	13·7	2,456	51·0	20	0·4	28
29		Hindupur	12,456	905	1	463	296	759	759	651	367	237	616	23	125	9	20	98·1	8·6	50·2	3·5	16·0	533	42 8	9	0·7	29
30		Hospet	18,337	6,486	1	400	393	793	793	750	636	85	722	13	50	...	...	98·0	0·2	39.4	1·7	...	799	43·6	5	0·3	30
31		Karaikudi	15,235	2,176	1	278	222	500	500	465	213	194	431	3	35	12	6	93·4	42·2	29·0	0 6	17·1	...	...	...	...	31
32		Karūr	18,219	12,166	1	519	422	941	941	310	446	324	809	...	132	61	...	99·8	46·2	47·7	...	...	653	35·8	2	0·1	32
33		Kodaikānal	4,283	714	1	182	153	335	335	267	197	24	266	1	101	28	1	100·0	28·0	68·6	0·4	1·0	348	80·8	...	...	33
34		Kumbakōnam	60,700	13,733	3	1,766	1,197	2,963	988	2,809	1,525	606	2,298	...	658	277	5	99·5	42·4	42·4	...	0·8	2,349	36·7	11	0·2	34
35		Kurnool	27,908	2,683	1	980	826	1,806	1,806	1,529	993	429	1,433	78	277	49	67	98·8	23·3	53·1	5·1	24·2	1,436	51·5	2	0·1	35
36		Madras	528,791	19,090	52	45,954	29,055	75,009	1,442	23,840	15,945	6,012	22,665	820	51,191	11,618	8,712	98·5	27·3	84·8	3·4	17·0	27,400	51·8	295	0·6	36
37		Madura	138,894	17,362	7	11,791	7,827	19,618	2,803	4,733	3,019	1,565	4,682	19	14,955	4,817	471	99·3	33·3	68 4	0·4	3·1	16,390	118·0	127	0·9	37
38		Mangalore	53,877	10,301	2	3,699	2,248	5,947	2,974	2,544	1,871	549	2,501	13	3,411	2,242	204	98·8	69·9	88·0	0·5	6 0	13,756	51·2	9	0·2	38
39		Mannārgudi	21,636	4,857	1	450	373	823	823	684	376	222	623	43	150	32	11	97·1	22·0	30·1	6·3	7·3	630	29·1	42	1·9	39
40		Masulipatam	43,940	2,197	3	1,517	1,047	2,564	855	1,614	1,120	402	1,602	2	962	647	43	99·4	70·4	51·2	0·1	4·5	2,262	51·5	5	0·1	40
41		Māyavaram	28,617	6,829	1	664	444	1,108	1,108	783	580	172	781	1	325	61	29	99 9	20·6	29·4	0·1	8·9	934	32·6	10	0·3	41
42		Nandyāl	18,124	3,624	1	987	720	1,707	1,707	860	239	548	855	4	850	417	1	100·0	49·1	70·2	0 5	0·1	709	35·1	12	0·7	42
43		Narasaraopet	11,308	5,654	1	227	280	507	507	333	206	74	323	2	239	164	3	97·6	69.5	43·1	0·6	1·3	687	60·8	6	0·5	43
44		Negapatam	54,016	10,448	4	1,253	994	2,247	2,247	2,071	1,220	591	2,007	...	197	74	...	96·9	37·6	38·5	...	.	3,564	66·0	25	0·5	44
45		Nellore	25,863	8,969	2	1,524	1,073	2,597	1,299	1,640	778	614	1,623	5	962	384	146	99·3	47·0	36·0	0·3	15·2	1,391	38·8	13	0·4	45
46		Ongole	14,278	3,575	1	422	395	817	817	466	355	73	442	19	361	213	45	98·9	67·4	45·9	4·1	12·5	922	64·7	17	1·2	46
47		Ootacamund	19,467	1,391	2	1,086	597	1,683	842	721	587	113	721	...	962	217	139	100 0	26·4	48·2	...	14·4	1,176	60·4	1	0·1	47
48		Palakole	14,535	7,269	1	712	377	1,089	1,089	584	280	198	543	29	505	99	202	97·8	32·7	44·2	5·0	40·0	392	27·0	37	2·5	48
49		Palamcottah	46,613	1,167	2	1,415	728	2,143	1,072	1,781	897	701	1,745	14	481	271	29	98·8	60·0	43·2	0·8	6·0	1,887	40·5	7	0·2	49
50		Palghat	45,487	4,548	2	992	806	1,798	899	1,417	1,048	290	1,386	10	389	190	8	98·5	49·9	34·6	0·7	2·1	1,892	41·6	21	0·5	50
51		Palni	17,501	10,000	1	365	357	722	722	625	440	81	530	34	97	37	27	90·0	52·8	32·4	5·4	27·8	557	31·8	8	0·1	51
52		Parlākimedi	18,719	14,398	1	526	368	894	894	714	622	60	704	...	181	80	...	98·6	44·2	41·9	...	.	912	48·7	3	0·2	52
53		Peddāpuram	14,620	2,417	1	391	284	675	675	515	370	128	508	2	175	132	14	99·01	82·0	43·8	0·4	8·0	661	45·2	1	0·1	53
54		Periyakulam	16,478	21,971	1	571	449	1,020	1,020	977	774	185	977	...	61	60	1	100·0	100·0	62·9	...	1·7	989	58·8	...	...	54
55		Pollāchi	11,875	2,969	1	805	404	1,209	1,209	753	478	211	697	54	459	160	74	99·7	41·6	72·2	7·2	16·1	625	52·6	5	0·4	55
56		Proddatūr	15,906	5,891	1	418	377	795	795	742	502	173	676	39	62	18	12	92·2	38·0	43 6	5·3	19·4	669	43·9	17	1·1	56
57		Rajahmundry	53,791	15,310	2	1,297	1,179	2,476	1,238	1,837	1,199	553	1,762	28	673	29	45	97·1	4·8	33·3	1·5	6·7	2,621	48·7	16	0·3	57
58		Saidapet	27,404	3,045	1	871	607	1,478	1,478	958	832	100	940	16	520	170	68	99·8	37·4	40·5	1·7	12·7	1 431	52·2	2	0·1	58
59		Salem	52,244	10,243	3	2,410	1,714	4,124	1,375	3,167	2,414	605	3,148	...	996	399	...	99·4	41·3	67·9	...	...	3,284	52·9	23	0·4	59
60		Sivakāsi	14,617	5,568	1	325	270	595	595	541	464	61	527	...	69	45	...	97·4	65·2	39·1	...	...	624	42·7	...	...	60
61		Srirangam	23,153	4,567	1	696	512	1,208	1,208	947	526	329	925	6	263	94	8	98·3	36·9	44·0	0·6	3·0	1,101	47·6	3	0·1	61
62		Srivilliputtūr	31,195	15,597	1	674	719	1,393	1,393	946	758	149	925	...	481	107	55	97·8	26·4	33·1	...	11·9	1,406	45·1	...	...	62
63		Tadpatri	11,293	2,823	1	517	170	687	687	35	140	155	320	6	341	45	42	92·8	15·1	32·3	1·7	12·3	283	25·1	2	0·2	63
64		Tanjore	59,913	7,811	3	1,779	1,478	3,257	1,086	2,120	1,400	634	2,119	...	1,138	632	8	100·0	56·9	45·9	...	0·7	2,630	43·9	9	0·2	64

VACCINE DEPARTMENT—*cont.*

Statement No. I showing the particulars of Vaccination in the Madras Presidency for the official year 1929-30—cont.

Serial number.	Districts.	Municipalities.	Population of municipalities 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 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.		
						Males.	Females.	Total.		Total number of operations.	Under 1 year.	Total number of operations.	Successful.				Primary vaccination.	Re-vaccination.		Primary vaccination.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	Number.
													Successful.													
													1 and under 6 years.	Total of all ages.	Unknown.											
1	2	3	4	5	6	7			8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
65	Municipalities—*cont.*	Tellicherry	27,576	10,175	2	882	889	1,771	886	832	666	139	825	...	939	232	11	99·2	25·1	38·3	...	1·2	1,032	37·4	18	0·7	65
66		Tenali	23,230	9,292	1	450	375	825	825	749	347	371	729	5	78	21	9	98·0	30·4	32·3	0·7	11·5	731	31·5	5	0·2	66
67		Tinnevelly	53,783	15,193	2	1,695	1,074	2,769	1,385	2,317	1,440	673	2,295	4	462	379	1	99·2	82·2	49·7	0·2	·2	2,611	48·5	24	0·4	67
68		Trichinopoly	120,422	13,622	4	3,527	3,095	6,622	1,656	5,175	3,003	1,918	5,025	72	1,500	1,062	69	98·5	74·2	50·5	1·4	4·6	6,207	51·0	33	0·3	68
69		Tirupati	17,434	11,622	1	682	396	1,078	1,078	603	404	190	603	...	475	87	...	100·0	18·3	39·6	...		540	31·0	4	0·2	69
70		Tiruppattūr	16,275	4,540	1	955	370	1,325	1,325	520	315	196	520	...	805	249	...	100·0	30·9	47·3	...	...	644	40·0	1	0·1	70
71		Tiruppur	10,851	2,894	1	477	279	756	756	661	253																
72		Tiruvālur	24,124	5,079	1	429	320	749	749	691	488	201	595	21	106	67	16	92·9	74·4	52·1	3·2	15·1	636	58·6	2	0·2	71
73		Tiruvannāmalai	21,912	5,478	1	864	409	1,273	1,273	749	542	168	690	1	58	50	4	100·0	92·6	30·7	0·1	6·9	638	26·4	2	0·1	72
74		Tuticorin	44,522	24,734	2	1,255	953	2,208	1,104	1,461	990	133	726	13	533	68	49	98·6	14·0	36·2	1·7	9·2	957	43·7	9	0·4	73
75		Udamalpet	10,236	4,123	1	353	196	549	549	396	239	400	1,450	3	770	195	136	99·5	30·8	36·9	0·2	17·7	1,819	40·9	2	0·1	74
76		Vāniyambādi	20,090	5,740	1	556	340	896	896	633	521	138	392	2	153	72	...	99·5	47·1	45·0	0·5	...	419	40·9	2	0·2	75
77		Vellore	50,210	12,553	2	1,989	1,211	3,200	1,600	2,296	1,309	69	594	9	293	94	...	100·0	32·1	34·2	1·5	...	727	36·2	11	0·5	76
78		Villupuram	17,423	4,311	1	408	272	680	680	568	354	802	2,171	52	951	268	192	98·7	35·3	48·6	2·3	20·2	1,907	38·0	15	0·3	77
79		Virudhunagar	21,821	9,698	1	613	355	968	968	783	682	147	568	...	112	29	...	100·0	25·9	24·3	...	...	606	34·8	5	0·3	78
80		Vizagapatam	44,711	7,293	3	2,365	1,515	3,880	1,293	1,233	658	91	773	1	185	101	16	98·8	60·0	40·1	0·1	8·6	1,041	47·7	22	1·0	79
		Vizianagram	39,299	7,866	3	1,820	798	2,618	873	1,075	519	422	1,124	25	2,663	405	205	93·0	16·5	34·2	2·0	7·7	1,962	43·9	54	1·2	80
81		Walajapet	10,013	10,013	1	452	163	615	615	287	218																
82		Total of Municipalities ...	3,045,976	...	...	146,232	98,127	244,359	...	121,369	79,005	289	863	210	1,546	295	735	99·8	36·4	29·5	19·5	47·6	2,006	51·0	5	0·1	81
												69	287	...	328	175	...	100·0	53·4	46·1	...	...	385	38·5	...	...	82
		Bangalore	118,940	8,792	2	474	454	928	464	470	253																
		Secunderabad	95,124	5,006	6	9,021	9,294	18,315	3,053	5,706	3,699	32,784	117,136	2,305	124,184	35,669	14,805	97·6	32·6	50·2	1·9	11·9	152,985	50·2	1,231	0·4	
1	Military Cantonments.																										
2		Total of Cantonments ...	214,064	13,798	8	9,495	9,748	19,243	2,405	6,176	3,952	157	412	...	458	325	...	87·7	71·0	6·2	...	...	...	...	...	...	1
												1,111	5,188	195	12,819	4,307	324	94·1	34·5	99·8	3·4	2·5	...	...	...	...	2
		Total of cases vaccinated by Medical Subordinates	...	...	..	8,448	134	8,582	...	110	24	1,268	5,600	195	13,277	4,632	324	93·6	35·8	47·8	3·2	2·4	7,280	34·0		...	
		Total of cases vaccinated by Dispensary Staff—	...	...	..	1,707	1,214	2,921	...	1,857	157	21	101	6	8,472	3,722	191	97·1	44·9	...	5·5	2·3	...	...	...		
		* Total of cases performed under Railway administration	...	...	...	5,411	638	6,049	...	684	278	108	1,842	...	1,064	642	...	99·2	60·3	...	...	...	...	...	...	...	
		Total of figures from Port Health authorities and Emigration depot ...	...	...	...	4,574	816	† 5,390	...	...	...	269	625	5	5,366	2,965	821	92·0	65·2	...	0·7	15·3	...	..	...	...	
		Total of Districts ...	39,502,524	...	601	1,007,832	789,700	17,97,532	...	1,356,059	716,657	411,104	11,89,299	112,704	500,703	138,592	57,371	95·7	31·3	33·6	8·3	11·5	1,334,249	23·8	11,017	0·3	
		Grand total ...	42,762,564	...	795	1,179,125	899,561	2,078,686	‡ 2,621	1,486,255	800,073	445,554	1,314,603	115,215	653,066	186,222	73,512	95·9	32·1	35·1	7·8	11·3	1,494,514	34·9	12,248	0·3	

*Particulars from Bengal-Nagpur Railway not received.

† Full particulars for these 5,390 cases are not available since no records are said to have been maintained for them.

‡ In finding out the average number of persons vaccinated, the total work done by the special staff in Statement I and the work in Military Cantonments have only been taken.

NOTE.—Difference between number of operations and number of persons vaccinated equals 60,635 which represents secondary operations.

N.B.—In calculating the percentage of success shown in this statement unknown cases have not been taken into account.

VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Districts for the official year 1929-30.

Number.	Districts.	Ranges.	Expenditure.									Paid from					
			Health Inspectors.		Vaccinators.				Peons, etc.		Total pay of establishment.	Travelling allowance.	*Contingencies.	Total cost.	Provincial funds.	Local funds.	Total.
			Number.	Pay.	First class.	Second class.	Probationers.	Pay.	Number.	Pay.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
				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		Ganjām ... ... Government	3	1,576 7 4	6	5	4	4,347 10 0	3	192 3 4	6,116 4 8	3,140 4 0	389 0 9	9,645 9 5	9,645 9 5	...	9,645 9 5
2		Gōdāvari ... ... {Government	1	367 12 4	1	...	1	784 11 0	1	55 5 4	1,207 12 8	503 6 3	95 4 8	1,806 7 7	1,896 7 7		1,806 7 7
		{Local fund.	3	1,524 14 8	1	11	...	4,834 11 0	3	177 12 0	6,537 5 8	2,038 3 0	611 7 10	9,187 0 6	5,441 0 6	3,746 0 0	9,187 0 6
		Total of district ...	4	1,892 11 0	2	11	1	5,619 6 0	4	233 1 4	7,745 2 4	2,541 9 3	706 12 6	10,993 8 1	7,247 8 1	3,746 0 0	10,993 8 1
3		Vizagapatam ... {Government	3	1,847 1 0	1	10	3	7,577 7 0	3	156 0 0	9,580 8 0	3,012 8 4	381 0 2	12,974 0 6	12,974 0 6	...	12,974 0 6
		{Local fund.	4	1,918 15 8	3	8	4	6,152 6 4	4	205 10 0	8,277 0 0	2,651 4 3	354 3 0	11,282 7 3	3,022 4 11	8,260 2 4	11,282 7 3
		Total of district ...	7	3,766 0 8	4	18	7	13,729 13 4	7	361 10 0	17,857 8 0	5,663 12 7	735 3 2	24,256 7 9	15,996 5 5	8,260 2 4	24,256 7 9
		Total of Government ...	7	3,791 4 8	8	15	8	12,709 12 0	7	403 8 8	16,904 9 4	6,656 2 7	865 5 7	24,426 1 6	24,426 1 6	...	24,426 1 6
		Total of Local fund ...	7	3,443 14 4	4	19	4	10,987 1 4	7	383 6 0	14,814 5 8	4,689 7 3	965 10 10	20,469 7 9	8,463 5 5	12,006 2 4	20,469 7 9
		Grand total of Agency districts ...	14	7,235 3 0	12	34	12	23,698 13 4	14	786 14 8	31,718 15 0	11,345 9 10	1,831 0 5	44,895 9 3	32,889 6 11	12,006 2 4	44,895 9 3
4		Anantapur	11	3,799 11 8	3	16	...	9,239 7 9	11	599 7 8	13,638 11 1	4,985 14 5	1,484 1 0	20,108 10 6	6,373 1 9	13,735 8 9	20,108 10 6
5		Arcot, North...	11	4,542 5 4	8	9	7	13,061 11 0	11	622 15 0	18,226 15 4	6,404 11 2	1,831 1 1	26,522 11 7	7,046 11 9	19,475 15 10	26,522 11 7
6		Arcot, South...	12	5,000 9 4	10	13	...	10,495 4 8	12	633 8 0	16,129 6 0	5,304 8 8	1,300 7 6	22,734 6 2	7,397 8 0	15,336 14 2	22,734 6 2
7		Bellary	11	3,778 10 8	3	8	4	6,064 7 11	11	578 12 8	10,421 15 3	4,360 0 4	1,142 5 5	15,924 5 0	6,432 7 0	9,491 14 0	15,924 5 0
8		Chingleput	8	3,345 11 4	8	7	1	7,127 11 0	8	432 14 0	10,906 4 4	4,096 8 8	921 7 9	15,924 4 9	5,262 8 10	10,661 11 11	15,924 4 9
9		Chittoor	9	3,064 5 0	6	9	5	9,090 14 0	9	499 1 8	12,654 4 8	4,716 10 8	982 4 11	18,353 4 3	5,263 1 3	13,090 3 0	18,353 4 3
10		Coimbatore	13	5,117 7 2	11	18	...	13,598 14 0	13	664 2 4	19,380 7 6	7,212 12 7	1,428 9 8	28,021 13 9	8,118 10 9	19,903 3 0	28,021 13 9
11		Cauvery-Mettur Project ...	...	...		2	...	941 15 0	...	...	941 15 0	493 8 0	48 5 6	1,483 12 6	1,483 12 6	...	1,483 12 6
12		Cuddapah	9	2,929 14 5	2	15	1	9,652 8 0	9	483 5 5	13,065 11 10	3,480 7 4	1,219 3 3	17,765 6 5	5,006 4 11	12,759 1 6	17,765 6 5
13		Ganjām	13	4,135 3 0	3	25	5	13,416 7 9	13	688 10 8	18,240 5 5	7,646 5 5	1,051 2 5	26,937 13 3	6,991 11 1	19,946 2 2	26,937 13 3
14		Gōdāvari, East	9	2,941 10 9	6	12	3	9,011 1 2	9	476 13 8	12,429 9 7	4,175 2 8	570 2 8	17,174 14 11	4,798 14 8	12,376 0 3	17,174 14 11
15		Do. West	7	2,413 2 8	7	6	2	7,045 11 0	7	361 6 4	9,820 4 0	3,385 1 0	560 7 2	13,765 12 2	3,954 3 6	9,811 8 8	13,765 12 2
16		Guntūr	11	3,709 9 4	7	20	...	11,804 4 6	11	579 3 4	16,093 1 2	5,845 0 6	1,376 0 1	23,316 1 9	6,290 4 1	17,025 13 8	23,316 1 9
17		Kistna	11	3,694 6 1	5	9	...	6,970 15 0	11	552 14 0	11,218 3 1	3,841 13 8	747 13 2	15,807 13 11	6,065 10 8	9,742 3 3	15,807 13 11
18		Kurnool	11	3,758 10 4	5	12	...	6,793 12 6	11	532 2 8	11,084 9 6	3,386 13 1	1,770 12 4	16,222 2 11	6,288 5 5	9,933 13 6	16,222 2 11
19		Madura	11	3,751 8 0	8	11	2	11,656 9 2	11	554 3 4	15,962 4 6	5,549 10 3	1,312 15 0	22,824 13 9	6,084 7 9	16,740 6 0	22,824 13 9
20		Malabar	16	6,447 11 8	6	28	2	15,924 2 5	16	864 15 0	23,236 13 1	9,884 0 3	2,016 12 3	35,137 9 7	11,665 10 5	23,471 15 2	35,137 9 7
21		Nellore	13	4,814 15 4	4	21	...	10,731 1 10	13	684 0 0	16,230 1 2	5,511 14 8	1,489 3 0	23,252 2 10	8,063 5 6	15,188 13 4	23,252 2 10
22		The Nilgiris	3	1,207 1 4	4	3	...	3,563 8 9	3	166 10 0	4,937 4 1	1,760 10 0	330 0 3	7,077 14 4	2,203 15 4	4,873 15 0	7,077 14 4
23		Bāmnād	9	3,208 10 4	8	13	1	11,519 3 0	9	461 10 0	15,189 7 4	5,212 5 4	1,285 6 6	21,687 3 2	5,455 13 8	16,231 5 6	21,687 3 2
24		Salem	12	4,268 15 0	7	16	7	11,621 14 4	12	622 2 4	16,512 15 8	6,787 5 10	1,440 7 8	24,740 13 2	6,940 1 0	17,800 12 2	24,740 13 2
25		South Kanara	8	2,911 11 4	4	17	...	8,433 14 0	8	409 14 0	11,755 7 4	5,534 8 3	1,531 5 9	18,821 5 4	5,133 14 7	13,687 6 9	18,821 5 4
26		Tanjore	16	6,204 3 1	8	16	...	12,295 3 9	16	813 6 0	19,312 12 10	6,589 14 7	1,430 7 0	27,333 2 5	9,618 15 2	17,714 3 3	27,333 2 5
27		Tinnevelly	11	4,364 10 8	8	9	1	8,702 12 0	11	560 14 0	13,628 4 8	4,937 13 9	839 13 4	19,405 15 9	6,948 7 6	12,457 8 3	19,405 15 9
28		Trichinopoly	10	4,056 1 8	6	11	1	10,430 5 0	10	532 2 4	15,018 9 0	4,409 0 4	1,458 11 3	20,886 4 7	6,055 2 6	14,831 2 1	20,886 4 7
29		Vizagapatam	15	5,095 3 0	7	21	1	9,378 3 7	15	770 14 0	15,244 4 7	6,444 9 8	1,045 9 4	22,734 7 7	8,159 14 0	14,574 9 7	22,734 7 7
		Total ...	284	1,05,797 3 6	168	379	55	2,72,268 12 5	284	14,932 15 1	3,92,998 15 0	1,43,372 12 11	32,488 15 8	5,68,830 11 7	1,95,992 6 6	3,72,868 5 1	5,68,860 11 7

Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
19	20
	Rs. A. P.
12,675	0 12 2
1,508	1 3 2
8,928	1 0 6
10,436	1 0 10
13,656	0 15 2
21,483	0 8 4
35,139	0 11 1
27,839	0 14 0
30,411	0 10 9
58,250	0 12 3
31,869	0 10 1
66,344	0 6 5
61,891	0 5 10
27,903	0 9 2
42,197	0 5 2
45,310	0 6 6
72,443	0 6 2
2,338	0 10 2
27,560	0 10 3
54,100	0 7 11
44,508	0 6 2
36,242	0 6 1
61,540	0 6 1
34,353	0 7 5
28,619	0 9 1
55,143	0 6 7
1,29,544	0 4 4
44,503	0 8 4
47,472	0 7 4
70,261	0 5 7
46,893	0 6 5
53,116	0 8 3
57,553	0 5 5
43,224	0 7 9
68,647	0 5 4
13,27,891	0 6 10

VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1929-30—cont.

Number.	District.	Range.	Expenditure.											Paid from				Total.	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.	Number.
			Sanitary Inspectors on vaccination duty.		Vaccinators.				Peons, etc.			Travelling allowance.	Contingencies.	Total cost.	Imperial funds.	Provincial funds.	Local funds.	Municipal funds.			
			Number.	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	15	16	17	18	19	20	21	22	23
				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		Adōni	...	...	1	...	...	816 0 0	1	136 0 0	952 0 0	60 0 0	27 14 0	1,039 14 0	...	...	...	1,039 14 0	1,039 14 0	1,425	0 11 8	1
2		Anakāpalle	...	...	...	1	...	604 9 0	1	108 0 0	712 9 0	...	25 12 0	738 5 0	...	...	...	738 5 0	738 5 0	907	0 13 0	2
3		Anantapur	...	...	...	1	...	395 0 0	...	...	395 0 0	60 0 0	11 7 6	466 7 6	...	...	...	466 7 6	466 7 6	558	0 13 6	3
4		Bellary	...	...	1	1	...	1,005 0 0	...	...	1,005 0 0	105 0 0	48 0 0	1,158 0 0	...	...	...	1,158 0 0	1,158 0 0	1,504	0 12 4	4
5		Berhampūr	...	...	...	1	...	371 0 0	...	...	371 0 0	...	79 0 0	450 0 0	...	...	...	450 0 0	450 0 0	1,565	0 4 8	5
6		Bezwada	...	...	1	1	...	929 1 3	1	133 3 7	1,062 4 10	...	48 4 0	1,110 8 10	...	...	...	1,110 8 10	1,110 8 10	1,781	0 9 7	6
7		Bimlipatam	...	...	...	1	...	300 0 0	...	...	300 0 0	...	19 0 0	319 0 0	...	...	...	319 0 0	319 0 0	364	0 14 0	7
8		Bodināyakkanūr	...	...	...	1	...	382 8 0	...	...	382 8 0	...	23 11 6	406 3 6	...	...	...	406 3 6	406 3 6	869	0 7 5	8
9		Calicut	1	510 0 0	...	5	...	983 0 5	...	...	1,493 0 5	...	50 5 0	1,543 5 5	...	...	...	1,543 5 5	1,543 5 5	4,412	0 5 7	9
10		Cannanore	...	...	...	3	...	723 1 0	...	...	723 1 0	37 12 0	18 0 0	778 13 0	...	...	...	778 13 0	778 13 0	2,364	0 5 3	10
11		Chicacole	...	...	...	1	...	646 0 0	...	...	646 0 0	...	45 14 0	691 14 0	...	...	...	691 14 0	691 14 0	886	0 12 6	11
12		Chidambaram	...	...	1	...	...	456 0 0	...	...	456 0 0	...	73 13 0	589 13 0	...	...	...	589 13 0	589 13 0	1,262	0 7 6	12
13		Chingleput	...	...	...	1	...	490 2 0	...	...	490 2 0	60 0 0	13 8 11	503 10 11	...	...	...	503 10 11	503 10 11	545	0 14 9	13
14		Chirāla	...	...	...	...	1	457 15 0	...	...	457 15 0	...	33 10 0	551 9 0	...	...	...	551 9 0	551 9 0	526	1 0 9	14
15		Chittoor	...	...	...	1	...	537 1 0	...	...	537 1 0	60 0 0	46 15 0	584 0 0	...	...	...	584 0 0	584 0 0	532	1 1 7	15
16		Cocanada	...	...	...	2	...	616 5 0	1	24 0 0	670 5 0	...	192 8 0	862 13 0	...	...	...	862 13 0	862 13 0	1,786	0 7 9	16
17		Cochin	...	...	1	1	...	1,176 5 5	...	...	1,176 5 5	...	129 8 0	1,305 13 5	...	...	...	1,305 13 5	1,305 13 5	1,987	0 10 7	17
18		Coimbatore	...	...	...	6	1	1,706 0 0	...	...	1,706 0 0	...	207 12 0	1,913 12 0	...	...	...	1,913 12 0	1,913 12 0	3,514	0 8 9	18
19		Conjeeveram	...	...	1	1	...	936 2 5	...	...	936 2 5	...	107 9 3	1,043 11 8	...	...	...	1,043 11 8	1,043 11 8	2,426	0 6 11	19
20		Coonoor	...	...	1	...	...	434 0 0	...	...	434 0 0	...	57 15 0	491 15 0	...	...	...	491 15 0	491 15 0	671	0 11 9	20
21		Cuddalore	...	...	1	1	*1	804 10 0	...	...	804 10 0	...	125 11 6	930 5 6	...	...	...	930 5 6	930 5 6	2,653	0 5 7	21
22		Cuddapah	...	...	...	1	...	554 6 0	...	...	554 6 0	...	81 6 0	635 12 0	...	...	...	635 12 0	635 12 0	638	0 15 11	22
23		Dhārāpuram	...	...	...	†2	...	329 7 0	...	...	329 7 0	...	...	389 7 0	...	...	...	389 7 0	389 7 0	683	0 9 1	23
24		Dindigul	...	...	...	1	...	528 0 0	1	168 0 0	696 0 0	60 0 0	...	389 7 0	...	...	...	389 7 0	389 7 0	747	0 11 2	24
25		Ellore	...	...	...	2	...	1,248 14 0	2	300 0 0	1,548 14 0	...	51 1 6	747 1 6	...	...	...	747 1 6	747 1 6	1,069	0 11 2	25
26		Erode	...	...	...	1	...	551 0 0	...	...	551 0 0	...	117 2 0	1,666 0 0	...	...	...	1,666 0 0	1,666 0 0	2,742	0 9 9	26
27		Gudiyāttam	...	...	...	1	...	358 4 9	...	...	358 4 9	...	22 1 0	573 1 0	...	...	...	573 1 0	573 1 0	584	0 15 8	27
28		Guntūr	...	...	1	1	...	857 8 0	1	131 0 0	988 8 0	...	...	358 4 9	...	...	...	358 4 9	358 4 9	1,028	0 5 6	28
29		Hindupūr	...	...	...	1	...	574 8 0	...	...	574 8 0	...	55 0 2	1,043 8 2	...	...	...	1,043 8 2	1,043 8 2	1,753	0 9 6	29
30		Hospet	...	...	1	...	...	377 12 0	...	...	377 12 0	...	12 7 0	586 15 0	...	...	...	586 15 0	586 15 0	625	0 15 0	30
31	Ranges.	Karaikudi	...	...	...	1	...	360 0 0	...	...	360 0 0	...	40 2 0	417 14 0	...	...	...	417 14 0	417 14 0	722	0 9 3	31
32		Karūr	...	...	1	...	...	556 9 0	...	...	556 9 0	...	...	360 0 0	...	...	...	360 0 0	360 0 0	448	0 12 0	32
33		Kodaikānal	...	...	...	1	...	257 5 0	...	...	257 5 0	...	24 1 8	580 10 8	...	...	...	580 10 8	580 10 8	870	0 10 8	33
34		Kumbakōnam	...	...	1	2	...	1,403 1 0	...	...	1,403 1 0	...	27 13 0	285 2 0	...	...	...	285 2 0	285 2 0	294	0 15 6	34
35		Kurnool	1	...	...	...	...	757 8 0	...	...	757 8 0	...	135 0 0	1,538 1 0	...	...	...	1,538 1 0	1,538 1 0	2,575	0 9 7	35
36		Madras	‡19	33	...	...	...	41,236 9 4	23	6,148 12 3	47,385 5 7	...	60 0 0	827 7 2	...	...	...	827 7 2	827 7 2	1,482	0 8 11	36
37		Madura	...	...	1	6	...	3,648 8 0	...	...	3,648 8 0	60 0 0	9 15 2	827 7 2	...	...	...	827 7 2	54,700 5 2	§34,283	‖0 12 9	37
38		Mangalore	...	...	1	1	...	1,465 9 8	1	181 8 0	1,647 1 8	...	7,314 15 7	54,700 5 2	...	...	...	54,700 5 2	54,700 5 2			38
39		Mannārgudi	...	...	...	1	...	318 1 7	...	...	318 1 7	...	1,195 2 1	4 843 10 1	...	...	...	4,843 10 1	4,843 10 1	9,499	0 8 2	39
40		Masulipatam	...	...	1	2	...	1,193 13 6	...	...	1,193 13 6	...	100 9 3	1,747 10 11	...	...	...	1,747 10 11	1,747 10 11	4,743	0 5 11	40
41		Māyavaram	1	...	...	...	...	480 0 0	...	...	480 0 0	...	68 13 0	386 14 7	...	...	...	386 14 7	386 14 7	655	0 9 5	41
42		Nandyāl	1	...	...	...	...	440 0 0	...	...	440 0 0	...	247 3 0	1,441 0 6	...	...	...	1,441 0 6	1,441 0 5	2,249	0 10 3	42
43		Narasaraopet	...	...	...	1	...	541 14 11	...	...	541 14 11	...	91 8 6	571 8 8	...	...	...	571 8 6	571 8 6	842	0 10 10	43
44		Negapatam	...	...	...	¶4	...	791 14 0	...	...	791 14 0	...	1 8 0	441 8 0	...	...	...	441 8 0	441 8 0	1,272	0 5 7	44
45		Nellore	...	...	1	1	...	758 10 0	2	232 0 0	990 10 0	...	13 14 0	555 12 11	...	...	...	555 12 11	555 12 11	487	1 2 3	45
46		Ongole	...	...	...	1	...	365 14 0	...	...	365 14 0	...	209 9 6	1,001 7 6	...	...	...	1,001 7 6	1,001 7 6	2,081	0 7 8	46
47		Ootacamund	...	...	1	1	...	676 9 6	...	...	676 9 6	...	19 2 0	1,009 12 0	...	...	...	1,009 12 0	1,009 12 0	2,007	0 8 0	47
48		Palacole	...	...	...	1	...	575 11 0	...	...	575 11 0	...	26 8 0	392 6 0	...	...	...	392 6 0	392 6 0	655	0 9 7	48
49		Palamcottah	...	...	...	2	...	755 1 0	1	148 0 0	898 1 0	28 0 0	78 14 0	783 7 6	...	...	...	783 7 6	783 7 6	938	0 13 4	49
50		Palghat	...	...	...	2	...	797 6 0	...	...	797 6 0	...	21 11 0	597 6 0	...	...	...	597 6 0	597 6 0	642	0 14 10	50
51		Palni	...	...	...	1	...	505 12 0	...	...	505 12 0	...	25 14 0	923 15 0	...	...	...	923 15 0	923 15 0	2,016	0 7 4	51
52		Parlākimedi	...	...	...	1	...	336 0 0	...	...	336 0 0	...	139 14 0	937 4 0	...	...	...	937 4 0	937 4 0	1,576	0 9 6	52
53		Peddāpūr	...	...	...	1	...	360 0 0	...	...	360 0 0	15 15 0	81 1 6	602 12 6	...	...	...	602 12 6	606 12 0	567	1 1 0	53
54		Periyakulam	...	...	...	1	...	465 10 0	...	...	465 10 0	...	38 5 0	374 5 0	...	...	...	374 5 0	374 5 0	784	0 7 8	54
55		Pollachi	...	...	...	1	...	480 0 0	...	...	480 0 0	...	15 4 0	375 4 0	...	...	...	375 4 0	375 4 0	640	0 9 5	55
56		Proddatūr	...	...	...	2	...	406 0 0	...	...	406 0 0	...	...	465 10 0	...	...	...	465 10 0	465 10 0	1,037	0 7 2	56
57		Rajahmundry	...	...	1	1	...	1,071 9 5	...	...	1,071 9 5	60 0 0	116 0 0	656 0 0	...	...	...	656 0 0	656 0 0	857	0 12 3	57
58		Saidapet	1	...	...	...	...	673 10 0	1	168 0 0	841 10 0	44 14 2	78 9 8	529 7 10	...	...	...	529 7 10	529 7 10	694	0 12 2	58
59		Salem	1	...	2	...	...	1,331 8 1	...	...	1,331 8 1	...	93 10 6	1,165 3 11	...	...	...	1,165 3 11	1,165 3 11	1,791	0 10 5	59
60		Sivakasi	...	...	1	...	...	360 0 0	...	...	360 0 0	...	45 12 0	887 6 0	...	...	...	887 6 0	887 6 0	1,110	0 12 9	60
												...	330 15 0	1,662 7 1	...	...	...	1,662 7 1	1,662 7 1	3,547	0 7 6	
												...	9 9 6	369 9 6	...	...	...	369 9 6	369 9 6	572	0 10 4	

* Temporary.
† One additional vaccinator was employed temporarily for Smallpox from 24th Feb. 1930.
‡ Eight Medical Registrar Vaccinators.
§ Includes 283 successful cases vaccinated in the Penitentiary.
‖ The cost of registration and vaccination during 1929-30 was Rs. 54,700-5-2 and debiting half the amount to vaccination, the cost of a successful case comes to Re. 0-12-9.
¶ Two permanent vaccinators, two temporary vaccinators.

VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1929–30—cont.

Number.	District.	Range.	Expenditure.																		Number.
			Sanitary Inspectors on vaccination duty.		Vaccinators.				Peons, etc.			Paid from					Total.	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.	
			Number.	Pay.	First class.	Second class.	Probationers.	Pay.	Number.	Pay.	Total pay of establishment.	Travelling allowance.	Contingencies.	Total cost.	Imperial funds.	Provincial funds.	Local funds.	Municipal funds.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
				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.	
61	Range—cont.	Srirangam	...	...	...	1	...	384 0 0	...	...	384 0 0	...	36 7 6	420 7 6	...	...	...	420 7 6	420 7 6	1,019	0 6 7	61
62		Srivilliputtūr	...	...	...	1	...	367 0 0	...	...	367 0 0	...	49 14 6	416 14 6	...	...	...	416 14 6	416 14 6	1,032	0 6 6	62
63		Tadpatri	...	...	...	1	...	548 0 0	...	...	548 0 0	...	28 0 0	576 0 0	...	...	...	576 0 0	576 0 0	36	1 9 8	63
64		Tanjore	...	...	...	3	...	1,219 5 0	...	...	1,219 5 0	...	158 9 0	1 377 14 0	...	...	...	1,377 14 0	1,377 14 0	2,751	0 8 0	64
65		Tellicherry	...	...	...	2	...	530 0 0	1	196 0 0	726 0 0	...	50 0 0	776 0 0	...	...	...	776 0 0	776 0 0	1,05	0 11 9	65
66		Tenali	...	...	...	1	...	360 0 0	1	144 0 0	504 0 0	...	13 0 0	517 0 0	...	...	...	517 0 0	517 0 0	750	0 11 0	66
67		Tinnevelly	1	377 6 9	...	4	...	1,732 12 9	...	...	2,110 3 6	60 0 0	149 7 5	1,274 5 5	...	...	...	1,274 5 5	1,274 5 5	2,674	0 7 7	67
68		Trichinopoly ...	...	...	...	1	...	443 7 0	...	...	443 7 0	...	112 0 6	2,222 4 0	...	...	...	2,222 4 0	2,222 4 0	6,087	0 5 10	68
69		Tirupati	...	...	...	1	...	420 0 0	...	...	420 0 0	...	...	443 7 0	...	...	...	443 7 0	443 7 0	690	0 10 3	69
70		Tiruppattūr	...	...	...	1	...	598 7 0	...	...	598 7 0	60 0 0	100 14 0	580 14 0	...	...	...	580 14 0	580 14 0	769	0 12 1	70
71		Tiruppūr	...	...	...	1	...	380 0 0	1	53 8 0	433 8 0	...	30 3 1	628 10 1	...	...	...	628 10 1	628 10 1	662	0 15 2	71
72		Tiruvālūr	...	...	...	1	...	401 5 0	...	...	401 5 0	60 0 0	14 15 6	508 7 6	...	...	...	508 7 6	508 7 6	740	0 11 0	72
73		Tiruvannāmalai ...	...	...	...	1	...	401 5 0	...	...	401 5 0	...	65 1 0	466 6 0	...	...	...	466 6 0	466 6 0	794	0 9 5	73
74		Tuticorin	...	...	1	1	...	932 12 7	1	169 8 0	1,102 4 7	60 0 0	43 6 0	1,145 10 7	...	...	...	1,145 10 7	1,145 10 7	1,645	0 11 1	74
75		Vaniyambādi	...	...	...	1	...	350 4 0	...	...	350 4 0	4 12 0	35 9 0	445 13 0	...	...	...	445 13 0	445 13 0	464	0 15 4	75
76		Vellore	...	...	...	1	...	492 2 0	...	...	492 2 0	...	80 4 0	577 2 0	...	...	...	577 2 0	577 2 0	688	0 13 5	76
77		Villupuram	...	...	...	2	...	812 15 0	...	...	812 15 0	...	83 15 0	896 14 0	...	...	...	896 14 0	896 14 0	2,439	0 5 11	77
78		Virudhunagar	...	...	...	1	...	470 11 0	...	...	470 11 0	...	73 10 6	544 5 6	...	...	...	544 5 6	544 5 6	597	0 14 7	78
79		Vizagapatam	...	...	...	1	...	466 5 0	...	...	466 5 0	...	11 8 0	477 13 0	...	...	...	477 13 0	477 13 0	874	0 8 9	79
80			...	...	...	3	...	1,057 1 1	..	...	1,057 1 1	...	287 1 2	1,344 2 3	...	...	...	1,344 2 3	1,344 2 3	1,529	0 14 1	80
81		Vizianagram	...	...	...	3	...	886 9 2	...	...	886 9 2	...	83 8 0	970 1 2	...	...	...	970 1 2	970 1 2	1,158	0 13 5	81
82		Walajapet	...	...	...	1	...	469 0 0	...	...	469 0 0	...	59 4 0	528 4 0	...	...	...	528 4 0	528 4 0	462	1 2 3	82
		Total of Municipalities.	2	887 6 9	44	140	3	97,781 11 10	41	8,591 5 10	1,07,260 8 5	896 5 2	13,893 3 5	1,22,050 1 0	...	...	...	1,22,050 1 0	1,22,050 1 0	1,52,805	0 12 9	
	Military Cantonments.	Bangalore	...	...	1	1	...	660 0 0	...	...	660 0 0	240 0 0	...	900 0 0	900 0 0	...	...	...	900 0 0	737	1 3 7	
		Secunderabad	†1	771 4 0	1	5	..	1,864 9 0	5	603 13 0	3,239 10 0	180 0 0	200 0 0	3,619 10 0	...	...	...	3,619 10 0	3,619 10 0	9,495	0 6 1	
		Total of Cantonments ..	1	771 4 0	2	6	...	2,524 9 0	5	603 13 0	3,899 10 0	420 0 0	200 0 0	4,519 10 0	900 0 0	...	...	3,619 10 0	4,519 10 0	10,232	0 7 1	
		Grand total ..	287	1,07,455 14 3	214	525	58	3,72,575 1 3	330	24,128 1 11	5,04,159 1 5	1,44,689 2 1	46,582 3 1	6,95,430 6 7	900 0 0	1,95,992 6 6	3,72,868 5 1	1,25,669 11 0	6,95,430 6 7	1,490,512	‡0 7 5	

† Superintendent of Vaccination.

‡ 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) and exclusive of Rs. 1,971-4-6 being the total amount of recoveries made for wastage of lymph.

Statement No. III 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.																					
	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
	1920–1921.		1921–1922.		1922–1923.		1923–1924.		1924–1925.		1925–1926.		1926–1927.		1927–1928.		1928–1929.		1929–1930.			
Government vaccinators ...	14,625	10,616	15,749	11,860	11,997	14,981	20,959	16,852	21,275	19,629	24,284	22,270	30,055	26,610	33,869	30.651	26,893	23,313	26,588	23,894		
Local Fund do. ...	1,107,117	651,154	1,057,517	796,007	1,149,068	8,964,474	1,270,638	1,149,187	1,298,064	1,226,452	1,248,453	1,167,748	1,240,915	1,156,949	1,281,914	1,195,591	1,255,427	1,164,580	1,270,244	1,165,405		
Cantonment do. ...	4,105	3,024	5,218	4,354	5,439	5,245	5,859	5,850	4,204	4,275	5,264	5,320	6,282	6,230	5,749	5,674	5,977	5,877	5,966	5,600		
Municipal do. ..	105,504	88,536	99,480	90,518	105,203	96,948	113,237	109,620	116,000	115,688	115,486	115,099	122,535	122,008	118,443	118,038	118,284	116,817	120,176	117,136		
Dispensaries	115	113	124	115	152	140	148	143	2	2	...	...	749	711	129	125	1,054	1,027	1,857	1,842		
Medical Subordinates ...	680	492	1,764	1,402	1,769	1,232	1,188	842	1,842	1,267	576	423	2,658	2,239	2,011	2,003	686	441	110	101		
Railways	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4,624	4,561	683	625		
Total ...	1,232,146	753,935	1,179,852	904,256	1,273,628	1,015,020	1,412,029	1,282,494	1,440,887	1,367,313	1,394,063	1,310,860	1,403,194	1,314,747	1,442,115	1,352,082	1,412,445	1,316,616	1,425,624	1,314,603		

Statement No. IV showing particulars of vaccination verified by Inspecting Officers in the Madras Presidency during 1929-30.

Districts.	Total number of cases 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 Officers, and Medical Officers including Civil Surgeons, District Health Officers, Municipal Health Officers, etc.		By Health Inspectors.		By District Medical Officers, including Civil Surgeons, District Health Officers, Municipal Health Officers, etc.		By Health Inspectors.		By District Medical Officers, including Civil Surgeons, District Health Officers, Municipal Health Officers, etc.		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.	Primary vaccination.	Re-vaccination.	Primary vaccination	Re-vaccination.
Agency districts	58,892	23,741	2,179	1,092	53,563	20,632	3·7	4·6	91·0	86·9	87·3	25·4	92·4	32·7	92·3	35·6
Anantapur	34,482	12,072	2,042	671	30,563	10,125	5·9	5 6	91·5	89·5	97·3	20·7	96·4	22·8	97·4	21·9
Arcot, North	72,539	29,479	6,675	3,012	59,760	22,509	9·2	10·2	88·4	86·1	98·1	34·7	96·9	29·7	98·0	32·7
Arcot, South	72,456	16,789	6,389	2,619	60,964	11,702	8·8	15·6	88·8	84·8	98·0	51·9	94·7	25·9	98·1	45·5
Bellary	32,648	10,982	4,288	3,282	27,087	6,038	13·2	29·9	93·4	88·9	98·0	20·7	97·3	25·5	97·3	9·1
Chingleput	50,593	25,897	4,714	1,421	38,785	19,802	9·3	5·6	82·6	82·3	98·8	19·2	96·6	86·9	94·3	29·0
Chittoor	42,683	26,202	3,246	794	36,942	21,859	7·6	3·0	88·9	85·5	98·8	24·4	98 0	35·4	97·6	19·8
Coimbatore	82,007	33,384	9,179	5,311	64,227	22,036	11·2	15·9	87·1	81·8	97·2	37·4	97·9	28·7	86·1	16·0
Cuddapah	31,810	10,943	2,588	408	28,154	9 218	8·1	3·7	92·3	88·3	98·5	29·7	92·4	16·8	97·3	25·9
Ganjām	63,590	15,182	3,250	1,0·8	55,462	1·,931	5·1	6·8	90·6	87·2	97·1	66·0	92·4	17·2	98·3	75 2
Gōdāvari, East	52,264	18,921	4,486	2,544	42,912	13,971	8·6	13·4	88·6	86 8	97·5	24·3	94·2	23·5	97 8	15·2
Gōdāvari, West	40.236	15,222	2,989	1.800	33,203	11,162	7·4	11·8	88·7	84·5	99·3	38·9	96 8	33·2	98·3	25·8
Guntūr	66,927	25,695	4,940	2,503	58,611	22,073	7·4	9·7	92·5	92·0	96·9	35·1	94·5	23·5	98·3	42·6
Kistna	40,365	8.589	3,638	856	34,055	6,367	9·0	10·0	91 5	90·4	99·1	50·1	95·9	26·5	99·9	68 0
Kurnool	32,567	13,752	2,903	859	27,698	11,048	8·9	6·2	91·8	87·5	98·4	44·8	91·9	24·9	97·0	21·1
Madras	23,840	51,191	11,874	5,186	.	...	49·8	10·1	...	...	99·0	28·4	...	...	91·0	27·5
Madura	67,740	34,657	8,391	12 550	49,732	14,883	12 4	36·2	84·0	79·9	98·6	30·2	95·2	29·1	98·4	32·9
Malabar	119.611	73,666	10,476	9,719	105,320	53,827	8·8	13·2	94·8	90·5	98 3	33 5	99·2	46·6	97·2	27·2
Nellore	48,688	17,216	2,939	1,096	42,878	14,389	6·0	6·4	91·1	88·4	97·4	41·9	92·3	28·3	96·5	45·9
Nilgiris, the	5,281	17,308	1,406	1,738	3,877	13,030	26·6	10 0	91·5	82·1	99·3	33·1	98·6	41·8	99·4	28·0
Rāmnād	55,829	13,807	3,0·4	541	35,500	8,655	5·5	3·9	66·9	66·3	97·3	32·5	95·5	20·0	95·8	25·6
Salem	77,103	19,617	5,557	1,464	68,012	15,915	7·2	7·5	92·1	97·5	97·1	45·8	96·9	22·2	99·1	42·1
South Kanara	43,418	33,042	5,538	4,979	36,245	25,812	12·8	15·1	88·7	87·1	99·4	57·6	98·8	37·3	98·6	63·2
Tanjore	67,773	15,073	8,949	2,521	49,371	9.5·0	13·2	16·7	83·5	77·7	98·9	46·6	95·0	29·9	97·7	39·9
Tinnevelly	67,668	13,802	7,8·9	1,582	53,744	10,020	10·8	11·4	86·5	84·4	99·5	56·3	95·3	34·1	97·7	63·3
Trichinopoly	52,879	15,393	6,8·2	2,667	40,213	10,·53	13·0	17·3	87·6	85·5	98·5	51·7	95·0	32·8	98·1	62·6
Vizagapatam	72.184	40,8·4	3,215	3,233	62,529	32.059	4·5	7·9	90·8	89·9	97·4	33·2	93·4	30·1	95·4	27·4
Cauvery-Mettur ...	2,562	1,8·8	237	94	2,317	1,685	13·2	5·0	90·4	88·8	...	...	...	...	...	...
Total ...	1,479,395	634,423	139,473	75,620	1,201,554	430,931	9·4	11·9	88·6	86·0	98·1	36·1	95·7	32·9	91·7	35·4

Statement No. V showing the number of vaccinations performed in Municipal Towns on children under one year of age (G.O. Mis. No. 1524 L., dated 6th December 1909).

Municipalities.	Number of births available for vaccination during the year 1929-30.	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 1930.	Percentage of infantile vaccination to total births.		Municipalities.	Number of births available for vaccination during the year 1929-30.	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 1930.	Percentage of infantile vaccination to total births.	
				1928-29.	1929-30.					1928-29.	1929-30.
Adōni	1,399	215	903	84·5	84·8	Narasaraopet ...	423	70	170	70·0	66 1
Anakāpalle ...	624	101	360	56·0	68·0	Negapatam ...	1,697	294	896	60 2	61·1
Anantapur	478	50	226	89·2	89·4	Nellore	2,032	210	910	41·5	38 3
Bellary	1,801	344	851	48 0	47·4	Ongole	642	95	314	65 0	65 4
Berhampur ...	1,136	211	489	60·4	60·1	Ootacamund ...	917	110	442	61·5	58·1
Bezwada	2,096	548	728	47·9	48·6	Palacole	453	68	280	59 8	61·8
Bimlipatam ...	324	59	206	73·4	86·2	Palamcottah ...	1,702	540	702	59 9	69·6
Bōdinayakkanūr ...	1,096	211	726	94·1	71·2	Palghat	1,982	324	1,059	57·9	50·0
Calicut	3,026	220	1,810	60·8	60 1	Palni	663	172	399	64·4	89 6
Cannanore ...	1,137	190	478	41·4	42·0	Parlākimedi ...	621	122	326	55 1	71 4
Chicacole	583	104	236	55·4	53·4	Peddāpur	567	99	168	79 6	74·0
Chidambaram ...	668	126	288	38·6	42·2	Periyakulam ...	737	138	574	77·5	77·9
Chingleput ...	611	131	226	34·5	41·1	Pollachi	625	105	363	77·0	76·5
Chirala	435	78	205	53·5	56·1	Proddatūr	654	84	350	57 0	62·3
Chittoor	662	95	279	50 2	51·3	Rajahmundry ...	2,080	425	714	47·1	57·6
Cocanada	2,170	511	793	52 0	36·1	Saidapet	768	80	353	86·1	67·2
Cochin	895	176	549	97·4	97·4	Salem	3,711	599	2,075	60 2	59·6
Coimbatore ...	2,852	531	1,355	64·9	70·2	Sivakāsi	498	89	308	72·5	93 2
Conjeeveram ...	2,389	369	1,544	48·0	73·6	Srirangam ...	617	114	326	88·8	89 2
Coonoor ...	485	48	213	65 2	58·2	Srivilliputtūr ...	1,306	236	745	64·0	61 0
Cuddalore	2,170	386	1,229	60·6	59·7	Tadpatri	300	35	84	56 3	59·9
Cuddapah	765	144	293	46·6	47 1	Tanjore	2,238	313	690	53 9	42·2
Dhārāpuram ...	622	131	348	85·6	75·7	Tellicherry ...	1,075	174	663	65·1	61·95
Dindigul ...	1,354	254	940	72 7	70·9	Tenali	823	179	258	48 4	37 3
Ellore	1,862	403	849	68·1	73·5	Tinnevelly ...	1,974	610	872	55 7	54·3
Erode	307	38	146	79·3	91·8	Trichinopoly ...	4,474	718	2,232	50 8	57·1
Gudiyāttam ...	568	77	224	69·1	39 4	Tirupati ...	469	53	214	70·4	86 1
Guntūr	2,544	604	916	49·4	54·5	Tiruppattūr ..	840	85	315	52 2	35 5
Hindupur	546	40	283	59·0	85·4	Tiruppur	373	50	98	45 5	47·9
Hospet	823	113	492	68·5	77 3	Tiruvālūr ...	655	144	275	69·0	74·5
Karaikudi	291	30	125	...	73·2	Tiruvannāmalai ...	967	115	542	56·1	56·8
Karūr	519	63	448	66·1	85 8	Tuticorin	1,782	335	779	55·5	50·2
Kodaikānal ...	266	27	191	77 8	74 0	Udamalpet ...	428	66	202	48·0	55·7
Kumbakōnam ...	2,126	446	1,018	62·7	59·9	Vāniyambādi ...	593	96	376	71·7	70·9
Kurnool	983	118	405	48·2	41·2	Vellore	2,145	412	951	57 2	52 5
Madras	21,334	3,689	9,644	58 0	74·7	Villupuram ..	465	51	197	63 0	76·1
Madura	5,808	879	2,992	62 1	52.0	Virudhenagar ...	863	169	285	75 1	88·3
Mangalore ...	2,206	241	1,603	78 7	75 1	Vizagapatam ...	1,590	208	385	37 6	48·6
Mannārgudi ...	737	132	319	38·7	47·4	Vizianagram ...	3,779		860	45 1	38 7
Masulipatam ..	1,667	376	1,120	57·5	67·2	Walajapet	439	81	161	43	49 6
Māyavaram ...	958	151	518	57·4	54 1						
Nandyal	464	97	242	100 0	99·8						

Comparative Statement showing infantile vaccination in districts for 1928–29 *and* 1929–30.

Districts.	Percentage of infantile vaccination to total births registered.		Increase or decrease.	Districts.	Percentage of infantile vaccination to total births registered.		Increase or decrease.
	1928–29.	1929–30.			1928–29.	1929–30.	
1. Anantapur	47·9	48·9	+1·0	14. Kurnool	45·3	48·9	+3 6
2. Arcot, North	52·6	49 4	−3·2	15. Madura	72 0	65·1	−6·9
3. Arcot, South	47·3	48·5	+1·2	16. Malabar	53·6	52·1	−1·5
4. Bellary	50·4	47·7	−2·7	17. Nellore	38·2	37·9	−0·3
5. Chingleput	55·4	55·0	−0·4	18. Nilgiris, The	65·0	45 3	−19·7
6. Chittoor	47·3	47·2	−0·1	19. Ramnad	53·5	39·0	−14·5
7. Coimbatore	56·4	49·1	−7·3	20. Salem	45·1	46·2	+1·1
8. Cuddapah	40·1	48·2	+8·1	21. South Kanara	40·0	35·7	−4·3
9. Ganjam	50·8	41·7	−9·1	22. Tanjore	38·1	40·8	+2·7
10. Gōdāvari, East	25·2	37·5	+12·3	23. Tinnevelly	47·1	49·8	+2·7
11. Gōdāvari, West	48·1	44·6	−3·5	24. Trichinopoly	53·6	46·2	−7·4
12. Guntūr	29·0	44·6	+15·6	25. Vizagapatam	46·8	45·8	−1·0
13. Kistna	38·3	42·8	+4·5				

FORTIETH ANNUAL REPORT OF THE SANITARY ENGINEER TO GOVERNMENT, 1929.

During the year under review the Coimbatore and Tuticorin water-supply schemes were brought into partial operation and piped water was being supplied to the towns from about April and August 1929 respectively. The number of municipalities provided with protected water-supply thus rose during the year from 32 to 34. As in the previous year Rameswaram was the only union town in the Presidency provided with a complete protected water-supply.

As regards drainage, Ootacamund, Vellore and Madura continued to be the only towns which had anything approaching a scientific system.

2. The fact that there are 34 municipalities with protected water-supply schemes and only three with comprehensive drainage schemes is a matter for serious consideration. This Department investigates as many, if not more, drainage schemes as water-supply schemes but few of them even reach the stage of the preparation of detail plans and estimates. The writer endeavoured to meet this deficiency to a certain extent by the introduction of the piecemeal system for the execution of drainage schemes, a policy which was adopted by Government in G.O. No. 1117, P.H., dated 7th June 1927. The Municipalities are only just becoming alive to the possibilities of this system and the demand for the preparation of detail plans and estimates for drainage schemes have increased considerably during the last two years. The preparation of a drainage scheme for a city is a long and laborious process, involving masses of calculations and innumerable plans and drawings for the hundreds of miles of street drains for each of which calculations for size and discharge have to be made.

Unfortunately the magnitude of drawing office work involved in these schemes and in water-supply schemes also has never been properly realized and despite many endeavours on the part of the Sanitary Engineer to rectify this defect his drawing office staff remains totally inadequate to deal with the work which is waiting to be done and which the Public Health of the Presidency demands should be done. Provision in estimates for special establishment does not meet the case as the designers and draftsmen for this work require a long experience in this class of work to be of any use. Until the Public Health Engineering Department in this Province is given freedom to organize its work according to the needs of that work, as is done in other Provinces, the cities of this Presidency will continue to cry out for those improvements in sanitation which the Province is able to pay for and which this Department would be able to give them if its hands were not tied.

New water-supply schemes under execution.

3. The following 12 *new* water-supply schemes were under execution or had been taken up for execution:—

Tuticorin	Cuddalore.	Gudur.
Coimbatore.	Palni.	Tiruvannamalai.
Rajahmundry.	Tiruppur.	Saidapet.
Palacole.	Chodavaram.	Proddatur.

This is a record in the history of this Province for new schemes under execution at one time and is due to a great extent to the departure during the last few years from that policy of perfection, the insistence on a 15-gallon per head basis for all schemes, which "killed" so many schemes in the past. There

can be no doubt that it is better to provide the less wealthy towns with 5 to 7 gallon per capita schemes, with street fountains only and no house connexions, than to allow them to go on for 20 or more years, as has occurred in the past, without any protected supply at all, even after schemes have been investigated and definite proposals made.

New water works under execution.

4. The following works were under execution by Public Works Department:—

(1) *Tuticorin water-supply.*—All items of work at the head works, the reservoirs at Valanad and the pumping and gravitation mains were practically completed and water was being distributed through the partial distribution system already laid. Pipes were being received for the rest of the distribution system and arrangements for laying them were in progress.

(2) *Coimbatore water-supply.*—Gravitation main, distribution system, service reservoir, meter house, machine and store sheds were completed. Settling tank and off-take dam at the foot of the hill and tunnelling work were in progress. An advance supply is being given to the town from April 1929.

(3) *Palni water-supply.*—Blasting for foundations for service reservoir and dam site was nearly completed. Pipes for the gravitation main were received and arrangements were being made for laying them.

(4) *Tiruvannamalai water-supply.*—The gallery was excavated to a depth of about 26 feet below ground level on an average and borings were put down along the centre line of gallery to find out the depth to which it should be finally taken. Materials were being collected for laying the gallery.

(5) *Proddatur water-supply.*—The infiltration well was sunk to a depth of 16½ feet. The engine driver's quarters and the engine house were in progress.

(6) *Saidapet water-supply.*—The most suitable alignment for this gallery was finally fixed by means of borings. Arrangements to acquire the necessary land for the head works were in progress.

(7) *Palacole water-supply.*—The storage tank, engine and filter houses and driver's quarters were nearly completed. The masonry for the off-take from the Narsapur canal was also completed. The raw-water suction well and the clear water well were sunk. The service reservoir and other works were in good progress.

(8) *Ellore water-supply improvements.*—The second clear water reservoir was completed. Orders to take up the construction of the additional storage tank have since been issued.

(9) *Chodavaram water-supply.*—The driver's quarters were constructed. Trial borings to finally determine the site of the infiltration well were put down and the location of the well settled. Land required at the head works has been acquired.

(10) *Chingleput water-supply.*—The gas plant was fitted up. Sundry improvements to the engine house and filling in of the trench in front of the infiltration gallery with sand were the only things that remained to be carried out.

(11) *Ootacamund water-supply.*—The improvements to the Marlimund reservoir were completed.

(12) *Anantapur water-supply extension.*—All items of work except fitting of the meter were completed. The meter also has since been obtained.

Preliminary arrangements were made during the year to start the following works:—

Cuddalore water-supply.	Bezwada drainage.
Tiruppur water-supply.	Salem drainage.
Rajahmundry water-supply.	

Tanjore water-supply improvements.—There was no progress of any importance on this work. In G.O. No. 46, P. H., dated 7th January 1930, Government issued orders entrusting the further execution of the work to the

Municipality and directing it to prepare and submit for their approval revised estimates for the work.

Gobichettipalaiyam water-supply.—In Memo. No. 30063-2/D-2, P.H., dated 3rd October 1929, the scheme was ordered to be suspended pending final orders on the request of the Union Board for a more extended scheme.

5. *Rameswaram water-works.*—These works which were being maintained by the Public Works Department were ordered in G.O. No. 2891 W., dated 19th October 1929, to be handed over to the District Board for maintenance with effect from 1st April 1930.

6. Another feature of the last year or two has been the number of schemes under execution by municipalities and other local bodies. This is in accordance with the policy fostered by this department of raising the standard of "Municipal and County Engineering" in this Province so that local bodies may in the future carry out all their own major engineering works. The system cannot be regarded as altogether a success so far on account of the low standard of engineering staff generally employed and it is doubtful if it will ever be a complete success until the Municipal Engineers are placed on a Provincial cadre for at least long enough to attract the right type of men and for their status and value to be properly established and realized. The system has thrown a lot of extra work on this Department in the way of supervision and control, in some cases almost as much as if the work had been carried out by this Department. In some cases, particularly those where the Deputy Sanitary Engineer concerned has shown enthusiasm over the new policy, the system has been an undoubted success. The principal works under execution or approved for execution under this system during the year were:—

	Estimated cost.	Agency of execution.	Controlling agency.
	Rs.		
1. Vizagapatam water-supply augmentation works.	98,500	Municipality.	Sanitary Engineer.
2. Bezwada water-supply improvements.	41,900	Do.	Do.
3. Vizianagram water-supply repairs to pumping main.	21,600	Do.	Do.
4. Guntur water-supply improvements.	65,700	Do.	Do.
5. Ongole water-supply ...	5,450	Do.	Do.
6. Gudur water-supply scheme.	1,45,000	District Board.	Public Works Department.
7. Negapatam water-supply extension to pipe line.	13,991	Municipality.	Sanitary Engineer.
8. Dindigul water-supply improvements (various works).	63,374	Do.	Do.
9. Coonoor water-supply (rearrangement of distribution mains).	8,900	Do.	Do.
10. Masulipatam water-works construction of service reservoir.	96,750	Do.	Do.
11. Vellore water-supply—New scheme from Palar river.	1,80,000	Do.	Do.
Total ...	7,41,165		

7. The progress on the works under execution by the local bodies was as follows:—

Vizagapatam water-supply.—The scheme for the augmentation of the supply at the head works at an estimated cost of Rs. 98,500 was in full progress.

Bezwada water-supply.—Construction of high level reservoir with distribution main and fountains to supply the high level area at an estimated cost of Rs. 41,900. The work was nearing completion.

Vizianagram water-supply.—Renewal of protective coating to the steel mains. The work was completed at a cost of Rs. 18,410 against the estimate of Rs. 21,600.

Guntur water-supply improvements (estimated cost Rs. 65,700).—The excavation of the trench was nearing completion.

Ongole water-supply.—Sinking of a well near Ranga Rao's tank and providing it with a Boulton Elevator at an estimated cost of Rs. 5,450.

Gudur water-supply.—The scheme is under execution by the District Board, Nellore, under the supervision of the Public Works Department. The elevated tank was completed and materials required for the pumping main and distribution system collected. Work connected with the engine house was in progress.

Negapatam water-supply.—The extension of the pipe lines approved in G.O. No. 2166, P.H., dated 1st November 1927, was carried out by the municipality at a cost of Rs. 13,991.

Dindigul water-supply improvements.—Improvements to the Nattamakara and Adikarai wells (estimated cost Rs. 35,374) were completed except for some further deepening of and the provision of a pumping plant for the Adikarai well and the substitution of the 3-inch pumping main by a 6-inch one.

The question of the construction of the barrage wall at Odukam head works was revived and plans and estimates amounting to Rs. 28,000 were sanctioned in this office No. 2256-M., dated 1st November 1929, for execution by the Municipal Council.

Coonoor water-works improvements.—The re-arrangement of the distribution system under the Mount Pleasant Reservoir area approved in G.O. No. 2271, P.H., dated 30th October 1928, was completed at an actual cost of Rs. 8,906.

Arrangements for commencing the *improvements to the water-works at Masulipatam and Vellore* approved in G.Os. No. 1827, P.H., dated 6th September 1929, and No. 2436, P.H., dated 8th October 1929, respectively, were also in progress.

8. The plans and estimates for the *Erode drainage* scheme forwarded to Government with this office No. 83-G., dated 10th February 1928, were recorded in G.O. No. 1618, P.H., dated 28th June 1929, as the Council did not send any reply to the reference sent to it by Government in regard to the financing of the scheme. The Council has since undertaken to carry out the scheme piecemeal.

9. The detailed plans and estimates for Part I of the III stage of *improvements to the Madura water-supply* forwarded to Government on 18th February 1928 were still under their consideration.

10. *Proddatur water-supply.*—Plans and estimates for Rs. 35,200 for the erection of additional fountains forwarded to Government in August 1928 were approved by them in G.O. No. 817 W., dated 8th March 1929.

11. Plans and estimates for the following schemes were under preparation during the year :—

(i) *Bellary water-supply—Extension of the distribution system to Brucepet.*—Plans and estimates amounting to Rs. 58,000 were prepared and forwarded to Government in November 1929, and were approved by them in G.O. No. 595, P.H., dated 15th March 1930. The work is to be carried out by the Municipality.

(ii) *Nellore water-supply improvements* (estimated cost Rs. 96,000) since sanctioned in this office No. 237-G., dated 29th April 1930. The work is to be executed by the Public Works Department.

(iii) *Bezwada water-supply improvements* (estimated cost Rs. 67,000) since sanctioned in this office No. 277-G., dated 21st May 1930. The work is to be executed by the Public Works Department.

(iv) *Masulipatam water-supply improvements* (estimated cost Rs. 54,000).

(v) *Salem water-supply—Extension to Ammapet area.*—Plans and estimates amounting to Rs. 12,000 were prepared and forwarded to the Council with this office No. 2087-M., dated 9th October 1929. The work is to be executed by the Municipality.

(vi) *Srirangam drainage.*—The completion and submission of the scheme was put off pending the acquisition by the Council of the lands required for ingress to and egress from some of the sanitary lanes already acquired and opened.

(vii) *Tirupati drainage.*—The preparation of the scheme was nearing completion and has since been completed.

(viii) *Tadpatri water-supply.*—Plans and estimates amounting to Rs. 95,000 were forwarded to Government in No. 39-G., dated 23rd January 1930, and since sanctioned for execution by Public Works Department in G.O. No. 769 W., dated 7th March 1930.

(ix) *Coimbatore drainage.*—The preparation of the scheme was taken up towards the close of the year.

(x) *Virudhunagar water-supply.*

(xi) *Kumbakonam water-supply—Utilization of the second* borehole.

(xii) *Sembiyam water-supply—Full power test.*—The permission of the military authorities for construction of the experimental well at the site selected in the military area was awaited.

12. The preparation of plans and estimates for the following schemes sanctioned by Government was awaiting their turn for being put on hand as establishment became available:—

(i) Sembiyam drainage.
(ii) Madura water-supply improvements—Part II of Stage III.
(iii) Hindupur water-supply.
(iv) Coonoor water-supply—Laying of pipe line from Ralliah to Bandami.
(v) Arkonam water-supply.
(vi) Saidapet water-supply—Extension of supply to Mambalam and other areas.
(vii) Tiruvallur water-supply.
(viii) Trichinopoly water-supply improvements.

13. *Uravakonda water-supply.*—As the source proposed for this scheme was considered unsatisfactory, a small scheme with Subbarayudu Bhavi as the source was recommended and it was suggested that the District Board Engineer might carry out yield test of the well and draw up proposals. This was approved by Government in Memo. No. 10473-4/D-2, P.H., dated 4th September 1929.

14. The investigation of the following schemes were completed and reports with approximate estimates submitted to Government :—

(i) *Vizagapatam water-supply—Mehadriyedda scheme.*—Source of supply—Infiltration wells in the bed of the river ; estimated initial cost Rs. 12·60 lakhs ; annual maintenance charges Rs. 19,500.

(ii) *Guntur water-supply.*—Source of supply—Underground springs between the Undavalle and the Tadepalle hills ; estimated initial cost Rs. 22·5 lakhs ; annual maintenance charges Rs. 30,500. A preliminary full power test at a cost of Rs. 15,000 was recommended. The Government in G.O. No. 2241, P.H., dated 12th September 1929, approved the proposal after consulting the Council. The full power test has since been put on hand.

(iii) *Vizagapatam drainage.*—Estimated initial cost Rs. 21·14 lakhs ; annual maintenance charges Rs. 23,000.

(iv) *Tuticorin drainage.*—An underground drainage scheme estimated to cost Rs. 15·50 lakhs to instal and Rs. 20,000 annually to maintain was recommended.

(v) *Cochin water-supply.*—A report on the work carried out was submitted to the Chief Engineer recommending further investigation of shallow sources of water-supply in the town and an yield test of the existing borehole with a

view to utilize it for giving a partial supply to the town. As the Council was however in favour of a scheme for supply of water from the Alwaye river it has been asked in Government Memo. No. 2187-4/D-2, P.H., dated 27th November 1929, to submit definite proposals in consultation with the Mattancheri Municipal Council. It has also been asked to offer its remarks on the proposal to utilize the supply from the existing borehole.

(vi) *Bellary drainage.*—Estimated initial cost Rs. 7·31 lakhs; annual maintenance charges Rs. 2,500.

(vii) *Pollachi water-supply.*—Source of supply—Filter bed in the Aliyar river; estimated initial cost Rs. 4·20 lakhs; annual maintenance charges Rs. 14,000.

(viii) *Peddapuram water-supply.*—Infiltration wells in the bed of the Peddapuram river; approximate initial cost Rs. 2·16 lakhs; annual maintenance charges Rs. 5,700.

(ix) *Extension of distribution of Saidapet water-supply to Mambalam, Little Mount and Guindy.*—The investigation was completed and an approximate estimate for Rs. 67,300 for the extension was forwarded in No. 714-G., dated 20th November 1929.

15. The *Tiruttani water-supply scheme* for which an investigation report was sent in this office No. 674-G., dated 1st November 1927, and No. 221-G., dated 1st May 1928, was dropped by Government in G.O. No. 3024, P.H., dated 13th December 1929.

16. The *Walajapet water-supply scheme* for which an investigation report was submitted in this office No. 7-G., dated 5th January 1929, was also ordered to be dropped by Government in Memo. No. 459-6/D-2, P.H., dated 18th October 1929, and the Council was asked to report on the possibility of a joint scheme of water-supply being taken up for Walajapet, Arcot and Ranipet.

17. The following schemes were under investigation or had not yet been taken up for investigation :—

(i) Nellore drainage.
(ii) Rajahmundry partial drainage.
(iii) Negapatam drainage (supplemental investigation).
(iv) Kurnool drainage (do.).
(v) Periyakulam drainage (do.).
(vi) Tiruvallur drainage.
(vii) Karaikudi water-supply.
(viii) Cocanada water-supply improvements.
(ix) Karur water-supply.
(x) Tiruvarur water-supply.
(xi) Coonoor water-supply—Karadipallem scheme.
(xii) Palacole drainage.
(xiii) Bezwada drainage extensions.
(xiv) Pollachi drainage.
(xv) Mangalore drainage.
(xvi) Virudhunagar drainage.
(xvii) Madanapalle drainage.
(xviii) Salem drainage—supplemental.
(xix) Adoni water-supply from Hagari river.
(xx) Nandyal water-supply.
(xxi) Paramakudi drainage.

18. An underground drainage scheme for the General Hospital and Medical College buildings, Madras, with a pumping station for discharging sewage into the Corporation sewer was prepared and forwarded to Government in this office No. 125-G., dated 23rd February 1929. This was sanctioned in G.O. No. 2148 W., dated 31st July 1929.

The provision of water-supply and drainage arrangements to the Vizagapatam Hospital and of water-supply to Guntūr Hospital was also under consideration.

A number of proposals or estimates for provision of, or improvements to, water flushed sanitary equipment in Government buildings in Madras were also examined and advice required in connexion with water-supply and drainage schemes under execution were furnished. Plans for the revised distribution systems of Tuticorin, Palni and Cuddalore were drawn up.

19. *Periodical inspections of water-works* were made by the Sanitary Engineer and his deputies as far as time and work permitted.

20. The King Institute staff continued to carry out the periodical analyses of municipal water-supplies. Measures to improve the quality of the supply were suggested to the councils wherever necessary.

21. A statement is appended showing the number and aggregate cost of the sanitary works prepared by local bodies and sanctioned or recommended for sanction during the year. Another statement is also appended showing the sanitary type-design work constructed by the local bodies during the year.

22. The several municipal pumping plants were inspected by the Chief Inspector of Boilers and Inspectors of Boilers and proposals for improvements to, or replacements of, the existing plants were made. The following were some of the more important recommendations and work carried out during the year :—

Anantapur.—The erection of No. 2 engine was completed.

Bezwada.—The plant which is very old is inefficient and the cost of working high.

The crank shaft of No. 2 engine failed in September 1929 and that of No. 1 engine which was in repair was fitted to it.

Proposals for electrification of the station were under consideration.

Chingleput.—The steam plant was removed and gas plant installed and the cost of working the station considerably reduced.

Chidambaram.—The plant was repaired during the year. The consumption of fuel was high.

Cocanada.—The plant was not kept in good repair as the question of electrification of the station was under consideration.

Conjeeveram.—The gas engine and the geared pump and the loco-type boiler were thoroughly overhauled. A new foundation was built for the engine.

The Cochrane boiler was neglected and the certificate for working it had to be revoked under the Indian Boilers Act. The Council took no action to carry out the repairs recommended. The steam plant also requires repairs. The staff and the Council take no interest to keep the plant in good order and the cost of working has consequently considerably increased.

Dindigul.—The two original steam pumps having served their time were recommended to be scraped. The question of replacing the steam plant by an oil-engine and centrifugal pump was examined but was given up on account of local conditions.

Ellore.—The plant was in very poor condition and little was being done to put it in order. The Council should arrange to properly equip the workshop and carry out the repairs to the plant locally.

Erode.—The recommendations made for repairing the plant were not attended to and the cost of working consequently increased. The question of providing a small workshop was still unsettled.

Gudiyattam.—The repairs to the plant were satisfactorily carried out. The workshop should be suitably equipped.

Kumbakonam.—The 7 B.H.P. Crude oil-engine was replaced by the Council by an 8 B.H.P. Petter oil-engine. As the engine was too big for the duty the Chairman was advised to arrange for its replacement by a 5 B.H.P. engine and also for the replacement of the existing 3″ Gwynnes centrifugal pump by a Mather and Platt 2″×3″ centrifugal pump.

Kurnool.—Necessary specification and tender for an electric motor-driven centrifugal pump were furnished.

Madura.—Proposals for the electrification of the Kochadai Pumping Station and for Drainage Sub-pumping Station No. 5 were drawn up and examined.

Masulipatam.—The condition of the plant was not satisfactory and very little attention was paid to the recommendations made to improve it.

Negapatam.—Proposals were made for the erection of a new steel chimney.

The plant is maintained in a satisfactory condition.

Nellore.—The yield from the river being insufficient the plant was worked throughout the 24 hours to meet the demand. The plant was also being repaired constantly and the cost of working was high. The question of improving the supply and of installing a new plant as per improvements estimate recently furnished, requires the immediate consideration of the Council.

Tanjore.—The consumption of fuel was abnormal and the cost of working very high. Little notice was taken for a long time of the recommendations made for the repair of the plant. The overhauling of the plant has recently been taken up.

Trichinopoly.—The condition of the plant at the main and sub-pumping stations was very unsatisfactory. The overhauling of the plant one after another was taken up during the year.

Proposals for electrification of the main and sub-pumping stations were also under consideration.

Vizianagram.—The condition of the plant was very unsatisfactory and the cost of working very high.

Waltair.—The condition of the plant was not quite satisfactory.

Advice was also given regarding pumping plant required for new water-supply schemes, e.g., Gudur, Maddikera, Palacole, Proddatur.

The condition of the plant at the several pumping stations emphasizes the necessity for the appointment of a separate Mechanical Engineer who could devote his whole attention to this work.

A detailed report by the Chief Inspector on the working of the several plants during 1928–29 is also enclosed.

23. *Experimental filters.*—A fourth report detailing the experiments carried out during the year was submitted to Government in March 1930 and is printed in G.O. No. 932, P.H., dated 12th April 1930.

24. Requisitions continued to be received for reinforced squatting slabs for borehole latrines in rural areas. These were manufactured at the Experimental Filter Station, Kilpauk, and supplied.

25. The Department took part in the Park Fair and the National Health and Baby Week exhibitions held in Madras and demonstrated methods of water and sewage purification and exhibited models of wells, buildings and other sanitary appliances. The exhibits were much appreciated and a gold medal and a certificate of merit were awarded for the excellence of the exhibits in the Park Fair exhibition.

26. Two examinations were held for engine drivers and water works fitters in January and June 1929 respectively by the Board of Examiners consisting of the Sanitary Engineer, the Chief Inspector of Boilers and the Superintendent, Public Works Workshops. The results of the examinations were as follows :—

		Number applied.	Number passed.
Engine driver's examination	Competency	100	40
	Service...	26	12

27. In G.O. No. 1565 W., dated 23rd May 1929, the Government sanctioned the appointment of a Special Deputy Sanitary Engineer and an Instructor for teaching Elementary Sanitary Engineering to Health Officers and Health and

Sanitary Inspectors and for assisting the Sanitary Engineer in work connected with the preparation of statistics, propaganda work, etc. The course of training for the Sanitary Inspectors' class was also extended from five months to one year with effect from 1929.

28. During the year under review I was on leave from 7th March to 3rd November 1929 and Mr. J.R. Thurai Singham acted as Sanitary Engineer during the period. The appointment of Deputy Sanitary Engineers were held as follows :—

Northern Circle ...	Mr. G. V. Rao.
Central Circle ...	Mr. A. V. Raman, from 1st January to 10th August 1929 when he went on 8 months leave. Mr. J. R. Thurai Singham, from 11th August to 3rd November 1929 in addition to his duties as Sanitary Engineer and in sole charge from 4th November 1929.
Southern Circle ...	Mr. J. R. Thurai Singham, from 1st January to 1st March 1929. Mr. T. S. Subrahmanya Ayyar, from 2nd March to 14th April 1929. Mr. K. Narayana Ayyangar, from 15th April 1929.
Deputy Sanitary Engineer, Teaching.	Mr. A. V. Raman, from 20th June to 7th August 1929. Mr. G. V. Rao, in addition to his duties from 8th to 19th August 1929. Mr. T. S. Subrahmanya Ayyar, in addition to his duties from 20th August to 21st October 1929. Mr. M. Howth, from 22nd October 1929.

A new appointment of Personal Assistant was created during the year and this was held by Mr. T. S. Subrahmanya Ayyar, Officiating Assistant Engineer, Public Works Department, from 20th April 1929.

29. The Boiler Inspection staff continued to work under the administrative control of this office. Mr. G. L. W. O'Brian continued to be Chief Inspector except for the period from 15th April to 14th August 1929 when he was on leave. Mr. J. L. Thompson acted as Chief Inspector during the period. The several circles were in charge of the officers noted below :—

Madras Circle ...	Mr. R. L. Lazarus, from 1st January to 21st June 1929 and from 21st November to 31st December 1929. Mr. C. S. Raju, from 22nd June to 20th November 1929.
Coimbatore Circle.	Mr. J. L. Thompson (continued to hold charge of the appointment while acting as Chief Inspector).
Bellary Circle ...	Mr. O. W. Baskett, from 1st January to 21st May 1929 and from 14th November to 31st December 1929. Mr. R. L. Lazarus, in additional charge from 22nd May to 21st June 1929 and in sole charge from 22nd June to 13th November 1929.
Waltair Circle ...	Mr. W. A. Baskett.
Trichinopoly Circle.	Mr. S. A. Davis.

MADRAS,
11*th August* 1930.

J. S. WESTERDALE,
Sanitary Engineer to Government.

ANNEXURE A.

Statement showing the number and aggregate estimated cost of the sanitary works prepared by the local bodies sanctioned or recommended for sanction by the Sanitary Engineer and his Deputies during the year 1929.

Particulars.	Medical institutions.		Markets.		Slaughter-houses.		Latrines.		Water-supply.		Drainage.		Miscella-neous.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
Estimates of Rs. 2,500 and under.	2	2,820	1	800	...	...	6	6,770	32	20,607	1	1,400	...	...
Estimates of above Rs. 2,500 up to Rs. 10,000.	5	32,935	7	41,000	...	...	...	...	19	76,380	1	3,253	3	15,080
Estimates of above Rs. 10,000 up to Rs. 50,000.	9	2,01,701	4	1,05,542	1	16,300	1	21,830	4	71,114	...	...	1	21,000
Estimates of above Rs. 50,000.	...	...	2	1,30,300	...	...	...	...	2	1,29,000	...	...	...	...
Total ...	16	2,37,456	14	2,77,642	1	16,300	7	28,600	57	2,97,101	2	4,653	4	36,080

Total 101 works estimated to cost Rs. 8,97,832 against 61 works costing Rs. 6,12,970 in 1928.

ANNEXURE B.

Statement of works constructed on sanitary type designs by municipalities and district boards during the year 1929.

Name of municipality or local board.	Locality.	Name of description of work.	Number of type design on which work is executed.	Number and date of Sanitary Engineer's professional sanction.	Date of completion of work.	Remarks as to its success or failure as a type design construction.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Coimbatore District Board.	Sulur	Dispensary	C.A. No. 174 of 1918.	No. 581-M, 4 Sep. 1927.	1929	Successful.
Coonoor Municipality.	Coonoor	New mutton stall ...	T.D. No. 159-L., issued with Sanitary Board No. 722/S., dated 15 Aug. 1914.	No. 731, 13 Dec. 1927.	24 July 1929.	Found successful with certain alterations and additions. *Alterations.*—The expanded metal at front all round has been replaced by masonry walls so as to render the place less exposed to the cold climate of the locality. Seats arranged along the walls instead of in centre. Roof provided with corrugated iron zinc covered with mangalore tiles. *Addition.*—One separate cooling room provided.
West Gödävari District Board.	Tanuku	Maternity ward in the compound of the hospital.	T.D. No. 183.	No. 1428-M, 7 Sep. 1925.	1929	.....
Karaikudi Municipality.	Karaikudi ...	Latrine of three seats,	San. No. 49/1929.	Nil.	1929	The pig wall has not been constructed and the latrine does not function quite well. As the latrine is located in a wide maidan, people use it only in day time and very sparingly.
Kumbakonam Municipality.	Kumbakonam ...	Latrine of six seats in Melakaveri Girls' School.	T.D. No. 193.	Nil.	4 July 1929 ...	.....
Do.	Do. ...	Women and Children's Dispensary.	No. 1-0, C.A. No. 151/12.	No. 625-M, 30 Sep. 1927 of the Deputy Sanitary Engineer, Southern Circle.	17 Apr. 1929.	.....
Mayavaram Municipality.	Mayavaram ...	Latrine of nine seats in the compound of the Municipal High School.	San. No. 49/1929.	Nil.	Mar. 1929 ...	Working in a satisfactory manner.
Periyakulam Municipality.	Periyakulam ...	Single tap fountain in Viraswaran Koil Street.	T.D. No. 5/E.	No. 372 M/9 Apr. 1929.	17 Sep. 1929.	Do.
Do.	Do. ...	Lethal chamber ...	San. No. 155/1928.	...	23 July 1929.	Do.
Pollachi Municipality.	Pollachi	Three latrines of five seats.	San. No. 49/1927.	Nil.	1929	Useful. Provision of doors to compartments is a desirable improvement.
Salem Municipality.	Salem	Two dry latrines in Ammapet and Ponnamapet.	T.D. 193 ...	Nil.	1929	.....
Tellicherry Municipality.	Tellicherry ...	Dry earth latrine of 24 seats.	San. No. 49/1927.	Nil.	28 Mar. 1929.	The latrine is working very well.
Tanjore District Board.	Swamimalai ...	Out-patient dispensary.	T.D. No. 184	No. 355, 25 Feb. 1929.	June 1929.	The type design is a success.
Vaniyambadi Municipality.	Vaniyambadi ...	Sandai market ...	T.D. Nos. 72 and 193.	No. 1287-M, 29 June 1929.	...	.....

ENCLOSURE.

REPORT OF THE CHIEF INSPECTOR OF STEAM BOILERS ON THE WATER WORKS PLANT OF THE MUFASSAL MUNICIPALITIES FOR THE YEAR 1928–29.

Anantapur.—There was an increase of 0·2 per cent, 18·2 per cent and 66·8 per cent in duty, consumption of fuel per 1,000 gallons and cost per million gallons raised one foot high respectively. No. 2 engine was at last set to work after the replacement of the missing parts under the instructions of this office. A suitable pressure gauge graduated in feet head per square inch is required to be fitted to the delivery main in pump chamber. The abnormal increase in cost of raising a million gallons one foot high is due to the increase in the cost of fuel and inclusion of the cost of spares purchased. The condition of the plant was satisfactory and it is one of the best maintained plant in the presidency.

Bellary.—The proposed alteration of the suction pipes has not been given effect to and the lay out of the pipes is about one of the worst in the presidency. Comparison with the previous year's figures is not possible as the latter were only for a portion of the year. The condition of the plant was satisfactory.

Bezwada.—There was an increase of 2·6 per cent in duty and a decrease of 15·9 per cent and 0·6 per cent in consumption of fuel per 1,000 gallons and cost of raising a million gallons one foot high respectively. Little, if any, attention was paid to the recommendations of the Inspecting officers. The condition of the plant was very unsatisfactory due to indifference and slackness of the station staff.

There were several minor breakdowns of the plant and the best thing that can be done is to replace it at an early date since it is a waste of money frequently patching it up from time to time.

Chidambaram.—There was an increase of 2·5 per cent and 10 per cent in duty and consumption of fuel per 1,000 gallons respectively and a decrease of 0·4 per cent in cost of raising a million gallons one foot high. The consumption of fuel is high and requires to be examined closely.

The old chimney for the boilers was allowed to collapse and only a portion of the new chimney was erected.

A portable boiler was sent as a temporary measure to supply steam to the plant.

A sudden change in head drivers was made by the Council and generally speaking, the state of affairs at the station was far from satisfactory.

Chingleput.—The steam plant at this station was replaced by two Crossley suction gas engines and Mather and Platt "Medivane" centrifugal pumps on 6th February 1929. The plant is working satisfactorily. Particulars in the accompanying statement are omitted, as the gas plant was not in use for the whole year.

The new plant worked satisfactorily and the cost of working was reduced considerably.

Cocanada.—There was an increase of 20·2 per cent in duty and a decrease of 2·1 per cent and 13·8 per cent in consumption of fuel per 1,000 gallons and cost per million gallons raised one foot high respectively.

The condition of the plant was satisfactory but owing to the interest displayed in its electrification repairs were being neglected.

Conjeeveram.—There was an increase of 0·6 per cent, 8·4 per cent and 0·9 per cent in duty, consumption of fuel and cost per million gallons raised one foot high respectively.

The steam plant which was overhauled in 1926–27 was worked continuously without any attention.

The foundation of the suction gas engine was broken up and a new foundation laid. No effort was made by the staff to do anything, everything having to be done by this office. The condition of the plant and station was disgraceful and the only cure is replacement of the principal members of the staff.

Cuddapah.—The plant at this station worked for 11,964·25 hours and consumed 579 tons and 15 cwt. of wood fuel.

The consumption of fuel per hour was 108·5 lb. and cost of working per hour 15·4 annas. There was a decrease of 17 per cent in consumption of fuel and an increase of 1·3 per cent in cost of working per hour.

No notice was taken of the several recommendations made and the condition of the plant and station was most unsatisfactory. It is a sheer waste of time and money inspecting and reporting on the plant at this town.

Dindigul.—The plant was worked for 926·5 hours and delivered 20,602,700 gallons of water. The consumption of fuel was T. 16–4–56 of coal and T. 53–15–0 of wood. The cost of stores and establishment was Rs. 3,452–6–3. There was an increase in duty and a decrease in consumption of fuel and cost of working. The two vertical pumps, originally installed at Dindigul, were removed and re-erected at the Odukam and Nattamakara wells. The engine and pump at the Nattamakara well were dismantled in 1928. The plant requires replacement as it has served its time and repairs are not advisable.

Ellore.—There was a decrease of 2·8 per cent in duty and an increase of 2·8 per cent and 0·9 per cent in consumption of fuel per 1,000 gallons and cost per million gallons raised one foot high respectively. The condition of the plant was most unsatisfactory and nothing was done to maintain it in an efficient state. The workshops at the station should be properly equipped and the repairs to the plant carried out locally.

Erode.—There was a decrease of 19·3 per cent and 17·1 per cent in duty and cost of raising a million gallons one foot high, the consumption of fuel per 1,000 gallons remaining the same.

No notice was taken of the several recommendations for repairing the plant which is daily deteriorating.

The station was still without workshop machinery.

Gudiyattam.—There was an increase of 27·9 per cent in duty and a decrease of 2·2 per cent in cost of raising a million gallons one foot high, the consumption of fuel per 1,000 gallons remaining the same.

The condition of the plant was as satisfactory as could be expected as the staff was worked beyond the regular eight hours, in fact on most days the staff was on duty for not less than 16 hours. This is a matter which should be looked into as in factories this would not be allowed by Government.

There was not a single suitable tool at the station and no steps were taken to provide any.

Kumbakonam.—The plant was worked for 1,308·5 hours at a cost of Rs. 1,518–6–0. The cost per hour was Rs. 1–2–7 against Re. 0–15–6 for the previous year. The consumption of fuel was 4,200 lb. The Blackstone oil engine failed and consequently pumping to the town was stopped from 30th December 1928 to 4th March 1929. The engine was replaced by a new 8 B.H.P. Petter's Crude Oil Engine.

Kurnool.—Particulars in the accompanying statement are omitted as the gallons of water pumped during the year were not furnished by the council, the recorder being under repairs.

The condition of the suction gas plant and the 6 inches centrifugal pumps was satisfactory.

The Blackstone and Westinghouse oil engines and the two old centrifugal pumps were pretty well worn out and were maintained merely as a standby.

Madura main pumping station at Kochadai.—There was a decrease of 12·2 per cent and 13·6 per cent in duty and consumption of fuel per 1,000 gallons respectively, the cost per million gallons raised one foot high remaining the same as that of the previous year.

The condition of the plant and station was very good.

Madura sub-pumping station at Arapalayam.—There was an increase of 36·5 per cent in duty and a decrease of 11·1 per cent and 20 per cent in consumption of fuel per 1,000 gallons and cost per million gallons raised one foot high respectively.

The condition of the plant was satisfactory.

Masulipatam.—As the Venturi Meter was out of order for a very long time, necessary particulars are not given in the statement appended to this report.

Little if any attention was paid to the recommendations of the Inspecting Officer with the result that the condition of the plant was unsatisfactory.

Negapatam.—There was an increase of 4·7 per cent and 4·3 per cent in duty and cost per million gallons raised one foot high respectively, the consumption of fuel per 1,000 gallons remaining the same as that of the previous year.

The condition of the plant and station was very good.

Nellore.—As the Venturi Meter was out of order, necessary particulars are not given in the statement appended to this report. The plant was constantly under repair and added to the cost of its working which was already high.

The plant has served its time and little is to be gained by patching it up from time to time.

Tanjore.—There was an increase of 13·4 per cent and 10·9 per cent in duty and cost per million gallons raised one foot high and a decrease of 5·8 per cent in consumption of fuel per 1,000 gallons. Little notice was taken of the several recommendations made in connexion with the plant. The cost of working continued to increase.

The condition of the plant and station was very unsatisfactory.

Trichinopoly main pumping station.—There was an increase of 2·2 per cent, 1·6 per cent and 30 per cent in duty, consumption of fuel per 1,000 gallons and cost of raising a million gallons one foot high respectively.

The condition of the plant was disgraceful due to neglect and the employment of inexperienced persons in charge of the station.

Trichinopoly sub-pumping station.—There was a decrease of 0·5 per cent and 5·4 per cent in duty and consumption of fuel per 1,000 gallons respectively and an increase of 14·7 per cent in cost of raising a million gallons one foot high.

The condition of the plant was unsatisfactory.

Vizianagram.—There was an increase of 1·9 per cent in duty and a decrease of 9·3 per cent and 20·1 per cent in consumption of fuel per 1,000 gallons and cost per million gallons raised one foot high. The condition of the plant was very unsatisfactory.

Waltair.—There was a decrease of 8·9 per cent in duty and an increase of 6·7 per cent and 20·3 per cent in consumption of fuel per 1,000 gallons and cost of raising a million gallons one foot high respectively.

The condition of the plant was unsatisfactory.

Vellore drainage.—There being no recording instruments the duty cannot be arrived at. The station was inspected and necessary recommendations were made.

General remarks.—The results of the working of most of the stations and the condition of the plant are very bad.

A graphical comparative statement of several of the stations is attached which shows the actual state of affairs.

With the exception of a very few of the stations, the majority can only be considered as a burden to the tax-payer but this probably would not be objected to if an equitable supply of good drinking water was available.

Many of the stations are being worked day and night to supply the demand for drinking water but with poor success, as the plant in most cases is inefficient and there is no possibility of improving matters under existing conditions.

For the past many years it was pointed out that this department could not cope with the work and if proof were required the results of the working during 1928-29 are sufficiently convincing.

To continue to burden a department with work, which not only is not part of its legitimate work, but which it has not the time to do is simply asking for trouble.

Considering the Councils contribute towards the inspection of their plant, it is for Government to provide for the same being thoroughly carried out.

Statement of pumping particulars for 1928–29.

Stations.	Gallons of water pumped.	Average lift in feet.	Total consumption of fuel.			Description of fuel.	Pounds of fuel consumed per 1,000 gallons.	Cost per 1,000,000 gallons raised 1 foot high.	Pounds of fuel consumed per pump horse-power hour.	Remarks.
			TONS.	CWT.	LB.			RS. A. P.		
Anantapur	32,850,000	70	19	11	30	Charcoal and coke ...	1·3	2 1 1	3·8	Crossley suction gas engines with belt-driven centrifugal pumps.
Bellary	70,379,182	205·0	102	6	92	Charcoal	3·26	0 9 6	3·1	Crossley suction gas engines and 5-stage, belt-driven, Worthington Simpson centrifugal pumps.
Bezwada	310,679,610	85	515	8	1	Liquid fuel, kerosene oil and coal.	3·7	0 13 10	8·7	Diesel oil engines with belt driven, Worthington, triplex, deep-well pumps; also an auxiliary portable boiler and engine.
Chidambaram	69,554,000	52·75	169	12	84	Coal and wood ...	5·5	3 8 11	20·5	Hathorn, Davey horizontal, compound, surface condensing pumping engines.
Cocanada	206,040,400	47·5	424	4	84	Do. ...	4·6	1 4 9	19·2	Horizontal, direct acting, compound, surface condensing Worthington pumping engines.
Conjeeveram	131,684,000	47·99	390	0	54	Do. ...	6·6	2 5 3	27·4	Horizontal, direct acting, compound, non-condensing, Worthington pumping engines and Crossely suction gas engine with belt driven Hayward Taylor's triplex pump.
Ellore	120,092,202	62·00	391	17	56	Do. ...	7 3	1 13 3	23·3	Horizontal, direct acting compound, non-condensing, Worthington fly wheel pumping engines.
Erode	142,878,600	100	471	1	84	Coal	3 4	0 11 5	6·6	Vertical, direct acting, triple expansion, surface condensing Worthington pumping engines.
Gudiyattam	90,000,000	67·84	37	17	80	Charcoal, coke, kerosene and liquid fuel.	0 94	0 7 9	2·75	Crossley suction gas engines and Gwynne's belt-driven centrifugal pumps.
Madura (Main)	800,160,000	76·4	692	5	84	Coal and wood ...	1·9	0 10 2	5·0	Horizontal, direct acting, triple expansion, jet-condensing Worthington pumping engines.
Madura (Sub)	164,339,726	58·1	235	5	56	Do. ...	4·0	1 13 1	13·7	Horizontal, direct acting, triple expansion, surface condensing Worthington pumping engines.
Negapatam	222,252,200	144·13	505	11	56	Do. ...	5·1	0 12 1	7·0	Vertical, direct acting, triple expansion, surface condensing Worthington pumping engines.
Tanjore	355,910,087	82·44	1,027	16	56	Do. ...	6·5	1 5 2	15·5	Do. do.
Trichinopoly (Main)	829,100,000	116·74	2,316	11	70	Do. ...	6·3	1 6 9	16·6	Do. do.
Trichinopoly (Sub)	101,403,000	62·89	238	18	98	Do. ...	5·3	1 14 1	16·6	Horizontal, direct acting, triple expansion, surface condensing pumping engines.
Vizianagram	159,823,310	271·98	835	9	28	Coal and wood ...	11·7	0 10 7	8·5	Vertical, direct acting, triple expansion, surface condensing Worthington pumping engines.
Waltair	21,810,382	194·81	15	16	50	Kerosene oil	1·6	0 14 10	1·7	Hornsby oil engine with belt-driven Worthington triple pumps.

G. L. W. O'BRIAN,
Chief Inspector of Steam Boilers.

Government of Madras

LOCAL SELF-GOVERNMENT (PUBLIC HEALTH) DEPARTMENT

G.O. No. 2717, P.H., 28th October 1930

Public Health Annual Report for 1929—Reviewed.

READ—the following papers :—

I

Report of the Director of Public Health, Madras, 1929, including Administration of vaccination in 1929-30 and Fortieth Annual Report of the Sanitary Engineer to Government, 1929.

II

Letter from Major-General C. A. SPRAWSON, C.I.E., V.H.S., I.M.S., Surgeon-General with the Government of Madras (in charge), Office of the Director of Public Health, Madras, to the Secretary to Government, Local Self-Government (Public Health Department), dated the 30th August 1930, D. No. 143/Sanitary.

[*Reference*—Government Memorandum No. 28459/1-E, Public Health, dated 15th August 1930.]

I have the honour to invite the attention of the Government to paragraph 169 of my administration report for 1929 wherein I have made a few general remarks about major sanitary works. I would take this opportunity to impress upon the Government the urgent necessity for protected water-supplies to the towns of Rajahmundry, Bezwada and Kumbakonam in view of the fact that the important festivals of Pushkaram at Rajahmundry and Bezwada and Mahamagham at Kumbakonam all come off in 1933. These festivals attract large gatherings from all parts of the Presidency and follow one after the other. Rajahmundry has no protected water-supply scheme at all and this town requires special and urgent attention in view of the coming Pushkaram festival. Being at the head of the delta, infection is easily spread throughout the district, once Rajahmundry is affected with cholera. It is observed that the water-supply scheme for Rajahmundry is included as one among the twelve new water-supply schemes that were under execution or had been taken up for execution.

An expenditure of Rs. 67,000 has been sanctioned on Bezwada water-supply improvements to be carried out by the Public Works Department. These improvements should be completed before the commencement of the Pushkaram festival there.

Plans and estimates for the utilization of the second borehole, Kumbakonam water-supply, were said to be under preparation during the year. In G.O. No. 1886, P.H., dated 29th September 1927, it was stated that the second borehole having been completed, it should be utilized to augment the supply of water to the town. It is nearly three years since the Government sanctioned the scheme and it has not fructified yet, in spite of the small cost of the scheme. The Council and the Sanitary Engineer should take urgent steps to expedite the completion of the scheme at least before the Mahamagham festival.

Nandyal is another place which requires early water-supply. It lies en route to Srisailam, Mahanandi and Ahobilam and cholera is almost an yearly visitor.

III

Letter from R. F. STONEY, Esq., Chief Engineer, Public Works Department (General, Buildings and Roads), to the Secretary to Government, Local Self-Government Department (through the Secretary to Government, Public Works and Labour Department), dated the 2nd September 1930, No. 4494-Wks./30-C.R.

[Sanitary Engineer's Annual Administration Report for 1929. *Reference*—Government, Local Self-Government Department, Memorandum No. 28450-1-El., Public Health, dated 15th August 1930, calling for remarks on the —.]

Paragraph 11, *item* (*iii*) *Bezwada Water-supply improvements—Estimated cost Rs.* 67,000.—As the work is to be executed by the Public Works Department, the Government have in Public Works and Labour U.o. No. 10771-C/30-1, dated 23rd June 1930, called, for the remarks of the Chief Engineer on the estimate. A reply will be sent on receipt of the report from the Superintending Engineer, Bezwada Circle, as to the suitability or otherwise of the rates provided in the estimate.

(2) *Paragraph* 2 (*a*) *of the report.*—The demand for the following additional staff was taken up to Government as a Part II scheme for the current year in Endorsement No. 2928 Ad./29-1, dated 4th October 1929 :—

2 draftsmen on Rs. 110—6—140.
3 „ Rs. 60—4—100.
1 tracer on Rs. 33—33—33—1—50.

But no orders thereon have so far been received from Government.

Order—No. 2717, P.H., dated 28th October 1930.

Recorded.

2. There was a general improvement in the public health of the Presidency. The total number of deaths fell from 1,080,744 in 1928 to 1,037,452 in the year under review, a figure very nearly approaching the quinquennial average of 1,033,017. Mortality from cholera considerably declined and there was an appreciable reduction in the number of deaths under "fevers" and to a smaller extent under dysentery, diarrhœa and plague. The number of deaths from smallpox, however, increased by 2,090 as compared with the previous year. Details relating to important diseases are given below.

3. *Cholera.*—The mortality (25,846) from cholera decreased by nearly 55 per cent as compared with 1928 (57,677). The rate of mortality was 0·63 per mille against the quinquennial average of 0·9. Except Guntūr and the Nilgiris, every district was infected, the epidemic being severe in Tinnevelly, Madura, Tanjore, Rāmnād and South Arcot. Thirty-two (of the eighty-two) municipalities were entirely free.

4. *Smallpox.*—The mortality from smallpox rose from 7,618 to 9,708, the death-rates for the years 1928 and 1929 being 0·19 and 0·24 respectively against the quinquennial average of 0·4 per mille. No district was free from infection. High death-rates were recorded in South Arcot, North Arcot, Chingleput, Malabar and Tanjore.

5. *Plague.*—The number of deaths from plague decreased from 2,106 to 1,801, the lowest on record during the last decade. Ten districts in the Presidency were infected and the districts of Bellary, Salem and Madura recorded slightly over 90 per cent of the total number of deaths in the year.

6. *Malaria.*—Statistics relating to malaria are included under "fevers" which are responsible for nearly one-third of the total number of deaths in the Presidency. The disease was prevalent in almost all the districts and was responsible for a mortality of about 2·5 per mille of population. This disease is one of the most difficult to control. The Government have sanctioned the

continuance of the special Malarial staff and the scheme of free distribution of quinine in certain specially malarious tracts during 1930-31. They have also reduced the price of quinine and introduced the "treatment system" of selling quinine at a reduced price during the current year.

7. *Respiratory diseases*—The mortality under this head (90,159) was practically the same as in 1928 (90,012) and was the highest on record during the last ten years. The causes of the steady increase of mortality under this head have not been determined.

8. *Guinea-worm.*—This disease, though one of the most easily preventible, is prevalent in several districts mainly on account of the lethargy of local bodies and their unwillingness to incur the comparatively small expenditure required to carry out preventive measures. The inaction of the local bodies in this matter is inexcusable.

9. *Hook-worm.*—The staff of the rural sanitation campaign was strengthened during the year. About 2,200 lectures and 237 motion-picture demonstrations were given to audiences of nearly five lakhs, and about 42,000 pamphlets were distributed. About 266,000 treatments for hook-worm infection were given during the year. The control of the disease depends largely on the provision and use of suitable types of latrines. The Government hope that the example set by the Madura District Board in connexion with soil sanitation work will be emulated by other local bodies.

10. *Registration of vital statistics.*—Since the re-organization of the Public Health Department in 1923 there has been a progressive improvement in the registration of births and deaths and the compilation of returns. The vigilance of the officers of the department led to the detection of about 73,000 unregistered births and 23,000 deaths during the year. The system of check of the monthly vital statistics returns by the District Health Officers has been working satisfactorily. The Madras Registration of Births and Deaths Act, 1899, is being gradually extended to rural areas, especially to villages with a population of 2,000 and above, and the question of facilitating such extension by the creation of panchayat courts to try offences under the Act is engaging attention. On the whole, however, it has to be admitted that the registration of births and deaths, both in urban and in rural areas, is still very far from satisfactory.

11. *Birth-rate.*—The recorded birth-rate rose from 37·4 to 37·9 per mille in 1929, the highest on record during the last decade. The quinquennial average was 35·7 per mille. The birth-rate was as usual highest (39·7) in the Muhammadan community. There was a marked increase in the districts of the Nilgiris, Ganjam and Nellore. High birth-rates were recorded in the municipalities of Salem, Kodaikanal, Bodinayakkanur, Chingleput, Tirupattur and Guntūr while Erode, Tiruvarur, Nandyal, Tadpatri and Karaikudi returned very low birth rates (below 25 per mille). The ridiculously low rates in Erode and Tiruvarur (below 20 per mille) clearly point to the unreliability of the statistics.

12. *Death-rate.*—The recorded death-rate for the Presidency fell from 26·3 to 25·3 per mille of the population. The quinquennial average was 25·0 per mille. Nearly 75 per cent of the decrease in mortality was under deaths from cholera. Eight districts showed an increase in the death-rate, while eighteen districts showed a decrease. In the municipal towns of Erode, Ellore, Chittoor, Tadpatri, Tiruvarur, Vaniyambadi and Palacole the death-rates were incredibly low, due evidently to defective registration. The rate of infantile mortality was 179·5 per mille of births as against 184·2 during the previous year. The rate is still very high as compared with western countries, and emphasizes the need for more intensive child welfare work throughout the Presidency.

13. *Maternity and child welfare.*—The recorded mortality from child birth was 11,087 in 1929 against 11,150 during the previous year, but it is doubtful if this can be said to represent the true state of affairs as registration and classification of deaths under this head are very defective. The high death-rate is, to a large extent, due to the want of skilled aid during confinement. In municipalities only 38 per cent of the total births were attended by qualified midwives or

doctors, while in rural areas the proportion of confinements attended by qualified midwives was insignificant (3·87 per cent). There were 98 maternity relief and child welfare centres against 69 during the previous year. The Government hope that with employment of the special staff recently sanctioned for maternity relief and child welfare work in the Presidency there will be a rapid improvement in this direction.

14. *Fairs and festivals.*—The taluk boards of Pattukottai, Tanjore, Dharmapuri, Gobichettipalaiyam, Koilkuntla and Hospet did not allot adequate funds for sanitary arrangements during fairs and festivals in their areas. Some local bodies entrusted the sanitary arrangements connected with fairs and festivals to the authorities of the temples concerned. The Government would draw the attention of these bodies to their responsibilities and powers under section 128 of the Madras Local Boards Act (as amended) and section 156 of the Madras District Municipalities Act (as amended) and would remark that the sanitary arrangements in such cases can only be made effectively by the local bodies themselves.

15. *Propaganda.*—During the year nearly 125,000 lectures were delivered by the Public Health staff to audience numbering nearly 78 lakhs. The number of demonstrations with lantern slides was about 13,000. These figures show that there has been an increase in the activities of the department in regard to the education of the public in Public Health problems.

Vaccination.—As already stated, the mortality from smallpox increased during the year under review (from 7,618 in 1928 to 9,708 in 1929), but it was less than the quinquennial average (11,308). The health staff continued to check the registers of vital statistics and of unprotected children. The total number of unprotected cases detected by them during the year was 2·55 lakhs. More than one-half of this number were detected in the districts of Coimbatore, Tinnevelly, Gōdāvari East and West, Kistna and Madura.

Vaccination work cannot be said to have been entirely satisfactory in spite of the fact that the total number of vaccinations performed during 1929-30 reached the record figure of 2,139,321. The register of unprotected children was not maintained properly in panchayat areas. Several local bodies continued to employ incompetent vaccinators and exhibited a reluctance to sanction prosecutions of parents and guardians who failed to get their children vaccinated. Vaccination work in non-panchayat areas was impeded in many cases by the failure of the village headmen to assemble children for vaccination and for inspection of vaccinated cases.

Water-supply and drainage.—During the year under review the Coimbatore and Tuticorin water-supply schemes were brought into partial operation. The number of protected water-supply schemes has thus risen from 33 to 35. Ootacamund, Vellore and Madura continued to be the only towns which had an efficient drainage system.

Twelve new water-supply schemes were under execution or had been taken up for execution during the year—a record figure in the history of this Province. Improvements to four existing schemes were also in progress during the year. The construction of the high level reservoir for the Bezwada water works is almost complete and proposals for further improvements are under consideration. Another important feature of the year was the execution of schemes by local bodies themselves under the supervision of the Sanitary Engineer or the Public Works Department. Nine such works were in progress and two others were about to be started. Plans and estimates were under preparation for the water-supply schemes at Tadpatri, Virudhunagar and Sembiam (full power test), for the drainage schemes at Srirangam, Tirupati and Coimbatore and for six other improvement schemes. Various other schemes were also investigated, chief among them being the water-supply schemes of Vizagapatam (Mehadrigedda scheme), Walajapet, Pollachi, Peddapuram and Guntūr and the drainage schemes of Vizagapatam, Tuticorin and Bellary. The investigation of the Nandyal water-supply scheme has been delayed owing to the objections raised to the proposal by the temple authorities and the public.

The report of the Chief Inspector of Steam Boilers, Madras, on the water works plant of the several municipalities shows that municipal councils have not taken adequate and prompt steps to carry out the various recommendations made by him.

The King Institute, Guindy, continued to carry out the periodical analysis of municipal water-supplies and suggested measures for improving their quality. The experiments conducted at Kilpauk regarding the filtration of water were also continued. It is gratifying to note that the Sanitary Engineer's department won a gold medal and a certificate of merit for its exhibits in the annual Park Fair and National Health and Baby Week Exhibition held in Madras in December 1929.

The administration of the department was satisfactory and credit is due to the Director of Public Health and his staff. The department has recently sustained a grave loss by the sudden and untimely death of Captain N. R. Ubhaya under whose direction notable development and expansion had been effected in the department during the last two years. The Government desire to take this opportunity to place on record their high appreciation of the valuable services rendered by Captain Ubhaya.

(By order of the Government, Ministry of Local Self-Government)

HILTON BROWN,
Secretary to Government.

To the Director of Public Health.
" the Surgeon-General.
" the Chief Engineer.
" the Sanitary Engineer.
" the Inspector-General of Prisons.
" the Inspector-General of Police.
" the Director of Public Instruction.
" the Director, Civil Veterinary Department.
" the Examiner of Local Fund Accounts.
" all Collectors.
" all Presidents of District Boards.
" all Chairmen of Municipal Councils.
" the President, Corporation of Madras.
" the Inspector of Municipal Councils and Local Boards.
" the Secretary to Government, Local Self-Government Department, Bihar Government.
" the Consul-General for Siam at Calcutta.
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