

36640

57th Annual Report of
Sanitary Commissioner, Madras,
1920



R
DS-2111 N20
N22
36640

THE FIFTY-SEVENTH ANNUAL REPORT OF THE
SANITARY COMMISSIONER

AND

THE THIRTY-FIRST ANNUAL REPORT OF THE
SANITARY ENGINEER

MADRAS

1920

MADRAS

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS

1922

10000

THE
FIFTY-SEVENTH ANNUAL REPORT
OF THE
SANITARY COMMISSIONER, MADRAS,
1920.

GENERAL POPULATION.

RAINFALL.

The total registered rainfall of the Presidency during 1920 amounted to 1214.42 inches against 1199.22 in 1919, giving a district average of 43.58 inches against 47.97 inches in the previous year, i.e., an increase of the district average by 0.61 inch. The distribution of the year's district average among the three monsoons was as follows:—

	INCHES.
Inter-monsoon period (January to May)	7.39
South-west monsoon (June to September)	23.33
North-east monsoon (October to December)	17.86
Total	48.58

2. The average district rainfall in all the monsoons was greater than the district average for a series of years ending with 1914 by 4.38 inches. Compared with 1919, the total rainfall showed an increase in 13 districts and a decrease in 12. The districts which showed an increase of more than 10 inches were the Nilgiris (+ 43.30), Madras (+ 20.94), Malabar (+ 19.13), Chingleput (+ 14.98), Tanjore (+ 13.92), South Arcot (+ 12.63) and Madura (+ 10.25). The decrease was marked in Ganjam (— 33.03), Gōdāvari (— 21.74) and Vizagapatam (— 19.38). These districts showed also highest decreases of 12.95, 12.71 and 11.08 inches, respectively, when compared with the average of a series of years ending 1914. Increases, as compared with the average, were prominent in the districts of the Nilgiris (+ 46.42) and Tanjore (+ 29.56).

3. Judged with reference to the individual monsoons, the inter-monsoon period was favourable throughout the Presidency as a whole, the total registered rainfall of the season being 184.61 inches against 141.45 in 1919 and 130.06 the average. Sixteen districts had an increased rainfall during this period, prominent among them being South Arcot, Rāmūd and Madura with an increase of 8.36, 8.18 and 8.07 inches, respectively, over the figures of 1919 and of 8.22, 7.09 and 6.99 inches over the average.

4. The south-west monsoon was not as favourable as the inter-monsoon. The total rainfall during this season was lower than that of the corresponding period in the previous year by 22.05 inches and that of the average by 22.57 inches. In eight districts, an increased rainfall was recorded, the Nilgiris (+ 48.43), Malabar (+ 18.02) and South Kanara (+ 9.96) recording the highest increases. The last-named district showed, however, a decrease of 1.49 inches as compared with the average, while the other two—the Nilgiris and Malabar—showed the highest increases of 47.17 and 10.67 inches, respectively. Greatest decreases, as compared with the average, were recorded in Gōdāvari (— 10.47 inches), Madras (— 9.95 inches) and Vizagapatam (— 9.34 inches).

புதுச்சேரி
* செப்பனிடும்புக்காக எடுத்தபடி *
* கொள்ளப்பட்ட *
* மாதம் 1919 வருடம் *
* செப்பனிடும் முடிந்த *
* மாதம் 1919 வருடம் *
* இராச்சி உதவியாளர் *
* கையொப்பம் *

5. In the north-east monsoon increased rainfalls occurred in 11 districts and decreased rainfalls in 14. The increase was over 10 inches in Madras (+28.10) and Chingleput (+10.55). In other districts, it ranged between 0.65 inch in Salem and 5.14 inches in Tanjore. The most marked decrease occurred in Ganjam with a short-fall of 13.60 inches over the previous year's figure and of 5.86 inches over the average. The districts which fared worst for all monsoons were Anantapur, Bellary, Ganjam, Gōdāvari and Kurnool.

PRICES OF FOOD-GRAINS.

6. Although the seasons during the year as a whole cannot be considered bad, the prices of the staple food-grains showed no tendency to fall. Rice was sold during 1920 at 4.6 imperial seers of 30 tolas per rupee, ragi at 6.7, cholam at 6.6 and cumbu at 6.4, against the previous year's figures of 4.7, 6.9, 6.5 and 6.6, respectively, and against the average prices of 8.0, 13.7, 13.1 and 12.5, respectively. The prices of 1920 represent a rise of 73.9, 104.5, 98.5 and 95.3 per cent, respectively, above the average, the economic condition of the Presidency being therefore as bad as in recent years.

GENERAL POPULATION.

7. The population of the Presidency according to the census of 1911 was 41,829,232 exclusive of Europeans and Eurasians who numbered 40,928. The population for which vital statistics were returned for the year under report continued to be 40,005,735, the excluded number (1,823,497) representing the hill tribes of the Ganjam district (341,622) and of the Vizagapatam district (1,020,077), and the inhabitants of the Laccadive Islands (10,600), of the Banganapalle State (39,343) and of the Pudukkōttai State (411,855). The estimated population of the year 1920 was 45,242,544 and its natural growth as ascertained by adding to the census figure of 1911, the excess births over deaths during the succeeding period up to the end of December 1920 gives a population of 43,829,678. This large difference (1,412,866) between the two figures may be mainly attributed to the abnormal high death-rate of the Presidency during the influenza epidemic of 1918.

8. Emigration during the year was restricted to the Straits Settlements, Burma and Ceylon as in the previous year, the number of emigrants being 345,937 against 349,404 in 1919. Immigrants (excluding indentured emigrants) totalled 279,599 against 233,327 (revised figure) in the previous year and were less than the emigrants by 66,338.

9. The Madras Registration of Births and Deaths Act III of 1899 was in force during the year in 330 unions and 2,333 villages. The necessity for wider extension of this Act is becoming more and more obvious owing to the unsatisfactory manner in which vital statistics are at present registered in rural tracts. When District Health Committees are formed,—and it is hoped this will take place shortly,—this question should receive immediate attention.

10. Prosecutions so far reported for failure to report domestic occurrences in areas where registration of births and deaths was compulsory numbered 558; 543 of these ended in conviction.

BIRTHS IN DISTRICTS.

11. A total of 1,137,238 births was registered during the year under report against 1,021,213 in 1919, an increase of 116,025. Calculated on the census population of 1911, these figures give a birth-rate of 23.4 per mille for 1920 and of 25.5 per mille for 1919, against the accepted normal rate of 42.5 per mille. This birth-rate is less than that of the decennial average,—for the ten years ending 1919—by 2.7 per mille. Excluding Madras district which had a birth-rate of 41.5 per mille against 36.6 per mille in 1919, the highest birth-rate was recorded in Guntūr (36.5) against the previous year's rate of 30.7 per mille. Birth-rates in eight districts were between 30 and 36 per mille, the lowest rate (13.3) being returned by Nellore as in the previous year. This figure is ridiculously low and

requires investigation. In the remaining 14 districts, the rates varied from 23.1 in South Arcot to 28.5 in Salem. Compared with the previous year, all the districts excepting Nellore and Tanjore where birth-rates decreased by 2.5 and 1.0 per mille, respectively, showed increased rates. Judged by the decennial average, only four districts—Madras (+2.9), Anantapur (+1.4), Cuddapah (+1.1) and Rāmnād (+0.7)—returned higher birth-rates. All others excepting Kistna where the birth-rate was the same as the average, showed decreased rates, Nellore heading the deficiency list with a decrease of 11.2 per mille.

12. Considered with reference to sex, there were 105.2 male births for every 100 female births, as in the previous year. Muhammadans, as usual, returned the highest birth-rate of 30.8 against 28.6 per mille in 1919. The birth-rate among Indian Christians was 23.3 and among Hindus 23.2, the corresponding rates for 1919 being 25.1 and 25.3, respectively.

13. The total population of the rural tracts where Act III of 1899 was in force during the year was 5,924,869 and of those where it was not in force 31,266,953, the birth-rate obtained for these populations being 27.9 per mille in each case. Of the 21 districts where the Act was in force, 12 returned rates in excess of those registered in non-compulsory areas, increases being largest in Guntūr (+19.6) and Rāmnād (+19.0). Among the districts which showed a decrease, Kurnool ranked first with a deficit of 19.1 per mille. The existence of large variations in birth and death-rates in different districts and sometimes in different areas of the same district is very striking and, as remarked by Government in paragraph 4 of G.O. No. 80, P.H., dated 26th January 1921, reviewing the Sanitation Report for 1919, there is scope for an intensive examination in selected areas to ascertain why in some areas the birth or the death-rate is twice or even thrice that in others and to decide what local conditions contribute to this abnormal result. This matter is engaging separate attention.

BIRTHS IN RURAL TOWNS.

14. In the 191 rural towns of the Presidency with over 5,000 inhabitants (excluding Tadpatri, Hindupur, Chirala and Palakole which were constituted municipalities during 1920) there were 45,345 births (23,581 males and 21,814 females) against 41,998 (21,727 males and 20,271 females) in 1919. Calculated on the census population of 1911 of these towns, namely, 2,014,029 (979,892 males and 1,034,137 females), the above number of births give annual ratios of 22.5 and 20.9 per mille, respectively, the quinquennial average being 24.5 per mille. Largest birth-rates were recorded in Nāmakkal (68.3), Dharmapuri (60.9) and Kovilpatti (56.0). The rates returned by these towns in the previous year were 62.9, 46.0 and 37.5 per mille, respectively. In five other towns, the rates were also large, varying from 41.1 in Kulittalai to 47.9 in Vadakku Valliyūr. The rates varied from 40 to 30 per mille in 39 towns, from 30 to 20 in 74 towns, and from 20 to 10 in 54 towns. Sixteen towns returned abnormally low rates of less than 10 per mille. As compared with the previous year, increased birth-rates occurred in 121 towns and decreased birth-rates in 69, the rate in the remaining town of Pollachi being identical. Increases were marked in Aiyabād (+36.1), Kanigiri (+23.3) and Vasudayanallūr (+21.6). Among those which showed a decrease, Tanuku (−16.3) headed the list followed by Penukonda (−14.5), Uttamapālaiyām (−13.9), Tirumangalāra (−13.5) and Palla-lam (−12.2). The large variations in birth-rate in some of these towns cannot be satisfactorily explained without local investigation. The methods of registration will probably explain many of them, but the instructions issued to Collectors in G.O. No. 897 L., dated 22nd September 1920, will facilitate enquiry.

BIRTHS IN MUNICIPALITIES.

15. Seven new municipalities (Tadpatri, Hindupur, Chirala, Palakole, Sivakāsi, Repalle and Pollachi) have been constituted since the close of the year 1919 bringing the total number of towns in the Presidency under municipal administration where compulsory registration of births and deaths was enforced

by the operation of the District Municipalities Act of 1920, to 81. Three of these municipal towns (Sivakāsi, Repalle and Pollachi) came into being only at the close of 1920 and consequently particulars of vital statistics for these towns have been excluded from municipal figures and included under figures relating to rural towns (or town circles). The remaining 78 towns have an aggregate population of 2,840,207 (1,414,293 males and 1,425,914 females) according to the census of 1911. The total number of births registered among this population was 100,024 (51,695 males and 48,329 females) against 91,590 (47,134 males and 44,456 females) including the births returned by Tadpatri, Hindupur, Chirala and Palakole) in 1919, representing annual ratios of 35.2 and 32.2 per mille, respectively, against the quinquennial average of 35.8 per mille. Compared with the birth-rate in rural areas, viz., 28.2, the rate in municipal towns is higher by 7.0 per mille, probably due to better registration arrangements obtaining therein. The highest birth-rate was recorded in Tiruppattūr (55.2); Periyakulam (51.1), Guntūr (49.6), Kodaikānal (47.5) and Dindigul (45.8) returned also comparatively high rates. The birth-rate varied from 45 to 40 per mille in 15 towns, from 40 to 30 per mille in 30 towns and from 30 to 20 in 26 towns. The lowest rates were returned by the newly constituted municipalities of Chirala (18.9) and Palakole (17.8) the reasons for which are not very apparent. Comparing the year's figures with those of 1919, there were increased birth-rates in 56 towns and decreased birth-rates in the remaining 22 towns. Increases were marked in Guntūr (+17.2), Tiruppattūr (+16.2), Ongole (+10.6) and Poddapuram (+10.5) and decreases in Coonoor (-9.7), Ellore (-5.0) and Cochin (-4.2). Compared with the quinquennial average, 36 towns showed an increased birth-rate and 41 a decreased birth-rate. In the remaining town of Anantapur it was the same in both periods, viz., 31.3 per mille. Noticeable increases occurred in Udumalpet (+11.8) and Chittoor (+10.4) as in the previous year and decreases in Coonoor (-10.9), Ellore (-8.8) and Dindigul (-8.1).

DEATHS IN DISTRICTS.

16. The total number of deaths registered during the year aggregated 873,981 against 1,089,829 in 1919. These figures represent annual ratios of 21.8 and 27.2 per mille, respectively, against the decennial average of 25.9 and against the accepted normal death-rate of 33.7 per mille. The death-rate of the year was thus 5.4 per mille below that of the previous year and 4.1 below the decennial average, due probably partly to better health conditions prevailing in the Presidency but more probably to the fact that a large proportion of the weaklings were killed off during the influenza epidemics of the previous two years. Madras returned the highest death-rate, viz., 41.8 per mille against 53.1 in 1919 and 43.4, the decennial average. In 18 districts, the rates varied between 26.9 in the Nilgiris and 20.6 in North Arcot. In the remaining 6 districts, the rates were below 20 per mille, the lowest rate of 12.2 per mille being returned by Nellore, a figure as ridiculous as that of the birth-rate for the same district. Taking the two in conjunction, it is probable that very faulty registration is the real explanation. Compared with 1919, only four districts showed slightly higher death-rates, noticeable falls being in Malabar (-18.1), South Kanara (-15.9), Ganjām (-13.9) and Madras (-11.3). Compared with the average, all the districts excepting Madras, Ganjām and Trichinopoly showed decreased rates. Decreases were prominent in the Ceded districts, Bellary heading the list with a fall of 15.4 per mille followed by Anantapur (11.5), Cuddapah (10.5) and Kurnool (9.5). Excepting "Plague" the fall in the death-rate of the year was common to all causes of death.

17. Mortality among males was higher during the year than among females, the proportion being 102.2 to 100. Racially considered, the death-rate among Muhammadans was the highest, viz., 22.2 per mille; among Hindus and Indian Christians the rates were 21.9 and 18.4, corresponding ratios for 1919 for these three communities being 33.3, 27.0 and 22.6 per mille, respectively. Year after year the mortality statistics show this higher death-rate among Muhammadans as

compared with other communities. The reasons for this are being investigated as desired by Government in G.O. No. 80-P.H., dated 26th January 1921 (paragraph 7).

18. The death-rate in areas where Madras Act III of 1899 was in force was 22.0 per mille, in areas where it was not in force 20.8 per mille. Fifteen districts yielded rates in excess of those returned by the non-compulsory areas. Increases were marked in Guntūr (+20.1) and Rāmnād (+17.8) and the decrease in Kurnool (-13.1). These varying results call for detailed investigation when officers capable of carrying out such investigations are available.

19. The infantile death-rate for the districts during the year under report was lower than that of the previous year and lower also than that of the quinquennial average. The rate was 161.8 per mille of registered births against 142.9 of 1919 and 197.3 of the quinquennium showing a fall of 31.6 and of 36.0 per mille, respectively. Classified according to sex, the rate of mortality among male infants was 168.1 and among female infants 154.0; or in every 100 deaths, there were 53.4 male and 46.6 female deaths, the corresponding figures for the previous year being 52.8 and 47.2, respectively. The incidence of infantile mortality was the heaviest in Madras district (282.4) as in several previous years. It was also heavy in the Nilgiris (244.5), Tanjore (202.6), Chingleput (193.4) and Kistna (180.4). As compared with the previous year, all the districts excepting the Nilgiris which showed an increase of 17.3 per mille, showed a decreased rate of infantile mortality, Chittoor (-72.8) heading the list, followed by South Kanara (-71.0), Chingleput (-68.5), Ganjām (-65.7), Bellary (-57.3) and Malabar (-54.0). When compared with the quinquennial average the Nilgiri district alone showed an increase, all the other districts returning decreased rates. Decreases in infantile mortality were prominent in Nellore (-74.0), Chittoor (-68.5), Bellary (-62.3), Cuddapah (-54.4), Guntūr (-53.4) and Ganjām (-50.1).

DEATHS IN RURAL TOWNS.

20. In the 191 rural towns of the Presidency having over 5,000 inhabitants a total of 36,537 deaths was registered during the year against 43,346 in 1919, yielding annual ratios of 18.1 and 21.5 per mille against the quinquennial average death-rate of 23.2 per mille. The highest death-rate of 61.6 per mille was recorded in Harpanahalli against 16.6 per mille in 1919. This large increase was due to the abnormal mortality under "plague" registered in the said town. Other towns which returned higher rates were Nāmakkal (56.0), Ambur (48.6), Dharmapuri (46.5), Kevilpatti (43.7), Sholavandan (41.6) and Tirutturaippundi (41.4). In twelve other towns, the rates varied from 30.6 in Mudugulla to 39.9 in Dharmavaram. Of the 34 towns where the rates were below 10 per mille, the lowest were returned in Ranipettai (4.9), Bukkapatnam (4.4), Pallikonda (4.1), Vempalli (3.9), Rajampet (3.5), Pernampattu (3.1) and Tiruvattur (2.7)—statistics which cannot possibly be accepted as even within the bounds of possibility. The causes which led to the submission of such abnormal statistics should be carefully investigated by the local authorities concerned.

21. Compared with the previous year, death-rates in 67 towns showed an increase and in 124 towns a decrease. Increases were prominent in Harpanahalli (+45.0), Aiyabad (+18.3), Kanigiri (+16.8), Uadur (+16.5) and Sholavandan (+15.7) and decreases in Tiruvallūr (-33.9), Srungavarapukota (-27.7), Russellkonda (-26.6) and Tadurnagaram (-25.0).

DEATHS IN MUNICIPALITIES.

22. Deaths registered in the 78 municipal towns of the Presidency during the year numbered 95,164 against 110,713 (including the deaths returned by Tadpatri, Hindupur, Chirala and Palakole) in 1919, representing annual ratios of 33.5 and 39.0 per mille, respectively, against the quinquennial average of 38.1 per mille. The highest death-rate, viz., 56.7 per mille, was returned by Tiruppattūr, the municipality which occupied the same

unenviable position in the previous two years. The death-rates were also high in Bezawada (55.9), Coimbatore (54.7) and Udumalpet (52.8). The high death-rate in Coimbatore and Udumalpet was due to "Plague" and in Tirupattūr and Bezawada to a large number of deaths shown under "All other causes." The rates varied from 50 to 40 per mille in four towns, from 40 to 30 in 34 and from 30 to 20 in 2. Of the remaining 8 towns where the rates were below 20 per mille, the lowest rate was returned by Adōni (12.8). This is much too low a figure and cannot be accepted as even approximately correct. In contrast with the results of the previous year the death-rate showed an increase in 18 towns and a decrease in 60. Increases were prominent in Bodinayakanūr (+26.6), Udumalpet (+20.0), Villupuram (+12.0) and Anantapur (+10.1) and decreases in Palni (-30.6), Calicut (-26.5), Tirupattūr (-24.9) and Parālakimēdi (-22.3). Judged with reference to the quinquennial average, the death-rates of the year showed an increase in 17 towns and a decrease in 61 towns. The increase was marked in Udumalpet (+28.2) and the decrease in Bellary (-30.8).

23. The average infantile mortality in the municipalities during 1920 was 228.2 per mille of the registered births against 246.2 in 1919, the quinquennial average being 248.9 per mille. Considered with reference to sex, the mortality among male infants (237.1) was higher than among female infants (218.7) or in every 100 deaths there were 53.7 males and 46.3 females. The rates of infantile mortality were very high in Ootacamund (348.5), Bezawada (332.9), Kodaikānal (318.8) and Narasaraopet (303.9). They varied from 300 to 250 per mille in 12 towns, from 250 to 200 in 31 towns, from 200 to 150 in 20 towns and from 150 to 100 in 10 towns. Tadpatri returned the low infantile death-rate of 75.3 per mille, evidently the result of defects in local registration. In contrast with the figures of the previous year, there was an increase in 33 towns and a decrease in 41, the four newly constituted municipalities being excluded, figures for them not being available. Compared with the quinquennial average 19 towns showed an increased mortality among infants and 55 towns a decreased mortality. The increase was over 100 per mille in Villupuram (+190.7), Kodaikānal (+108.9) and Ootacamund (+103.3). The towns which returned noticeable decreases were Udumalpet (-117.1), Tenali (-97.7), Guntūr (-80.5), Anantapur (-75.8) and Chicacole (-75.2).

24. This section of the report cannot be closed without making further reference to the large number of cases where defective registration of births and deaths gives a totally misleading idea of the health of the areas concerned. Vital statistics are of great value when they are accurate, but statistics, such as have been submitted by certain districts and municipalities mentioned above, are worse than useless. With a view to effect general improvement in this very important public health question, various proposals are now under consideration and these will be submitted to Government separately.

GENERAL HISTORY OF CHIEF DISEASES.

CHOLERA.

25. Deaths from cholera declined from 93,262 or 2.3 per mille in 1919 to 31,139 or 0.8 per mille in 1920, against the quinquennial average of 1.6 per mille. The disease appeared at one time or another in all districts of the Presidency and existed almost continuously throughout the year in as many as eight districts. In nineteen districts it was a continuation of the epidemic that broke out in the previous year. Trichinopoly returned the highest death-rate of 2.0 per mille, against the previous year's rate of 1.3 per mille. Death-rates were also large in Tanjore (1.7), South Arcot (1.6) and Gōdāvari (1.5). In five districts the rates varied between 1 and 1.5 per mille and in the remaining districts were below 1 per mille. As compared with the previous year, all the districts excepting Gōdāvari, Kistna, South Arcot, Tanjore and Trichinopoly showed decreased death-rates. South Kanara and Ganjām showed highest decreases, the death-rate recorded therein being 0.3 and 0.6 per mille, respectively, in 1920 against 7.1 and 5.6 per mille in 1919. The incidence of cholera mortality throughout the Presidency was heaviest in the months of January, February and August.

26. One thousand two hundred and sixteen deaths from cholera were registered in 108 rural towns against 3,995 in 139 towns in 1919, representing annual ratios of 0.6 and 1.9 per mille, respectively. The mortality rates were largest in Tirutturaippundi (7.6), Narasapur (5.8) and Mandapeta (5.2).

27. From 62 municipal towns, 2,107 deaths from this disease were reported against 5,461 in 68 towns in 1919. These figures yield annual ratios of 0.7 and 2.0 per mille, respectively. Eight towns (Hindupur, Erode, Cuddapah, Kurnool, Coonoor, Tirupattūr, Mangalore and Vizianagram) returned only one sporadic case each; Udumalpet, Cochin and Tinnevely returned two cases each; and Palni and Vizagapatam three each. The highest death-rate was recorded in Dhārāpuram (4.8 per mille). Other towns which returned comparatively higher rates were Palakole (4.5), Rajahmundry (4.4), Mayavaram (3.9) and Cannanore (3.7). Proddatur which suffered most during the previous year and twelve other towns which had also high death-rates from this disease during 1919 were free during the year under report. Palni, Calicut, Tellicherry and Cochin showed the largest decreases of 11.2, 9.1, 8.3 and 8.3 per mille, respectively.

28. Out of 42,052 towns and villages in the Presidency, deaths from cholera were reported from 5,002 as against 8,389 in 1919.

29. The rules issued with G.O. No. 1658 M., dated 21st September 1916, for combating epidemics of cholera continued to be in operation in all municipal towns and their working was generally satisfactory. There is a tendency on the part of chairmen of municipal councils, however, to delay application of these rules until the epidemic assumes serious dimensions. This is an entirely erroneous attitude. Everything depends upon the promptness with which first cases of cholera are dealt with, and if immediate preventive steps be taken, the disease can very often be stamped out from an affected locality within a few days of its appearance.

30. The eight cholera parties sanctioned for the Presidency were employed during the year under report in all the districts excepting Vizagapatam, Chingieput, Kurnool, Cuddapah, Anantapur and the Nilgiris. Some of the parties were also engaged in anti-malarial work in Hospet in Bellary district, and Armegam and Pulicat in Nellore district. On the whole, these parties have turned out much useful work, but there is much scope for improvement in their working methods. How best this can be done is receiving separate attention.

31. The chief anti-cholera measures adopted by the parties were the usual ones, viz., hankinization of drinking-water supplies and their subsequent protection as far as possible from contamination; isolation of infected patients and disinfection of their houses, clothing, etc.; distribution and administration of medicines, and propaganda work regarding the causes of spread of cholera and the advantages of attention to simple rules of hygiene. Sir Leonard Roger's method of treatment of cholera by saline injection was attempted in some cases; but there does not seem to be great scope for expansion in this direction as not only is there great disinclination on the part of patients to submit themselves to this treatment, but the conditions under which the treatment has to be attempted make its successful application often utterly impossible.

32. The instructions of Government in paragraphs 11 and 13 of G.O. No. 80-P.H., dated 26th January 1921, reviewing the administration report of the Sanitary Report for 1919 in regard to the attention to be paid to the history of each cholera epidemic with a view to determine the areas most susceptible to infection and the periodicity of the disease within each such area have been noted and are receiving attention. The appointment of three additional Deputy Sanitary Commissioners recently sanctioned by Government will, it is hoped, enable more attention to be paid to this and similar problems; but without District Health Officers, who can devote time to the intensive study of epidemics in their districts, and who will be able to collect statistics locally, it will not be possible to make that progress which is so desirable.

SMALLPOX.

33. Smallpox claimed 13,697 victims against 41,732 in 1919 representing annual ratios of 0.3 and 1.0 per mille, respectively, against the quinquennial average of 0.9 per mille. No district was free from the disease during the year; and in all of them, except the Nilgiris, it was continuously present. The highest death-rate was registered in Anantapur, Cuddapah and South Kanara (0.6 each). The rates were also comparatively high in Bellary, Kurnool, Gōdāvari and Trichinopoly (0.5 each). Classified according to ages 4,737 cases were among infants under one year of age and 4,641 from among those between 1 and 10 years of age or 34.6 and 33.9 per cent, respectively, of the total mortality from this cause against 29.5 and 32.4 per cent in 1919. The incidence of mortality was heaviest during January-April 1920.

34. Three hundred and two deaths from this cause were registered in 56 rural towns against 1,184 in 132 towns in 1919, representing annual ratios of 0.1 and 0.6 per mille, respectively. The death-rate was the highest in Vāsudēvanallūr (4.3) followed by Aiyabad (3.5), Mangalagiri, Sholavandan and Nanguneri (1.6 each).

35. In 55 municipal towns, a total of 715 deaths was registered against 4,563, in the previous year, yielding annual ratios of 0.3 and 1.6 per mille, respectively. In 28 towns the total number reported throughout the whole year did not exceed five in each. The death-rates were highest in Hospet (2.1) and Hindupur (1.2). The rates in all the other affected towns were below 1 per mille.

36. Smallpox cases were reported during the year from 3,608 towns and villages against 7,000 in the previous year. In rural towns, the death-rate from this cause was 0.1 per mille and in rural tracts 0.4 per mille, while in municipal areas it was 0.3 per mille.

37. The remarks of Government, in paragraphs 14—16 of last year's review, regarding the relation of smallpox mortality to vaccination statistics have been noted and will receive due attention when the new Deputy Sanitary Commissioners commence work. In order to reduce smallpox mortality to a minimum, general extension of the compulsory vaccination provisions of the Local Boards Act is most essential; and the general reluctance to take action in this direction is much to be deprecated. Further delay in extending compulsory vaccination throughout the Presidency is quite unnecessary and it is hoped that Government will see their way to sanction such extension at a very early date.

PLAGUE.

38. Plague was more prevalent during the year under report than in the two previous years. There were altogether 14,652 deaths against 5,645 in 1919 and 12,859 in 1918, representing annual ratios of 0.4, 0.1 and 0.3 per mille, respectively, against the quinquennial average of 0.3 per mille. Eight districts, however, enjoyed complete immunity from the disease during the year. In five districts, there were in all 19 imported cases and in the remaining 12, the disease was prevalent in an indigenous form. Madura, Bellary and Coimbatore were on the infected list all the year round and the death-rates registered therein were highest, being 3.2, 2.3 and 1.8 per mille, respectively, against 0.3, 1.6 and 0.7 in 1919 and 0.1, 4.4 and 1.2, the quinquennial average. Death-rates were comparatively high in Salem (0.7), North Arcot (0.3) and Anantapur (0.2). As compared with the average, mortality from this disease showed the largest decline of 2.1 per mille in the Bellary district.

39. From 17 rural towns, 1,576 deaths from plague were reported against 401 in 18 towns in 1919, yielding annual ratios of 0.8 and 0.2 per mille, respectively. The towns of Kadiri, Gooty, Rayadrug and Kalahasti each had one imported case. The death-rate was highest in Harpanahalli (43.6 per mille). The rates were also high in Ambur (29.7), Dharmavaram (18.4), Uttamapalayam (10.9), Pollachi (9.7), Kotturu (9.4) and Solavandan (9.3).

40. 2,373 deaths from plague were reported during the year from 27 municipal towns against 1,460 from 26 towns in 1919. These figures represent annual ratios of 0.8 and 0.5 per mille, respectively. Hospet, Periyakulam, Cannanore, Gudiyattam, Tiruppattūr, Tanjore and Srirangam reported one imported case each and Anantapur, Bellary, Chittoor, Vellore and Virudupatti two cases each. The remaining 15 towns had indigenous cases, the highest death-rates being 32.4 per mille in Udampet, 18.9 in Coimbatore and 18.2 in Bōdināyakkannur. The death-rates were also large in Dindigul (5.6), Salem (4.7) and Erode (4.1).

41. Deaths from plague were reported from 525 towns and villages against 363 in 1919.

42. Among persons who have been previously inoculated with anti-plague vaccine, there were 461 deaths (Madura 411, Bellary 40, Salem 7, North Arcot 2 and Kistna 1) against 11 in 1919.

43. The remarks of Government in paragraph 17 of G.O. No. 80-P.H., dated 26th January 1921, in regard to the preventive measures against plague have been noted, but the whole question of plague is a difficult one, and one which requires special enquiry. This enquiry, it is hoped, will be commenced shortly.

FEVERS.

44. Under the existing arrangements for the registration of vital statistics in this Presidency, "Fevers" is one of the most convenient heads for careless registrars. All doubtful cases attended with fever are entered up under this elastic heading. "Fever" is a symptom of many diseases and to correctly diagnose the particular disease in any given case requires a medical knowledge which the ordinary registrar of births and deaths does not possess. Little or no improvement can be expected under existing conditions, but it will be the duty of District Health Officers to carry out strict enquiries in this respect and amend faulty diagnoses wherever possible. When those officers come into being, therefore, some improvement in registration may be anticipated.

45. During the year 1920, 324,998 deaths were registered under "Fevers" against 403,499 in 1919, representing annual ratios of 8.1 and 10.1 per mille, respectively, the quinquennial average being 11.0. The highest death-rates were recorded in Ganjam (13.6), Vizagapatam (13.3), Kurnool (14.4), Guntūr (11.8), Gōdāvari (10.9) and Cuddapah (10.6). As compared with 1919, all the districts—except the Ceded districts where there was an increase and Nellore where the rates were the same—showed decreased rates under this head. Increases were

prominent in Bellary (+ 1.5) and Anantapur (+ 1.2) and decreases in Ganjam (— 7.1), Gōdāvari (— 5.8), Malabar (— 5.2), and the Nilgiris (— 4.5). Ganjam alone, however, showed an increase of 0.7 per mille when compared with the quinquennial average. The largest decreases were met with in the Ceded districts—Kurnool (— 11.1), Bellary (— 9.8), Anantapur (— 7.2) and Cuddapah (— 7.1). The largest number of deaths (32,842) from fevers was recorded in the month of January; December and March following closely with 32,154 and 30,719, respectively.

46. 10,309 deaths from fevers were recorded in 189 rural towns against 13,243 in 1919 yielding annual ratios of 5.1 and 6.4 per mille, respectively. Yellamanchili in the Vizagapatam district returned the highest death-rate, viz., 21.2 per mille. Twenty-six other towns returned also higher rates varying from 19.5 in Russellkonda to 10.0 per mille in Manamadura.

47. A total of 16,129 deaths was reported from 77 municipal towns against 19,228 in 1919, representing annual ratios of 5.7 and 6.9 per mille, respectively. No cases were reported from the municipality of Vāiyambādi, this being obviously due to culpable neglect on the part of the registration staff. The highest death-rate, viz., 18.1 per mille, was recorded in Anantapur, against 6.4 in the previous year. In 11 other towns the rates varied from 16.5 in Hospet to 10.3 per mille in Ongole.

DYSENTERY AND DIARRHŒA.

48. Deaths registered from these two causes aggregated 56,402 against 74,074 in 1919 with annual ratios of 1.4 and 1.9 per mille, respectively, against the quinquennial average of 1.7 per mille. The largest number of deaths under the head was registered as usual in Madras which gave a mortality rate of 9.2 per mille. The rates were also high in the Nilgiris (5.2), South Kanara (2.7), Malabar (2.5), Chingleput (2.4), North Arcot (2.0) and Coimbatore (1.9), as in past years. Compared with the previous year, there was an increased death-rate in 6 districts and a decreased death-rate in 15, the death-rates in the remaining 4 districts being identical. South Arcot showed the largest increase of 0.3 per mille when compared with 1919 and 0.2 per mille when compared with the quinquennial average.

49. A total of 2,581 deaths from these causes was registered in 167 rural towns against 2,883 in 1919 representing annual ratios of 1.3 and 1.4 per mille, respectively. The death-rates were highest in Kosgi (7.0), Gudur (6.9) and Namakkal (5.0).

50. The 78 municipal towns had a total of 13,840 deaths registered under this head against 15,023 in 74 towns in 1919, the annual ratios being 4.9 and 5.4 per mille, respectively. The highest death-rates were returned by Chingleput (10.4), Madras (9.2), Vizianagram and Palamcottah (9.0 each). In 15 towns the rates varied from 5.0 per mille in Tiruppur to 8.9 per mille in Vizagapatam. Compared with the previous year, there was an increased mortality in 34 towns and a decreased mortality in 43, the rate in the remaining town, Cuddalore, being the same in both years. The municipal death-rate from these causes exceeded the rural death-rate by 3.8 per mille.

51. Deaths from dysentery and diarrhœa were reported from 12,318 towns and villages against 14,047 in 1919.

RESPIRATORY DISEASES.

52. Under this head were registered 46,937 deaths in 1920 against 48,981 in 1919 with annual ratio of 1.2 per mille in both the years, the quinquennial average also being the same. As in several previous years, Madras returned the highest death-rate, viz. (8.8 per mille). The rates were also high in the Nilgiris (4.4) and Kistna (3.0) as in previous years. Compared with the quinquennial average, the death-rate showed an increase in 7 districts and a decrease in 13, the rates in the remaining districts being identical.

53. One thousand seven hundred and ninety-six deaths from respiratory diseases were registered in 152 rural towns against 2,076 in 1919 yielding annual ratios of 0.9 and 1.0 per mille, respectively. The death-rate was highest in Paramagudi (7.8). It was also high in Narasapur (5.3), Gobichettipālaiyam (4.8) and Gudivada (4.3).

54. In municipalities 9,670 deaths from respiratory diseases were recorded during the year against 10,331 in 1919 representing annual ratios of 3.4 and 3.7 per mille, respectively. The highest death-rate was returned by Ootacamund (14.2) followed by Tirupati (13.6), Coonoor (9.1), Madras (8.8), Conjeeveram (7.9), Bezwada (6.9) and Cuddapah (6.6). Fourteen towns reported no deaths from this cause. Out of 42,052 towns and villages, 11,094 had deaths from this cause against 10,926 in 1919.

INJURIES.

55. Seven thousand nine hundred and thirty-seven deaths were registered under this head against 8,445 in 1919, the annual ratio being 0.2 per mille in both the years. The mortality rate for rural towns was 0.2 per mille and that for municipal towns 0.3 per mille. Suicides among males numbered 516 and among females 593.

56. A total of 97 deaths from rabies was registered during the year under report against 62 in the previous year. Malabar and Tanjore districts had the largest number of cases under this head, 29 and 19, respectively. No details are available as to the action taken by the district authorities in each case of death from this cause. The instructions of Government contained in this regard in paragraph 22 of G.O. No. 80-P.H., dated 26th January 1921, have been noted and enquiry will be made regarding all future cases reported to this office.

ALL OTHER CAUSES.

57. Deaths registered under this all-absorbing head aggregated 378,169 against 414,183 in 1919 yielding annual ratios of 9.4 and 10.4 per mille, respectively. About 43 per cent of the total mortality in the Presidency during the year was classified under this head. The death-rate from these causes was 10 per mille and above in 11 districts. Of the 14 districts which showed a death-rate of below 10 per mille, Vizagapatam (1.5), Ganjam (1.8), Nellore (2.8), Cuddapah (4.1) and Kurnool (5.2) recorded lower rates than in 1919, while the death-rates in these districts from "fevers" were comparatively high. This points to the conclusion that doubtful cases of deaths are entered up under one or other of these two convenient heads.

58. In rural towns, a total of 18,429 deaths was registered in 1920 against 20,517 in 1919, representing annual ratios of 9.1 and 9.9 per mille, respectively. In municipal towns, the death-rate under this head was 17.4 per mille against 18.8 per mille in 1919. It exceeded 20 per mille in 19 towns, was between 10 and 20 per mille in 46 towns and was below 10 per mille in 13. The highest death-rate was recorded in Bezwada (36.1) and the lowest in Adōni (4.9) as in the previous year.

GENERAL.

59. The orders of Government in paragraphs 18—21 of last year's review as to the immediate need for a systematic investigation into the health problems in localities where mortality is generally high and as to the preventive measures called for to reduce the present high mortality rates in such localities to a minimum have been noted. Steps will be taken to give effect to the suggestions made therein when the department is strengthened by the addition of the two Deputy Sanitary Commissioners recently sanctioned by Government.

MINES.

60. The following paragraphs are added with reference to the orders of Government in G.O. Mis. No. 886-P.H., dated 27th July 1921.

61. During 1920, mining operations were carried on in the districts of Anantapur, Kurnool, Nellore, Salem and Vizagapatam. Calculated on the aggregate number of *daily* attendances divided by the number of days actually worked, the average daily mining population in this Presidency amounts to 5,997 persons.

62. The general health of the employees was good. In the Nellore district, however, the coolies in the Kallihodu mine are reported to be subject to malaria and about 60 per cent of the children examined were said to have enlarged spleens. This requires investigation by the local medical staff and the necessary anti-malarial measures should be initiated without delay.

63. So far as can be ascertained, there were no special diseases peculiar to miners in the five districts concerned. This statement should not be accepted, however, without caution. Proof is difficult unless a special enquiry is made regarding health conditions in the mining areas by an expert Medical officer.

64. No epidemics are reported from any of the mining areas.

65. Information is not available to show what arrangements exist at present in the different mines for the treatment of the sick. This omission may be corrected in future reports.

66. Except in Anantapur no proper attention seems to have been paid to the conservancy arrangements obtaining in and near the coolie lines in the mining areas. The defects described in the reports are numerous and these should be removed as early as possible. The local Medical officer should inspect the localities within his jurisdiction and suggest the measures which, in his opinion, are called for.

67. Arrangements for the supply of good drinking-water to the mining employees are satisfactory. To maintain water-supplies in efficient condition, periodical inspections by the local medical staff should be carried out. Any defects noticed during such inspections should be reported for necessary action. Vizagapatam and Kurnool district reports furnish no information on this important subject. A few remarks may usefully be inserted in this connexion in their future reports.

SANITARY WORKS—CIVIL.

MUNICIPALITIES.

68. The District Municipalities continued to be administered under Act IV of 1884 up to October 1920 when the new District Municipalities Act V of 1920 was introduced.

69. The provision of the District Municipalities Act was applied to seven major unions during the year, viz., Chirala, Palacole, Tadpatri, Hindupur, Pollachi, Repalle and Sivakasi raising the number of municipalities to 81 with an aggregate population of 2,879,111. The new municipalities were duly inspected by the Deputy Sanitary Commissioners and their sanitary requirements reported to the Municipal Councils concerned.

70. Many of the legal disabilities which hampered the progress of sanitation under the old Act have been removed in the new Act and, it is hoped, that with the enhanced powers with which the municipal councils are now armed, sanitary measures will be enforced with greater vigour and energy.

71. The following statement shows the progress of major sanitary works in connexion with water-supply and drainage. Details of these major sanitary works are furnished in the Sanitary Engineer's report. The minor works consisted of potty improvements to water-supply and drainage, the construction and repair of markets, slaughter-houses, latrines, etc.

Statement showing the position of Municipal Water-supply and Drainage Schemes in 1920.

Water-supply.				Drainage.			
Opened.	Under execution.	Sanctioned.	Investigated, under investigation, investigation ordered, etc.	Opened.	Under execution.	Sanctioned.	Investigated, under investigation, investigation ordered, etc.
Adoni. Berhampur. Bezwada. Chidambaram. Coimbatore. Conjeevaram. Coonoor. Cuddapah. Dindigul. Erode. Gudiyattam. Guntur. Kodakānal. Kumbakonam (partial). Kurnool. Madura. Masulipatam. Negapatam. Nellore. Ootacamund. Periyakulam. Salem. Tanjore. Tirupati. Trichinopoly. Vellore. Vizagapatam (including Waltair). Vizianagaram.	Adoni (improvements). Anantapur. Bellary (full power test). Chingloput. Cuddapah (improvements). Guntur (water-works improvements). Madura (improvements). Narasaraopet. Tirupati. Tuticorin (Tambra-parai scheme). Vizagapatam (water-works improvements). Tanjore (water-works improvements). Coimbatore (Police Recruits' School water-sundry). Salem (water-works improvements).	Conjeevaram (water-works improvements). Coonoor. Ootacamund (water-supply, southern portion). Vellore (water-works improvements). Mangalore. Mannargudi. Nandyal. Ongole. Palghat. Tahsi. Parlikimoli. Rajahmundry. Salem (improvements). Srirangam (separate scheme). Srivillipattur. Tirupattur. Tiruvallur. Tiruvannamalai. Trichinopoly (improvements). Vaniyambadi. Walajapet.	Bellary. Calicut. Chidambaram. Chittoor. Coimbatore (Sivuvani scheme). Coimbatore (Forest College). Cuddalore. Dharmapuri. Dindigul (water-works improvements). Kodakānal (extension). Mangalore. Mannargudi. Nandyal. Ongole. Palghat. Tahsi. Parlikimoli. Rajahmundry. Salem (improvements). Srirangam (separate scheme). Srivillipattur. Tirupattur. Tiruvallur. Tiruvannamalai. Trichinopoly (improvements). Vaniyambadi. Walajapet.	Ootacamund. Madura. Vellore.	Madura. Vellore.	Kumbakonam (Part I Conservancy lines).	Adoni. Anakapalle. Bellary. Berhampur. Bezwada. Bimlipatam. Calicut. Chengannur build-ings. Chidambaram. Chingloput. Chittoor. Coimbatore. Coimbatore. Cuddalore. Dharmapuri. Dindigul (water-works improvements). Kodakānal (extension). Mangalore. Mannargudi. Nandyal. Ongole. Palghat. Tahsi. Parlikimoli. Rajahmundry. Salem (improvements). Srirangam (separate scheme). Srivillipattur. Tirupattur. Tiruvallur. Tiruvannamalai. Trichinopoly (improvements). Vaniyambadi. Walajapet.

14

SANITARY WORKS—CIVIL

72. No new water-works were opened during the year under review, but two sanctioned schemes proceeded to execution, viz., improvement to the Tanjore and Salem water-supplies. Thus out of a total of 81 municipalities, only 29 have the benefits of a protected water-supply.

73. The number of towns provided with a comprehensive drainage scheme remained the same, progress having been hampered owing to the war. There is no system of drainage anywhere except Ootacamund, and conditions are very unsatisfactory in all municipalities. Cesspools, earthen drains, bits of isolated masonry drains constructed without any regard to levels or outfalls are the usual means employed for the disposal of sullage.

74. There was an all-round increase in the superior and menial staffs employed in 1920 as compared with the previous year, although in individual municipalities there were serious deficiencies in this respect. The deficiencies have been pointed out to the municipalities concerned in the inspection reports and in the budget reviews, and in several cases steps have been taken to remedy the defects. There was a slight reduction in the conservancy plant, the greatest fall occurring in the number of night-soil carts. The general tendency appears to be to employ the absolute minimum, with the result that nightsoil conservancy is extremely defective in most municipalities. Neither does the quality of the plant show any improvement, the carts being of the most primitive and non-descript types and usually very much the worse for wear. Carts of approved patterns are rather the exception than the rule.

75. The scheme for employing Health Officers made no progress during the year. Out of 15 towns for which Health Officers were sanctioned only in Trichinopoly, Calicut, Tuticorin, Coimbatore, Ootacamund (for seven months) and Tanjore (for two months) were such officers employed. The chief reason for this state of affairs is the dearth of qualified candidates, owing to reluctance on the part of medical graduates to enter the Public Health Department. Now that the service has been provincialized, and better terms as to pay and promotion have been offered it is hoped that candidates will be attracted. A large number of applications were received this year for the new health officers' class and at present 15 candidates are undergoing the special course of training. It must be remembered, however, that the great majority of applications came from temporary Assistant Surgeons who saw no other chance of obtaining permanent posts in the Medical Department.

76. The number of public latrines increased from 1,887 to 1,884 the increase occurring in the number of type-design latrines. Of the total 1,271 were type-design or pucca-built non-type-design latrines against 1,223 in the previous year. In many municipalities the public latrine accommodation is very inadequate, but the greatest deficiency occurred in the municipalities of Calicut, Palghat, Masulipatam, Madura, Bodinayakanur, Ellore and Tiruvallur.

77. The number of private latrines totalled 164,401 against 161,498 in 1919 or an increase of 1.7 per cent; of these 145,091, as compared with 143,611, were conserved by municipal agencies—an increase of only 1.009 per cent. Efforts to extend the private scavenging service did not therefore keep pace with the increase in the number of private latrines. Calculated on the number of houses assessed to the "tax on buildings" the proportion of private latrines was only 39.1. Thus over 60 per cent of the class of house that should possess private latrines were without this convenience. These facts show that municipal councils were not sufficiently energetic in enforcing the provision of the Municipal Act relating to private latrines. Further development in this direction is very necessary and a more vigorous enforcement of the provisions of the Act should be carried out. Of the total number of private latrines, 88.2 per cent were conserved by municipal scavengers. The municipalities of Ellore, Udumalpet, Tiruppur and Coimbatore show least progress in the extension of this system, less than 50 per cent of the private latrines in these towns being conserved by municipal agency. Recent inspections of municipalities make it very evident that conservancy is much neglected. This is due partly to inadequacy of staff and plant, partly to want of efficient supervision and largely to the pernicious contract system which is persisted in spite of its obvious drawbacks. In order to place municipal sanitation on a satisfactory footing endeavours should be made, especially in those towns that are pilgrim centres or are provided with a protected water-supply, to employ Health Officers. Were the contract system abolished

and properly managed departmental systems developed, there is no doubt that the Health Officers' salaries could be paid many times over from the profits which now find their way into contractors' pockets. The methods at present in practice for the disposal of conservancy waste products are entirely wasteful and with a little enterprise it should be possible to derive a considerable income from the judicious storage and sale of these products, and at the same time effect greatly-to-be-desired improvements in the sanitary condition of the towns. The whole question of the most profitable way of dealing with these conservancy waste products, especially nightsoil, is at present engaging the attention of Government, but meanwhile much could be done in anticipation by municipal councils themselves. Conservancy should be run entirely by the municipalities which should purchase their own rubbish and nightsoil carts. Depots and trenching grounds should be kept in a sanitary and orderly condition and the materials deposited therein sold annually by auction in such lots as experience may prove most satisfactory. Where there is no demand for rubbish or nightsoil for agricultural purposes every effort should be made to create a demand by the municipality cultivating their trenching grounds and thus affording the ryot an object lesson in the manurial value of these waste products.

78. There is little to add to the remarks already made in paragraphs 66 and 67 of the report for 1919 in regard to the cropping of trenching grounds and sewage farms. Sewage farming cannot be carried out very satisfactorily where there is no drainage system and even in Ootacamund the sewage farm can hardly be called a success. The financial results of such sewage farming as is attempted is therefore necessarily disappointing, but this is no doubt partly due to the common system of leasing out the existing farms. That this is not the only factor, however, is evident from the fact that the sewage farm in Ootacamund is run at a loss.

79. The allotment for sanitation in 1920-21 amounted to Rs. 34,17,692 or 43.1 per cent of the total income and the expenditure for the nine months for which information is available totalled Rs. 24,57,413, which is 71.9 per cent of the allotment against 68.4 per cent in the previous year. The provision for sanitation was 0.9 per cent less than in the previous year, but it is satisfactory to note that municipal councils made better use of the money in the year under review than in 1919-20. Of the total allotment conservancy absorbed Rs. 17,69,675 and water-supply, Rs. 5,34,365, the expenditure under these heads being Rs. 13,50,575 and Rs. 4,26,960, respectively. The balance was devoted to the construction and repair of drains, markets, slaughter-houses, latrines, the improvement of town-sites, fairs and festivals, etc. In seven municipalities, viz., Vizagapatam, Mayavaram, Parlakimedi, Anakapalle, Kurnool, Cochin and Srirangam the expenditure exceeded 90 per cent of the allotment whilst in the remaining 74 towns it varied from 88.4 per cent in Cuddapah to 31.3 per cent in Dhārāpuram.

DISTRICT BOARDS.

80. The old Local Boards Act, V of 1884 was repealed by Act XIV of 1920 during the year and the new Act came into operation on 1st April 1921. In spite of great advance in the legal obligations in matters relating to public health under the new Act, scope for the improvement of sanitation is still somewhat limited. The omnibus provision in section 206 of the Act should, however, be very helpful and it is hoped that local boards will make free use of it in the matter of sanitation.

81. With the exception of Rāmēsvaram, in no rural area is there a complete water-supply system although in several localities schemes are under investigation. No drainage schemes have been undertaken, the chief obstacle being the paucity of funds. Conditions as to water-supply and drainage in the rural areas therefore, are still very backward.

82. As in previous years conservancy in rural areas has not made any progress worth recording. Lack of funds for employing the necessary staff and plant and for giving effect to the recommendations of inspecting officers nullifies against

organized measures for the improvement of rural sanitation. It is hoped that with the advent of District Health Committees and the formation of a District Health Service better results will be possible. Conservancy arrangements existed in 1,200 union and non-union villages of which 1,044 were union and 156 other villages. Compared with the previous year this shows retrogression. The proportion of conserved villages to the total number of villages is only 2·3 per cent. In five districts,—North Arcot, Cuddapah, Guntūr, Tanjore and Vizagapatam—Sanitary Assistants to District Medical and Sanitary Officers were employed for the supervision of rural sanitation.

83. The assignment for rural sanitation during the year under report amounted to 21·8 per cent of the income against 26·4 in 1919 and the expenditure to 60·3 per cent of the allotment against 45·7 per cent. Out of the total sanctioned allotment of Rs. 15,06,785, Rs. 4,77,743 were spent on conservancy and Rs. 1,55,030 on improvement of water-supplies. The balance was spent on improvements to drains, markets, slaughter-houses, latrines, etc. The best use of the available funds was made by the District Boards of Cuddapah and the Nilgiris only, where the expenditure was 97·5 and 88·6 per cent, respectively.

84. The subjoined statement shows the progress of water-supply and drainage schemes in rural areas.

Statement showing the position of Water-supply and Drainage Schemes in rural areas in 1920.

Opened.	Under execution.	Sanctioned.	Investigated, under investigation, investigation ordered, etc.
<i>Water-supply.</i>			
Nil.	Gudur ... Rameswaram ... New Engineering College, Guindy.	Nil.	Arcot. Aruppukottai. Alagarkovil (Madura district). Bodirayalkkanur. Gobichettipalayam. Guntakal. Hindupur. Kelahasti. Madakasira. Mottapalayam. Palacole. Pauruti. Pentkonda. Poddapuram. Pollachi. Ranipettai. Salur. Truppur. Tiruchanur. Udumalpet. Urvakonda. Hampi. Proddattur. Tirukkalkkumaram.
<i>Drainage.</i>			
Nil.	New Engineering College, Madras.	Nil.	Lunatic Asylum, Madras.

85. *Maintenance of Village Sanitary Inspection book.*—This record was maintained in all districts except the Nilgiris, South Kanara, North Arcot and Malabar—in the first two owing to the absence of unions. No reason is assigned for its non-maintenance in North Arcot. The form of this important record was under revision, but this is hardly a sufficient explanation. The District Medical and Sanitary Officers of Vizagapatam, Ramanad and Salem report that it is not properly maintained in their districts. A revised edition of this book will shortly be issued, and it is hoped that steps will be taken to introduce it in all unions and that greater attention will be paid to its proper maintenance.

GENERAL REMARKS AND PERSONAL PROCEEDINGS.

86. The Hon'ble Major-Genl. G. G. Giffard, C.S.I., I.M.S., was in charge of the office of Sanitary Commissioner when the year opened and was relieved of the appointment by Lieut.-Col. E. L. Perry, I.M.S., on the forenoon of 3rd June.

In the absence of a whole-time Sanitary Commissioner, no detailed sanitary inspection of municipalities was carried out. During the time Major-Genl. Giffard was Surgeon-General (Sanitary), in the course of his inspection of Medical Institutions, he visited Vizagapatam, Berhampur, Chicacole in January and inspected the head waterworks at Vizagapatam, Bezwada and the Central and District Jails at Vizagapatam and Berhampur. He met the chairmen of the councils concerned and discussed sanitary matters with them. In March he proceeded to Cuddapah for the inspection of certain drainage questions which were referred to him. In April he inspected the head waterworks at Rameswaram and examined proposals for the extension of certain roads in Tuticorin and the extension of the Sivankoil drain there. He then proceeded to Coimbatore and Anamalais, in the former case for the inspection of the working of the cholera party which was at the time in the district, and in the latter, in connexion with anti-malarial measures. Thence he proceeded to Ootacamund. Lieut.-Col. E. L. Perry, soon after he joined, made an inspection of the Ootacamund sewage farm and drainage system, attended conferences on various matters held at Ootacamund, and then availed himself of the recess. Returning to Madras in July he journeyed to Waltair for the Agency Malaria Conference. In the same month he also inspected the pushkaram arrangements at Rajahmundry. In August he again visited Rajahmundry in connexion with the epidemic of cholera then prevalent in the town. In October, Coimbatore was visited to enquire into plague matters and examine sanitary schemes generally, and Madras for the inspection of proposals with reference to the Ponnagaram block. In November the Central Jail at Coimbatore was inspected and Bellary, Hospet, Kamalapuram and Hampi-Bellary with reference to the water-supply of the jail and the last three with reference to the anti-malarial measures carried out by the cholera parties. On the 8th December Lieut.-Col. Perry left for Simla to attend the informal All-India Conference of Sanitary Commissioners and returned to headquarters on the 22nd idem.

No programme of inspections was drawn up by the Sanitary Commissioner; but the Deputy Sanitary Commissioners duly submitted their programmes which were communicated to the authorities concerned, as required by G.O. No. 1746 M., dated 1st November 1899, and G.O. Mis. No. 77 M., dated 16th January 1920. Inspections carried out by the Deputy Sanitary Commissioners are detailed in the report on vaccination.

It is hoped it will be possible to make more intensive investigations into epidemic disease than has hitherto been possible when the additional Deputy Sanitary Commissioners are appointed and the necessary redistribution of the work of the whole department is effected. So far as enquiry shows, in towns provided with protected water-supplies, no evidence is forthcoming to lead one to suspect that infection of the water-supply had taken place. This is what might have been anticipated. Instructions have been issued calling for reports on this point when cholera epidemics occur in towns having a piped water-supply.

Dr. K. T. Matthew, D.H.Y., D.P.H. (Cantab), Deputy Sanitary Commissioner, Central Range, was placed on special duty in connexion with fairs and festivals and Capt. N. R. Ubhaya, D.P.H., was appointed in his place and posted to the Southern Range.

No candidates qualified as first or second-class health officers during the year. Forty-eight candidates qualified as Sanitary Inspectors and Assistant Sanitary Inspectors. Thirteen Sanitary Inspectors in the employ of local bodies went through the quinquennial course prescribed in G.O. No. 660 L., dated 21st May 1910, and G.O. No. 1108 L., dated 16th June 1914, and 28 Sanitary Inspectors qualified as vaccinators.

Service registers of the Sanitary Commissioner's office establishment and of the Deputy Inspectors of Vaccination have been duly verified.

A. J. H. RUSSELL, Major, I.M.S.,
Sanitary Commissioner, Madras.

OFFICE OF THE SANITARY COMMISSIONER,
MADRAS, 15th September 1921.

APPENDIX.

VITAL STATISTICS OF THE GENERAL POPULATION.
No. I.—Statement showing the Births registered in the districts of the Madras Presidency during the year 1920.

Number.	2			3	4			5			6			7	8	9	10	
	Population (exclusive of Europeans and Eurasians as per census of 1911).				Population (exclusive of Europeans and Eurasians) for which returns were received.			Number of births registered (exclusive of Europeans and Eurasians and still-births).			Ratio of 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.	Females.	Total.	Deaths per 1,000 of population.	Deaths per 1,000 of population.	Deaths per 1,000 of population.	Males.	Females.	Total.
1	493,945	468,738	962,683	...	...	...	159,945	468,738	628,683	15,928	15,424	31,352	16.6	16.0	16.3	15.5	15.2	307
2	486,637	456,007	942,644	...	...	...	486,637	456,007	942,644	14,031	13,383	27,414	14.3	13.6	13.9	14.1	13.7	278
3	704,127	699,083	1,403,210	...	...	...	704,127	699,083	1,403,210	25,776	21,068	46,844	18.3	17.6	18.3	18.8	17.9	367
4	624,232	600,222	1,224,454	...	...	...	624,232	600,222	1,224,454	17,270	16,544	33,814	13.9	13.4	13.9	15.2	14.8	300
5	1,043,813	1,071,505	2,115,318	...	...	...	1,043,813	1,071,505	2,115,318	29,528	28,104	57,632	13.9	13.3	13.9	14.9	14.3	292
6	435,915	435,915	871,830	...	...	...	435,915	435,915	871,830	12,330	12,085	24,415	13.8	13.5	13.5	13.5	12.9	264
7	868,822	1,001,819	1,870,641	...	...	...	868,822	1,001,819	1,870,641	22,016	21,538	43,554	12.1	11.5	12.1	12.7	12.1	248
8	175,779	174,681	350,460	...	...	...	4,485	4,485	8,970	143	137	280	16.2	15.5	15.5	13.8	13.6	274
9	1,176,500	1,176,500	2,353,000	Total	...	...	873,195	1,006,281	1,879,476	22,759	21,970	44,729	12.1	11.5	12.1	12.7	12.0	247
10	707,297	737,835	1,445,133	...	...	...	707,297	737,835	1,445,133	23,711	22,453	46,164	16.4	15.6	16.4	15.6	14.9	304
11	191,480	102,399	293,879	...	...	...	102,399	102,399	204,798	2,372	2,344	4,716	11.5	11.3	11.3	13.0	12.1	257
12	811,786	840,235	1,652,021	Total	...	...	811,786	840,235	1,652,021	26,083	24,783	50,866	15.8	15.0	15.8	15.3	14.6	259
13	856,548	840,782	1,697,330	...	...	...	856,548	840,782	1,697,330	31,430	30,519	61,949	18.5	18.0	18.5	18.4	17.6	360
14	994,802	489,705	1,484,507	...	...	...	994,802	489,705	1,484,507	23,187	22,157	45,344	17.0	16.1	17.0	15.8	15.0	378
15	491,154	483,205	974,359	...	...	...	491,154	483,205	974,359	13,185	12,853	26,038	14.1	13.8	14.1	13.7	13.3	270
16	225,092	245,136	470,228	...	...	...	245,136	245,136	490,272	10,840	10,655	21,495	21.5	20.9	21.5	20.1	19.5	363
17	945,872	986,134	1,932,006	...	...	...	945,872	986,134	1,932,006	23,773	21,806	45,579	13.8	13.3	13.8	14.5	13.8	283
18	1,482,568	1,532,931	3,015,499	...	...	...	1,477,138	1,527,771	3,004,909	43,455	41,848	85,303	15.5	14.6	15.5	18.1	17.3	354
19	665,011	662,581	1,327,592	...	...	...	665,011	662,581	1,327,592	8,672	8,672	17,344	6.8	6.5	6.8	11.5	10.9	354
20	60,958	53,035	113,991	...	...	...	60,958	53,035	113,991	1,474	1,407	2,881	12.9	12.9	12.9	15.1	14.6	297
21	939,545	990,387	1,929,932	...	...	...	939,545	990,387	1,929,932	28,184	26,521	54,705	17.1	16.4	17.1	17.1	16.4	335
22	758,127	872,225	1,630,352	...	...	...	758,127	872,225	1,630,352	20,768	20,480	41,248	12.4	11.7	12.4	12.1	11.5	236
23	1,019,806	1,023,794	2,043,600	...	...	...	1,019,806	1,023,794	2,043,600	28,384	26,269	54,653	12.0	11.1	12.0	13.2	12.6	258
24	1,172,841	1,189,400	2,362,241	...	...	...	1,172,841	1,189,400	2,362,241	28,384	26,269	54,653	12.0	11.1	12.0	13.2	12.6	258
25	618,598	618,598	1,237,196	...	...	...	618,598	618,598	1,237,196	19,803	19,803	39,606	16.9	16.2	16.9	18.3	17.6	359
26	1,239,189	1,239,189	2,478,378	...	...	...	1,239,189	1,239,189	2,478,378	28,222	26,857	55,079	11.9	11.4	11.9	14.0	13.4	274
27	924,819	924,819	1,849,638	...	...	...	924,819	924,819	1,849,638	28,222	26,857	55,079	16.7	15.8	16.7	16.4	15.5	319
28	1,075,678	1,104,512	2,180,190	...	...	...	1,075,678	1,104,512	2,180,190	28,222	26,857	55,079	14.0	13.3	14.0	14.3	13.7	289
29	1,049,824	1,118,342	2,168,166	...	...	...	1,049,824	1,118,342	2,168,166	35,890	33,453	69,343	16.5	15.4	16.5	16.4	15.8	322
30	511,176	508,901	1,020,077	...	...	...	511,176	508,901	1,020,077	...	...	...	...	...	...	...	...	...
31	20,584,206	21,245,026	41,829,232	Grand Total for the Presidency.	...	...	19,679,859	20,325,676	40,005,535	582,063	554,275	1,136,338	14.0	13.8	14.0	15.4	14.7	301
32	2,394,185	2,480,051	4,874,236	Total of Town circles in the Presidency.	...	...	2,394,185	2,480,051	4,874,236	75,225	70,143	145,368	15.5	14.4	15.5	15.9	15.0	309
33	18,190,021	13,754,975	31,944,996	Total of Rural circles in the Presidency.	...	...	17,265,674	17,865,825	35,131,499	507,757	484,182	991,939	14.4	13.8	14.4	15.3	14.7	309

No. II.—Statement of Births and Deaths registered in the districts of the Madras Presidency during the year 1920.

1	2	3	4	5	6	7	8	9	10																
Number.	Districts.	Area in square miles.	Population (exclusive of Europeans and Eurasians for which returns were received).		Births. 1,000 of popu- lation.	Number of deaths registered (exclusive of Europeans and Eurasians and born-adopt).		Ratio of deaths per 1,000 of population from										Mean ratio of deaths per 1,000 during previous five years.							
			Males.	Females.		Total.	Number of deaths of males to every 100	Cholera.	Smallpox.	Plague.	Dysentery and diarrhoea.	Hospitality diseases.	Injuries.	All other causes.	Males.	Females.	Total.								
1	Anantapur	6,718	423,945	468,788	962,633	31,352	82.6	9,398	16,885	109.5	0.1	0.6	0.2	4.8	0.6	1.4	0.2	12.2	10.8	19.9	10.6	32.4	35.3	34.4	
2	Bellary	5,875	496,637	495,997	992,634	27,424	37.9	10,732	21,377	100.8	0.6	0.5	0.3	4.1	1.1	1.3	0.3	10.8	21.6	21.9	21.8	42.0	42.4	42.2	
3	Chingleput	4,568	704,127	690,683	1,403,210	30,442	35.0	16,813	33,772	102.8	0.3	0.3	0.3	4.3	2.4	1.3	0.2	14.8	23.9	23.4	22.6	31.3	31.5	31.4	
4	Chittoor	5,672	218,232	693,222	1,238,454	33,814	27.3	11,519	11,038	104.4	1.0	0.4	0.002	4.8	1.1	1.6	0.2	8.1	13.3	18.1	15.2	26.1	27.0	26.5	
5	Coimbatore	7,196	1,913,813	1,071,305	2,115,319	57,627	27.2	12,984	18,233	104.7	0.4	0.3	1.8	3.2	1.3	1.2	0.2	8.6	18.3	17.0	17.8	26.7	25.4	26.0	
6	Cuddapah	5,892	451,027	439,915	890,942	21,421	27.3	7,773	7,645	101.7	0.2	0.6	0.004	10.6	0.5	1.0	0.2	4.1	17.1	17.4	17.2	29.7	29.8	29.7	
7	Ganjam Plains, Do. Agency.	4,898	865,822	1,001,815	1,870,641	14,149	23.0	21,063	42,505	97.8	0.6	0.4	...	15.5	0.9	0.3	0.2	1.9	24.2	21.5	22.3	26.0	22.4	24.1	
	Total	5,035	875,195	1,006,584	1,879,479	44,429	23.6	21,217	21,032	97.3	0.6	0.4	...	15.6	0.9	0.3	0.2	1.8	23.3	21.5	22.3	26.0	22.5	24.2	
8	Goa (Goa) Plains, Do. Agency.	2,545	707,287	737,936	1,445,133	40,100	31.9	17,516	17,378	100.8	1.7	0.4	...	10.7	0.9	1.6	0.2	8.6	24.8	23.5	24.1	39.4	38.3	39.8	
	Total	5,035	1,014,489	1,022,239	2,055,856	4,716	23.8	2,157	1,976	102.2	0.3	0.9	...	12.4	1.0	0.5	0.5	4.1	20.6	19.3	20.0	38.8	31.7	35.8	
9	Gundur	5,735	850,548	840,782	1,697,330	61,939	36.5	25,167	20,848	105.0	0.6	0.2	0.001	11.8	0.7	1.8	0.2	10.0	25.8	24.8	25.3	30.8	30.7	30.1	
10	Kannur	5,907	421,832	1,002,452	1,537,284	66,161	33.1	23,523	23,590	114.2	0.1	0.4	0.001	9.1	0.8	3.0	0.2	8.5	23.7	22.5	23.1	29.4	28.0	28.7	
11	Kannool	7,580	471,379	463,737	935,116	26,093	27.9	10,390	9,804	116.6	0.0	0.5	...	6.4	0.4	0.9	0.2	8.5	22.0	21.1	21.6	36.4	36.2	36.3	
12	Madras	27,187	223,002	1,023,794	1,246,796	20,925	20.7	10,732	10,323	104.0	0.4	0.2	0.02	4.7	9.2	1.8	0.3	18.6	14.1	12.1	11.8	43.3	46.0	44.9	
13	Madras	4,916	393,000	964,872	1,357,872	51,079	26.7	12,512	23,086	102.1	0.1	0.2	3.2	4.6	1.5	1.1	0.3	12.1	24.9	23.4	24.1	25.0	23.0	23.9	
14	Malabar	5,795	1,477,128	1,527,771	3,004,899	90,808	30.1	36,683	35,646	102.9	0.2	0.2	0.001	8.0	2.5	1.2	0.1	9.0	24.8	23.3	24.1	29.4	28.0	28.7	
15	Nellore	7,973	1,695,011	662,581	1,927,592	17,332	18.3	8,203	7,995	132.3	0.4	0.2	0.2	8.0	4.0	0.3	0.1	2.8	13.3	12.1	13.2	20.5	16.2	19.9	
16	Nizama, The	1,693	60,556	63,035	123,592	3,041	25.3	1,691	1,462	108.5	0.0	0.3	0.1	8.5	5.2	1.4	0.3	8.1	26.8	27.6	26.9	32.6	33.5	34.0	
17	North Arcot	4,920	398,445	900,987	1,599,332	54,705	27.9	10,370	10,957	102.0	1.1	0.4	0.3	4.0	2.0	1.9	0.2	11.6	21.0	20.2	20.6	30.5	30.3	30.3	
18	Ramanath	4,864	786,127	872,225	1,658,352	39,932	24.1	14,637	14,726	103.3	0.4	0.1	0.01	6.6	0.9	1.1	0.1	1.3	18.6	16.9	17.7	21.6	19.5	20.6	
19	Salom	6,218	1,013,806	531,199	2,044,999	53,199	29.5	23,322	27,459	103.7	1.6	0.3	0.7	3.1	1.0	0.6	0.2	10.1	23.7	22.8	23.2	32.4	31.8	32.1	
20	South Arcot	4,298	1,173,341	1,169,490	2,361,141	54,563	29.1	25,080	33,222	106.7	1.6	0.4	...	6.2	1.7	0.6	0.1	9.7	21.4	19.9	20.7	33.9	23.0	23.5	
21	South Kanara	4,621	577,832	618,803	1,194,728	28,435	33.1	12,451	12,577	25,023	99.0	0.3	0.6	0.02	7.4	2.7	1.0	0.3	8.6	21.5	20.4	20.8	28.4	27.3	27.7
22	Tanjore	3,727	1,123,383	1,236,181	2,361,562	56,169	25.3	26,042	26,697	22,739	97.5	1.7	0.3	0.001	3.8	1.1	0.5	0.2	14.7	23.2	21.5	22.3	38.1	26.3	27.4
23	Tamilvelly	4,353	985,403	924,813	1,790,222	58,111	32.5	20,875	21,510	41,591	101.7	0.6	0.3	5.2	1.1	0.5	0.2	13.2	24.1	22.2	23.1	36.4	24.3	25.4	
24	Tinnevely	4,317	873,128	949,207	1,826,335	40,866	27.3	21,871	22,055	99.2	2.0	0.5	0.002	5.9	1.2	1.0	0.2	13.2	24.9	23.2	24.0	26.1	21.4	25.2	
25	Vizianagaram	4,000	1,043,824	1,118,342	2,168,166	60,153	31.0	23,077	22,689	101.7	0.1	0.2	...	18.3	0.5	0.3	0.2	1.5	22.0	20.3	21.1	31.5	28.2	29.3	
	Grand Total for the Presidency	121,585	10,678,359	20,325,870	40,605,725	1,187,299	28.4	441,714	432,267	873,981	102.2	0.8	0.3	0.4	8.1	1.4	1.2	0.2	9.4	22.4	21.3	21.8	26.7	27.4	28.1
	Total of Town Presidencies	...	2,394,185	2,460,031	4,854,236	145,339	29.0	64,565	65,136	131,701	103.2	0.7	0.2	0.8	5.4	3.4	3.4	0.3	13.9	27.8	26.5	27.1	32.1	31.2	31.6
	Total of Rural circles in the Presidency	...	17,253,074	17,865,839	35,151,469	981,960	28.2	375,149	367,131	742,280	102.2	0.8	0.4	0.3	8.5	1.1	1.0	0.2	8.3	21.7	20.5	21.1	29.2	27.0	27.6

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

No. III.—*Deafies registered in the districts of the Madras Presidency during each month of the year 1920.*

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	1,602	1,550	2,485	1,806	1,307	1,316	1,298	1,410	1,249	1,505	1,482	1,680	18,585
2	Bellary	1,522	1,554	3,163	2,223	1,404	1,172	1,420	1,613	1,630	1,686	1,597	1,653	21,377
3	Chingleput	8,223	8,039	2,693	1,934	2,370	2,411	2,380	2,397	2,468	2,230	2,412	2,372	83,172
4	Chittoor	2,793	1,831	1,697	1,658	1,453	1,476	1,619	1,720	1,809	1,626	2,217	2,708	32,552
5	Coimbatore	3,407	3,790	8,035	2,445	2,552	2,591	2,713	3,087	3,353	3,426	2,224	4,598	37,317
6	Cuddapah	1,277	1,015	1,290	1,118	1,125	1,416	1,028	1,680	1,166	1,319	1,295	1,590	15,418
7	Ganjām Plains Do. Agency	4,067	3,836	4,436	3,603	3,503	3,093	3,513	3,704	2,172	3,208	3,171	3,601	42,565
8	Gedavai Plains Do. Agency	4,108	3,319	4,407	3,885	2,578	3,033	3,539	2,727	3,192	3,432	3,193	3,020	42,899
9	Guntur	3,513	2,754	2,730	2,630	3,706	3,591	3,307	4,172	4,823	4,032	3,750	3,753	42,053
10	Kistna	3,543	2,878	3,034	2,949	3,163	3,075	3,200	3,215	4,063	4,252	3,972	4,132	40,119
11	Kurnool	1,213	1,214	3,033	2,272	1,745	1,430	1,431	1,415	1,359	1,474	1,363	1,253	20,164
12	Madras	3,239	1,832	1,936	1,690	1,563	1,420	1,421	1,400	1,480	1,666	2,031	2,341	21,055
13	Madura	5,214	4,186	4,603	2,919	3,236	3,424	3,895	3,506	2,827	3,429	3,727	5,890	46,548
14	Madabari	7,227	6,330	6,204	6,974	6,974	6,560	7,210	6,511	5,247	4,413	4,063	4,237	72,329
15	Nellore	1,780	1,663	1,611	1,887	1,587	1,556	1,739	1,739	633	1,610	1,157	1,174	16,153
16	Nilgiris, The	189	109	216	333	333	346	288	231	200	239	265	273	3,043
17	North Arcot	6,311	4,459	2,793	2,049	2,328	2,177	2,011	2,812	2,305	3,141	4,367	6,014	40,863
18	Ramnad	3,318	2,984	2,920	2,935	2,411	2,772	2,406	3,175	1,892	2,805	2,805	3,177	29,363
19	Salem	5,976	1,980	3,176	3,232	3,623	3,212	3,196	3,104	3,356	3,472	3,367	3,665	47,469
20	South Arcot	8,219	4,372	4,380	3,317	3,112	4,622	4,251	3,968	3,866	4,711	4,355	4,711	48,800
21	South Kanara	3,271	2,300	1,787	1,787	1,800	1,858	1,859	1,732	1,704	1,913	1,724	2,062	23,028
22	Tanjore	8,484	5,825	3,145	8,331	3,041	3,272	3,295	4,034	4,231	4,805	5,007	5,207	52,769
23	Tinaverly	5,523	3,124	2,565	2,519	2,600	3,015	3,652	2,964	2,694	2,681	3,677	6,115	41,301
24	Trichinopoly	5,435	4,029	3,218	2,754	2,870	3,302	3,585	3,455	3,065	3,275	3,531	2,757	43,935
25	Vizagapatam Plains	4,678	3,863	4,078	3,486	3,315	3,364	3,542	3,016	3,640	3,806	3,708	4,449	46,766
Total, Madras Presidency		50,205	77,679	75,455	62,136	65,542	66,046	68,377	73,438	63,477	68,271	69,464	57,657	873,681
Ratio of deaths per 1,000 in each month		2.4	2.0	1.8	1.6	1.6	1.7	1.7	1.8	1.6	1.7	1.7	2.2	21.8

Ratio of deaths per 1,000 in each month.

No. IV. — Deaths registered according to Age in the districts of the Madras Presidency during the year 1920—cont.

1		2		3										4										5										6										7										8										9										10										11										12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Districts.		Total		Not exceeding one month.					Over one month and not exceeding six months.					Over six months and not exceeding twelve months.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.					Total.				

* Calculated on the total population for the Presidency as per census of 1911 including Europeans and Eurasians though the statistics are exclusive of Europeans and Eurasians and born-dead cases.

R
D8.2117-200
N20
13

No. V.—Deaths registered according to Classes in the districts of the Madras Presidency during the year 1920

Number.	Districts.	Population for which returns were received.										Number of deaths registered.			
		3										4			
		Population for which returns were received.										Number of deaths registered.			
		Indian Christians.		Mohammedans.		Hindus.		Other classes.		Total.		Indian Christians.		Mohammedans.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.		Males.	Females.	Males.	Females.
1	Arantapur	1,618	1,148	41,187	36,911	440,555	459,916	1,605	1,463	439,915	459,738	21	20	693	692
2	Bellary	1,815	1,070	19,890	16,851	444,805	455,915	1,837	1,602	490,637	483,007	20	14	922	862
3	Chingleput	13,603	13,819	16,314	15,290	973,259	973,998	863	563	703,127	699,683	210	190	231	230
4	Chittoor	2,133	2,187	59,632	53,841	774,621	774,621	4,271	4,099	620,232	609,923	25	25	574	539
5	Chittoor	8,992	9,912	21,790	21,919	1,011,919	1,039,349	1,102	1,024	1,019,313	1,071,752	130	121	880	496
6	Coimbatore	11,453	11,096	53,731	49,935	599,235	599,235	1,751	1,656	451,027	439,915	165	170	332	563
7	Coimbatore	1,028	1,024	2,773	2,357	333,632	371,410	20,284	20,918	563,822	1,001,619	14	10	70	61
8	Coimbatore	1,075	1,101	2,768	2,637	843,653	875,055	20,284	20,918	873,195	1,001,619	14	10	70	61
9	Coimbatore	3,752	3,654	12,658	12,389	591,567	721,584	220	180	707,297	737,338	88	80	215	212
10	Coimbatore	728	869	1,814	1,295	92,265	90,196	10,127	10,128	104,989	104,989	11	11	25	36
11	Coimbatore	4,545	4,473	13,072	13,033	753,622	811,790	10,347	10,317	811,786	840,235	91	71	240	247
12	Coimbatore	63,133	63,553	59,332	57,749	720,322	718,183	4,670	4,402	550,543	540,782	1,407	1,284	1,570	1,394
13	Coimbatore	24,811	24,071	35,707	35,039	933,429	942,029	755	726	991,992	1,004,152	579	507	597	787
14	Coimbatore	21,199	20,785	61,602	60,168	357,477	362,635	1,110	1,079	471,370	467,737	392	360	1,370	1,130
15	Coimbatore	13,121	14,171	30,844	29,135	213,781	202,179	1,166	601	259,002	246,136	473	460	1,363	1,296
16	Coimbatore	92,923	99,392	37,764	38,034	379,312	313,533	11	...	448,972	1,332,634	685	656	1,149	1,155
17	Coimbatore	25,371	25,703	47,017	47,257	933,174	1,029,499	943	299	1,477,128	1,527,771	683	641	1,189	1,326
18	Coimbatore	21,832	21,608	41,592	40,297	553,080	568,203	33,327	32,963	683,011	684,781	189	184	541	566
19	Coimbatore	6,351	6,352	8,729	8,146	60,044	43,830	759	626	69,958	63,636	133	108	133	97
20	Coimbatore	15,628	16,166	56,231	62,373	592,971	593,381	4,412	4,452	693,515	693,387	120	142	1,118	1,245
21	Coimbatore	33,145	40,431	60,035	70,185	394,937	761,394	11	15	786,127	872,235	463	468	1,053	1,177
22	Coimbatore	7,259	7,724	20,318	23,227	98,088	99,234	61	22	1,010,806	1,023,701	143	172	474	447
23	Coimbatore	38,112	33,499	23,588	20,820	1,103,167	1,100,004	2,474	2,190	1,172,341	1,180,400	423	453	597	578
24	Coimbatore	48,790	48,749	70,950	70,820	443,282	433,165	4,700	4,371	577,832	616,893	830	830	1,411	1,423
25	Coimbatore	42,880	43,327	70,951	70,820	1,118,376	1,118,376	332	306	1,122,393	1,122,393	825	825	1,433	1,428
26	Coimbatore	84,078	91,316	46,853	58,021	731,447	774,777	27	6	865,403	914,297	1,713	1,703	1,652	1,728
27	Coimbatore	41,883	44,214	29,246	32,155	897,794	872,907	...	...	876,123	894,297	983	981	963	769
28	Coimbatore	1,068	1,811	10,007	11,174	1,034,742	1,101,697	807	950	1,049,921	1,118,842	25	22	149	133
29	Coimbatore	559,239	579,638	1,345,891	1,394,244	17,671,338	18,292,549	102,450	89,544	16,675,527	20,325,573	10,512	10,711	36,404	36,239

No. V.—Deaths registered according to Classes in the districts of the Madras Presidency during the year 1920—cont.

Number.	Districts.	Number of deaths registered—cont.										Ratio of deaths per 1,000 of population.			
		Number of deaths registered—cont.										Ratio of deaths per 1,000 of population.			
		Number of deaths registered—cont.										Ratio of deaths per 1,000 of population.			
		Hindus.		Other classes.		Total.		Indian Christians.		Mohammedans.		Hindus.		Other classes.	
		Males.	Females.	Males.	Females.	Total.		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	Arantapur	8,279	8,531	74	95	9,374	9,374	138	138	189	178	195	200	649	199
2	Bellary	9,328	9,518	162	121	10,440	10,440	127	127	187	174	217	217	251	219
3	Chingleput	16,164	15,777	148	158	17,990	17,990	137	137	178	174	240	236	1,603	234
4	Chittoor	10,817	10,850	103	99	11,919	11,919	117	117	189	180	183	183	212	181
5	Chittoor	18,450	17,610	74	66	19,084	18,232	130	130	174	203	183	183	671	176
6	Coimbatore	6,541	6,417	175	189	7,773	7,615	116	116	176	150	193	169	998	174
7	Coimbatore	20,925	21,324	57	61	21,063	21,324	130	91	253	241	249	249	23	215
8	Coimbatore	151	163	...	...	304	304	...	...	...	...	345	313	...	343
9	Coimbatore	21,076	21,547	57	61	21,603	21,603	130	91	253	241	249	249	23	215
10	Coimbatore	17,208	17,090	10	11	17,218	17,373	221	164	178	171	249	237	455	235
11	Coimbatore	2,107	1,917	14	13	2,157	1,978	130	136	199	276	228	213	13	193
12	Coimbatore	19,315	19,007	24	24	19,363	19,363	207	159	179	181	247	234	23	230
13	Coimbatore	18,985	18,985	109	85	19,070	19,070	223	213	261	241	261	252	189	218
14	Coimbatore	21,033	21,033	141	158	21,191	21,191	232	213	233	225	235	223	189	218
15	Coimbatore	8,512	8,512	6	5	8,518	8,518	171	173	196	191	225	214	874	211
16	Coimbatore	21,295	21,295	...	...	21,295	21,295	220	216	246	233	245	232	51	418
17	Coimbatore	23,682	23,682	...	...	23,682	23,682	264	219	244	240	250	230	570	241
18	Coimbatore	7,339	7,339	...	...	7,339	7,339	87	89	130	93	130	129	19	123
19	Coimbatore	1,183	1,183	...	...	1,183	1,183	304	261	352	452	227	243	1719	121
20	Coimbatore	18,074	18,465	138	135	18,212	18,600	83	88	108	103	188	188	358	206
21	Coimbatore	23,553	23,703	...	...	23,628	23,628	125	116	211	168	158	173	...	177
22	Coimbatore	23,229	23,229	...	...	23,229	23,229	200	223	199	192	238	229	...	232
23	Coimbatore	10,109	10,270	72	59	10,181	10,181	129	135	178	172	217	201	500	207
24	Coimbatore	23,635	23,635	...	...	23,635	23,635	194	168	201	202	234	214	153	209
25	Coimbatore	18,110	17,964	87	102	18,212	18,212	195	192	225	186	247	233	262	231
26	Coimbatore	20,320	20,320	...	...	20,320	20,320	204	193	235	236	250	233	...	240
27	Coimbatore	22,865	22,865	...	...	22,865	22,865	238	218	233	236	221	221	582	211
28	Coimbatore	399,499	399,499	1,899	1,899	401,714	401,714	150	151	132	119	221	204	...	213
29	Coimbatore	399,499	399,499	1,899	1,899	401,714	401,714	150	151	132	119	221	204	...	213

No. VI.—Births and Deaths registered from Different Causes in the districts and towns of the Madras Presidency during the year 1920.

Number.	Districts and towns.	Births.			Deaths.			Ratio of deaths per 1,000 of population.			From all causes.		
		Males.		Females.	Males.		Females.	Males.		Females.	Males.		Females.
		Total.	Birth-rate per 1,000 population.	Total.	Total.	Death-rate per 1,000 population.	Total.	Total.	Death-rate per 1,000 population.	Total.	Total.	Death-rate per 1,000 population.	Total.
1	Andamans	11,001	25,431	23,777	112	231	61	3,582	405	1,205	42	0.6	1.4
2	Batavia	11,506	24,217	27,777	91	402	1,725	5,100	500	1,211	60	1.0	1.1
3	Chinsapat	28,062	44,472	37,377	325	448	...	5,300	2,743	1,122	18	0.6	0.7
4	Chittor	10,000	18,000	18,000	1,110	438	...	5,722	1,317	1,652	...	1.0	1.1
5	Coimbatore	27,000	51,163	27,000	614	401	34,773	6,182	2,415	2,910	19	1.2	1.3
6	Cuddapah	11,200	22,338	23,111	114	228	1	9,000	347	789	10	0.5	0.6
7	Do. Agency	21,000	29,888	29,888	1,022	750	...	30,772	1,433	2,011	...	0.8	0.9
8	Gowari Plains	1,781,500	21,711	21,711	1,032	776	...	33,410	1,458	504	...	0.5	0.6
9	Do. Agency	1,781,500	21,711	21,711	1,032	776	...	33,410	1,458	504	...	0.5	0.6
10	Guntur	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
11	Krishna	1,781,500	21,711	21,711	1,032	776	...	33,410	1,458	504	...	0.5	0.6
12	Kurnool	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
13	Madura	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
14	Malabar	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
15	Nellore	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
16	Nizampet	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
17	North Arcot	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
18	Ramanathapuram	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
19	Salon	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
20	South Arcot	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
21	South Kanara	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
22	Tanjore	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
23	Tinnevely	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
24	Tiruchirappalli	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
25	Tirunelveli	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
26	Tirupur	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
27	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
28	Tiruvengudi	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
29	Tiruvottur	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
30	Tiruvur	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
31	Tiruvallur	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
32	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
33	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
34	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
35	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
36	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
37	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
38	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
39	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
40	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
41	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
42	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
43	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
44	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
45	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
46	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
47	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
48	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
49	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
50	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
51	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
52	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
53	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
54	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
55	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
56	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
57	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
58	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
59	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
60	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
61	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
62	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
63	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
64	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
65	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
66	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
67	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
68	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
69	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
70	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
71	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
72	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
73	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
74	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
75	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
76	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
77	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
78	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
79	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
80	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
81	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
82	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
83	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
84	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
85	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
86	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
87	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
88	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
89	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
90	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
91	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...	18,822	868	2,078	...	0.5	0.6
92	Tiruvannamalai	1,652,100	25,417	25,417	771	592	...</						

No. VI.—Births and Deaths registered from Different Causes in the districts and towns of the Madras Presidency during the year 1920—cont.

1	2	3	4		5	6	7	8	9	10	11			12	13	14																	
Number.	Districts and towns.	Popula- tion for which returns were received.	Births.		Total number.	Birth-rate per mille of popula- tion.	Cholera.	Smallpox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.			All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.															
			Males.	Females.									Males.	Females.	Wounds and accidents.			Suicides.	Stabbed and killed by wild beasts.	Rabies.	Cholera.	Smallpox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory dis- eases.	Injuries.	All other causes.	For the year previous to 1900.				
41	B. Towns—cont.																																
42	Chidambaram—cont.																																
43	M.T.C. Chidambaram	17,936	175	106	309	300	17	10	86	15	22	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
44	M.T.C. Erode	16,791	260	231	491	294	29	24	1	2	69	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	
45	M.T.C. Idanapet	10,445	175	126	321	285	2	2	388	12	39	12	38	12	38	12	38	12	38	12	38	12	38	12	38	12	38	12	38	12	38	12	38
46	M.T.C. Tiruppur	9,429	124	117	241	256	7	7	33	47	47	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
47	M.T.C. Kottur	18,893	105	85	190	191	10	10	10	10	10	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
48	M.T.C. Kottur	12,556	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
49	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
50	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
51	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
52	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
53	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
54	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
55	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
56	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
57	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
58	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
59	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
60	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
61	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
62	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
63	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
64	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
65	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
66	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
67	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
68	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
69	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
70	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
71	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
72	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
73	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
74	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
75	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
76	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
77	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
78	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
79	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
80	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
81	M.T.C. Kottur	19,909	88	33	121	55	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

No. VI.—Births and Deaths registered from Different Causes in the districts and towns of the Madras Presidency during the year 1920—cont.

Number.	Districts and towns.	3	4		5	6	7	8	9	10	11			12	13	14														
			Births.								Total number.	Injuries.				Total deaths from all causes.	Ratio of deaths per 1,000 of population.													
			Males.	Females.								Deaths.	Wounds and accidents.				Subsidiary and other.	Babies.	Cholera.	Smallpox.	Plague.	Pertussis.	Dysentery and diarrhoea.	Injuries.	All other causes.	From all causes.				
82	B. Towns—cont.																													
83	Guntur—cont.																													
84	M.T.C. Ongole	13,233	246	279	525	275	39	46	4	2	137	45	137	45	137	45	137	45	137	45	137	45	137	45	137	45	137	45	137	45
85	M.T.C. Narasapur	8,742	142	141	283	284	32	32	2	2	128	18	128	18	128	18	128	18	128	18	128	18	128	18	128	18	128	18	128	18
86	T.C. Bapatla	10,952	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
87	T.C. Vengal Rao	10,552	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
88	T.C. Mangalagiri	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
89	T.C. Ponnur	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
90	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
91	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
92	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
93	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
94	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
95	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
96	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
97	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
98	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
99	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
100	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
101	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
102	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
103	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
104	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
105	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
106	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
107	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
108	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
109	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
110	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
111	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
112	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
113	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11
114	T.C. Alankota	8,742	146	146	292	275	26	25	5	5	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11	55	11

No. VII.—Deaths registered from Cholera in the districts of the Madras Presidency during each month of the year 1920.

Number.	Districts.	Circles of registration.	5												Total.	Ratio of deaths per 1,000 population.		Mean ratio per 1,000 for previous 5 years.					
			Villages.													Males.	Females.						
		Number in each district.	Number from which deaths were reported.	Number in each village.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.				
1	Anantapur	22	12	846	17	7	17	2	6	12	8	33	37	25	...	...	70	64	134	0.1	0.1	1.7	
2	Bellary	25	6	910	10	1	...	...	...	...	...	...	...	...	...	...	33	33	66	0.07	0.07	0.03	
3	Chingleput	29	12	2,157	71	226	119	...	...	...	...	...	...	...	...	...	179	179	358	0.3	0.3	1.7	
4	Chittoor	14	13	2,447	401	294	102	139	23	4	1	...	...	...	...	...	217	217	434	0.3	0.3	1.7	
5	Coimbatore	22	16	1,359	132	203	178	179	105	4	...	...	...	...	...	...	418	418	836	0.3	0.3	1.7	
6	Cuddapah	17	11	882	57	32	11	32	12	...	...	...	...	...	...	...	84	84	168	0.2	0.2	2.9	
7	Cuddapah Plains Do. Agency	19	12	4,154	298	31	17	87	49	176	108	241	98	56	38	27	532	532	1,064	0.6	0.6	0.6	
	Total	13	12	4,205	808	84	17	87	49	176	108	241	98	16	35	27	832	554	1,386	0.6	0.6	0.6	
8	Godavari Plains Do. Agency	17	15	833	262	6	18	10	23	49	6	34	1,553	388	180	112	1,264	1,102	2,366	1.8	1.6	1.7	
	Total	22	17	1,835	255	6	48	10	28	40	20	31	1,641	387	181	112	1,304	1,223	2,527	1.6	1.5	1.5	
9	Guntur	21	18	945	139	185	63	34	6	...	...	...	...	...	...	...	492	414	906	0.6	0.6	0.6	
10	Kistna	25	24	1,715	290	107	109	79	86	17	...	...	...	...	...	...	1,168	1,037	2,205	1.1	1.1	1.1	
11	Kurmad	12	6	800	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
12	Machilipatnam	1	1	1,118	234	439	517	556	287	223	12	1	1	1	...	...	1,307	7	21	2,030	0.4	0.4	0.4
13	Nallaburu	18	13	2,213	71	175	149	43	84	43	2	1	1	1	...	...	241	243	484	0.2	0.2	1.4	
14	Nellore	21	17	1,662	131	19	...	...	...	...	...	...	...	...	...	...	267	243	510	0.4	0.4	0.4	
15	Nellore	6	2	57	322	863	815	204	14	8	...	...	...	...	...	...	1,123	243	1,366	0.3	0.3	0.3	
16	Nellore, Tho.	23	22	2,325	349	85	273	171	84	38	19	128	102	43	4	2	1,493	553	2,046	1.2	1.2	1.2	
17	North Arcot	31	19	2,498	85	273	171	84	38	19	128	102	43	4	2	13	1,493	459	1,952	0.6	0.6	0.6	
18	North Arcot	17	15	2,562	890	1,003	854	291	189	94	13	2	1	...	...	...	1,340	1,108	2,448	1.3	1.3	1.3	
19	South Arcot	19	19	2,851	691	1,071	515	129	124	229	120	205	219	219	219	219	2,476	1,716	4,192	1.3	1.3	1.3	
20	South Arcot	11	11	805	107	278	80	29	1	...	...	...	...	...	...	...	188	210	398	0.2	0.2	0.3	
21	South Arcot	20	23	2,527	553	1,138	1,200	144	68	18	19	51	70	53	50	42	2,024	1,854	3,878	1.5	1.5	1.5	
22	Tanjore	35	22	1,168	234	352	55	29	74	97	315	136	4	11	18	6	2,024	1,854	3,878	0.7	0.7	0.7	
23	Tiruchirappalli	15	12	1,074	545	1,251	993	239	183	296	298	108	310	147	81	18	2,024	1,854	3,878	2.3	2.3	2.3	
24	Tiruchirappalli	12	12	2,600	26	27	19	26	30	1	1	15	111	7	7	...	128	121	249	0.1	0.1	0.1	
25	Vizagapatnam Plains	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total Madras Presidency		495	308	42,054	5,002	8,955	6,286	2,754	1,220	1,286	1,473	1,072	4,251	1,773	898	470	16,887	14,522	31,409	0.8	0.7	0.8	

APPENDIX

No. VIII.—Deaths registered from Smallpox in the districts of the Madras Presidency during each month of the year 1920.

Number.	Districts.	Circles of registration.	4		5												Total.	Number of deaths among children.	Ratio of deaths per 1,000 of population.	Mean ratio per 1,000 for previous 5 years.				
			Number in each district.	Number from which deaths were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.					Males.	Females.	Total.	
1	Anantapur	22	14	846	16	62	50	79	69	54	68	59	32	29	43	32	13	293	323	616	0.6	0.6	0.6	
2	Bellary	20	13	949	86	43	75	86	47	34	28	31	32	31	23	27	28	272	232	504	1.0	1.0	0.9	
3	Chingleput	20	11	2,157	249	37	43	44	47	24	15	16	45	35	41	37	44	259	218	477	0.3	0.3	0.3	
4	Chittoor	15	10	2,447	144	23	13	13	61	77	35	37	48	26	30	75	75	216	213	429	1.3	1.3	1.3	
5	Coimbatore	22	12	1,359	133	158	91	81	71	47	43	42	105	97	81	46	46	404	340	744	0.3	0.3	0.3	
6	Cuddapah	17	11	882	133	24	96	30	43	31	63	42	105	97	81	46	46	273	270	543	0.6	0.6	0.7	
7	Godavari Plains Do. Agency	18	14	4,154	228	100	78	68	70	73	104	74	61	26	32	49	38	394	383	777	0.5	0.4	0.6	
	Total	19	13	4,206	238	160	79	68	81	78	105	79	61	29	32	49	38	492	391	783	0.5	0.4	0.6	
8	Godavari Plains Do. Agency	17	10	833	125	95	107	94	61	43	51	31	16	24	20	6	39	278	275	553	0.4	0.4	0.4	
	Total	22	15	1,495	179	96	125	125	149	45	44	41	18	7	16	7	46	197	185	382	1.0	1.0	0.8	
9	Guntur	21	12	945	65	44	43	77	32	43	19	17	45	12	21	20	56	233	191	424	0.3	0.2	0.3	
10	Kistna	23	20	1,715	181	93	123	127	79	85	48	72	45	26	29	36	64	488	347	835	1.3	1.3	1.1	
11	Kurmad	12	12	800	153	40	43	63	96	105	30	37	24	19	12	10	32	218	246	464	0.6	0.6	0.6	
12	Machilipatnam	1	1	1,118	234	439	517	556	287	223	12	1	5	4	9	6	6	59	46	105	0.2	0.2	0.2	
13	Machilipatnam	13	14	1,108	164	45	31	60	44	23	27	27	20	37	23	23	17	193	179	372	0.3	0.2	0.3	
14	Machilipatnam	13	13	2,213	151	93	115	109	57	34	17	32	31	32	20	9	6	231	224	455	0.3	0.2	0.3	
15	Nellore	21	15	1,662	78	16	18	92	13	5	14	26	23	4	17	19	42	119	112	231	0.2	0.2	0.2	
16	Nellore, Tho.	6	6	57	7	7	9	9	8	8	3	3	8	4	4	1	1	11	92	38	131	0.2	0.2	0.2
17	North Arcot	29	18	2,231	192	125	98	47	39	32	76	45	65	12	50	59	58	426	300	726	0.3	0.3	0.3	
18	North Arcot	31	13	2,498	13	7	8	17	18	94	67	32	18	12	13	13	31	190	169	359	0.1	0.1	0.1	
19	South Arcot	17	10	2,562	270	709	59	97	69	58	67	29	38	40	21	13	31	309	611	919	0.3	0.3	0.3	
20	South Arcot	13	14	2,851	136	125	70	80	44	62	41	47	12	33	23	27	35	335	351	686	0.6	0.6	0.6	
21	South Arcot	11	9	805	154	63	113	118	76	69	74	46	39	68	66	66	66	282	284	566	0.2	0.2	0.2	
22	Tiruchirappalli	35	20	2,527	255	71	61	31	64	61	46	54	23	24	30	75	80	366	357	723	0.8	0.8	0.8	
23	Tiruchirappalli	35	21	1,168	131	42	42	60	22	43	21	21	23	23	24	20	19	282	282	564	0.3	0.3	0.3	
24	Tiruchirappalli	15	13	1,074	369	152	77	57	59	63	97	53	48	17	20	8	11	246	132	378	0.5	0.4	0.5	
25	Vizagapatnam Plains	23	18	2,600	182	62	76	48	67	62	31	31	23	14	20	8	11	246	132	378	0.2	0.2	0.2	
	Total Madras Presidency	495	308	42,054	5,002	1,712	1,511	1,050	1,272	1,126	1,426	970	1,025	762	754	726	1,101	7,197	6,550	13,747	0.4	0.3	0.3	

Number.	Diarrhoea.	Circles of registration.	4		5												6		7	8					
			Villages.	Number in each district.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.			Total.	Ratio of deaths per 1,000 of population.	Mean ratio per 1,000 for previous 5 years.		
1	Amritsar	22	80	845	78	108	118	149	172	104	103	92	92	108	87	116	81	149	701	589	1,290	1.4	1.3	1.4	27
2	Bahawalpur	20	17	949	109	125	159	125	113	72	73	75	75	125	136	95	75	110	574	563	1,133	1.2	1.3	1.2	18
3	Bahawalpur	20	19	388	137	141	141	171	338	138	156	129	129	129	136	104	142	136	979	979	1,958	1.4	1.2	1.3	18
4	Bahawalpur	11	14	2,747	1,891	228	145	146	146	147	147	147	147	147	147	147	147	147	1,083	925	2,008	1.7	1.6	1.6	15
5	Bahawalpur	22	20	1,350	283	230	271	230	170	217	141	203	203	203	203	203	203	203	1,384	1,384	2,768	1.3	1.1	1.2	15
6	Bahawalpur	17	16	883	469	81	47	72	53	53	59	77	85	85	112	88	74	83	504	440	944	1.1	1.0	1.0	13
7	Bahawalpur	18	17	4,154	104	45	53	58	47	49	49	47	47	47	47	47	47	47	300	271	571	0.3	0.3	0.3	0.2
8	Bahawalpur	1	...	52	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1	
9	Bahawalpur	19	17	4,206	104	45	53	58	47	49	49	47	47	47	47	47	47	47	300	271	571	0.3	0.3	0.3	0.2
10	Bahawalpur	17	15	833	247	208	190	172	183	178	182	178	178	178	178	178	178	178	1,273	1,112	2,385	1.8	1.6	1.6	18
11	Bahawalpur	5	5	1,102	91	13	14	4.9	8	27	10	14	14	14	14	14	14	14	103	65	171	1.0	0.6	0.8	1.1
12	Bahawalpur	22	20	1,495	247	221	213	181	191	205	192	190	190	190	190	190	190	190	1,379	1,177	2,556	1.7	1.4	1.6	17
13	Bahawalpur	21	21	345	739	229	250	221	232	233	233	243	243	243	243	243	243	243	1,741	1,347	3,088	2.0	1.6	1.8	19
14	Bahawalpur	20	24	1,716	598	240	254	242	247	461	366	366	366	366	366	366	366	366	3,143	2,773	5,916	3.2	2.9	3.0	29
15	Bahawalpur	12	11	504	365	37	46	117	105	85	67	50	50	50	50	50	50	50	478	384	860	1.0	0.8	0.9	1.3
16	Bahawalpur	10	17	1,108	288	203	175	210	141	181	161	180	180	180	180	180	180	180	2,280	2,148	4,428	3.8	3.8	3.8	3.2
17	Bahawalpur	18	14	2,212	513	331	331	230	271	244	244	244	244	244	244	244	244	244	1,150	1,036	2,186	1.2	1.1	1.1	0.9
18	Bahawalpur	21	16	1,602	174	27	27	36	40	28	48	26	14	14	14	14	14	14	1,273	1,112	2,385	1.3	1.1	1.2	1.4
19	Bahawalpur	6	6	37	25	30	38	26	28	46	64	47	43	43	43	43	43	43	284	215	499	4.7	4.1	4.4	4.3
20	Bahawalpur	29	25	2,306	499	324	168	79	117	74	170	183	143	143	143	143	143	143	1,118	905	2,023	1.2	0.9	1.0	1.6
21	Bahawalpur	31	31	8,408	141	227	164	144	144	144	144	144	144	144	144	144	144	144	993	879	1,872	1.1	1.0	1.1	0.9
22	Bahawalpur	17	14	2,462	368	178	145	104	83	87	113	102	112	112	112	112	112	112	631	555	1,186	0.6	0.6	0.6	0.8
23	Bahawalpur	19	14	2,501	2,257	180	223	317	58	97	315	306	306	306	306	306	306	306	1,208	1,038	2,247	1.0	0.9	1.0	0.8
24	Bahawalpur	11	11	505	237	121	110	103	94	112	61	114	92	89	163	111	106	106	652	567	1,219	0.6	0.5	0.5	0.5
25	Bahawalpur	30	26	2,527	297	146	115	82	35	84	84	84	84	84	84	84	84	84	746	608	1,354	0.6	0.5	0.5	0.5
26	Bahawalpur	35	26	1,073	137	86	61	64	60	64	62	64	62	62	62	62	62	62	527	453	980	0.5	0.5	0.5	0.5
27	Bahawalpur	15	15	1,074	542	202	157	191	127	154	137	119	125	125	125	125	125	125	1,008	886	1,894	1.1	0.9	1.0	0.7
28	Bahawalpur	28	19	2,609	137	57	53	61	51	46	44	40	40	40	40	40	40	40	314	265	579	0.3	0.2	0.3	0.4
Total, Madras Presidency		405	483	42,052	11,004	4,538	3,803	3,855	3,552	3,415	3,715	3,681	3,681	3,681	3,681	3,681	3,681	3,681	25,253	21,734	46,987	1.3	1.1	1.2	1.2