

# **Report on the sanitary administration of the Punjab and proceedings of the Sanitary Board for the year ... and the report on sanitary works for.**

## **Contributors**

Punjab (India). Sanitary Board.

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Sanitary Department.

MEMO. OF ERRATA.

*In the Annual Sanitary Report of the Punjab for 1918.*

1. On page 1, paragraph 1, line 2, and margin, for "Meteriological" read "Meteorological."
2. On page 4, paragraph 14, line 12, for "usally" read "usually."
3. On page 13, paragraph 34, line 5, for "Rs. 47,546" read "Rs. 47,846."
4. On page 16, paragraph 45, line 5, delete the word "Compounders."
5. In appendix A (Proceedings of the Sanitary Board, Punjab), page ii, line 19, for "Rs. 126, 61" read Rs. "1,26,361."
6. Influenza form No. 1 against Attock, sub-column 31, for "30.3" read "30.9."
7. Influenza form No. 1 against average death rate per 1,000 during 1912-16, sub-column 6, for "59.21" read "59.20."
8. Influenza form No. 1 against average death rate per 1,000 during 1912-16, sub-column 9, for "9.53" read "9.52."
9. Influenza form No. 1 against average death rate per 1,000 during 1912-16, sub-column 18, for "18.82" read "18.81."
10. Influenza form No. III-B, Lahore District, against Patti town, column 7, for "50.64" read "50.54."
11. Annual Form No. II against Jhelum, sub-column 25, for "34.0" read "32.0."
12. Annual Form No. II against Multan, sub-column 6 for "367,965" read "365,965."
13. Annual Form No. IV, Ludhiana, against Dysentery and Diarrhoea, sub-column 26, for "66" read "96."
14. Annual Form No. IV, Jhelum, against fevers, sub-column 22, for "12 0" read "1270".
15. Annual Form No. IV, Total for the Province, against smallpox, sub-column 6, for "356" read "350."
16. Annual Form No. IX against Simla, sub-column 19, for "533" read "553."
17. Annual Form No. IX against Simla, sub-column 20, for "439" read "436."

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## Punjab Sanitary Report for 1918.



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**REPORT**  
ON THE  
**SANITARY ADMINISTRATION OF THE PUNJAB**  
AND  
**PROCEEDINGS OF THE SANITARY BOARD**  
FOR THE YEAR 1918

BY  
LIEUT.-COLONEL W. H. C. FORSTER, D.P.H., I.M.S.,  
*Sanitary Commissioner, Punjab,*

AND  
**THE REPORT ON SANITARY WORKS FOR 1918**

BY  
MR. A. R. ASTBURY,  
*Sanitary Engineer, Punjab.*



Lahore :  
PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRINTING, PUNJAB,  
1919.

# REPORT

OF THE

SANITARY ADMINISTRATION OF THE TUNISIAN

PROCEEDINGS OF THE SANITARY BOARD

FOR THE YEAR 1918

BY

MAJOR-GENERAL R. D. A. FORSTER, D.S.O.

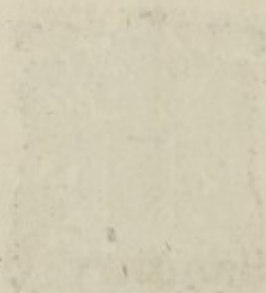
Commandant of the Sanitary Administration

THE REPORT ON SANITARY WORKS FOR 1918

BY

MAJOR R. D. A. FORSTER, D.S.O.

Commandant of the Sanitary Administration



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1918



## **Section II.—European Army.**

No remarks.

## **Section III.—Native Army.**

No remarks.

## **Section IV.—Jails.**

No remarks.

## **Section VII.—Vaccination.**

(Separate re.)port

## **Section VIII.—Sanitary Works, Military.**

No remarks.

## Section II - European Ancestry

## Section III - African Ancestry

## Section IV - Asiatic

## Section V - American

## Section VI - Miscellaneous

(The text of the Sanitary Report is limited to 20 pages and that of the Sanitary Engineer to 4 pages.)

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*Proceedings of His Honour the Lieutenant-Governor of the Punjab in the Home (Medical and Sanitary) Department No. 16348, dated Simla, the 28th June 1919.*

READ—

The Report on the Sanitary Administration of the Punjab for the year 1918.

REMARKS.—The public health of the year was overshadowed by one predominating factor, the influenza epidemic of the autumn months. But for the influenza the year 1918 as a whole would have been an exceptionally healthy one. Throughout the greater part of the time the weather conditions were drier and, consequently, much healthier than usual. The monsoon though early was weak and it was only in March and April and again towards the end of the year that any excess of rain over the normal occurred. During the month of November when the influenza epidemic was at its height the weather was unusually dry. The prices of food grains and especially of bajra and jowar ruled much higher than in the previous year and outstripped the considerable increase which occurred in wages. They were at their highest in the last quarter of the year and, by causing a reduction in the standard of living, probably increased the mortality from influenza among the poorer classes.

2. The birth rate fell from 45·3 to 39·6 per mille or 5·6 less than the average of the preceding quinquennium. The decrease was general throughout the Province, the quinquennial average having been exceeded only in the two districts of Kangra and Karnal. Though the causes contributing to this result are various there is no doubt that the main cause was the epidemic of influenza in the autumn which was peculiarly fatal in the case of women of child-bearing age, a factor which in all probability will also tend to diminish the birth rate of the current year. Among other Provinces only the Central and United Provinces show a higher birth rate than the Punjab. The urban birth rate (41·1 per mille) exceeded the general birth rate in spite of the fact that births in the three largest towns, Amritsar, Lahore and Multan, fell below the provincial average. In the case of Multan the rate was 34 per mille, a drop of no less than 12 per mille compared with the average of the preceding five years. In Amritsar there was a similar decline of 9, but in Lahore of not more than 2 per mille. Among districts, Karnal stands first with a birth rate approximating 1 in 20 while Dera Ghazi Khan at the other end of the list recorded only 1 birth for every 50 of the population.

3. Deaths exceeded births by 41·4 per mille, the excess being most marked in the south-east corner of the Province and reaching its highest figure in the Gurgaon District, where there occurred a net loss of nearly one-eighth of the population. All districts however participated in the excess of deaths over births. While among males deaths exceeded births by a total of 392,778, the corresponding figure for females was 407,314, the disproportion in number between the sexes which has existed for many years being thus intensified.

4. The death rate of 1918 was 81·0 per mille compared with 37·9 in 1917 and 33·4, the average of the previous five years. For this high rate which exceeds all previous records in the Punjab the influenza scourge is responsible. The number of deaths attributable to this epidemic in the Punjab is estimated as equivalent to 4·98 per cent. of the population at the last census or 4·58 per cent. of the estimated population of the year. While the Punjab stood fourth among the Provinces of India in its death rate and had more than double the rate of Burma or Bengal, the mortality may be said to compare favourably with that of the Central Provinces where the rate was no less than 202·6 per mille. Among the districts the highest rate, namely 155·4, was recorded by Gurgaon, where influenza was aggravated by an epidemic of relapsing fever, while two other districts, Rohtak and Ludhiana, exceeded 100 per mille and six others exceeded the provincial rate. The lowest rates are recorded where influenza was least prevalent, namely in the



comparatively isolated districts of Simla (45.4), Kangra (52.6) and Hoshiarpur (57.7). During the previous five years the urban death rate had usually exceeded that of rural areas but the past year exhibited a reversal of this tendency. The superior medical organization of the towns proved its value in the fight with influenza and while the urban death rate was 70.30 per mille that of rural tracts was 82.03. Even in Multan where plague added largely to the toll of victims, the death rate of 75.77 was appreciably less than the provincial rate. In Amritsar the rate was 71.90 and in Lahore 62.41.

5. A comparative immunity from cholera was a gratifying feature of the year. Deaths from this disease numbered 257, the lowest figure since 1902. The Jullundur, Ferozepore and Karnal Districts experienced outbreaks of some severity and there were minor outbreaks elsewhere. The origin of the disease in Karnal was not satisfactorily traced. In Ferozepore the infection was imported from the Jind State and in other districts from outside the Province.

6. Small-pox accounted for 3,032 deaths, the highest number for several years. Of these 1,002 occurred in December. The epidemic started in Lahore at the end of May and spread thence to other districts but persisted most acutely in the place of its origin. The Sanitary Commissioner considers that the conditions of the year were unusually favourable for small-pox and during November when the vaccination campaign is generally in full swing the energies of the vaccination staff were urgently requisitioned for the fight against influenza.

7. The year 1917 ended with more than half of the districts in the Province infected with plague and 1918 experienced a severe epidemic after two mild years. Deaths in British districts numbered 95,742 compared with 9,724 in the preceding year. The abnormal wetness of March and April favoured the breeding of the rat flea and the mortality was highest during the first four months of the year. The Lahore, Ludhiana, Jullundur, Jhelum, Gujrat and Amritsar Districts were the worst sufferers. The epidemic in Multan City was, however, also particularly severe, but the measures taken to cope with it were thorough and well-organised and the self-sacrificing assistance rendered by voluntary workers deserves the highest praise. Rawalpindi City which had become almost a byword as a disseminating source for the disease enjoyed comparative freedom, thanks to the dismantling of Agnew Ganj and to the energetic and systematic disinfection and rat-killing campaign organised by the Health Officer. The Lieutenant-Governor has read with interest the opinion of the Inspector General of Civil Hospitals that the attitude of the people towards measures for the suppression of plague is becoming more enlightened and that the word 'popular' can be applied not only to simple methods like solar disinfection but also to such methods as cresol fumigation. It would, however, be unwise to anticipate too sudden a popularity for anti-plague precautions and the spread of sound ideas on the subject is likely to be achieved only by perseverance coupled with tact and patience on the part of those who are in charge of the preventive measures.

8. A special report on the Influenza Epidemic is printed as an appendix to the Sanitary Commissioner's Annual Report. Deaths from influenza were returned under the heading of "Fevers" or "Respiratory Diseases" according to circumstances. Influenza invaded the Punjab during the year in three waves. The first two epidemics occurred between July and September and were comparatively mild in character. Though widespread they were not accompanied by high mortality. In October the disease again broke out in a malignant and pandemic form and during the last three months of the year is estimated to have caused 962,937 deaths. It left no corner of the Province uninvaded. Its rapid spread may be ascribed to its highly infectious character coupled with the shortness of its incubation period. The milder epidemics of August and September closely simulated sandfly fever which is common during those months of the year, but in the malignant form in which it reappeared in October the disease simulated pneumonic plague, Lobar pneumonia and malignant malaria, all of which are liable to be epidemic at that time. As already stated, rural areas where medical aid was less readily available



suffered more than urban areas. The south-eastern and southern districts of the Province suffered most, especially the Gurgaon District, which was ravaged by visitations of relapsing fever and of influenza at the same time. The municipality of Murree, though badly infected, was fortunate in escaping without a single death. Among women mortality was greatly in excess of that among men and one of the most unfortunate features of the epidemic was the high proportion of young adults among its victims. Though much has been learnt of the behaviour of the disease and its clinical aspects, and though it has been possible to form more or less definite conclusions as to what preventive measures will afford aid against its recurrence, it must be recognised that the problem of successful diagnosis has not been solved and that failure to identify the disease in its earlier stages is liable to render abortive the preventive measures which in those stages would prove of greatest value.

9. Grants-in-aid of sanitary projects were distributed by the Sanitary Board to the extent of Rs. 4,80,206 during the year. Out of the 5 lakhs allotted by Government for distribution by the Board during the financial year 1917-18 only Rs. 15,889 lapsed unutilised at the close of the year. The post of Sanitary Engineer continued to be held throughout the year by Mr. A. R. Astbury and his report describes a busy year, fully occupied with the preparation and consummation of numerous important sanitary schemes. The difficulty of obtaining imported stores still handicaps progress in many cases. In other cases, for instance, that of the Rewari Water Supply Scheme, which is being carried out by the District Board, work has been hampered by the scarcity of labour entailed by successive epidemics. None the less progress on the whole has been satisfactory.

10. Several district boards are now adopting regulations for the improvement of village sanitation, their extension to individual villages being optional with the villagers. In some cases these rules are reported to have remained a dead letter and in others they have not been long enough enforced to justify an opinion as to the value of their results. It is important that such rules should be simple and easily understood by the least intelligent.

11. Major-General Hendley held the post of Sanitary Commissioner in addition to that of Inspector-General of Civil Hospitals until August and the value of his work has been acknowledged by Government on many previous occasions. Lieutenant-Colonel Forster succeeded him as Sanitary Commissioner and remained in charge till the end of the year. He has devoted himself to his duties with energy and an enthusiasm for sanitary reform, and His Honour desires to express his appreciation of his work both as Deputy Sanitary Commissioner and subsequently as Sanitary Commissioner. Major Mackenzie as Deputy Sanitary Commissioner during the last four months of the year and Dr. K. A. Rahman as Additional Deputy Sanitary Commissioner throughout the year have also earned recognition for the useful work performed by them.

ORDER.—Ordered that a copy of the foregoing remarks be circulated with the report and be furnished, with the usual number of copies of the report to the Government of India; also that the review be published in the *Punjab Government Gazette*.

Ordered, also, that a copy be furnished to the Sanitary Commissioner, Punjab, for information.

By order of His Honour the Lieutenant-Governor of the Punjab,

B. T. GIBSON,

*Financial Secretary to Government, Punjab.*

THE HISTORY OF THE  
CITY OF BOSTON  
FROM THE FIRST SETTLEMENT  
TO THE PRESENT TIME  
IN TWO VOLUMES  
BY NATHANIEL BENTLEY  
OF THE BARR, AT LAW  
IN 1786  
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## Section I.

THE Director-General of Observatories has kindly furnished the following brief summary of the chief meteorological features of the Punjab during the year 1918.

Chief Meteorological features.

During the first two months of the year the weather over the Punjab was much less disturbed than usual and the total rainfall recorded in the plains was only 14 per cent. of the normal amount. March and April were on the other hand conspicuously wet, while May was drier even than usual. The monsoon appeared over the province in the beginning of June about a fortnight before the usual date, but was extremely weak throughout and the total rainfall produced by it in the plains during the period, June to September, was barely half the normal amount. In October light scattered showers occurred during the first week, chiefly in the south-western districts. Weather was unusually dry in November. In December winter depressions were of frequent occurrence and there was more rain than usual in the north and central Punjab.

Humidity was low in February and from July to November, normal in January, May and December and high in March, April and June. There was decidedly less than the customary amount of cloud in January, May and from July to September, while in March the sky was unusually cloudy. Maximum temperature exceeded the average by more than  $3^{\circ}$  in February, May, July and August, and was lower than usual by  $3\frac{1}{2}^{\circ}$  in March and  $6\frac{1}{2}^{\circ}$  in April. Minimum temperature was  $4^{\circ}$  below normal in April, and  $3\frac{1}{2}^{\circ}$  above it in May; in the remaining months the departures from normal were small.

2. The Director of Land Records, Punjab, has furnished me with the usual return which shows that the average retail price of wheat was  $7\frac{1}{8}$  seers per rupee at Ambala,  $7\frac{3}{8}$  at Lahore,  $6\frac{7}{8}$  at Rawalpindi and  $8\frac{1}{8}$  at Multan during the year 1918.

Prices of food-grains.

The average rates of barley were  $10\frac{1}{8}$  seers at Ambala,  $11\frac{1}{8}$  at Lahore,  $11\frac{1}{16}$  at Rawalpindi and 11 seers at Multan and that of jowar  $8\frac{1}{16}$ ,  $7\frac{1}{16}$ ,  $7\frac{7}{16}$ , and  $7\frac{1}{4}$ , respectively.

As regards bajra the average rates varied from  $7\frac{1}{4}$  to  $8\frac{1}{8}$  seers at the principal markets of Ambala, Lahore, Rawalpindi and Multan, that of maize from  $8\frac{1}{4}$  to 10 and that of gram  $8\frac{3}{16}$  to  $10\frac{3}{16}$  seers per rupee.

It would appear that the prices were higher than in the preceding year owing to an increased export demand due to military requirements and the fact that the last kharif was not a good harvest and the prospects of the rabi poor.

3. The second regular wages survey of the Punjab was taken in December 1917 and the result is embodied in a special report by the Director of Land Records, Punjab. It may be noted that there has been a considerable increase in wages though not to the same extent as in prices.

Wages of labour.



## Section V.—Vital Statistics.

4. The rough estimated population for the year under report worked out by adding births and subtracting deaths since the last census comes to 20,205,141, *i.e.*, 11,114,110 males and 9,091,031 females, the corresponding census figures being 19,337,146, (10,608,101 and 8,729,045). The birth rate calculated on this estimated population is 37·9, *i.e.*, 1·7 *per mille* less than the rate calculated on the census figures. The death rate is 77·5, *i.e.*, 3·5 less than the rate on the census figures. In individual districts the rate calculated on the census figures is in excess except in the districts of Gurgaon, Simla, Rawalpindi and Dera Ghazi Khan, these being districts in which the estimated population shows a reduction as compared with the census figures. In the previous year the only district which showed a reduction in the estimated population was Simla.

5. With the exception of the last 3 months of the year, 1918 would have been a healthy year; the death rate from cholera is the lowest on record since 1901 when the rate was the same. Small-pox was in excess of the rates since 1914 and with one exception 1910 is less since 1900; the larger number of deaths from small-pox also were recorded during the last quarter of the year. Plague accounted for more deaths than in the two preceding years while under all the other heads of mortality except fevers, under which head deaths from Influenza were returned, there has been a reduction. Fevers account for a rate of 66·56 *per mille*; this is the highest yet recorded under this head including even the great malaria year of 1908. It is 49·88 in excess of the average for the years 1912—16 and this might be taken to represent practically the death rate from influenza. The birth rate is the lowest on record since 1902 with the exception of 1909 but, it is expected that the birth rate will be affected to a greater extent owing to influenza in the first half of 1919.

6. **Births.**—The total number of births recorded during the year were 765,468 of which 404,565 were males and 360,903 females, the respective rates being 39·6, 20·9 and 18·7. The total rate shows a reduction of 5·7 compared with last year and 5·6 compared with the average for the previous five years. The reduction has been general throughout the Punjab and is attributed jointly to the following causes:—the rise in prices of foodstuffs, the absence of men, the brisk epidemic of plague at the commencement of the year and the malaria epidemic in the autumn of the previous year and to the epidemic of influenza which is said to have peculiarly affected pregnant women. Karnal and Kangra were the only two districts with a birth rate in excess of the average for the previous five years, and Kangra and Mianwali with rates in excess of the previous year. The birth rate in Kangra is never particularly high and Mianwali last year showed a considerable reduction compared with the previous year. Karnal therefore is the only district which maintained its high birth rate, it being only 0·9 less than last year. The decrease in some districts has been considerable, *e.g.*, Gurgaon 14·5 and 18·2 compared with the mean for the previous five years and last year's rate, Montgomery 10·0 and 13·5, Multan 12·4 and 12·2, Dera Ghazi Khan 10·7 and 8·8, and Muzaffargarh 10·8 and 7·1.

7. The highest birth rate, namely, 43·24, was registered in the Central Provinces, the United Provinces coming next with 39·89. The provinces with a rate lower than that of the Punjab were as follows:—Bihar and Orissa 37·51, Assam 34·98, Burma 33·01, Bengal 32·9, Bombay 31·61, North-West Frontier Province 30·58 and Madras 28·89.

8. The birth rate in the 38 principal towns amounted to 41·1 *per mille* as against 46·2 last year and 45·3, the average for the previous 5 years. The rates in the three largest towns were as follows:—Amritsar 38, Lahore 36 and Multan 34; the corresponding rates last year were 47, 37 and 49 and the average for the previous 5 years 47, 38 and 46. It will thus be seen that except in Lahore, where the reduction is very slight, Amritsar and Multan show a considerable reduction compared with both the rates recorded in the previous year and the average for the previous 5 years.



9. The highest birth rate was recorded in Karnal where it was 51·3 and the lowest in Dera Ghazi Khan 19·3. The other districts with a comparatively high rate were Rohtak 49·2, Gurdaspur 45·7, Ludhiana 45·5, while those with low rates were Simla 21·2, Muzaffargarh 26·5 and Multan 29·9. The highest rates were recorded in the Ambala, Jullundur and Lahore Divisions where with four exceptions (Gurgaon, Simla, Kangra and Gujranwala) the rate was higher than the provincial rate. In only one district Lyallpur of the remaining divisions of Rawalpindi and Multan was the birth rate higher than the provincial rate.

In paragraph 2 of the review on the Annual Sanitary Report for 1917 it is stated that, ignoring the case of Kangra, a line drawn across the Punjab and following the eastern boundaries of the Sialkot, Gujranwala, Jhang and Multan Districts divides the Province into two parts which correspond with the increase and decrease in the birth rate as compared with the quinquennial averages, the eastern half showing an increase and the western half a decrease. From statistics prepared for the previous 5 years and the year under report it would appear that this arrangement is a mere coincidence as it has not been previously observed or repeated itself.

10. The excess of deaths over births amounted to 41·4 *per mille* and was general throughout the whole province; it varied considerably in districts and was as high as 119·1 in Gurgaon, 77·1 in Rohtak, 64·9 in Ludhiana, 56·3 in Dera Ghazi Khan, 54·0 in Hissar and 52·2 in Montgomery. The excess was least in Kangra 15·7, Hoshiarpur 17·9, Sialkot 19·2 and Lyallpur 20·8.

11. Deaths.—There were 1,565,560 deaths recorded during the year under review, 797,343 males and 768,217 females, the resulting rates being 81·0, 75·2 and 88·0 *per mille*. The corresponding rates for the previous year were 37·9, 35·7 and 40·6 and the average for the previous 5 years 33·4, 31·5 and 35·7. This high rate, the highest yet recorded in the Punjab, is due entirely to influenza which is recorded under the head of fevers, the rate for which is 66·6. The rates for the other heads of mortality are "all other causes" 5·7, plague 4·9, respiratory diseases 2·7, dysentery and diarrhoea 0·5, injuries 0·3, small-pox 0·2 and cholera 0·01. With the exception of small-pox, plague and fevers all these rates are less than those recorded in the previous year while plague, fevers and respiratory diseases are the only heads under which the death rate in 1918 exceeds the average for the previous 5 years.

12. The highest provincial death rate was recorded in the Central Provinces 202·60, Bombay coming next with 88·05 and the United Provinces 82·37; the other provinces, which have a lower rate than the Punjab are as follows:—North-West Frontier Province 70·30, Bihar and Orissa 56·71, Assam 46·10, Madras 43·01, Burma 39·59 and Bengal 38·1.

13. The death rates in all the districts exceeded those recorded in the previous year and the average for the preceding 5 years. The excess in Gurgaon amounted to 103·4 and 119·3, respectively, Rohtak 95·1 and 95·6, Ludhiana 79·2 and 77·4, Karnal 65·2 and 61·1, Hissar 62·3 and 66·0, Ferozepore 56·3 and 57·4, and in all the others it did not exceed 48·6 when compared with the previous year and 53·6 when compared with the mean for the previous 5 years except in Montgomery where it was 60·6. The least excess was recorded in Simla 19·1 and Muzaffargarh 21·6 compared with the previous year and 21·9 in Kangra compared with the average for the previous 5 years. The highest rates were recorded in Gurgaon 155·4, Rohtak 126·3, Ludhiana 110·4, Karnal 97·3, Hissar 97·2, Montgomery 88·2, Lahore 88·1, Ferozepore 88·0, Gujranwala 82·4; in all these districts in which the rate is in excess of the provincial rate the high rate is due to influenza. In Lahore and Ludhiana plague helped to swell the total death rate. The lowest rate was recorded in Simla 45·4, Kangra 52·6 and Hoshiarpur 57·7; in all these there was no plague and influenza did not prevail to the extent it did in practically all the other districts.



14. August and September were the two months in which the lowest death rates were recorded being 1.74 and 1.93 and they were closely followed by July and June with rates of 2.07 and 2.61, the total death rate in these four months being only 1.38 *per mille* more than the rate recorded in December (6.97). The rates in the first 5 months of the year varied from 2.88 in February to 3.90 in May. The total death rate for the first 9 months of the year amounted to 25.89, i.e., practically double the rate recorded in October (13.92), 8.29 less than the rate in November when it was 34.18 and about half of the total rate recorded in the last quarter of the year which was 55.07. Influenza was entirely responsible for the abnormal rate in November and the high rates in October and December. The last quarter of the year is usually the unhealthiest period of the year owing to malaria, but in the year under review the deaths attributable to malaria were insignificant compared with influenza which was general throughout the Province.

The deaths in November are the highest yet recorded in any one month including October 1908, the great malaria year.

15. The highest death rates, as usual, were recorded under the age group "under one year," viz., 248.83 in the case of males and 235.91 in that of females. Next to infants old people of 60 and upwards suffered most, the rates being 144.64 and 164.73; the age group between 50 and 60 came next with 93.71 and 108.14 and the age group 1—5 with 93.72 and 96.02. In the remaining age groups the rate varied from 79.57, the female rate for the age group 30—40, to 37.13, the male rate for the group 5—10. With the exception of the rates for infants under one year the female rate exceeded the male rate under every other age group. Calculated on the number of births during the year the death rates for infants were 261.19 and 264.36 as against 247.35 and 248.60 in the year preceding.

16. Gujranwala and Attock Districts again recorded more deaths under "other classes" than the actual numerical population of this class and this year are supported by Gujrat. Montgomery accounts for more deaths among Indian Christians than the numerical population shown for this class. Very high death rates are recorded under "other classes" in Dera Ghazi Khan, Montgomery, Jhang, Sialkot, Gurgaon, Lyallpur, Multan and Gurdaspur and in the case of Indian Christians in Multan, Gujranwala, Shahpur, Lahore and Sialkot. These abnormal rates have been remarked on previously and only emphasise the fact that the population for this class is not recorded correctly. The total rate for Muhammadans was 81.32 as against 80.09 for Hindus, while the total rates for Indian Christians and other classes were 100.80 and 107.01. The rate for Hindus is relatively higher than it was last year compared with the rate for Muhammadans.

17. The urban rate was 70.30 and the rural rate 82.03 as against 42.77 and 37.43, respectively, last year, the average for the preceding 5 years being 36.74 and 33.06. The urban rate was in excess of the rural rate under all heads of mortality except fevers in which, however, the excess in the rural rate was very marked, amounting to 24.64 *per mille*. This is due to influenza which caused a higher mortality relatively in rural areas than in towns. The rates recorded in the three largest towns were Multan 75.77, Amritsar 71.90 and Lahore 62.41, these rates are considerably in excess of the rates recorded in the previous year and the average for the preceding five years. The increase in Multan is due to plague and fevers and in the other two to fevers.

In the minor towns the highest rate was recorded in Hodal 174.84, the others seriatim were Faridabad 162.69, Beri 159.27, Palwal 156.46, Bahadurgarh 156.31, Ferozpur-Jhirka 147.23, Hansi 137.97, Jhajjar 127.53, Chunian 118.58, Dasuya 115.37, Gohana 113.64, Ballabgarh 113.50, Chuharkhana Mandi 108.90, Fazilka 108.33, Bhiwani 108.30, Jagraon 107.72 and Pind Dadan Khan 102.74. The increase in all these is attributable to fevers, but in Hansi, Bhiwani, Beri, Jagraon, Chunian and Pind Dadan Khan plague also helped to swell the death rate.



The lowest rates were recorded in Gojra 22·52, Ichhra 24·23, Sargodha 29·61, Montgomery 33·58, Murree 33·80, Lyallpur 34·78, Anandpur 35·14, Dharmasala 35·35, Shahpur 36·27, Sangla 36·73, Hazro 37·19 and Una 37·58. In all these the fever rate was comparatively low.

18. Compared with last year there has been an increase of 23,068 in the total number of entries checked, the actual numbers checked were 648,092 in the birth and 642,031 in the death registers.

The percentage of omissions detected to total number of entries checked by Divisional Inspectors worked out at 1·39 and 1·21 for male and female births and 1·02 and 1·00 for male and female deaths, those checked by Superintendents of Vaccination and Vaccinators at 1·22 and 1·39 for births and 0·70 and 0·76 for deaths, those by the revenue staff at 2·77 and 3·55 for male and female births and 1·52 and 1·38 for deaths.

The number of chaukidars punished for neglecting to report cases of domestic occurrence was 95, the total fines amounting Rs. 181 while in municipal towns 218 persons were punished for neglecting to register births and 190 to register deaths, the total fines coming to Rs. 370.

19. During the year 75 births and 151 deaths were recorded at railway stations outside municipal limits as against 133 and 134, respectively, in the previous year. Of the deaths 118 were due to fevers, 19 to all other causes, 6 to dysentery and diarrhoea, 5 to diseases of the respiratory organs, 2 to injuries and 1 to small-pox.

20. There were 263 births and 162 deaths amongst Europeans and Anglo-Indians as against 229 and 149, respectively, last year. The deaths were distributed as follows:—All other causes 69, fevers 55, diseases of the respiratory organs 31, dysentery and diarrhoea 6 and injuries 1.

21. There were 3,547 births and 7,304 deaths among the non-military population of Cantonments, showing a decrease of 406 in the former and an increase of 2,629 in the latter compared with the previous year. The deaths were classified as follows:—Cholera 13, small-pox 17, injuries 53, dysentery and diarrhoea 121, plague 127, respiratory diseases 1,033, all other causes 1338 and fevers 4,602. Influenza is accountable for the large number of deaths under respiratory diseases and fevers and presumably to a great extent for the reduction in the number of births.



## Section VI.—Chief Diseases.

22. **Cholera.**—The mortality from cholera has been the lowest on record since 1902 and amounted to 257 as compared with 1,365 deaths in the previous year, the rate being 0·01 *per mille* as compared with 0·07 in 1917 and 0·30 the average for the previous 5 years.

The mortality was highest in the Jullundur District where 56 deaths occurred, Ferozepore coming next with 53, Karnal 45, Lahore 19, Montgomery 17 and Kangra and Hoshiarpur 16 each. In the districts of Rohtak, Ludhiana, Amritsar, Gujranwala, Lyallpur, Multan, Ambala, Sialkot, Gujrat, Rawalpindi, Attock and Hissar the number of deaths varied between 6 and 1; the other districts remained free.

The province was free from cholera in the first quarter of the year and in April only 4 deaths occurred, 2 in Gujrat District and 1 each in Ferozepore and Amritsar. During the month of May 47 deaths were recorded in Jullundur alone and 1 each in Gujranwala and Rawalpindi while in June 4 deaths were recorded in Karnal, 2 each in Hoshiarpur and Multan and 1 each in Ambala, Jullundur, Ferozepore, Amritsar, Gujranwala and Lyallpur.

July, August and September were the worst months in respect of cholera during the year under report in which the mortality amounted to 77, 57 and 46, respectively. In October the number of deaths fell to 10 and in November and December the province remained free. In individual districts the highest number of deaths returned in July was 37 in Karnal and 17 in Montgomery, in August 24 in Ferozepore and 16 in Lahore and in September 20 in Ferozepore and 12 in Hoshiarpur. Compared with 1917 the mortality was lower in every month except April, May, June and July.

During the year under report only 16 out of 144 towns in the province recorded deaths from cholera, the number being 45. Miani town in the Hoshiarpur District suffered most and lost 13 of its inhabitants. This was due to an outbreak of the disease at the end of August which continued up to September. The chief cause of the outbreak was said to be a common water-supply from a well situated in the compound of one of the first 4 cases and subsequently other mohallas of the town were infected by the communication of the disease through soiled clothes which were taken away by the washerman and the sweeper to create fresh foci of infection. In Lahore, Karnal and Fazilka only 6, 5 and 4 deaths respectively were recorded and in no other town did the mortality from the disease exceed 2.

In the Jullundur District Dr. K. A. Rahman, Additional Deputy Sanitary Commissioner, was deputed to investigate the outbreak and he found that the first case occurred in a woman who arrived in village Manko from Rangoon *via* Calcutta on the 19th April and the day after arrival developed symptoms of cholera from which she died on 25th April. Calcutta was very severely infected with cholera at the time this woman landed there and she must have taken food and drink while waiting to catch a train to her home.

Altogether the following 7 villages were infected :—

Village.	Date of infection.	Cases.	Deaths.	Infection imported from
Manko	22nd April 1918	24	11	Calcutta.
Chukiara	10th May 1918	56	30	Manko.
Damauda	14th May 1918	3	2	Chukiara.
Daroli Khurd	17th May 1918	2	2	Do.
Raipur Risalpur	Ditto	2	1	Manko.
Padhiana	18th May 1918	3	1	Chukiara.
Jlanda Singha	28th May 1918	1	1	Manko.



In the Karnal District the Additional Deputy Sanitary Commissioner was deputed on cholera duty in August as the disease was lingering there, 2 villages were infected, Sheikhpur and Dehra, recording 14 deaths each. The first case occurred at Sheikhpur on 26th June. The origin of the disease was not ascertained. At Dehra the disease was reported to have been introduced from Raipur village where the first case had gone to mourn the death of her brother who died of cholera there. Twenty deaths were recorded in Churiwala village in the Ferozepore District and the origin was traced to a marriage party which visited Jind State which was infected at the time. In Jassoki Garditta village (Montgomery District) 17 deaths were recorded and the infection was caused by a pilgrim returning from Hardwar. In the Lahore District the village of Chiman recorded 12 deaths. A sweeper had been to Lahore and on his return died of cholera. The disease then spread among the sweepers.

The other outbreaks in Bhogpur and Mallian Khurd in Jullundur District, which caused 2 and 5 deaths respectively, were due to infection from Hardwar and 3 more fatal cases imported from Hardwar occurred in this province.

As in previous years Dr. K. A. Rahman dealt with the returns and reports and other matters connected with cholera during the year.

The usual history of cholera in the province is that it is first imported from other provinces and thereafter the course of events depends upon whether or not it happens to be a "good year" for cholera. In 1918 various foci of infection were established by importation, but as it was not a "good year" for cholera the disease did not spread to any appreciable extent.

With few exceptions the imported cases as usual were the result of pilgrimages to Hardwar, and as long as that place continues to be the disseminating centre for cholera which it is we shall always be at the mercy of the factors which operate to make a "good year." The constant menace of Hardwar has already engaged the attention of Government who deputed the Hon'ble Colonel (now Major-General) Hendley to visit it, and I would suggest that the matter is one which might be taken up by the Imperial Government.

23. **Small-pox.**— During the vaccination season of 1917-18 I came to the conclusion that factors other than improved technique and supervision were responsible for the very high potency of the lymph strains obtained, and gave it as my opinion that 1918 was likely to be a "good year" for small-pox. This guess, for it can hardly be called anything else though based on the experience of 14 years, proved to be correct.

Deaths from small-pox during the year numbered 3,032 against 1,417 in 1917 yielding annual ratios of 0.16 and 0.07 *per mille*, respectively, against 0.49, the average for the previous five years. The mortality was higher than in the last 4 years and no district was free from the disease. The number of deaths among children under one year of age was 725 as against 302 in the previous year whilst the number for over one and under ten years of age was 1,707 as against 911. The number of deaths by months was as follows:—January 107, February 103, March 153, April 170, May 216, June 158, July 171, August 242, September 168, October 193, November 349 and December 1,002. General vaccination operations begin on the 1st of November, but owing to the epidemic of influenza, in connection with which the vaccination staff was freely employed, little could be attempted in the way of an intensive campaign of vaccination until the end of that month.

The mortality rate from small-pox was as high as 0.82 *per mille* in the district of Lahore, 0.57 in Amritsar, 0.30 in Rohtak, 0.27 in Hissar and Ferozepore, 0.24 in Karnal and Ludhiana; the rate in all others was below the provincial rate. The lowest rate reported was in Rawalpindi, Mianwali, Jhang and Dera Ghazi Khan where it was 0.01.

The death rate from small-pox in urban areas was 1.02 as compared with 0.07 in rural circles and the average rate for towns in which the compulsory Vaccination Act is in force was 1.17 as against 0.11 in the previous year.



Only 68 municipal towns escaped the disease during the year. Among the towns in which the Vaccination Act is compulsory the highest number of deaths was recorded in Lahore 713, Amritsar coming next with 391, Panipat 89, Ludhiana 75, Gujranwala 67, Ferozepore 51, while among those in which the Vaccination Act is not compulsory the highest number of deaths was recorded in Bhiwani 37, Shahabad 35, Hissar 25, Batala 20, Faridabad 14 and Dasuya 13.

The mortality was greatest among infants under one year of age, the male death rate being 0·88 and the female 0·87; among children from one to five years of age the rates were 0·55 and 0·63 while in the next 5 years' period 5—10 it was 0·21 and 0·22; over 10 years of age the death rate gradually fell with increasing age.

This epidemic dates from the end of May when 5 deaths from small-pox were returned in Lahore city. Infection continued in the city and about the middle of June a death from small-pox occurred at Kasur; Jullundur was infected about the end of this month and Ferozepore at the beginning of August. The disease then increased steadily and spread to the adjoining districts of Amritsar, Ludhiana, Gujranwala and Gujrat from one or other of these centres. The central parts of the province were badly infected, the eastern and western districts escaping comparatively lightly.

As soon as possible after taking over charge I proceeded to initiate a vigorous campaign against the threatened epidemic, but unfortunately the influenza epidemic intervened and threw everything out of gear until the end of November when I was able to resume operations. All Heads of Departments, Civil Surgeons and Health Officers were informed of the situation by general letter and requested to assist in the preventive measures advised, whilst by means of the Press and handbills the European population were advised to get vaccinated without delay. Facilities for vaccination were greatly increased, extra staff being employed for the purpose, and special attention was paid to schools and colleges. For purdah establishments female vaccinators were specially employed. In addition all important centres of infection were visited by myself and my deputies for the purpose of giving advice and assistance. The results on the whole were satisfactory and the total number of deaths 3,032 compares favourably with the corresponding total of 38,687 recorded in the last epidemic of 1913. There is of course room for improvement in the vaccination of the population but speaking generally the Province may be said to be well vaccinated. When I first joined the Indian Army a Punjab regiment on parade consisted mostly of pock-marked men, whereas now the pock-marked sepoy from the Punjab is the exception. During the epidemic it was forcibly brought home to me that the medical curriculum for the M. B. and M. P. L. classes does not provide for instruction in vaccination and I therefore took steps to have this defect remedied. Instruction in vaccination is now compulsory for both these classes.

The chief preventable factors in the epidemics which occasionally visit us are—

(1) Vaccination is not yet compulsory in some of the municipalities and notified areas.

(2) No action is taken to ensure the vaccination of children who migrate to other places and are shown in the register as "left the town." Civil Surgeons have been instructed to note such cases and see that they are eventually vaccinated.

(3) The exposure of children and others in the scabbing stage. This at present is no offence and it ought to be dealt with by adding a section to the Municipal Act.

(4) The attitude of Hinduism towards small-pox.—This is a matter to which the leaders of the Hindu community might well direct their attention.

(5) Non-enforcement of vaccination amongst Government employees. In the present epidemic many of the cases admitted to the Lahore Small-pox Hospital were unvaccinated policemen. On representing this to the Inspector-General of Police vigorous action was at once taken, and I think it would be well if all Heads of Departments were instructed to see that all subordinate to them, including clerical staff, are properly protected against small-pox.



**24. Plague.**—The Inspector-General of Civil Hospitals, Punjab, has furnished the following plague report:—

*Mortality.*—There were 95,742 deaths in British districts and 18,734 in Native States. Total 114,476 during the year under review.

This was a severe epidemic after two mild years. One important factor that contributed to this was the large legacy left to this year from the previous year in that no less than 16 districts were infected at the end of the year 1917.

The disease was chiefly bubonic in type, though a few septicæmic and pneumonic cases were also noted.

The case mortality was 76·7 per cent. in the British districts.

*Area of Distribution.*—The Jullundur, Lahore and Rawalpindi Divisions were the worst infected, the mortality in the first two alone being 64 per cent. of the total for British districts. In the Multan Division the City of Multan suffered a very severe epidemic during the first half of the year. The worst infected districts were those of Lahore, Ludhiana, Jullundur, Jhelum, Gujrat and Amritsar. The Simla District remained free throughout the year. The Dera Ghazi Khan and Muzaffargarh Districts may also be considered free since there were only a few imported cases there; 9 districts remained free in the latter half of the year, 4 from July and 5 from August to December. The Jullundur District remained free for the last 4 months. The Nurpur Tahsil of the Kangra District remained infected during the first 5 months. About a dozen districts were infected at the end of the year with an epidemic of a mild type.

*Seasonal variation.*—As usual the mortality went up month by month during the first 4 months of the year. It began to drop in May except for the districts of Amritsar, Sialkot, Gujrat, Shahpur, Attock and Jhang, where the figures exceeded those of April. There was a rapid fall in June, and this downward curve was carried on to October after which there was a slight rise. March and April were conspicuously wet months producing very favourable conditions for the breeding of the rat fleas which continued to flourish in the slightly drier month of May.

*Measures.*—(a) *Education.*—The plague staff impressed upon the people the value of simple sanitary measures during the course of their work, especially in the hot weather. A large number of copies of Major Norman White's memorandum on plague prevention were distributed in the districts and its purport was explained to the people by the plague staff and by the subordinate Medical staff.

(b) *Trapping, baiting and smoking.*—These measures were carried out throughout the year, but more specially during the hot weather in all late infected villages and in places affected annually or during the previous year: with a view to reduce the number of foci of infection in the next season, 2,000 villages and towns approximately were thus treated during the summer. It is gratifying to note that in only a few villages thus treated did plague break out during the ensuing season.

In Rawalpindi city, under the instructions of Colonel Buist, the Health Officer carried out a most systematic house-to-house cleansing and disinfection campaign in the summer months. Every house in the city and every shop in the grain market was thoroughly cleaned first and then the rat holes were smoked and closed up, while at the same time baiting and trapping were also carried out. The worst portion of the Mandi Agnew Ganj has been dismantled and from the debris an evacuation camp of 40 huts has been built outside the city. The result has been eminently satisfactory as there have been very few indigenous cases in the city during the autumn months this year usually the worst months for Rawalpindi. If the grain market is removed from its present site the municipality would do well to take Colonel Buist's advice and convert it into a public garden.

Multan city was badly infected this year. A very thorough ratting and disinfection campaign was carried out here during the period of active infection. Two plague camps, both very well run, were established, one Municipal and the other managed by the Sewa Samiti, a band of devoted voluntary workers. They also helped the Municipal Camp by sending volunteers and supplying milk. Altogether 2,900 cases were treated in these camps of whom 750 recovered. The treatment adopted in both camps was Iodine internally as well as externally and except in those cases which came in very late, the results were very good. The success of the whole scheme was due to the untiring efforts of the Civil Surgeon, and to the keen interest taken by Colonel and Mrs. Powney Thompson and by Mr. Dunnett, the Deputy Commissioner.

*Cresol fumigation.*—This measure of killing fleas has come to be popular with the people and there is no doubt that its timely use combined with ratting has helped to check the spread of the disease in many places, notably Rawalpindi and Multan.

*Evacuation.*—This is seldom resorted to in a sensible manner. Some people run away in panic from an infected place when the disease is well established and thereby spread the disease to other places. They object to living in camps. They do not exercise the special powers of self-protection against persons from infected places given to them under section 141, Punjab Plague Manual, except in rare cases. Rewari Municipality made an effort in this direction, but it worked only for about two months and then fell through owing to the want of co-operation. Jhang Municipality was the only one which carried this measure out effectually and by completely evacuating the town saved the city from an epidemic. However 48 villages were completely evacuated in the whole province, and about 200 partially.



*Inoculation.*—91,117 inoculations were done in the British districts. Considering that there were only 3 Sub-Assistant Surgeons on plague duty this year, each for a short time in 3 districts, this is very creditable. A very much larger number would have been done if enough vaccine had been obtainable but unfortunately, owing to the shortage of the supply of bottles from Europe, the Parel Laboratory could not meet the demands of the province. The measure has somewhat increased in popularity especially in the Jullundur District, where alone a number of villages had to be refused. Sub-Assistant Surgeon Muhammad Azim Khan deserves special mention as having performed 7,039 inoculations in addition to his hospital work.

*Solar disinfection.*—People appreciate the simplicity of this measure and understand its value and generally resort to it willingly.

*Protection of Simla.*—The usual precautions against the spread of plague into Simla and its district were taken throughout the year.

*Attitude of the people.*—There is a distinct change for the better in the attitude of the people. They have come to understand the causation and spread of plague and although there are still met with people who are averse to plague measures, they are usually relics of by-gone days too set in their beliefs to wish to imbibe fresh ideas.

*Reporting.*—Reporting has been fairly satisfactory during the year under report. There have been defaulters here and there, but they have been dealt with by the district authorities.

*Auxiliary staff.*—The auxiliary staff existed in most of the districts and was composed of Zaildars, Sufedposhes, Lambardars, Hakims, etc., and generally speaking they did their work satisfactorily.

*Urban and rural committees.*—These existed in some districts and they did their work satisfactorily. No new committees were formed, but a lot of help was obtained from school boys and teachers in Rawalpindi City in the house-to-house disinfection campaign. In Ludhiana City also some local plague committees were formed and they helped to some extent.

*General Medical Relief.*—2,210 persons were treated during the year by the 3 Sub-Assistant Surgeons who were on plague duty in Hissar, Jullundur and Rawalpindi. In the autumn during the whole month of November and some days of October and December the whole plague establishment was on influenza duty. They afforded relief to thousands of people, but the work was so heavy that no record of the numbers treated by them was kept.

*Rewards.*—All those who helped the plague staff voluntarily or who did conspicuous plague work were rewarded suitably.

*Special Plague staff.*—This consisted of 30 Plague Supervisors in the beginning of the year. Later on, finding that the very important hot weather campaign was a heavy undertaking owing to the large number of late infected villages, sanction was obtained in July from the local Government for the employment of 15 more supervisors in order to cope with the work. Three Sub-Assistant Surgeons, one in Hissar for 2½ months, one in Rawalpindi for about four months and one in Jullundur for a month, were on plague duty in the year.

Dr. T. Sinha has worked as Assistant to the Chief Plague Medical Officer throughout the year. In the summer he toured in 12 districts to supervise preventive measures and also advised the Military authorities in Jullundur Cantonment in the carrying through of similar measures there.

The Inspector-General of Civil Hospitals, Punjab, held the office of the Chief Plague Medical Officer as an additional charge during the war.

**25. Fevers.**—During the year under report a total of 1,287,027 deaths was registered under the head of "Fevers" against 510,812 in 1917, showing an increase of 776,215 deaths and almost entirely due to influenza, deaths from which were, according to my instructions, returned under the heading of "Fevers" or "Respiratory diseases" according to circumstances. In accordance with orders issued by the Government of India Influenza is dealt with separately in Appendix D to this report. The mortality from fevers is the highest on record since the introduction of the system of registration of vital statistics in this province, viz., 1867. The death rate was 66.56 against 26.42 in 1917 and a quinquennial mean of 19.12.

The fever mortality by months was as follows:—

January 45,911, February 33,816, March 30,343, April 28,314, May 35,816, June 33,063, July 26,845, August 21,876, September 24,393, October 247,938, November 637,959, and December 120,753.



The highest death rate was recorded in Gurgaon 134.88, Rohtak coming next with 109.07, Karnal 85.40, Hissar 84.66, Montgomery 77.56 and Ferozepore 75.30. The lowest rates were recorded in Simla 25.28, Kangra 40.47, Rawalpindi 46.85, Jhelum 47.37 and Hoshiarpur 48.85.

The urban and rural fever death rates were 44.17 and 68.81 as against 21.46 and 26.91 in the previous year. In the three largest towns rates of 40.80, 39.71 and 32.77 were recorded in Amritsar, Lahore and Multan, those for the previous year being 29.95, 25.89 and 30.46, and for the quinquennium 19.56, 21.07 and 19.28. When compared with 1908 Amritsar showed a decrease of 27.36 while Multan and Lahore an increase of 8.97 and 6.02, respectively. In the smaller towns rates as high as 135.52 were recorded in Hodal, 134.61 in Faridabad, 128.62 in Palwal, 124.50 in Firozpur-Jhirka, 111.22 in Bahadurgarh, 94.00 in Ballabgarh, 86.65 in Chuharkana Mandi, 86.61 in Gohana, 85.90 in Jhajjar, 85.35 in Dasuya, 80.40 in Zira, 79.51 in Hansi, 78.48 in Beri, 75.47 in Rohtak and 74.26 in Isakhel. The mortality from fevers is higher in all the districts of the province than in the previous year and is of course due to the prevalence of influenza in epidemic form in the last quarter of the year.

In Simla 22 cases were notified from Enteric fever—15 among Europeans and 7 among Indians. The localities in which the cases among Europeans occurred were the Grand Hotel, Snowdon, Abergeldie, Kaithu, Chota Simla, Alexandra Hotel, the Foreign Office, Young Men's Christian Association, Corstorphane's Hotel, Strawberry Hill, Elysium and Forest Lodge and those among Indians in Sanjauli, Kashmiri Mohalla, Lalpani, Old Butcher Khana and Kaithu. The cases were thus widely spread over Simla and except where more than one member of a family was attacked, no connection could be established between them. The case from Snowdon, a member of His Excellency the Commander-in-Chief's staff, was diagnosed bacteriologically as Paratyphoid B. The case at Forest Lodge was diagnosed on bacteriological grounds as Paratyphoid A. The remainder were all diagnosed clinically as Enteric fever, and there is no record of these having been subsequently confirmed bacteriologically.

In the Gurgaon District Malaria of Algid Type and Relapsing Fever were prevalent in severe form. These were investigated and the localities visited by the Civil Surgeon of the district and the Assistant to the Chief Malaria Medical Officer, Punjab.

Cases of Relapsing Fever were reported from Palwal and Ballabgarh Tahsils, and especially from Faridabad town. At the time of the visit of the Civil Surgeon 19 cases were in the febrile stage and 56 in the a-febrile period. The disease is apparently spreading as the Karnal District is now infected and the matter is being investigated as far as our limited resources in personnel permit. When it is possible to obtain workers for the purpose a detailed survey of the suspected areas will be undertaken.

**26. Dysentery and Diarrhoea.**—The total deaths from dysentery and diarrhoea, which amounted to 10,358 at a rate of 0.54, show a reduction of 0.26 and 0.16 compared with the previous year and the average for the preceding 5 years, respectively. This rate is only in excess of the rates recorded in the years 1909, 1910 and 1912 and is due partly to the absence of malaria in epidemic form in the year under review. The provincial rate was exceeded in 9 districts, but the excess was most marked in Rawalpindi where the rate was 3.90, Simla 2.03 and Kangra 1.32. In 5 districts the rate did not exceed 0.21 while it was as low as 0.02 in Hoshiarpur and 0.03 in Attock.

The urban and rural rates were 1.68 and 0.42 as against 2.49 and 0.64 in the year preceding.

**27. Respiratory Diseases.**—Respiratory diseases accounted for 52,786 deaths at a rate of 2.73 as against 54,392 deaths last year at a rate of 2.81. The rate in the year under report would have been much less had it not been for influenza, many deaths from which were recorded under this head. This is borne out by the

Fevers in municipal towns and rural circles (A. F. No. VI.-A. and B.).

A. F. No. X.

A. F. No. XI.



large number of deaths recorded in October and November, i.e., 7,300 and 7,377, respectively, as against an average of 3,564 and 3,885 recorded in these two months during the years 1912 to 1916. Exceptionally high rates were recorded in Gurdaspur 11.08, Simla 9.18, Sialkot 6.76, Ambala 5.24 and Amritsar 4.54, while very low rates were returned in Montgomery 0.39, Muzaffargarh 0.40, Mianwali 0.73, Gujranwala 0.84, Lyallpur 0.88 and Multan 0.92. These variations are probably due to a misclassification of deaths in individual districts, but the total rate for the whole province may be regarded as fairly accurately representing the death rate due to respiratory diseases.

Although the Respiratory death-rate as a whole shows an improvement, analysis of the rate for our two largest towns reveals an unsatisfactory state of affairs. For the six years 1913-1918 the rates in Lahore and Amritsar are as follows :—

Year.	LAHORE TOWN.		AMRITSAR TOWN.	
	Deaths from Respiratory diseases.	Rates.	Deaths from Respiratory diseases.	Rates.
1913	1,234	5.87	1,407	9.30
1914	1,069	5.08	1,331	8.79
1915	1,045	4.97	2,185	14.44
1916	997	4.74	2,365	15.63
1917	1,297	6.17	3,776	24.95
1918	1,810	8.61	2,700	17.84

The upward tendency is very marked and in my opinion is a reflection of the housing conditions in these two towns. These conditions are particularly bad in Amritsar and I look forward to the day when action on the lines of the Bombay City Improvement Trust Act will be taken to improve our large towns.

**28. Injuries.**—There were 6,191 deaths due to injuries at a rate of 0.32 compared with 0.37 last year and 0.37 the average for the preceding 5 years. The deaths were classified as follows :—

Suicide 335 (121 males and 214 females), wounds 505 (364 and 141), accidents 4,366 (2,504 and 1,862), snake bite 830, injuries inflicted by wild beasts 82 and rabies 73.

**29. All other causes.**—There were 110,294 deaths recorded under the head "all other causes" at a rate of 5.70 as compared with 6.91 last year and 6.66 the average for the preceding 5 years. The highest rates were recorded in Gurgaon 12.5, Ludhiana 11.2, Rohtak 10.3, Karnal 8.9 and Jhang 8.0 while very low rates were recorded in Gurdaspur 0.8, Dera Ghazi Khan 1.8 and Muzaffargarh 2.0. These marked variations in individual districts are due to misclassification.

**30. Rabies.**—The total number of patients from the Punjab that underwent anti-rabic treatment at the Pasteur Institute of India at Kasauli was 1,745 as against 1,475 last year. Of this number 124 were Europeans and 1,621 Indians. There were 20 deaths and 7 failures among Indians and in addition 3 cases are for various reasons still under enquiry. There were no deaths or failures among Europeans.



### Section IX.—Sanitary Works.

31. The report on Sanitary Works during 1918, furnished by the Sanitary Engineer to Government, Punjab, is contained in Appendix B to this report.

32. One hundred villages in Ferozepore and eight in Multan Districts were supplied with village sanitary note books during the year under report.

33. The District Board, Shahpur, agreed to give prizes to the two best villages in each tahsil for sanitary improvements, but no practical result was obtained during the year.

34. During the year under report the number of wells cleaned and parapets constructed rose from 5,082 in the previous year to 5,615 and from 531 to 608, respectively. The sum of Rs. 83,909 was spent for the purpose, showing an increase of Rs. 47,546, compared with the previous year. A new sanitary well has been sunk at Ker Baba in the Gujrat District at a cost of Rs. 1,388.

35. An income of Rs. 1,44,265 was derived from the sale of street sweepings in municipal towns during the year as against Rs. 1,39,082 in the previous year. The largest sums were realized in Amritsar, Sialkot, Lahore and Jhang.

36. There were 1376.67 acres of land under sewage irrigation in the principal towns and Rs. 43,570 were realized for its use. There was an increase of 29.70 acres in land thus irrigated and a sum of Rs. 5,993 in the amount realized.

37. It is reported that a sum of Rs. 2,000 was sanctioned by the District Board, Hissar, to help the villagers to carry out schemes of sanitation, but nothing has been actually spent during the year and no noticeable improvement has yet been effected in sanitation.

The regulations framed by the District Board of Gurgaon for the improvement of village sanitation and sanctioned by Government are being enforced in 10 large villages of each of the 6 tahsils in that district, while in the Ambala District similar rules remained a dead letter and in the Ludhiana District no resident came forward to accept the conditions of the rules. Similar schemes have been prepared by the District Boards of Jullundur and Lyallpur and sanction of Government has been applied for. It is hoped that these rules will tend to improve the sanitary conditions of at least those particular villages to which they are extended.

38. There was no change in the number (100) of municipalities during the year 1917-18, but the constitution of four new Notified Areas at Nurpur, Jakhal, Chuhanana and Dhariwal has brought the total number of these bodies to 104. The total income during the year, excluding the opening balance of Rs. 39,65,670 and "Extraordinary" and debts amounting to Rs. 12,90,318, was Rs. 72,61,273, and the total municipal expenditure on sanitation Rs. 23,92,552 as detailed below :—

	Rs.
(1) Water-supply ... ..	5,73,533
(2) Drainage ... ..	2,34,857
(3) Conservancy, including establishment, road cleaning and watering, latrines, etc. ...	8,93,975
(4) Health Officers and Sanitary Inspectors ...	83,989
(5) Vaccination ... ..	19,255
(6) Markets and slaughter-houses ...	28,098
(7) Roads ... ..	5,43,095
(8) Burning and burial of paupers ...	4,298
(9) Other sanitary requirements ...	11,452



The total income of District Boards, excluding opening balance, amounted to Rs. 88,16,599 and the expenditure on sanitation and vaccination Rs. 1,32,839.

The information regarding grants made for sanitary works is given in Appendix A appended to this report.

39. A list of works of public utility constructed during the year 1917-18, by private individuals at their own expense, is given below :—

Works of public utility by private individuals.

*Ambala Division—Ambala District.*—A pucca well at Ambala City at a cost of Rs. 1,000 by Rai Sahib Lala Ganga Ram, *Rais*, Ambala City.

*Rohtak District.*—A pucca well and a dharmasala at Salhawas at a cost of Rs. 3,000 by Todar Mal, son of Moti Ram, Mahajan, of Salhawas. A pucca well at Dubaldhan at a cost of Rs. 2,000 by widow of Gagan, Jat, Dubaldhan. A pucca well at Siwana at a cost of Rs. 2,000 by the widow of Tulsi Ram, Mahajan, Beri. A pucca well and a Dharmasala near Railway Station Kosli, at a cost of Rs. 2,000 by Kahan Singh, Zaildar, Kosli. A pucca well at Sundhrahti at a cost of Rs. 1,400 by Lala, son of Jodha, Mahajan, Sundhrahti. A pucca well on Jhajjar-Bahadurgarh Road at a cost of Rs. 3,000 by Nathu Lal, Contractor, Jhajjar. A pucca well on Jhajjar-Bahadurgarh Road at a cost of Rs. 3,000 by Chandu Lal, Mahajan, Jhajjar. A pucca well and a dharmasala at Rajpura at a cost of Rs. 2,400 by Niadar, son of Raju, Rati Ram, son of Pirbhu, Mahajan, Rajpura. A pucca well on Sonapat-Kharkhauda Road at a cost of Rs. 400 by Pirbhu, Jat, of Bainyapur. A pucca well at Harsana Kalan at a cost of Rs. 425 by Hardwari, Mahajan, of Harsana Kalan.

*Hissar District.*—A dharmasala and a pucca well on the road leading from Bhiwani to village Kunt at a cost of Rs. 8,000 by Ram Chander, son of Sri Kishen, and Kanhaya Lal, son of Ram Chander, Mahajan, of Bhiwani Janpal. A pucca well in village Lohari at a cost of Rs. 1,800 by Lal Chand, son of Ganesh Das, Mahajan, of Bhiwani.

*Gurgaon District.*—A pucca well for drinking at Kakrali village at a cost of Rs. 600 by Mussamat Mehr Kaur, widow of Kundan, Jat, of village Kakrali in Tahsil Palwal. A pucca well for drinking at village Patti Khurd at a cost of Rs. 600 by Radhka Das, disciple of Dewa Das, Bairagi, of village Patti Khurd, Tahsil Palwal. A pucca well for drinking at village Badha at a cost of Rs. 500 by Chajjan, son of Fateh, Mahajan, of Badha, Tahsil Palwal.

*Jullundur Division—Hoshiarpur District.*—A pucca serai and well at Tuto Muzara on Hoshiarpur-Garhshankar Road open to all sections of the public free of charge at a cost of Rs. 6,000 by Pandit Nil Kanth, son of Pandit Mutsadi Ram, Brahmin, of Tuto Muzara, Tahsil Garhshankar.

*Jullundur District.*—A well in the village Kang Sahib Rai at a cost of Rs. 100 by Puran Das and Shama, etc., of village Kang Sahib Rai, Tahsil Nakodar. A pucca Musafir-khana, with a well and 3 ghumaons of land attached to the building and well at a cost of Rs. 3,200 by Chaudhri Chuhan Singh, son of Budh Singh Jat of Garcha, Nawashahr Tahsil.

*Ludhiana District.*—A well on the road leading from Tihara to Talwandi Mallian, etc., villages of Ferozepore District, at a cost of Rs. 100 by Sher Ali, son of Mamun, washerman, of Tihara, Tahsil Jagraon.

*Ferozepore District.*—A well at village Daroli Bhai at a cost of Rs. 200 by Bhai Gajindar Singh, son of Bhai Hira Singh, of Daroli Bhai, Tahsil Moga. A well on Moga-Badhni Road at a cost of Rs. 300 by Sewa Singh and Dewa Singh, sons of Mahan Singh, Tarkhan, of Moga.

*Kangra District.*—A pucca well in Tika Bhajnu of Kaloha Mauza at a cost of Rs. 1,000 by Lala Dina Nath, Dayala and Ram Kishan, son of Mutsaddi, Sud, of Rakkar in Kaloha, Dehra Tahsil. A pucca well in Jarot village at a cost of Rs. 1,000 by Pandit Syama, son of Jati, Brahmin, of Katnaur, Dehra Tahsil.



## Section X.

40. The post of Sanitary Commissioner was held by the Hon'ble Colonel (now Major-General) H. Hendley, M.D., K.H.S., I.M.S., in addition to that of Inspector-General of Civil Hospitals till the 16th August when I relieved him and held charge for the remainder of the year. I held charge of the post of Deputy Sanitary Commissioner until I was relieved by Major Mackenzie, I.M.S., himself a former Deputy Sanitary Commissioner, on 16th August who remained in charge for the rest of the year. The appointment of Deputy Sanitary Commissioner was held both by Major Mackenzie and myself in addition to that of Professor of Pathology at the Lahore Medical College. Dr. K. A. Rahman, M.B., Ch.B. (Edin), D.P.H. (London), was Additional Deputy Sanitary Commissioner throughout the year.

41. Colonel Hendley inspected Sialkot, Lyallpur, Multan, Muzaffargarh and Dera Ghazi Khan. He also advised Bahawalpur State on the system of registration of vital statistics. In February he inspected Wazirabad and Gujrat; in March Campbellpur, Rawalpindi, Jhelum and Lalamusa; in April Karnal, Rohtak, Ferozepore, Ambala, made the first sanitary inspection of Simla; and also presided at the meeting at Amritsar in connection with the Amritsar Improvement Committee. In May he inspected Lahore and in August visited Amritsar.

When I took over charge I was busy in connection with the Simla Water-Supply Extension Scheme.

In October I inspected Kasauli and Simla, but had to postpone my inspection of King Edward Sanatorium at Dharampore on account of the prevalence of influenza. In connection with the influenza epidemic in November I toured in the northern parts of the province and visited Gujranwala, Wazirabad, Sialkot, Gujrat, Jhelum, Rawalpindi, Murree and Campbellpur and also the rural areas along the line of march. The Sanitary Engineer joined me at Rawalpindi and at the request of the Deputy Commissioner and Municipal Committee we made a conjoint inspection of Murree and drew up a scheme for the improvement of the sanitation of that town. At Rawalpindi we held a conference between the Civil and Military authorities in connection with the alleged fouling of the water-supply by the Municipal Sewage Farm and arranged a compromise which was accepted by both parties. We also, at the request of the Deputy Commissioner and Civil Surgeon, respectively, inspected and advised on the reconstruction of Agnew Ganj and the sanitary arrangements of the Railway Station including the Monro canteen. The canteen arrangements were perfect in every detail and we had to confess to Mrs. Walters and her co-workers that having come as critics we left as students. In December I inspected Multan, Ferozepore and Montgomery and also inspected the Central Jails at Montgomery and Multan in connection with Tuberculosis in Jails. The December touring was sadly hampered by the numerous Boards and Committees held that month.

42. It is not feasible for the Deputy Sanitary Commissioner to undertake any touring during the cold weather as his time is fully occupied with work at the Medical College and in supervision of the working of the Punjab Vaccine Institute which meets demands for vaccine lymph from the Overseas Forces and the Army in India in addition to the demands of the Civil population in Northern India. Early in the year I carried out experiments with my new Chloral Hydrate lymph in Lahore Tahsil which was kindly placed at my disposal by the Civil Surgeon, Lahore, for the purpose. On Sundays and other holidays, during which the Medical College was closed, I took the opportunity of personally verifying the results and at the same time inspecting general sanitation and birth and death registration in 47 towns and villages. During the College recess, June to middle of August 1918, I made a special tour through 39 towns and villages in the Native States of Rampur, Kumharsain, Theog, Keonthal and Koti Kiar (District Simla) for the purpose of inspecting vaccinations performed by the Special Staff, sanitation of rest-houses on the Hindustan-Tibet Road, birth and death registration, etc.



Major H. M. Mackenzie, I.M.S., during the remaining period of the College vacation at his disposal set out on a tour of inspection of vaccination, registration of births and deaths, and to investigate the outbreak of enteric fever reported to be prevalent alongside the Hindustan-Tibet Road from Simla to Kotgarh. This outbreak proved to be one of influenza and not enteric fever. He inspected 49 towns and villages in Bhajji, Kiar Koti, Kumbarsain States and Kotgarh Tahsil of Simla District and in Suket State of Kangra District. In November Major Mackenzie visited the following districts :—

- |                |                  |              |
|----------------|------------------|--------------|
| 1. Ferozepore, | 3. Muzaffargarh, | 5. Jhang,    |
| 2. Montgomery, | 4. Multan        | 6. Lyallpur, |

and conferred with the Deputy Commissioners and Civil Surgeons regarding the outbreak of influenza in epidemic form and the measures undertaken to combat it.

43. The Additional Deputy Sanitary Commissioner supervised the medical and sanitary arrangements of the Muktsar Maghi fair in the Ferozepore District in January and the following month made a sanitary and vaccination inspection of Chakwal and 50 villages of the Jhelum District. Sangla was visited early in March in connection with the insanitary condition of the loco tanks, after which he visited the Multan and Gurdaspur Districts and reported on the condition of Chakwal, Talumba, Kahrur, Dinanagar and Dera Nanak and inspected vaccinations and registration of births and deaths in these towns and 290 villages in the Multan and Gurdaspur Districts.

In April he supervised the medical and sanitary arrangements at the Pehowa fair in Karnal and Choa Saidan Shah and Katas fairs in Jhelum. On the outbreak of cholera in May in villages of the Jullundur Tahsil he visited these places several times and in July proceeded to Simla to assist the Health Officer in protecting Simla from cholera which had broken out in villages below Anandale in Patiala State. In August his presence was required in Karnal town where cholera persisted. While there he took the opportunity of visiting the site and tanks of the Sun Eclipse Fair at Thanesar for the preparation of a note on the improvement of pilgrim centres. He also made a sanitary inspection of Shahabad, Panipat, Sonapat, Ballabgarh, Palwal, Jagraon and Kartarpur towns. In October he attended a meeting at Nankana Sahib to discuss arrangements for the fair which he supervised when it was held in the middle of November. Later he attended meetings held at Lahore Cantonment, Rawalpindi and Ambala in connection with the arrangements to provide pure drinking water for troops at Railway Stations. At the close of the year he carried out a preliminary experiment with the clogged strainer of the tube well at Dera Ghazi Khan with a view to increase the yield of water.

44. Civil Surgeons made 156 inspections of towns and 1,553 of smaller towns and villages during the year as against 213 of towns and 1,240 of villages in 1917. Assistant Surgeons inspected 25 towns and 265 villages as compared with 17 towns and 47 villages in the previous year.

45. Although most of the districts in the Punjab have reported that there was very little malaria, quinine was distributed gratuitously by the district boards and municipalities in the affected districts through the zaildars, lambardars, inamdars, girdawars, the vaccination and sanitary staffs, compounders, local hakims, medical students, plague supervisors, itinerating dispensaries, compounders, etc., and by a house to house distribution system as well. In some of the districts, kerosine oil was used for the destruction of mosquitoes. In many of the districts the quininisation of school children was successfully carried out. The most notable are the Lyallpur District and Amritsar Municipality where under the quininisation schemes 87,044 and 30,558 quinine tablets of 3 grains each respectively were distributed with very good results.

In the Lahore District the district board distributed 3,000 tablets through the Plague Supervisors and District Sanitary Inspector.



The Civil Surgeon, Gurgaon, reports that sufficient quantity of quinine in bulk as well as in tablets was kept in reserve stock at head-quarters to meet the demand of the outlying dispensaries. In addition to their annual supply, 28,038 quinine tablets of 5 grains each had also been stocked in the Civil Surgeon's office by the district board for free distribution among the people of villages far from dispensaries.

In the Rawalpindi District the district board sold quinine tablets through the agencies of the school masters to check the spread of malaria.

In the Gujrat District quinine was supplied to the canal department at their own cost for canal labour. The Railway Department also received a sufficient supply of quinine for the use of their employees.

46. Owing to financial stringency it was not possible to do much in the way of filling up depressions, but still in some towns and districts gangs were employed to fill up the depressions especially at Hissar, Rohtak, Lahore, Gujrat, Jhelum, Mianwali, Montgomery and Lyallpur.

Forty-two notices were issued by the Lahore Municipality to owners to fill up depressions near the town of Lahore, out of which 27 have so far been complied with.

47. The Deputy Sanitary Commissioner remained *ex-officio* Professor of Hygiene of the King Edward Medical College, Lahore, throughout the year and delivered the prescribed course of lectures to the M. B., B. S. Class.

Lectures on hygiene at Medical College, Lahore.

48. Six classes each lasting a fortnight were conducted at the Punjab Vaccine Institute in the early part of the year and were attended by five District Superintendents of Vaccination and 29 District Vaccinators to receive instruction in the principles of Elementary Hygiene.

Lectures on principles of Elementary Hygiene to Vaccinators.

49. The municipalities of Ludhiana, Sialkot and Multan have not been able to obtain Health Officers and the general subject of Municipal Health Officers requires reconsideration. The matter is receiving my attention and in due course proposals will be submitted to Government. In the Lahore District a Joint Sanitary Inspector for the district board and minor municipalities was engaged for six months during the year, and it is proposed to secure the services of a Sub-Assistant Surgeon for this duty as soon as one is available. The district board, Rohtak, has also employed a separate Sanitary Inspector for the district to look after the sanitation of the rural areas.

Health Officers and Sanitary Inspectors.

The usual class of Sanitary Inspectors was held in the cold weather. At the examination, held at the end of the course, 21 passed and were granted certificates.

50. We have numerous agencies—official and non-official—for this work, but what has particularly impressed me is the dearth of suitable teaching material. I therefore, at my own risk, engaged an artist and photographer to prepare suitable diagrams and lantern slides from the large series of photographs I have prepared during my service. The lantern slides at first proved a difficulty as I could not obtain the services of a man with the necessary technical knowledge and finally I had to teach and train a man myself. The diagrams and lantern slides so prepared have received the cordial approval of the Sanitary Commissioner with the Government of India and other critics to whom they have been referred and the Sanitary Board generously covered the whole cost of the venture by a special grant. The want is a very real one and the spade work having been done it is my intention to submit proposals to Government for the purpose of putting this work on a more satisfactory footing.

Education of the General Public in Elementary Hygiene.



51. The towns of Mian Channu, Chichawatni Road, Khanewal and Jahanian shown as under construction last year have not yet been completed. The Civil Surgeon of Montgomery in reporting on Chichawatni says the ventilation of some of the private houses is defective and no latrines have been built. The present arrangements for water are absolutely insanitary and dangerous, but there is a proposal to provide proper pucca drains and water works. A site has been reserved for the purpose. In regard to the Khanewal and Mian Channu towns and mandis the Civil Surgeon, Multan, reports that construction is still in progress—he is not able to furnish any satisfactory report but the sanitary arrangements so far as he has seen appear satisfactory.

52. As the Provincial Laboratory of the Punjab the Pasteur Institute at Kasauli reported on the specimens noted below :—

Serum diagnosis for typhoid fever	...	...	35
Serum diagnosis for paratyphoid (A)	...	...	56
Serum diagnosis for paratyphoid (B)	...	...	
Serum diagnosis for Malta fever	...	...	20
Examination of blood for malaria	...	...	21
Examination of blood Sputum, etc., for tubercle bacillus	...	...	12
Examination of tumours	...	...	34
Wasserman test for syphilis	...	...	81
Miscellaneous tests	...	...	22
Examination of brain for Negri bodies	...	...	389
Vaccines, etc., sent out	...	...	489 doses.
Autogenous vaccine sent out...	...	...	612 „
Total			1,771

LAHORE:

W. H. C. FORSTER, LIEUT.-COL., I.M.S.,

The 15th May 1919.

Sanitary Commissioner, Punjab.



## APPENDIX A.

### PROCEEDINGS OF THE SANITARY BOARD, PUNJAB.

THE constitution of the Board was the same as in 1917, except that I held charge of the office of Secretary from the afternoon of the 16th August 1918 when Colonel H. Hendley, K.H.S., M.D., I.M.S., was transferred to the Military Department.

The Board met seven times during the year, five times in Lahore and twice in Simla.

The balance of Rs. 3,69,494 left over from the grant made during 1917-18 was fully utilized and out of an additional grant of one lakh a sum of Rs. 84,111 was spent, leaving a balance of Rs. 15,889 which lapsed to Government.

The following is a detail of the grants sanctioned out of the balance of Rs. 3,69,494 and the additional grant of 1 lakh, making a total of Rs. 4,69,494 :—

	Rs.
1. Jullundur Drainage Scheme ... ..	1,00,000
2. Chuharkana Drainage Scheme (Gujranwala District) ... ..	12,594
3. Panipat Drainage Scheme (Karnal District) ... ..	30,000
4. Sialkot Drainage Scheme (Tibba Jalian) ... ..	3,010
5. Muktsar Storm Water Channel (Ferozepore District) ... ..	26,097
6. Wadala Drainage Scheme (Sialkot District) ... ..	4,000
7. Khushab Water Supply Scheme (Shahpur District) ... ..	62,500
8. Pasrur Water Supply Scheme (Sialkot District) ... ..	2,231
9. Lahore Conservancy Scheme ... ..	25,000
10. Flooring of certain parts of Sadhaura Bazar (Ambala District) ... ..	5,052
11. Paving and flooring of certain parts of Hassan Abdal (Attock District) ... ..	731
12. Sambarial Drainage Scheme (Sialkot District) ... ..	550
13. Construction of New Weir at Pind Dadan Khan (Jhelum District) ... ..	950
14. Paving of streets of Shah Jiwana and Lalian (Jhang District) ... ..	3,671
15. Lecture Hall for Society for Promoting Scientific Knowledge, Lahore ... ..	2,639
16. Hoshiarpur Drainage Scheme ... ..	63,180
17. Murid Village Drainage Scheme (Jhelum District) ... ..	1,000
18. Jullundur Drainage Scheme ... ..	50,000
19. Lahore Conservancy Scheme ... ..	61,000
Grand Total ... ..	4,53,605

A fresh grant of 4 lakhs was placed at the disposal of the Sanitary Board for allotment during 1918-19 and from this the following grants were made up to 31st December 1918, leaving a balance of Rs. 3,73,399 which will be accounted for in the next year's report :—

	Rs.
1. Lala Musa Drainage Scheme (Gujrat District) ... ..	723
2. Flushing of drains at Hazro (Attock District) ... ..	4,000
3. Silt clearance of the tank at Pind Dadan Khan (Jhelum District) ... ..	990
4. Diversion of Sarwana Nala at Hazro (Attock District) ... ..	2,805
5. Gurdaspur Drainage Scheme ... ..	2,252
6. Improvement of wells at Basdoda (Gurgaon District) ... ..	914
7. Sangla Drainage Scheme ... ..	14,112
8. Purchase of books, etc., for the use of the office of the Secretary, Sanitary Board ... ..	100
9. Education of public in Elementary Hygiene ... ..	500
10. Dhariwal Drainage Scheme (Gurdaspur District) ... ..	205
Total ... ..	26,601



The schemes noted below were approved of by the Board and administrative sanction accorded in each case :—

	Rs.
1. Certain sanitary schemes in the Chuharkana town (Gujranwala District), estimated to cost ... ..	25,187
2. Panipat Drainage Scheme (Karnal District), estimated to cost ... ..	60,701
3. Storm Water Channel at Muktsar (Ferozepore District), estimated to cost ... ..	52,195
4. Wadala Drainage Scheme (Sialkot District), estimated to cost ... ..	12,086
5. Dhobi Ghat for the Lahore City, estimated to cost ... ..	30,856
6. Flooring of certain parts of Sadhaura (Ambala District), estimated to cost ... ..	12,762
7. Pavement in certain parts of the Rawalpindi City, estimated to cost ... ..	13,958
8. Sangla Drainage Scheme, estimated to cost ... ..	28,225
9. Storm Water Drainage and filling of depressions at Montgomery town, estimated to cost ... ..	51,701 and 46,821 respectively

The Hoshiarpur Drainage Scheme amounting to Rs. 1,26,61 was approved of by the Sanitary Board and submitted to Government in the Civil Department for administrative sanction which was accorded.

The Board accorded revised administrative sanction to the Dera Ghazi Khan Water-Supply Extension Scheme at a revised estimated cost of Rs. 1,85,708.

The Government in the Public Works Department accorded technical sanction to the scheme noted below which had previously received the approval of the Board :—

	Rs.
1. Simla Water-Supply Extension Scheme, estimated to cost ... ..	2,33,745
2. Jullundur Drainage Scheme, estimated to cost ... ..	5,37,374
3. Gojra Drainage Extension Scheme, estimated to cost ... ..	13,929
4. Sillanwali (Shahpur district) Drainage Scheme, estimated to cost ... ..	63,800

Revised technical sanction was accorded to the Lala Musa Drainage Scheme and Dera Ghazi Khan Water-Supply Extension Scheme at a revised estimated cost of Rs. 24,540 and 1,85,708, respectively.

Orders were passed by Government on the suggestion of the Sanitary Engineer in regard to the maintenance of sanitary works by local bodies and other officers in connection with the working of the municipalities in the Punjab.

Model rules as proposed by the Sanitary Board in regard to projections and tharads over drains in conformity with United Provinces rules have also been framed by Government and are enforced in all intra-mural drainage schemes.

The growing of crops in the vicinity of the Montgomery town has been restricted by Government as suggested by the Sanitary Board, Punjab.

A Drainage Board has been constituted by Government to deal with questions of flooded or water-logged areas in the Province thus relieving the Sanitary Board from this additional work.



## APPENDIX B.

### ANNUAL REPORT OF THE SANITARY ENGINEER TO GOVERNMENT, PUNJAB, FOR THE YEAR 1918.

THE post of Sanitary Engineer to Government, Punjab, was held by Mr. A. R. Astbury throughout the year.

*Lahore Water-Supply.*—The tube well on the Ferozepore road delivering into the Mozang service reservoir has given such good results that the system of providing these wells at different points on the distribution system has been continued. A 10-inch tube well has been sunk at Lake Road and a good discharge of remarkably pure water has been obtained. The bacteriological examinations have shown the water to be practically sterile.

A third well at Davies Road is being sunk and the results are awaited with interest as other wells not far distant have hitherto yielded a somewhat brackish water.

The yield of the wells at Badami Bagh has been increased by sinking tube wells in them.

*Lahore Drainage.*—A few minor extensions of the surface drainage scheme have been carried out at a total cost of Rs. 23,541.

The sewerage scheme prepared for the municipal committee by Messrs. Lane Brown and Hewlett is still under consideration.

*Lahore Queen Mary College and Preparatory School combined Water-Supply.*—These institutions are unfortunately situated as regards a supply of water from the municipal distribution system, and to provide a supply which would be sufficient for irrigating the estate, and for a water carriage sanitary installation, a 7-inch tube well has been sunk. The water is slightly brackish and cannot be used for dietetic purposes, but is otherwise satisfactory. All drinking water is therefore drawn from the municipal distribution system.

*Amritsar Water-supply.*—In March 1918 great difficulty was experienced as coal could not be obtained and wood had to be used instead. A proposal to increase the water-supply is being considered by the local body with special reference to the extension of the under-ground drainage system. The number of house connections was increased by 232. No further connections are to be given until the supply is increased. The working of the tube wells sunk in different parts of the town for flushing the main drain has been satisfactory.

*Amritsar Dhobi Ghât.*—The ghât has proved to be very popular and others will be provided when funds permit.

*Amritsar Conservancy Tramway.*—Early in the year 1918 two second-hand engines were purchased from the Irrigation Department for Rs. 14,000 and these have been working well. As the quantity of refuse for disposal is increasing yearly. It is proposed by the municipal committee to instal a modern Refuse Destructor and the Municipal Engineer is in correspondence with manufacturers.

*Amritsar Sewage Disposal Works.*—There has been an increase in the income on account of the sale of the sullage by Rs. 4,425. These disposal works are the most satisfactory in the Province.

*Amritsar Storm Water Channel.*—The channel was cleaned during the year at a cost of Rs. 6,400. A special committee was appointed by the Local Government to enquire into and report on the larger measures of sanitation in Amritsar City and environs, particularly the tract lying between the Lahore Branch and the Main Branch Lower of the Upper Bari Doab Canal. Their report is now before Government.

*Rawalpindi Supplementary Intra-mural Drainage Scheme.*—Estimated cost Rs. 92,368. This work was commenced in 1915 and the total expenditure to end of the year under report was Rs. 40,355. The work is complete, except in two mohallas. Practically no work was done during 1918 owing to funds not being forthcoming. The Executive Engineer has referred the matter to the municipal committee.

*Narapur Fair Area Water-Supply.*—Estimated cost Rs. 25,275. In view of the increase in the cost of materials this scheme has been abandoned at the suggestion of the Commissioner. There are other important sanitary schemes in the Rawalpindi District where the money could be used to better advantage.



*Bhera Drainage.*—This work was estimated to cost Rs. 78,682. It has been completed, but the land compensation still remains to be paid by the Deputy Commissioner, Shahpur District.

*Improvement to Chowk Well at Sargodha.*—Estimated cost Rs. 6,683. The work has been completed. Water from the well is raised by an oil engine of 2½ B. H. P. driving a pump. The water being brackish is used chiefly for flushing the drains and watering the roads.

*Lalamusa Drainage.*—An estimate for this work amounting to Rs. 23,817 was sanctioned in 1916, but had to be revised to include an additional length of outfall and certain minor alterations in the intra-mural system.

Consequently the work was stopped until the revised estimate for Rs. 24,540 was sanctioned in February 1918. The contractor having failed in his contract, the work is being carried out by daily labour and the progress made during the year is satisfactory. The total expenditure to end of the year was Rs. 13,951.

*Wazirabad Drainage.*—The work was started in 1915 and completed in May 1918. The flushing well near the Palkhu Nullah cracked when pumped. The defects are being remedied.

*Eminabad Drainage.*—The work was started on 8th August 1916 and completed in June 1918. The well which furnishes the flushing water has cracked and the flushing tank has developed leaks. Expenditure to end of year was Rs. 19,103 against the sanctioned estimate for Rs. 31,751.

*Rupar Drainage—*

	Rs.
Estimated cost ... ..	37,861
Expenditure upto 31st December 1918 ... ..	36,920

The work is nearly completed. The remaining portion of work (5 chains of intercepting drain) is pending acquisition of land.

*Kalka Drainage—*

	Rs.
Estimated cost ... ..	36,531
Expenditure upto 31st December 1918 ... ..	32,036

The work has been completed except the item of flushing arrangements.

*Rewari Water-Supply.*

	Rs.
Estimated cost .. ..	3,15,873
Expenditure to date ... ..	2,34,679
Expenditure in 1918 ... ..	25,611

The work was started in July 1916. The progress on the work during 1918 was far from satisfactory owing to the scarcity of labour, and the epidemics of plague, malaria and influenza. The trenches were taken down to the depth of 50 feet when 3 slips occurred, and caused the death of a contractor and a labourer. The steel reservoir was fitted up and the rising main laid up to the point where it should join with the pumps. The work is being carried out by the district board on behalf of the municipal committee.

*Lyallpur Water-Supply Extension.*—The work was commenced on the 22nd July 1916. Progress was hampered by the difficulty of obtaining imported stores. The mill channel has been widened and poncelet wheel fixed during the year. The new pumping plant has not yet arrived from England.

*Extra-mural Drainage Scheme, Pathankot and Batala Drainage.*—Minor improvements were carried out during the year.



*Jullundur experimental Tube Well in the Empress Gardens.*—This work has been in progress since 1917. The stratum of clay which had to be pierced before the water bearing sand was reached proved to be unusually stiff and thick and made the sinking work very laborious with the somewhat inadequate plant available.

The work has been attended with unfortunate mishaps which have delayed matters considerably. When it has been completed a description of the difficulties encountered should be written for the information of those who may have to deal with this class of water-supply work.

*Improvements to Water-Supply at Dalhousie.*—The work has been completed at a cost of Rs. 16,915 against the sanctioned estimate for Rs. 15,903.

*Constructing Intra-mural Drainage at Gurdaspur.*—The work has been completed at a cost of Rs. 19,243 against the sanctioned estimate for Rs. 18,324.

*Constructing a new chimney and fixing boiler at Handesra.*—Estimated cost Rs. 21,019. The work was completed during 1918.

*Extension to Dera Ghazi Khan Water-supply.*—Estimated cost Rs. 1,85,708. The work has been completed. The expenditure during 1918 was Rs. 10,144. The scheme was handed over by the municipality to Public Works Department for maintenance. The new pumping plant has given no trouble, but the reinforced brick balancing reservoirs have shown a tendency to leak. Minor works in connection with the scheme were carried out at a cost of Rs. 3,726. Experimental work to discover the best means of clearing a clogged tube well is in progress.

*Shujabad Drainage.*—No work has yet been started except collection of some materials such as bricks, &c. Sanction to the revised project is awaited.

*Experimental boring in the Police Lines at Ambala.*—An 8-inch boring pipe was sunk to a depth of 170 feet. Considerable difficulty was experienced in piercing the strata which consisted of soft and hard clays. At a depth of 170 feet the pipe sludger jammed inside the boring pipe and the wire rope supporting the sludger snapped. The boring has been discontinued as no sand stratum had been met. This boring is one more item of evidence that the alluvium at Ambala is particularly unfavourable to well supplies.

*Ambala Water-Supply.*—Experimental tube well on the right bank of the Tangri near Handesra.

The object of the experiment is to discover a means of getting a plentiful supply of water from the sub-soil for the Ambala Water-Supply. Owing to the presence of clay beds to an unknown depth and the absence of layers of water-bearing sand wells are generally unsatisfactory at this place. There is, however, the sandy bed of the Tangri river, a hill torrent of very variable flow. An ordinary tube well would be no use here as the thickness of the sand layer in the neighbourhood of the river is too small. To meet this difficulty a special large diameter tube well made of wood and galvanised iron wire is being tried, the idea being to compensate the deficiency in length by excess in the circumference of the well.

*Simla Water-Works Extension.*—Progress has been practically confined to the preparation of the site for the additional filter beds at Dhali, and of detailed estimates for the various extension works.

The impossibility of getting pipes will, it is hoped, disappear and then work can be pushed forward.

*Simla Sewerage.*—A number of useful extensions of a minor kind have been made, and one large one to provide for the Bemloe Estate which is being developed as a residential area by the Government of India.

*Simla Surface Drainage.*—A few ravines have been paved and a small amount of protection work has been carried out. Much more in both directions is very necessary in the interests both of sanitation and public safety.

The survey staff of this office has been fully employed on preparing sanitary schemes for local bodies. Projects for a surface drainage scheme, a storm drainage scheme, and a water-supply depending on tube wells have been prepared in my office for the Sadar Bazar of Lahore Cantonments, and submitted to the military authorities for disposal.

A surface drainage scheme for the Sadar Bazar of Ferozepore has also been prepared and submitted.



The following rough and fair schemes for which survey and levelling was done were worked out in detail in this office :—

*Rough Estimates.*

	Rs.
1. Dinanagar Drainage Scheme ... ..	23,141
2. Shujabad „ „ ... ..	18,732
3. Leiah „ „ ... ..	70,643
4. Begowala „ „ ... ..	17,085
5. Ballabgarh „ „ ... ..	71,628
6. Sialkot and Hajipura Suburb Drainage Scheme ...	3,44,133
Total	5,45,862

*Fair Estimates.*

	Rs.
1. Sillanwali Drainage Scheme ... ..	58,731
2. Karnal „ „ ... ..	87,505
(Extramural drainage and flushing arrangements for the main city.)	
3. Rohtak Drainage Scheme ... ..	1,89,967
4. Experimental tube well on the banks of Tangri opposite the village of Sarangpur ... ..	5,509
5. Sangla Drainage Scheme ... ..	28,225
6. Drainage site for Gazetted officers residence in Lahore—	
Original sanctioned ... ..	14,694
Revised ... ..	37,612
Alternative ... ..	33,599
7. Draining the office compound of Public Works Department Secretariat ... ..	1,061
8. Proposed lavatory for Indian clerks inside Public Works Department Secretariat ... ..	1,154
9. Replacing the present pumping plant at the Septic tank in Queen Mary College, Lahore ... ..	3,066
10. Special repairs to lavatory attached to boarding house, Queen Mary College, Lahore ... ..	2,738
11. Trial boring in connection with the sinking of a tube well at Sonapat ... ..	775
12. Diversion of Sarwana Nala at Hazro ... ..	5,609
Total	4,70,245

The total cost of the out door establishment including draftsmen employed on the preparation of plans for these scheme comes out to Rs. 4,901 for the year and works out about 0.48 per cent. on the total cost of the above schemes. The projects, both rough and fair, prepared by the Executive Engineers in the Public Works Department or the local bodies that received technical approval of this office were 34 in number with a total estimated cost of Rs. 2,69,498.

The sewage disposal installations in Lahore in charge of the Sub-Divisional Officer, Sanitary Sub-Division, were satisfactorily maintained during the year



During the year I visited Rewari, Simla, Kalka, Dharmpur, Wazirabad, Sialkot, Jandiala, Multan, Dera Ghazi Khan, Campbellpur, Hazro, Jullundur, Baha-ud-din, Sangla, Ferozepore, Amritsar, Gujranwala, Montgomery, Lyallpur, Ludhiana, Rawalpindi, Murree, Lahore Cantonment. I also made a comprehensive tour of the Dasuya Tahsil with Mr. Langley, Deputy Commissioner.

Various sanitary schemes completed or in progress were also inspected by the Assistant Sanitary Engineer, and the Sub-Divisional Officer, Sanitary Sub-Division, and advice given in the form of Inspection notes.

The accompanying statement shows water pumped at the various water works in the province together with cost of pumping.

A. R. ASTBURY,

*Sanitary Engineer to Government, Punjab.*



## STATEMENT A.

STATEMENT OF WATER PUMPED AND USED IN THE WATER WORKS STATIONS—SIMLA, LAHORE, AMBALA, AMRITSAR, SARGODHA, LYALLPUR, LUDHIANA, SIMLKOT, DERA GHAZI KHAN, TOBA TEK SINGH, GOJRA, PIND DADAN KHAN, JARANWALA, RAWALPINDI AND MURREL AND COST OF PUMPING IN 1918.

No.	Name of Water Works.	Population supplied.	Water used daily.	Daily consumption per head, in gallons.	Lift including friction, in feet.	Daily hours of pumping.	Average pump—Horse power—during the year.	QUANTITY AND COST OF FUEL USED PER ANNUM.		Coal or oil consumption per horse power hour.	Cost of small stores and establishment at pumping station.	Total cost of fuel small stores, and establishment.	Cost of pumping per horse power h. ur.	Original level average of water surface in all the wells.	Average of water surface level below ground level of all the wells in 1918.	REMARKS.
								Wood or Electric current in lbs.	Coal cost.							
1	Simla { Cherot Nala Chair	30,316	419,474	13.83	1,300	1.78	1,397	672,700 units Rs. 21,022	Rs. 2,919	...	8,604 0 0	32,545 0 0	1.06	...	...	
		...	...	...	2,800	6.4	142.86	10,110	...	...	5,543 0 0	15,053 0 0	6.75	...	...	
2	Lahore ...	208,216	3,142,047	15.1	128	184	109.8	Mds. 39 Rs. 39	Tons 1,125 Rs. 16,312	...	Stores 5,569 0 0 Establishment 10,200 0 0	32,171 0 0	...	6.7	Winter 677 Summer, 674	
3	Ambala ...	24,491	219,266	8.9	75	24	3.4 H. P.	Rs. 7,405	Rs. 178	...	Stores 4,253 0 0 Establishment 6,104 0 0	15,008 0 0	Rs. A. P. 0 9 8	23' to 24'	22' to 22' 9"	
4	Amritsar ...	140,697	1,599,121	11.36	88	15 (29.5 hours) 3 pumps	24 H. P.	Mounds 560 Rs. 280	Mds. 23,042 Rs. 13,360	...	8,335 0 0	21,875 0 0	0 1 4	8' 8"	10' 9"	
5	Sargodha ...	12,500	122,722	9.8	3	15.2	3.5	Mds. 1,110 Rs. 823.3.2	Mds. 4,613 Rs. 3,802.15.7	...	Stores 453 9 9 Establishment 3,280 8 8 Coal charges 7,329 8 6	9,699 13 8	0 3 4	...	...	
6	Lyallpur ...	19,578	247,467	12.6	65	13 hours	6.25 H. P.	Rs. 3,988.12.4	Mds. 4,55.2	...	4,343 3 9	7,132 0 1	0 4 2	...	...	



7	Ludhiana	...	44,170	5,351,035	11-9	95-5	15-3	10-4 B.H.P.	Mds. 2606 Rs. A. P. 1,433 4 10	Tons Cwt. 320 2 Rs. 3,352	...	Stores 2,247 2 5 Establishment 5,610 15 9	1-043 7 0	0 2 2	W. 28' 1" S. 31' 7"
8	Sialkot	...	51,900	653,908	12-6	180 feet	13	33 H. P.	Mds. 110 Rs. 88	Tons Cwt. 613 5 Rs. 13,375	0-8	Stores 653 0 0 Establishment 7,910 0 0	21,456 0 0	0 2 3	785-47
9	Dera Ghazi Khan	...	16,853	117,581	7	25-6 feet	H. M. 6 30	2-4 P. H.	...	Rs. 2,634 4-0	...	554 0 0	...	0 8 11	20' below ground or R.L. 383-4
10	Toba Tek Singh	...	3,009	121,460	40-03	45	11-17	24	...	1-8 0	...	1,288 0 0	3,088 0 0	0 5 0	...
11	Gojra	...	5,417	24,800	4-5	32 feet	34 hours	1-13	...	Oil 1,500 Crude oil 2 seers per hour.	...	Small stores 1 0 0 Establishment 3 0 0 Rs. 4 daily	Cost of oil 1,500 0 0 S. S. 355 0 0 Establishment 1,080 0 0 Total 2,945 0 0	2 0 0 nearly.	...
12	Pind Dadan Khan	...	10,590	14,178	1-33	61	10	0-43	Mds. Srs. 36 20 Rs. 34-1-8	Tons Cwt. 142 5 Rs. A. P. 3,214-3-10	Tons Cwt. 1 8	1,373 12 2	4,922 1-8	2 15 1	12 feet
13	Jaranwala	...	80,000	45,000	Gallons. 15	56-4	7 1/2 hours	1-6 H. P.	Nil.	Oil 1,917 gallons Rs. A. P. 2,290 12 1	3-5	Establishment 1,080 0 0 Small Stores 4,079 4 5	4,854 14 4	1 1 9	No wells.
14	Rawalpindi	Topi Park. W. at Ridge.	...	511,700	...	118	11-12	27-5	Mds. 914 Rs. 91-4-0	Tons Cwt. Qr. 546 12 3 Rs. A. P. 932 12 0	11 11 lbs.	3,516 4 0	14,540 4 0	0 2 1	...
15	Murree	...	...	61,400	...	101-72	7-2	4-54	Mds. 88 Rs. 88	Tons Cwt. Qr. 121 11 3 Rs. A. P. 2,431 12 0	22-83 lbs.	514 4 0	3,034 0 0	0 4 0	...
15	Murree	...	6,890 15,940 1,215	24,517 Ga. lons. 1-24 -62 1-24 4,794	...	104	3 hours for days pumped.	4-25	Wood Mds. 133 Rs. 289	...	...	133 0 0	422 0 0	0 8 4	Springs ...

Water pumped for 64 days only,  
average daily consumption—  
Gallons.  
Europeans at 1-24  
8,544  
Indians at 62  
9,672  
Animals at 1-24  
1,607  
Miscellaneous  
4,794  
Total 24,517



## APPENDIX C.

Statement showing the death rates from cholera, small-pox, fevers and dysentery and diarrhoea for the five years preceding and for the period since the introduction of drainage or water-supply or both in the undermentioned towns :—

Towns.	DATE OF COMPLETION OF WORKS OF		AVERAGE ANNUAL DEATH RATE SINCE THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY OR BOTH.				AVERAGE ANNUAL DEATH RATE FOR THE FIVE YEARS' PERIOD PRECEDING THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY, OR BOTH.				REMARKS.
	Drainage.	Water supply.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	
1	2	3	4	5	6	7	8	9	10	11	12
Ambala ...	...	1895	0.5	0.4	13.3	3.5	0.5	0.4	19.3	6.4	
Simla ...	...	1893	0.2	0.4	13.5	0.8	...	1.1	17.1	1.4	
Ludhiana ...	...	1895	0.4	0.7	19.0	1.8	0.4	2.7	20.8	1.6	
Jagraon ...	...	1907	0.6	1.2	15.0	1.6	0.6	1.5	9.3	2.0	
Ferozepore ...	...	1916	0.6	0.7	13.5	1.5	0.2	0.7	9.8	1.1	
Zira ...	...	1913	0.7	2.1	19.8	0.4	0.3	4.0	16.6	0.9	
Fazilka ...	...	1913	1.0	1.4	24.3	2.0	2.2	2.6	21.4	1.7	
Lahore ...	...	1881	0.7	0.8	17.6	1.6	1.9	1.6	27.8	2.3	
Amritsar ...	...	1885	0.7	1.3	23.8	2.1	0.4	0.7	31.3	1.8	
Gurdaspur ...	...	1914	0.2	0.1	19.6	3.2	0.8	0.5	13.2	2.6	
Dalhousie ...	...	1894	0.1	0.1	12.3	2.0	...	...	9.6	2.4	
Pathankot ...	...	1915	0.8	0.2	26.1	4.7	0.8	0.7	12.4	2.8	
Sialkot ...	...	1915	0.9	0.04	11.8	2.7	3.0	1.2	9.6	2.3	
Gujranwala ...	...	1892	0.6	0.6	18.4	1.3	0.5	0.6	19.7	1.7	
Gujrat ...	...	1906	0.9	0.3	20.4	1.9	0.3	0.2	16.9	1.9	
Bhara ...	...	1917	...	0.1	30.8	1.9	0.03	0.7	17.8	1.7	
Sargodha ...	...	1907	...	0.1	8.5	0.4	Not available.				
Jhelum ...	...	1908	0.1	0.4	13.4	1.8	1.5	0.3	14.0	2.1	
Pind Dadan Khan ...	...	1909	0.1	0.9	23.4	3.5	1.1	0.7	23.1	3.6	
Rawalpindi ...	...	1907	0.5	0.3	19.0	2.3	0.5	0.1	16.4	3.4	
Murree ...	...	1894	0.1	0.1	16.7	2.2	0.7	0.4	14.8	0.9	
Mianwali ...	...	1904	0.2	0.6	22.0	2.3	Not available.				
Lyallpur ...	...	1904	0.1	0.6	12.2	0.8	2.8	0.4	16.3	2.1	
Gojra ...	...	1916	...	...	8.2	0.4	...	...	6.5	...	
Multan ...	...	1907	0.3	0.7	20.1	2.4	0.01	1.9	16.9	2.4	
Dera Ghazi Khan ...	...	1913	...	0.6	18.2	2.4	2.0	0.6	15.9	1.6	
Kalka ...	...	1890	0.4	0.1	14.5	2.4	1.7	0.2	15.2	3.9	

\* Figures available for four years only

† Figures for 1914 and 1915 only



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APPENDIX D.

THE INFLUENZA EPIDEMIC OF 1918 IN THE PUNJAB

*History of the epidemic in the Punjab.*—The disease was first heard of in July, but up to the end of that month no cases had been admitted into either the Albert Victor or Mayo Hospitals, Lahore. It was definitely known to be in existence at Karachi amongst military details, but, so far as the Punjab was concerned, the position was vague and uncertain. In August cases were definitely recognised in Lahore, Simla and Amritsar, and during that month all three places suffered from a mild epidemic of the disease. This epidemic, popularly known as the first epidemic, certainly justified the text-book statement that Influenza is a disease with a comparatively low case mortality. In Simla the European population was principally affected, but in the plains stations the cases were mostly among Indians.

During September the area of infection rapidly increased, and by the end of the month the Province was infected from Gurgaon to Campbellpur. During this, the so-called second epidemic, the disease was still mild in type, and beyond the inconvenience resulting from sickness amongst important employees there was no forecast of what was to come. Actually the death rates for August and September were the lowest recorded during the year.

In October the character of the disease changed completely and the Punjab began to experience the worst epidemic in its history, and one which, with almost diabolical malignancy selected young adults for its victims. A peculiarly fatal type of pneumonia appeared as a concomitant of the disease, and from October 15th to November 8th the state of the Province was such as to render adequate description impossible. The hospitals were choked so that it was impossible to remove the dead quickly enough to make room for the dying: the streets and lanes of the cities were littered with dead and dying people: the postal and telegraph services were completely disorganised; the train service continued, but at all the principal stations dead and dying people were being removed from the trains; the burning ghâts and burial grounds were literally swamped with corpses, whilst an even greater number awaited removal; the depleted medical service, itself sorely stricken by the epidemic, was incapable of dealing with more than a minute fraction of the sickness requiring attention; nearly every household was lamenting a death, and everywhere terror and confusion reigned.

Throughout the length and breadth of the Province, from Gurgaon to Campbellpur, from Simla to Multan, in towns and in villages, the disease raged with a fury new in our experience. The great malaria epidemic of 1908 and the worst years of plague fade into insignificance beside this epidemic which in the three months—October-December—killed 962,937 people.

By November the 8th the worst of the epidemic was over in the urban area, but throughout the month it continued to take heavy toll from the rural population and particularly in the northern and north-eastern areas. The hill tracts, excluding Simla and the Sutlej valley which showed the malignant stage of the epidemic at about the same time as the rest of the province, were infected late. Murree was reported as badly infected on November 11th and I visited it on the 15th to find that the mortality was trivial. Generally speaking the epidemic began to wane from the second week of November.

In December the epidemic was virtually over except in the Kangra District and the remote Hill tracts where it was prevalent and of a virulent type. As late as the first week of January travellers from the Kulu valley reported meeting with dying people on the roadside. But the provincial death rate fell to normal for the second half of December and for practical purposes the epidemic ceased early in December. There has been no recrudescence up to date (15th May 1919).

2. *Mortality*—The mortality attributable to influenza can be arrived at in two ways. Omitting 1917 which was an abnormal "fever" year and taking the quinquennium 1912—16, a representative average mortality can be obtained for the following headings:—

- (1) Total mortality from all causes.
- (2) Mortality from fevers.
- (3) Mortality from respiratory diseases.

In accordance with my instructions deaths from Influenza were returned under the two headings, Fevers and Respiratory Diseases, and therefore the mortality attributable to Influenza can be arrived at in two ways—

- (1) By determining the excess of the total mortality for 1918 over the average for the selected quinquennium.
- (2) By determining the combined excess mortality from fevers and respiratory diseases for 1918 over the average for the selected quinquennium.



Actually the results obtained by either method are practically identical as shown by the following test table for the two critical months of October and November and consequently the total mortality criterion has been adopted as being the simpler.

*Statement showing total deaths and deaths from Fevers and Respiratory Diseases during October and November 1918 and the average for these months during 1912-16.*

				Total.	Fevers.	Respiratory.
October 1918				269,224	247,938	7,300
Average 1912-16				50,102	32,616	3,564
Difference				218,822	215,322	3,736
November 1918				661,027	637,959	7,377
Average 1912-16				52,577	34,185	8,885
Difference				608,450	603,774	3,492
a	October 1918			269,224	247,938	7,300
	November 1918			661,027	637,959	7,377
Total				930,251	885,897	14,677
b	Difference—October 1918			218,822	215,322	3,736
	Difference—November 1918			608,450	603,774	3,492
Total				827,272	819,096	7,228

(a) Actual deaths in October and November 1918.

(b) Difference between actuals in 1918 and average 1912-16 in October and November.

Tables giving actuals are attached and the general results can be briefly stated—

(a) *Total mortality attributable to influenza*.—962,937. This is equivalent to 4.98 per cent. of the population as shown by the 1911 census, or 4.58 per cent. on the corrected population. The whole of the Influenza mortality was recorded between 1st October and 31st December, the peak period of the epidemic being the first half of November.

(b) *Mortality by age and sex*.—This is shown in Influenza Forms I and II.

After 5 years the female rate was greatly in excess of the male rate for all age periods.

The periods of greatest mortality are from 15 years upwards, the relative mortality increasing with every 10-year period, so that the highest rates are recorded for the period 60 years and over.

(c) *Case Mortality*.—Very few definite figures can be obtained in this connection. The European community, as a whole, escaped lightly. The mortality among commissioned officers and their families was trifling and the same can be said for those lower down in the social scale. For example, the Military Asylums at Sanawar and Ghora Galli return a total of 398 cases with no deaths. So far as the European community is concerned it may be safely said that the case mortality was well under 5 per cent.



In the case of the Indian community the only available statistics are those offered by the Jail Department and these are given in the table below.

*Statement showing the total number of cases and deaths from Influenza in the Jails of the Punjab (including Delhi) up to 30th November 1918.*

AGE.	CASES.						DEATHS.					
	Hindus.		Muhammadans.		Sikhs.		Hindus.		Muhammadans.		Sikhs.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
9-20	77	3	238	5	38	...	13	1	14	2	2	...
20-30	298	19	1,297	23	261	...	50	...	124	9	24	...
30-40	226	9	1,116	15	173	...	19	...	119	4	15	...
40-50	85	...	256	...	52	...	15	...	41	3	7	...
50-60	43	5	122	8	21	...	5	3	21	...	7	...
60-70	11	...	44	1	13	...	4	1	10	...	2	...
70-80	1	...	11	1	3	...	...	...	1	1	3	...
Total	741	36	3,084	53	561	...	106	5	330	19	60	...

Total cases 4,475.

Total deaths 520

Case mortality 11·6 per cent.

It will be seen that the Jail Department returns 4,475 cases with 520 deaths, giving a case mortality of 11·6 per cent. This comparatively high rate is due to the inclusion of the statistics of the district jails where the conditions with regard to medical aid are not so good as in the Central Jails. For the Central Jails of Multan and Montgomery the case mortality amongst convicts was 6 per cent., and I should say that this is a representative figure in the case of Indians of the better class and who are able to obtain the full benefit of qualified medical aid. The jail statistics also give useful information as to the case mortality by race and sex. The actual figures are—

	Male.	Female.
Hindus	14·3 per cent.	13·9 per cent.
Muhammadans	11	36
Sikhs	11	No figure.

The very high case mortality amongst Muhammadan women is of special interest.

For the poorer classes of Indians no statistics are available, but the general opinion is that the case mortality can be put at anything from 50 per cent. upwards.

To sum up—

The case mortality in Europeans was well under 5 per cent., in Indians of the better class and those provided with qualified medical aid about 6 per cent., in the poorer classes anything from 50 per cent. upwards.

An average case mortality of 5 per cent. would indicate that every person in the province suffered from the disease which was far from being the case. The average case mortality must therefore have been considerably higher than 5 per cent. Much could be written on this subject, but I will content myself with saying that hygienic conditions of livelihood coupled with qualified medical aid offer the best prospects of recovery from the disease.

3. *Relative intensity in different areas.*—With the solitary exception of the town of Murree all reporting centres show a very considerable mortality due to influenza. Murree was visited by the epidemic as previously noted, but it is the only centre with a mortality less than that of the critical average.

Omitting Murree the following statements can be made:—

(1) The south-eastern districts and the south generally suffered most.

Districts with a death rate from influenza of 60 and upwards—

1. Gurgaon	...	(123)	4. Hissar	...	(67)
2. Rohtak	...	(96)	5. Montgomery	...	(65)
3. Ludhiana	...	(77)	6. Karnal	...	(61)



Districts with a death rate from influenza of less than 30 are—

1. Kangra ... (23)	4. Hoshiarpur ... (26)
2. Simla ... (24)	5. Sialkot ... (29)
3. Rawalpindi ... (26)	

(2) Rural circles suffered more than urban areas.

*Influenza forms III A and B.*

Rural circles with a death rate from influenza exceeding 60 are—

1. Gurgaon ... (126)	5. Montgomery ... (67)
2. Rohtak ... (98)	6. Lahore ... (65)
3. Ludhiana ... (81)	7. Karnal ... (64)
4. Hissar ... (68)	

Rural circles with a death rate from influenza of less than 30 are—

1. Simla ... (19)	3. Hoshiarpur ... (26)
2. Kangra ... (23)	4. Rawalpindi ... (28)

Towns with a death rate from influenza exceeding 100 are—

1. Hodal, Gurgaon District ...	(130)
2. Beri, Rohtak District ...	(124)
3. Faridabad, Gurgaon District ...	(124)
4. Bahadurgarh, Rohtak District ...	(122)
5. Firozpur, Gurgaon District ...	(115)
6. Palwal " " ...	(107)
7. Hansi, Hissar District ...	(101)

Towns with a death rate from influenza of 10 and under are—

1. Murree, Rawalpindi District ...	(0)
2. Una, Hoshiarpur District ...	(3)
3. Sangla, Gujranwala District ...	(7)
4. Thanesar, Karnal District ...	(8)
5. Khushab, Shahpur District ...	(10)
6. Khanpur, Hoshiarpur District ...	(10)
7. Chawinda, Sialkot District ...	(10)
8. Kalabagh, Mianwali District ...	(10)

The points elicited by these statistics require consideration. The first question which naturally arises is—Why does Murree occupy the proud position of being the only reporting centre with no discoverable mortality from Influenza? Murree from the sanitary point of view is "suspect;" its vital statistics have attracted the attention of the Secretary of State; experts have sat in consultation to decide what should be done to rehabilitate Murree; and yet it occupies the position it does with regard to Influenza!! I have no explanation to offer. I can only say that Murree certainly did not escape for I visited it at the height of the epidemic and there were many cases but, as I noted at the time, the case mortality was trivial.

Why did the south-eastern districts, and particularly Gurgaon, suffer so severely? Here it is possible to offer a reasonable explanation. An epidemic of Relapsing Fever affected the south-eastern districts and particularly Gurgaon during the Influenza period and no matter what criterion we adopt the deaths from this disease must appear in the Influenza total. Apart from deaths directly due to Relapsing Fever there is also the effect on case mortality from double infection to be considered. For example in North Persia Typhus as an uncomplicated infection is not very fatal, but when supervening on a malarial infection it is an extremely fatal disease. I am therefore of the opinion that the high death rates returned by the south-eastern districts are in the main due to the combined action of Influenza and Relapsing Fever.

(3) Why did the rural areas suffer most?

The rural areas differ from the urban areas in the following important respects:—

- (1) For practical purposes the rural areas even in normal times are without qualified medical aid.
- (2) From the circumstances of the case the rural population is unable to benefit from communal effort—itsself energised by competent directing authority—to anything like the same extent as the urban population.

In my opinion these two factors are responsible for the greater mortality in the rural areas.



4. *Path of infection.*—In my opinion infection is undoubtedly aerial and similar to that which obtains in the case of pneumonic plague. I am opposed to the assumption that infected dust, infected by the discharges of patients, is a possible source of infection. Coughed up material from the air passages must teem with the causal organism, and given conditions where people are crowded together under unfavourable conditions as to ventilation, for example in Indian houses and trains, then such a highly infectious disease as Influenza requires no dust theory to explain its propagation. This epidemic has shown us that for infectivity Influenza far surpasses even pneumonic plague.

*Infection of the Province.*—Foci of infection were established by returned military details and Post Office employees, and from these foci the infection was rapidly spread by the agency of general travel, trains, cinemas, and so forth. The public generally were inclined to attribute the original infection to the Post Office with the idea at the back of their minds that the infection was actually conveyed by letters, parcels, etc., from previously infected areas on the coast. The Post Office no doubt was an important agency in the spread of infection, but not by means of letters, etc. Postal employees at Karachi and Bombay were early infected, and they in return infected the Railway Postal Service with the result that important delivery stations were also infected. In this way local foci of infection were established, and the habits of postal peons are such as to ensure that sooner or later the establishments on their beat are likely to become infected. In Lahore, Simla, and other places the original infection could be traced to the Post Office, but the following example will suffice to show how rapidly infection can be carried by infected individuals. In September I requested Major Mackenzie, I.M.S., Deputy Sanitary Commissioner, to inspect the Hindustan-Tibet Road as there were rumours of an outbreak of enteric fever on the route. He found no evidence of enteric fever, but gave the following interesting report. A recruit suffering from symptoms of Influenza had arrived at Narkanda and stayed a night with the Khansamah of the Hotel there. Three days later the Khansamah and his wife went down with Influenza. Within a few yards of the Khansamah's house lived a blacksmith and the two used to inter-visit. A few days after the Khansamah was attacked all the members of the blacksmith's house were down with the disease. The postal peons used to come and sit in the Khansamah's house, with the result that they all contracted the disease and two of them died from it. In this case the disease was first imported by an infected military detail, and it is easy to see how the postal peons would serve as a disseminating agency. From Narkanda the infection was quickly taken to Kotgarh, and in a very short time the Hindustan-Tibet Road was thoroughly infected. Major Mackenzie had just returned from military duty at Karachi where he had seen many cases of Influenza, and he consequently had no difficulty in at once recognising the condition. The cases he saw at Narkanda were all of the early mild type to be referred to later. Incidentally it will be noted that the incubation period of the disease is very short—two days in the example quoted—and this is an important factor in ensuring the rapid spread of such a highly infectious disease.

*The disease.*—Prior to the present epidemic Influenza was regarded with apathy and scepticism by the vast majority of the profession. The older physicians, and those influenced by them, continued to diagnose Influenza, but under that term they included a heterogeneous collection of moderately severe affections of the respiratory tract. Bacteriologists had ascertained the real cause of the vast majority of the so-called cases of Influenza, and consequently bacteriologists and the rising school of physicians regarded the diagnosis with contempt. Text-book descriptions based on the epidemic of 1890 were of course extant, but the general attitude was as stated. The present epidemic has taught us much, and from the standpoint of preventive medicine it will be necessary to consider certain clinical features of the disease as exhibited to us.

The early mild cases displayed a clinical picture of considerable interest, for, with one important exception, it was practically identical with the common 3—5—7 day fever popularly known as "sandfly fever." The details of the picture were—

(1) Fever of from 3—7 days' duration. The shorter periods of fever were marked by a high maximum with slight remission and the longer periods by a more irregular chart with considerable remission.

(2) Slow pulse rate compared with the temperature. In the short fever cases a pulse rate of 80—90 with a temperature of 104 was the general rule.

(3) Great pain in the head, back and limbs.

(4) Sub-normal temperature with marked physical and mental depression for 7—10 days during convalescence.

(5) Respiratory distress with catarrhal inflammation of the larger air passages.

With the exception of (5) the picture is identical with that of "sandfly fever," my records of over 800 cases of which show the respiratory lesion as invariably absent. This is a point of considerable importance.

In one other respect the two conditions differed. In my experience sandfly fever has no case mortality, whereas in the mild type of Influenza there was a small but definite case mortality due to broncho-pneumonia.



In the malignant form of the disease the clinical picture was very different. A concomitant and very fatal form of pneumonia made its appearance. This pneumonia was of three types—

(1) A low form of broncho-pneumonia, very fatal, and with surprisingly little in the way of physical signs. In these cases the patients rapidly died of what was equivalent to suffocation.

(2) A hæmorrhagic pneumonia characterised by copious sanguineous expectoration and clinically indistinguishable from pneumonic plague. This form was very fatal, though inferior to plague in this respect. *Post-mortem* the condition differed from pneumonic plague in histological type being a true Lobar pneumonia. The lung in these cases corresponded to the stage of "Red hepatisation" of Lobar pneumonia.

(3) The so-called "Septic pneumonia." *Post mortem* the lung in these cases corresponded to the stage of "Grey hepatisation" with generally a considerable amount of purulent infiltration. In this form death was generally delayed until the second week. In all these pneumonic forms the pulse was rapid from the onset. Pleurisy, frequently hæmorrhagic, and commonly going on to suppuration, was a common complication. Apart from these pneumonic forms there were—

- (1) The cerebral form, simulating exactly a cerebral crisis of malaria, and usually terminating fatally in 48 hours.
- (2) The tonsillar-laryngeal form, characterised by "sore throat" and a negligible case mortality.

From this brief description it will be seen that from August to September the disease closely simulated sandfly fever which is common about that time and is frequently epidemic in September. In September 1912, for example, I myself saw 386 cases of sandfly fever in Lahore, all of which would now be promptly diagnosed as Influenza by the average physician.

From October onwards the disease closely simulated pneumonic plague, Lobar pneumonia, and malignant malaria, all of which are liable to be epidemic at that time. Before the present epidemic had familiarised us with the clinical aspects of Influenza I have not the slightest hesitation in saying that the average physician would have diagnosed the early cases as sandfly fever and the malignant cases as pneumonic plague, Lobar pneumonia, broncho-pneumonia or malignant malaria according to circumstances.

These facts afford the student of preventive medicine ample food for reflection. Assuming a code of preventive measure to have been devised for Influenza it is obviously necessary that we should be reasonably sure of a diagnosis of the disease. There is only one certain method of diagnosis, and that is to determine the presence of the causal agent. When the causal agent is unknown and diagnosis has to be based on a composite clinical picture the probabilities of error are enormously increased. It is in the early stages of a threatened epidemic that preventive measures are most likely to be useful, and this is just the stage in Influenza where diagnosis is very likely to err.

*Bacteriology of the disease.*—All Medical Officers without exception had to aid in treating the sick and no bacteriological work of any importance was done in the Province.

#### *Preventive measures.*

From a study of the present epidemic the following salient facts have emerged:—

- (1) Influenza is extraordinarily infectious and infection is by the aerial route from case to case.
- (2) The conditions which obtain in Punjab dwellings, in trains, in places of amusement, such as cinemas and theatres, and at fairs are favourable to the spread of infection.
- (3) Postal peons and others who go from place to place visiting many households and sitting in kitchens, etc., constitute important disseminating agencies.
- (4) All classes and creeds are liable to suffer, but the mortality varies with classes. Europeans who live under almost ideal hygienic conditions suffer very slightly. Indians under good conditions of livelihood and assured of proper medical attendance, food, and clothing, escape comparatively lightly. The people who suffer most are the poor and the rural classes, whose housing conditions, medical attendance, food and clothing are in defect.
- (5) In the present epidemic the poor and the rural classes were adversely affected by the economic conditions resulting from the war and the failure of the monsoon. Food prices were high, a sufficiency of blankets and warm clothing almost impossible to obtain, and milk was scarce owing to the fodder famine.
- (6) The stress of the mortality falls on young adults.

What preventive, as apart from relief, measures can be devised on the basis of our experience? These can be considered under two heads—(1) General prophylaxis, (2) Personal prophylaxis.



*General Prophylaxis.*

1. *Housing conditions*—The improvement of housing conditions hardly comes within the region of practical politics at present, but there are some points worthy of mention. It has been the general experience during this epidemic that persons living or treated under conditions approximating as closely as possible to open air conditions suffered least. Several medical officers informed me that they noticed a marked difference in the mortality of those living in upper stories and those living in lower stories. A general instruction could be issued emphasising this point and advising the people to adopt open air conditions as far as possible in the face of a threatened epidemic. Provision for extensive temporary hospital accommodation in the form of tents and *chapper* structures might be made at the large towns. As soon as possible the housing conditions in our large towns should be seriously dealt with on the lines of the various Improvement Trust Acts in other Provinces.

2. *Land quarantine*—This is absolutely out of the question, and it is obvious that the Postal Service could not be suspended. The Postal Department could be instructed to carry out rigid inspection of the travelling staff so as to minimise as far as possible the risks due to infected employees serving the public. Schools, colleges, etc., where numbers of young adults are crowded together, could be closed by executive order at the first signs of a threatening epidemic.

3. *Provision of qualified medical aid*.—This I consider to be the most important of all possible preventive measures and until we have on an average one qualified practitioner per 100 square miles it will be impossible to really deal with serious epidemics. The local practitioner in rural areas must of necessity be the Health Officer of his beat and until we have a sufficiency of practitioners dotted about in the rural areas we will not be able to organise a really efficient public Health Service. On the whole, so far as general measures are concerned, it comes to this. In the face of a threatened epidemic schools, colleges, etc., can be closed early; the people can be advised to eschew railway travelling, places of amusement and fairs; fairs can be prohibited; general advice as to open air living can be issued; provision can be made for extensive temporary hospital accommodation; the Medical Department on the basis of its present experience can organise the forces at its disposal; a volunteer organisation of laymen to assist the poor can be formed in urban and rural areas. This latter measure would connote the formation of local committees to co-ordinate measures. Finally, the Post Office could be asked to institute rigid medical inspection of its travelling staff.

*Personal Prophylaxis.*

1. *Preventive inoculation*.—This measure has of course been greatly advocated, but there is much to be said against it. In the first place we are not yet certain as to the true cause of the disease. Secondly, re-infections have been the rule in the present epidemic and I have met with many cases where people have had three separate attacks in less than a few months. No vaccine can give greater protection than an attack of the disease, and it therefore remains to be seen whether a prophylactic vaccine will have any real value. But assuming that a vaccine as valuable as plague vaccine is evolved it will be of little value except in the case of the well-educated classes who in any case suffer slightly. Our previous experience with regard to extensive campaigns of inoculation against plague is sufficient to show the trifling value of even a reliable vaccine as a prophylactic in the Punjab.

2. *Antiseptic treatment of the Naso-Pharynx*.—This measure has proved of the greatest value when sensibly carried out, and is one on which I would lay the greatest stress. It is simple, unobjectionable, and, if the materials are provided, one which the people readily adopt.

3. *Attention to personal hygiene and avoidance of all crowded places.*



## SHOWING TOTAL DEATHS REGISTERED FROM ALL CAUSES ACCORDING TO AGE IN THE DISTRICTS

1	2	3		4		5		6		7		8		9	
No.	DISTRICTS.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.		15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
		3	4	5	6	7	8	9	10	11	12	13	14	15	16
AMBALA DIVISION.															
1	Hissar ...	4,598	4,151	4,487	4,650	2,060	2,189	1,060	1,245	590	621	7,885	9,773	5,674	6,818
2	Rohtak ...	6,107	5,391	5,857	6,246	2,674	2,879	2,046	2,451	2,834	3,285	6,613	8,668	5,132	7,203
3	Gurgaon ...	5,391	4,776	5,101	5,362	3,883	4,104	3,560	4,239	5,126	6,241	8,073	9,398	6,669	7,952
4	Karnal ...	6,031	5,648	4,778	4,976	1,846	2,085	1,773	2,100	2,275	2,346	6,239	6,764	4,977	5,726
5	AMBALA ...	3,898	3,611	3,070	2,992	2,215	2,074	2,168	2,214	2,148	2,280	2,824	2,710	2,143	2,230
6	Simla ...	132	123	74	63	47	43	48	43	87	41	130	97	117	79
JULLUNDUR DIVISION.															
7	Kangra ...	3,972	3,244	2,135	2,012	929	930	813	808	945	1,201	2,555	3,154	2,418	2,360
8	Hoshiarpur ...	4,571	4,216	4,283	4,330	1,554	1,674	1,146	1,198	1,189	1,108	3,313	3,621	2,935	2,860
9	JULLUNDUR ...	4,757	4,822	3,620	3,537	2,604	2,730	2,366	2,376	1,677	1,503	2,840	2,722	2,599	2,268
10	Ludhiana ...	3,805	3,892	2,219	2,230	2,221	2,337	2,942	2,716	3,000	2,936	3,523	3,250	3,724	3,564
11	Ferozepore ...	5,840	5,353	5,957	5,402	2,897	2,854	2,180	2,355	2,467	2,312	9,403	9,159	3,579	3,771
LAHORE DIVISION.															
12	LAHORE ...	5,925	5,140	6,176	5,741	3,952	3,951	3,989	3,809	3,501	3,328	6,257	5,831	5,281	4,762
13	Amritsar ...	5,142	4,736	5,437	5,132	2,326	2,297	1,871	2,021	2,350	2,099	4,234	3,976	3,657	3,328
14	Gurdaspur ...	4,877	4,148	4,049	3,974	2,620	2,520	2,554	2,425	2,655	2,545	4,698	4,671	3,597	3,043
15	Siakot ...	4,698	4,108	5,870	5,201	2,562	2,262	2,286	2,173	2,241	2,033	2,785	2,664	2,644	2,550
16	Gujranwala ...	4,463	3,686	4,443	3,837	3,499	3,171	3,044	2,970	3,159	2,839	4,958	4,504	4,240	4,321
RAWALPINDI DIVISION.															
17	Gujrat ...	3,240	3,359	2,769	2,789	2,344	2,392	2,296	2,441	2,199	2,119	2,792	2,690	2,720	2,750
18	Shahpur ...	2,916	2,363	2,675	2,443	1,920	1,762	1,730	1,898	2,030	1,904	2,760	2,606	2,337	2,273
19	Jhelum ...	1,681	1,625	1,874	1,829	1,027	1,145	848	930	737	790	1,915	2,217	2,355	2,597
20	RAWALPINDI ...	2,226	2,053	1,781	1,670	957	1,012	918	922	715	854	1,906	2,790	2,204	2,590
21	Attock ...	1,754	1,572	1,497	1,444	925	975	948	905	1,183	1,142	2,687	2,813	2,329	2,408
22	Mianwali ...	1,847	1,529	878	882	480	520	435	403	391	415	1,725	1,886	1,721	1,798
MULTAN DIVISION.															
23	Montgomery ...	2,823	2,437	2,813	2,539	1,871	1,751	1,844	1,714	2,055	1,893	2,650	2,368	2,477	2,319
24	Lyallpur ...	6,094	4,780	3,727	3,649	2,332	2,304	2,124	2,064	2,150	2,105	2,580	2,559	2,633	2,587
25	Jhang ...	3,077	2,946	2,253	2,074	1,160	1,218	917	968	1,067	956	2,295	2,574	1,921	2,274
26	MULTAN ...	3,480	3,102	2,756	2,507	1,815	1,630	1,998	1,983	2,412	2,724	4,614	4,409	4,421	3,994
27	Muzaffargarh...	1,917	1,551	1,462	1,124	1,075	959	1,114	867	1,183	942	3,747	3,591	3,555	3,297
28	D. G. Khan ...	1,406	1,093	1,469	1,222	1,337	1,142	1,115	960	1,117	838	3,420	3,565	3,404	3,046
Total ...		105,863	95,410	93,490	89,477	55,032	54,910	50,133	51,028	53,483	53,470	109,435	114,940	91,573	95,263
Total average 1912-16.		92,649	81,298	58,531	55,173	17,654	17,642	12,590	12,910	10,236	10,097	19,942	21,445	19,214	19,831
Increase or Decrease.		13,019	11,112	36,959	34,304	37,378	37,268	37,543	38,118	43,247	43,373	89,493	93,495	72,559	75,437
Death rate per 1,000 during 1918.		248.83	235.91	93.72	96.02	37.13	43.69	37.94	54.77	53.80	73.56	58.03	72.66	63.50	79.57
Average death rate per 1,000 during 1912-16.		218.17	208.44	56.67	59.21	11.91	14.01	9.53	13.86	10.30	13.89	10.57	13.53	13.28	16.56
Increase +		+30.66	27.47	37.05	36.82	25.22	29.58	28.42	40.91	43.50	59.67	47.46	59.10	50.22	63.01



## FORM No. I.

OF THE PUNJAB DURING THE YEAR 1918.

10		11		12		13		14		15			16			17	
40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		DEATH RATE PER 1,000 OF POPULATION.			Increase +						
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	1918.			Average, 1912-16.						
								Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	No.
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
3,689	4,301	2,819	3,141	4,088	4,462	36,880	41,351	81.1	112.9	97.2	28.9	31.3	30.0	55.2	81.6	67.2	1
3,788	4,532	3,043	3,248	3,845	4,331	41,939	48,334	108.8	146.7	126.3	29.4	30.8	30.1	79.4	115.9	96.2	2
5,542	5,954	5,086	5,046	5,692	6,075	54,123	59,177	139.1	174.1	155.4	31.6	33.1	32.3	107.5	141.0	123.1	3
3,687	4,002	3,125	3,112	3,216	3,448	37,947	39,907	86.7	110.2	97.3	34.8	38.6	36.5	51.9	71.6	60.8	4
2,325	2,151	2,056	1,961	2,543	2,424	25,394	24,647	71.0	89.6	79.1	30.9	38.5	34.2	40.1	51.1	44.9	5
104	46	79	40	115	70	942	645	42.8	49.8	45.4	19.4	25.0	21.5	23.4	24.8	23.9	6
1,934	1,481	1,703	1,304	3,486	2,908	20,890	19,402	52.4	52.7	52.6	28.6	30.8	29.7	23.8	21.9	22.9	7
2,285	1,707	1,975	1,488	4,213	3,339	27,474	25,541	54.8	61.2	57.7	29.9	33.8	31.7	24.9	27.4	26.0	8
2,359	2,079	2,649	2,235	4,167	3,603	29,728	27,875	67.5	80.3	73.1	29.6	36.8	32.8	37.9	43.5	40.3	9
3,403	3,023	2,373	2,450	1,781	1,713	29,001	28,111	98.8	125.7	110.4	29.8	37.1	33.0	69.0	88.6	77.4	10
2,850	2,674	2,955	2,547	4,027	3,783	41,955	40,210	80.6	97.5	89.0	28.5	33.1	30.5	58.1	64.4	57.5	11
4,060	3,306	3,262	2,703	4,804	3,811	47,307	42,382	81.4	97.2	88.1	29.9	35.0	32.1	51.5	62.2	56.0	12
3,050	2,644	2,811	2,264	5,521	4,726	36,499	33,193	73.7	86.5	79.3	34.3	40.7	37.1	39.4	45.8	42.2	13
3,020	2,667	2,628	2,222	3,799	3,254	34,797	31,964	74.7	87.2	80.2	32.2	37.4	34.5	42.5	49.8	45.7	14
2,504	2,084	2,308	1,871	4,525	3,769	32,414	28,775	61.1	66.5	63.5	31.8	37.2	34.2	29.3	29.3	29.3	15
4,053	3,683	3,596	2,911	4,837	3,909	40,342	35,731	77.8	88.2	82.4	34.0	38.5	36.0	43.8	49.7	46.4	16
2,836	2,551	2,815	2,522	4,342	3,417	23,353	26,970	70.8	78.2	74.2	32.5	36.7	34.4	38.3	41.5	39.8	17
2,027	1,877	1,834	1,600	2,702	2,154	22,931	20,680	60.8	66.6	63.5	25.8	28.6	27.0	35.0	38.0	36.5	18
2,137	2,246	1,759	1,619	2,445	2,107	16,778	17,005	64.0	70.3	67.0	30.8	33.0	31.9	33.2	37.3	35.1	19
1,660	1,581	1,294	1,072	2,300	1,923	15,961	16,437	59.6	68.5	63.8	36.4	39.5	37.9	23.2	29.0	25.9	20
1,685	1,569	1,522	1,423	2,001	1,666	16,541	15,917	61.2	65.0	63.0	30.3	31.9	31.0	30.3	33.1	32.0	21
1,718	1,543	1,609	1,511	1,479	1,288	12,283	11,775	68.3	72.9	70.5	29.0	29.8	29.4	39.3	43.1	41.1	22
1,994	1,869	1,887	1,633	2,816	2,667	23,230	21,210	84.1	93.0	88.2	21.8	24.1	22.8	62.3	68.9	65.4	23
2,587	2,351	2,650	2,324	3,825	3,141	29,702	27,864	59.0	72.3	64.8	21.2	26.7	23.6	37.8	45.6	41.2	24
1,638	1,502	1,503	1,247	2,804	2,182	18,635	17,961	67.2	75.3	71.0	25.8	27.2	26.5	41.4	48.1	44.5	25
3,970	3,168	3,461	2,751	4,725	3,613	33,552	29,861	77.1	81.6	79.1	24.1	26.5	25.2	53.0	55.1	53.9	26
2,477	2,095	2,016	1,363	2,891	2,006	21,437	17,795	69.5	68.2	68.9	26.7	28.0	27.3	42.8	40.2	41.6	27
2,429	2,048	1,832	1,300	2,779	2,283	20,308	17,497	74.6	76.9	75.6	21.9	22.4	22.1	52.7	54.5	53.5	28
75,761	70,734	66,650	58,908	95,818	84,072	797,343	768,217	75.2	88.0	81.0	29.5	33.2	31.2	45.7	54.8	49.8	
19,576	16,823	19,224	15,239	44,809	36,740	312,425	290,198	...	...	...	...	...	...	...	...	...	
56,185	53,911	47,426	43,669	51,009	47,332	434,918	478,019	...	...	...	...	...	...	...	...	...	
71.09	79.11	93.71	108.14	144.64	164.73	75.16	88.01	...	...	...	...	...	...	...	...	...	
18.37	18.82	27.68	27.98	67.64	71.99	29.45	33.25	...	...	...	...	...	...	...	...	...	
52.72	60.30	66.68	80.16	77.00	92.74	45.71	54.76	...	...	...	...	...	...	...	...	...	



## INFLUENZA FORM

SHOWING AVERAGE NUMBER OF DEATHS REGISTERED FROM ALL CAUSES

1	2	3		4		5		6		7	
No.	DISTRICTS.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.		15 YEARS AND UNDER 20 YEARS.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
AMBALA DIVISION.											
1	Hissar ...	4,087	3,418	2,639	2,537	699	638	375	352	294	260
2	Rohtak ...	3,919	3,356	1,835	1,654	453	429	381	362	384	343
3	Gurgaon ...	3,642	3,200	2,032	1,965	554	521	504	445	457	373
4	Karnal ...	4,690	4,110	2,462	2,329	664	646	537	534	574	484
5	AMBALA ...	3,361	3,357	1,548	1,614	483	494	419	486	352	324
6	Simla ...	116	94	38	29	12	10	11	11	16	15
JULLUNDUR DIVISION.											
7	Kangra ...	3,515	3,040	1,294	1,315	427	444	322	336	320	504
8	Hoshiarpur ...	4,191	3,754	2,578	2,641	750	850	581	671	432	455
9	JULLUNDUR ...	3,945	4,189	2,128	2,242	752	794	555	624	447	452
10	Ludhiana ...	2,762	2,739	1,207	1,151	514	482	476	471	494	468
11	Ferozepore ...	5,030	4,777	3,335	3,108	908	865	597	533	493	455
LAHORE DIVISION.											
12	LAHORE ...	5,242	4,786	4,069	3,585	1,680	1,021	648	656	496	495
13	Amritsar ...	4,988	4,861	3,474	3,312	904	919	730	765	531	544
14	Gurdaspur ...	4,071	3,486	2,995	3,034	718	704	530	570	531	554
15	Sialkot ...	4,380	3,966	3,662	3,633	1,109	1,137	872	916	716	750
16	Gujranwala ...	4,510	3,994	3,636	3,503	1,384	1,474	898	1,000	508	458
RAWALPINDI DIVISION.											
17	Gujrat ...	2,910	2,695	2,407	2,431	975	1,029	740	831	612	601
18	Shahpur ...	2,914	2,464	1,843	1,772	694	694	471	506	341	335
19	Jhelum ...	1,856	1,714	1,252	1,256	453	496	323	365	240	248
20	RAWALPINDI ...	2,287	2,066	1,264	1,335	529	591	447	463	307	328
21	Attock ...	2,013	1,839	1,407	1,426	527	567	345	315	219	202
22	Mianwali ...	1,744	1,404	980	1,060	332	342	153	148	104	93
MULTAN DIVISION.											
23	Montgomery ...	2,046	1,841	1,244	1,162	377	358	222	211	165	143
24	Lyallpur ...	4,107	4,098	2,289	2,373	604	562	418	398	324	310
25	Jhang ...	2,655	2,323	1,101	1,061	402	388	233	237	159	160
26	MULTAN ...	3,616	3,300	1,554	1,457	487	444	345	385	366	416
27	Muzaffargarh ...	2,480	2,144	1,250	1,241	448	373	243	196	185	161
28	Dera Ghazi Khan ...	1,572	1,293	1,038	947	415	340	214	173	169	166
Total ...		92,649	84,298	56,531	55,173	17,654	17,642	12,590	12,910	10,236	10,097



## No. II.

ACCORDING TO AGE IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1912-16.

8		9		10		11		12		13		14
20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		No.
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
13	14	15	16	17	18	19	20	21	22	23	24	25
941	973	615	662	696	563	759	574	1,596	1,481	12,691	11,458	1
689	762	645	681	713	628	792	651	1,524	1,295	11,335	10,161	2
935	930	809	824	940	773	869	729	1,576	1,495	12,318	11,255	3
1,241	1,246	1,090	1,141	1,152	1,001	1,081	896	1,729	1,599	15,220	13,966	4
854	919	809	816	857	695	793	617	1,575	1,313	11,051	10,585	5
49	40	40	34	40	25	40	22	65	44	427	324	6
726	1,193	811	960	870	808	889	736	2,236	2,005	11,410	11,341	7
875	1,109	899	979	984	799	1,025	706	2,696	2,139	15,011	14,103	8
757	795	715	723	767	619	777	582	2,195	1,771	13,038	12,791	9
638	654	649	622	604	534	520	438	892	744	8,756	8,303	10
798	811	676	699	672	538	692	521	1,590	1,332	14,821	13,639	11
1,136	1,044	932	799	918	669	870	581	2,052	1,616	17,383	15,252	12
1,145	1,153	957	881	910	706	931	676	2,406	1,811	16,976	15,628	13
1,045	1,107	995	966	1,024	846	950	776	2,139	1,643	14,998	13,686	14
887	976	834	911	856	794	838	769	2,743	2,225	16,897	16,077	15
1,126	989	1,051	957	1,043	808	993	718	2,450	1,716	17,599	15,617	16
924	956	990	1,016	834	815	738	677	1,882	1,623	13,012	12,674	17
545	589	542	614	531	485	558	413	1,276	993	9,710	8,865	18
565	677	645	730	626	645	600	529	1,524	1,332	8,084	7,992	19
770	920	974	1,035	840	811	727	626	1,590	1,316	9,735	9,481	20
594	624	683	707	584	546	589	496	1,225	1,080	8,186	7,802	21
232	254	258	306	276	271	334	267	803	667	5,216	4,810	22
273	279	253	286	268	241	313	250	870	712	6,031	5,485	23
428	452	391	426	409	364	404	321	1,301	968	10,675	10,302	24
338	370	330	389	377	340	400	328	1,164	889	7,159	6,485	25
542	558	608	586	689	609	710	598	1,584	1,337	10,501	9,690	26
519	635	594	647	637	526	588	419	1,288	975	8,232	7,317	27
370	430	419	434	409	364	449	323	838	619	5,953	5,089	28
19,942	21,445	19,214	19,831	19,576	16,823	19,224	15,239	44,809	36,740	312,425	290,198	



## INFLUENZA FORM III-A.

SHOWING TOTAL DEATHS FROM ALL CAUSES IN THE RURAL CIRCLES OF THE  
PUNJAB IN 1918 AND THE AVERAGE DURING 1912-16.

No.	A—Rural Circles.	Average, 1912 —16.	1918.	DEATH RATE PER 1,000.		Increase. +	No.
				Average, 1912 —16.	1918.		
AMBALA DIVISION.							
1	Hissar ... ..	20,973	69,972	28.93	96.51	+ 67.58	1
2	Rohtak ... ..	19,314	83,190	29.53	127.18	97.65	2
3	Gurgaon ... ..	21,707	106,728	32.15	158.07	125.92	3
4	Karnal ... ..	25,936	71,965	35.84	99.43	63.59	4
5	Ambala ... ..	19,624	46,447	34.01	80.49	46.48	5
6	Simla ... ..	373	684	23.26	42.65	19.39	6
JULLUNDUR DIVISION.							
7	Kangra ... ..	22,593	40,042	29.71	52.65	22.94	7
8	Hoshiarpur ... ..	27,236	49,894	31.49	57.69	26.20	8
9	Jullundur ... ..	22,405	51,119	32.39	73.89	41.50	9
10	Ludhiana ... ..	14,540	50,853	32.44	113.47	81.03	10
11	Perozepore ... ..	26,803	78,118	30.50	88.90	58.40	11
LAHORE DIVISION.							
12	Lahore ... ..	23,808	71,726	31.37	96.35	64.98	12
13	Amritsar ... ..	25,778	57,676	36.23	81.06	44.83	13
14	Gurdaspur ... ..	26,901	63,397	34.30	80.83	46.53	14
15	Sialkot ... ..	29,880	55,516	34.93	64.90	29.97	15
16	Gujranwala ... ..	30,240	70,488	36.05	84.73	48.68	16
RAWALPINDI DIVISION.							
17	Gujrat ... ..	24,192	52,926	34.42	75.30	40.88	17
18	Shahpur ... ..	17,000	40,588	26.94	64.33	37.39	18
19	Jhelum ... ..	15,321	32,019	31.83	66.53	34.70	19
20	Rawalpindi ... ..	17,264	29,947	37.56	65.15	27.59	20
21	Attock ... ..	15,425	31,650	31.08	63.77	32.69	21
22	Mianwali ... ..	9,248	22,414	29.24	70.88	41.64	22
MULTAN DIVISION.							
23	Montgomery ... ..	10,785	43,100	22.48	89.82	67.34	23
24	Lyallpur ... ..	20,720	56,763	23.98	65.71	41.73	24
25	Jhang ... ..	12,105	34,194	25.46	71.91	46.45	25
26	Multan ... ..	17,208	56,522	24.26	79.69	55.43	26
27	Muzaffargarh ... ..	14,742	37,971	26.95	69.42	42.47	27
28	Dera Ghazi Khan ... ..	10,075	35,362	21.75	76.33	54.58	28
Total ... ..		542,196	1,441,271	30.82	82.03	51.21	



## INFLUENZA FORM No. III-B.

SHOWING TOTAL DEATHS FROM ALL CAUSES IN THE TOWNS OF  
THE PUNJAB IN 1918 AND THE AVERAGE  
DURING 1912-16.

No.	B-Towns.	Average, 1912-16.	1918.	DEATH RATE PER 1,000 OF POPULATION.		Increase + Decrease -	No.
				Average, 1912-16.	1918.		
1	2	3	4	5	6	7	8
HISSAR DISTRICT.							
1	Hissar ... ..	702	1,473	40.90	85.83	+ 44.93	1
2	Hansi ... ..	545	2,011	37.38	137.97	+ 100.59	2
3	Bhiwani ... ..	1,303	3,363	41.99	108.30	+ 66.31	3
4	Sirsa ... ..	563	1,287	38.46	67.98	+ 29.52	4
5	Fatehabad ... ..	60	120	25.10	49.88	+ 24.78	5
ROHTAK DISTRICT.							
6	Rohtak ... ..	681	1,952	34.31	98.28	+ 63.97	6
7	Jhajjar ... ..	367	1,354	34.35	127.53	+ 92.98	7
8	Beri ... ..	276	1,242	35.34	159.27	+ 123.93	8
9	Gohana ... ..	279	618	51.38	113.64	+ 62.26	9
10	Bahadurgarh ... ..	171	780	34.31	156.31	+ 122.00	10
11	Sonepat ... ..	407	1,137	33.89	94.64	+ 60.75	11
GURGAON DISTRICT.							
12	Rewari ... ..	644	2,100	26.97	84.75	+ 58.78	12
13	Palwal ... ..	469	1,454	49.40	156.46	+ 107.06	13
14	Firozpur ... ..	183	842	31.93	147.23	+ 115.30	14
15	Hodal ... ..	243	956	44.40	174.84	+ 130.44	15
16	Ballabgarh ... ..	153	460	37.75	113.50	+ 75.75	16
17	Faridabad ... ..	176	730	39.18	162.69	+ 123.51	17
KARNAL DISTRICT.							
18	Karnal ... ..	880	1,706	41.85	81.17	+ 39.32	18
19	Kaithal ... ..	616	1,046	47.74	81.01	+ 33.27	19
20	Panipat ... ..	1,222	2,350	46.40	89.21	+ 42.81	20
21	Shahabad ... ..	365	561	33.08	50.75	+ 17.69	21
22	Thanesar ... ..	186	226	39.42	47.89	+ 8.47	22
AMBALA DISTRICT.							
23	Ambala ... ..	750	1,504	30.84	61.41	+ 30.77	23
24	Jagadhri ... ..	548	914	45.51	75.88	+ 30.37	24
25	Burya ... ..	173	317	40.54	74.20	+ 33.66	25
26	Sadhaura ... ..	310	439	39.85	56.47	+ 16.62	26
27	Rupar ... ..	230	420	33.14	60.56	+ 27.42	27
SIMLA DISTRICT.							
28	Simla ... ..	378	903	19.97	47.69	+ 27.72	28
KANGRA DISTRICT.							
29	Kangra ... ..	102	161	28.12	44.48	+ 16.36	29
30	Dharmasala ... ..	57	89	22.65	35.35	+ 12.70	30
HOSHIARPUR DISTRICT.							
31	Hoshiarpur ... ..	508	1,007	35.22	59.31	+ 24.09	31
32	Khanpur ... ..	94	119	37.10	47.17	+ 10.07	32
33	Hariana ... ..	176	248	32.62	45.97	+ 13.35	33
34	Garhdiwala ... ..	94	151	36.33	48.82	+ 12.49	34
35	Dasuya ... ..	183	415	50.88	115.37	+ 64.49	35
36	Tanda Urmur ... ..	239	395	34.01	56.30	+ 22.29	36
37	Miani ... ..	142	319	29.12	65.50	+ 36.38	37
38	Mukerian ... ..	114	168	55.43	81.83	+ 26.40	38
39	Una ... ..	143	157	34.18	37.58	+ 3.40	39
40	Anandpur ... ..	97	142	23.90	35.14	+ 11.24	40
JULLUNDUR DISTRICT.							
41	Jullundur ... ..	1,970	3,260	35.67	58.89	+ 23.22	41
42	Kartarpur ... ..	350	706	40.55	81.80	+ 41.25	42
43	Bunga ... ..	158	270	34.38	58.67	+ 24.29	43
44	Rahon ... ..	198	493	31.15	78.35	+ 47.20	44
45	Phillaur ... ..	195	404	37.29	77.84	+ 40.55	45
46	Nurmahal ... ..	255	508	35.55	70.77	+ 35.22	46
47	Nakodar ... ..	399	843	33.75	95.16	+ 61.41	47



## INFLUENZA FORM No. III-B—CONTINUED.

No.	B—Towns.	Average, 1912—16.	1918.	DEATH RATE PER 1,000 OF POPULATION.		Increase + Decrease —	No.
				Average, 1912—16.	1918.		
1	2	3	4	5	6	7	8
LUDHIANA DISTRICT.							
48	Ludhiana ...	1,466	3,614	33.97	83.75	+ 49.78	48
49	Jagraon ...	587	1,620	29.01	107.72	+ 68.71	49
50	Rashtot ...	305	734	40.56	97.74	+ 57.18	50
51	Khanua ...	162	291	45.93	67.68	+ 38.75	51
FEROZEPUR DISTRICT.							
52	Ferozepore ...	564	1,300	22.87	52.68	+ 29.81	52
53	Zira ...	149	425	33.94	97.08	+ 63.14	53
54	Dharamkot ...	205	415	34.92	70.83	+ 35.91	54
55	Muktsar ...	305	717	34.48	81.16	+ 46.68	55
56	Fazilka ...	434	1,190	29.49	108.33	+ 65.84	56
LAHORE DISTRICT.							
57	Lahore ...	7,145	13,122	33.98	62.41	+ 28.43	57
58	Chunian ...	276	848	38.00	118.53	+ 79.53	58
59	Khudian ...	99	244	33.09	81.55	+ 48.46	59
60	Kasur ...	867	1,802	34.98	72.71	+ 37.73	60
61	Rhem Karn ...	201	360	35.07	62.81	+ 27.74	61
62	Patti ...	239	643	29.97	80.51	+ 50.54	62
63	Baghbanpura Bhogiwal ...	} Not avail- able. {	689	} Not avail- able. {	91.38	...	63
64	Ichhra ...		133		24.23	...	64
65	Pattoki Mandi ...		172		91.49	...	65
AMRITSAR DISTRICT.							
66	Amritsar ...	6,300	10,882	41.63	71.90	+ 30.27	66
67	Majitha ...	176	405	33.70	77.54	+ 43.84	67
68	Jandiala ...	221	471	31.81	67.68	+ 35.87	68
69	Tarn Taran ...	129	258	30.33	60.56	+ 30.23	69
GURDASPUR DISTRICT.							
70	Gurdaspur ...	180	315	35.03	61.37	+ 26.34	70
71	Dinanagar ...	181	411	43.62	98.94	+ 55.32	71
72	Pathankot ...	264	559	37.71	79.78	+ 42.07	72
73	Dalhousie ...	25	53	26.65	56.50	+ 29.85	73
74	Batala ...	906	1,791	37.68	67.76	+ 30.08	74
75	Dera Nanak ...	136	235	29.69	51.58	+ 21.69	75
SIALKOT DISTRICT.							
76	Sialkot ...	1,806	2,513	37.17	51.71	+ 14.54	76
77	Daska ...	176	264	29.11	43.67	+ 14.56	77
78	Jamko ...	129	201	36.36	56.75	+ 20.39	78
79	Pasrur ...	242	342	31.99	45.21	+ 13.22	79
80	Zaffarwal ...	114	218	31.38	60.01	+ 28.63	80
81	Narowal ...	167	267	37.50	59.81	+ 22.31	81
82	Sambrial ...	*125	239	19.89	38.03	+ 18.14	82
83	Sahowala ...	*132	192	37.10	53.96	+ 16.86	83
84	Bogowala ...	*189	265	50.16	70.33	+ 20.17	84
85	Bhopalwala ...	* 99	203	29.68	60.85	+ 31.17	85
86	Mitranwali ...	*164	221	51.52	69.43	+ 17.91	86
87	Radomali ...	* 70	139	24.87	49.38	+ 24.51	87
88	Kalaewala ...	* 97	143	35.28	49.06	+ 13.78	88
89	Daud ...	* 96	240	27.58	68.95	+ 41.37	89
90	Chanwinda ...	*179	226	28.13	48.14	+ 10.01	90
GUJRANWALA DISTRICT.							
91	Gujranwala ...	1,126	1,862	39.33	65.02	+ 25.69	91
92	Wazirabad ...	583	920	34.01	53.66	+ 19.65	92
93	Emirabad ...	214	309	38.73	55.92	+ 17.19	93
94	Kila Didar Singh ...	86	172	38.73	77.83	+ 39.10	94
95	Akalgarh ...	64	204	16.23	51.74	+ 35.51	95
96	Ramnagar ...	205	404	30.04	76.86	+ 37.82	96
97	Sohdra ...	192	333	41.19	71.37	+ 30.18	97
98	Hafizabad ...	149	401	25.91	69.84	+ 43.93	98
99	Khangah Dogran ...	29	75	23.20	59.19	+ 35.99	99
100	Pindi Bhattian ...	113	175	31.23	48.20	+ 16.97	100
101	Sangla ...	29	36	29.39	36.73	+ 7.34	101
102	Sharakpur ...	159	282	35.56	62.92	+ 27.36	102
103	Shahkot ...	25	71	23.34	67.36	+ 44.02	103
104	Chubarkana Mandi ...	} Not avail- able. {	93	} Not avail- able. {	108.40	...	104
105	Nankana Sahib ...		248		40.45	...	105

\*Average for two years.



## INFLUENZA FORM No. III-B—CONCLUDED.

No.	B—Towns.	Average, 1912—16.	1918.	DEATH RATE PER 1,000 OF POPULATION.		Increase + Decrease —	No.
				Average, 1912—16.	1918.		
1	2	3	4	5	6	7	8
GUJRAT DISTRICT.							
106	Gujrat ... ..	699	1,161	37.41	62.11	+ 24.70	106
107	Jalalpur ... ..	288	545	53.44	46.92	+ 13.48	107
108	Kunjah ... ..	258	370	36.45	52.19	+ 15.74	108
109	Dinga ... ..	147	321	27.47	59.99	+ 32.52	109
SHAHPUR DISTRICT.							
110	Shahpur ... ..	167	317	19.09	36.27	+ 17.18	110
111	Sahiwal ... ..	284	474	30.61	61.90	+ 31.29	111
112	Bhara ... ..	536	1,034	35.25	68.02	+ 32.77	112
113	Miani ... ..	235	435	40.38	74.76	+ 34.38	113
114	Khushab ... ..	403	501	39.69	49.32	+ 9.63	114
115	Sargodha ... ..	*109	262	12.32	29.61	+ 17.29	115
JHELUM DISTRICT.							
116	Jhelum ... ..	376	676	30.57	54.97	+ 24.40	116
117	Pind Dadan Khan ... ..	379	1,088	35.81	102.74	+ 66.93	117
RAWALPINDI DISTRICT.							
118	Rawalpindi ... ..	1,905	2,405	40.83	51.56	+ 10.73	118
119	Murree ... ..	47	46	34.24	33.80	— 0.44	119
ATTOCK DISTRICT.							
120	Pindigheb ... ..	304	438	33.57	48.42	+ 14.85	120
121	Hazro ... ..	259	370	26.01	37.19	+ 11.18	121
MIANWALI DISTRICT.							
122	Mianwali ... ..	158	317	25.45	50.93	+ 25.48	122
123	Bhakkar ... ..	204	461	37.62	85.56	+ 47.94	123
124	Isa Khel ... ..	185	565	26.97	82.27	+ 55.30	124
125	Kalabagh ... ..	231	301	34.78	45.24	+ 10.46	125
MONTGOMERY DISTRICT.							
126	Montgomery ... ..	169	273	20.81	33.58	+ 12.77	126
127	Kamalia ... ..	300	618	36.40	75.03	+ 38.63	127
128	Pakpattan ... ..	262	449	33.16	56.75	+ 23.59	128
LYALLPUR DISTRICT.							
129	Lyallpur ... ..	257	681	13.15	34.78	+ 21.63	129
130	Gujra ... ..	*12	122	2.22	22.52	+ 20.30	130
JHANG DISTRICT.							
131	Jhang Maghiana ... ..	970	1,523	37.45	58.77	+ 21.32	131
132	Chisht ... ..	569	879	40.43	62.41	+ 21.98	132
MULTAN DISTRICT.							
133	Multan ... ..	2,763	6,497	32.23	75.77	+ 43.54	133
134	Shujabad ... ..	220	394	34.67	62.20	+ 27.53	134
MUZAFFARGARH DISTRICT.							
135	Muzaffargarh ... ..	120	270	29.13	65.55	+ 36.42	135
136	Khangarh ... ..	142	220	42.40	65.69	+ 23.29	136
137	Alipur ... ..	121	168	36.59	50.72	+ 14.13	137
138	Leiah ... ..	267	366	32.69	44.78	+ 12.09	138
139	Karor ... ..	157	237	44.70	67.66	+ 22.96	139
DERA GHAZI KHAN DISTRICT.							
140	Dera Ghazi Khan ... ..	357	1,162	21.17	68.95	+ 47.78	140
141	Jampur ... ..	185	385	28.42	59.08	+ 30.66	141
142	Dajal ... ..	225	467	32.70	67.75	+ 35.05	142
143	Rajanpur ... ..	118	236	31.91	63.71	+ 31.80	143
144	Kot Mithan ... ..	82	193	31.83	74.55	+ 42.72	144
Total ... ..		61,236	124,289	34.59	70.30	+ 35.71	

\*Average for 3 years.



# APPENDIX TABLE NO. 125 - CONTINUED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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## ANNUAL FORM NO. I.

STATEMENT SHOWING THE BIRTHS REGISTERED IN THE DISTRICTS OF THE PUNJAB  
DURING THE YEAR 1918.

2		3			4			5			6	7	8	9			10
Districts.		POPULATION ACCORDING TO CENSUS OF 1911.*			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.			No.
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.				Males.	Females.	Total.	
No.		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
AMBALA DIVISION.																	
1	Hissar ...	438,458	366,431	804,889	18,521	16,286	34,807	23.0	20.2	43.2	113.7	...	54.0	25.6	23.7	49.4	1
2	Rohtak ...	385,401	329,433	714,834	18,202	16,933	35,135	25.5	23.7	49.2	107.5	...	77.1	27.5	25.3	52.8	2
3	Gurgaon ...	389,215	389,952	779,167	14,097	12,404	26,501	19.3	17.0	36.3	113.6	...	119.1	26.3	24.5	50.8	3
4	Karnal ...	437,698	362,089	799,787	21,614	19,400	41,014	27.0	24.3	51.3	111.4	...	46.0	25.2	24.1	50.2	4
5	Ambala ...	357,470	275,083	632,553	14,413	13,055	27,468	22.8	20.6	43.4	110.4	...	35.7	22.8	21.2	44.0	5
6	Simla ...	22,015	12,955	34,970	375	367	742	10.7	10.5	21.2	102.2	...	24.2	11.3	10.0	21.3	6
JULLUNDUR DIVISION.																	
7	Kangra ...	398,401	368,285	766,686	14,697	13,604	28,301	19.2	17.7	36.9	108.0	...	15.7	19.0	17.8	36.8	7
8	Hoshiarpur ...	501,510	417,059	918,569	19,180	17,335	36,515	20.9	18.9	39.8	110.6	...	17.9	21.9	20.3	42.2	8
9	Jullundur ...	440,599	347,357	787,956	17,880	16,577	34,457	22.7	21.0	43.7	107.9	...	29.4	23.5	22.2	45.7	9
10	Ludhiana ...	293,531	223,661	517,192	12,397	11,138	23,535	24.0	21.5	45.5	111.4	...	64.9	25.8	24.1	50.0	10
11	Ferozepore ...	520,868	412,631	933,499	21,149	19,698	39,847	22.7	20.0	42.7	113.1	...	45.3	26.7	24.4	51.0	11
LAHORE DIVISION.																	
12	Lahore ...	581,498	436,244	1,017,742	22,590	20,456	43,046	22.2	20.1	42.3	110.4	...	45.8	25.8	23.4	49.2	12
13	Amritsar ...	495,533	383,778	879,311	19,666	17,898	37,564	22.4	20.4	42.7	109.9	...	36.6	26.3	24.4	50.7	13
14	Gurdaspur ...	466,115	366,446	832,561	19,928	18,142	38,070	23.9	21.8	45.7	109.8	...	34.5	24.8	23.1	47.9	14
15	Halkot ...	580,755	432,524	963,279	22,439	20,267	42,706	23.3	21.0	44.3	110.7	...	19.2	25.1	22.9	48.0	15
16	Gujranwala ...	518,251	405,168	923,419	18,195	15,747	33,942	19.7	17.1	36.8	115.5	...	45.6	23.6	20.9	44.4	16
RAWALPINDI DIVISION.																	
17	Gujrat ...	400,596	345,038	745,634	15,131	13,789	28,920	20.3	18.5	38.8	109.7	...	35.4	22.6	20.6	43.2	17
18	Shahpur ...	376,886	310,480	687,366	11,808	10,024	21,832	17.2	14.6	31.8	117.8	...	31.7	21.6	19.1	40.6	18
19	Jhelum ...	262,228	241,967	504,195	8,847	7,628	16,475	17.5	15.1	32.7	116.0	...	34.3	19.6	17.4	37.0	19
20	Rawalpindi ...	267,724	239,918	507,642	9,601	8,773	18,374	18.9	17.3	36.2	109.4	...	27.6	20.1	18.4	38.5	20
21	Attock ...	270,392	244,894	515,286	9,012	7,874	16,886	17.5	15.3	32.8	114.5	...	30.2	20.5	18.2	38.7	21
22	Mianwali ...	179,697	161,480	341,177	7,087	5,940	13,027	20.8	17.4	38.2	119.3	...	32.3	22.1	19.5	41.6	22
MULTAN DIVISION.																	
23	Montgomery ...	276,119	227,996	504,115	9,778	8,363	18,141	19.4	16.6	36.0	116.9	...	52.2	24.2	21.8	46.0	23
24	Lyallpur ...	503,644	385,251	888,895	20,470	18,601	39,071	23.0	20.9	44.0	110.0	...	20.8	25.6	23.6	49.3	24
25	Jhang ...	277,128	238,398	515,526	10,750	9,614	20,364	20.9	18.6	39.5	111.8	...	31.5	24.4	21.6	46.0	25
26	Multan ...	435,410	365,965	801,375	12,924	11,064	23,988	18.1	13.8	29.9	116.8	...	49.2	22.5	19.7	42.3	26
27	Muzaffargarh ...	308,350	261,111	569,461	8,313	6,795	15,108	14.6	11.9	26.5	122.3	...	42.4	20.1	17.2	37.3	27
28	Dera Ghazi Khan ...	272,409	227,451	499,860	5,501	4,136	9,637	11.0	8.3	19.3	133.0	...	56.3	16.4	13.5	30.0	28
Total ...		10,608,101	8,729,045	19,337,146	404,565	360,903	765,468	20.9	18.7	39.6	112.1	...	41.4	23.7	21.6	45.2	

\*Excluding population of Military cantonments.



## STATEMENT OF BIRTHS AND DEATHS REGISTERED IN EACH

1	2	3	4	5			6		7		
No.	DISTRICTS.	Area in square miles.	Average population per square mile.	POPULATION (CENSUS 1911).			BIRTHS.		NUMBER OF DEATHS REGISTERED.		
				Males.	Females.	Total.	Total number.	Birth rate per 1,000 of population.	Males.	Females.	Total.
1	2	3	4	5	6	7	8	9	10	11	12
AMBALA DIVISION.											
1	Hissar ...	5,213	154	438,458	366,431	804,889	34,807	43.2	36,880	41,351	78,231
2	Rohtak ...	2,248	318	385,401	329,433	714,834	35,135	49.2	41,939	48,834	90,773
3	Gurgaon ...	2,264	322	389,215	339,952	729,167	26,501	36.3	54,123	59,177	113,300
4	Karnal ...	3,153	254	437,698	362,089	799,787	41,014	51.3	37,947	39,907	77,854
5	Ambala ...	1,851	342	357,470	275,083	632,553	27,468	43.4	25,394	24,647	50,041
6	Simla ...	101	346	22,015	12,955	34,970	742	21.2	942	645	1,587
JULLUNDUR DIVISION.											
7	Kangra ...	9,978	77	395,401	368,285	763,686	28,301	36.9	20,890	19,402	40,292
8	Hoshiarpur ...	2,247	409	501,510	417,059	918,569	36,515	39.8	27,474	25,541	53,015
9	Jullundur ...	1,431	551	440,599	347,357	787,956	34,457	43.7	29,728	27,875	57,603
10	Ludhiana ...	1,452	356	293,531	223,661	517,192	23,530	45.5	29,001	28,111	57,112
11	Ferozepore ...	4,286	218	520,868	412,631	933,499	39,847	42.7	41,955	40,210	82,165
LAHORE DIVISION.											
12	Lahore ...	2,824	360	581,498	436,244	1,017,742	43,046	42.3	47,307	42,382	89,689
13	Amritsar ...	1,601	549	495,533	383,778	879,311	37,564	42.7	36,499	33,193	69,692
14	Gurdaspur ...	1,889	441	466,115	366,446	832,561	38,070	45.7	34,797	31,964	66,761
15	Sialkot ...	1,991	484	530,755	432,524	963,279	42,706	44.3	32,414	28,775	61,189
16	Gujranwala ...	4,082	226	518,251	405,168	923,419	33,942	36.8	40,342	35,731	76,073
RAWALPINDI DIVISION.											
17	Gujrat ...	2,051	384	400,596	345,038	745,634	28,920	38.8	28,353	26,970	55,323
18	Shahpur ...	5,097	135	376,886	310,480	687,366	21,832	31.8	22,931	20,680	43,611
19	Jhelum ...	2,813	179	262,228	241,967	504,195	16,475	32.7	16,778	17,005	33,783
20	Rawalpindi ...	2,010	253	267,724	239,918	507,642	18,374	36.2	15,961	16,437	32,398
21	Attock ...	4,025	128	270,392	244,894	515,286	16,886	32.8	16,541	15,917	32,458
22	Mianwali ...	5,395	63	179,897	161,480	341,377	13,027	38.2	12,283	11,775	24,058
MULTAN DIVISION.											
23	Montgomery ...	4,465	113	276,119	227,996	504,115	18,141	36.0	23,230	21,210	44,440
24	Lyallpur ...	3,340	266	503,644	385,251	888,895	39,071	44.0	29,702	27,864	57,566
25	Jhang ...	3,363	153	277,128	238,398	515,526	20,364	39.5	18,635	17,961	36,596
26	Multan ...	6,107	131	435,410	367,965	803,375	23,988	29.9	33,552	29,861	63,413
27	Muzaffargarh ...	6,052	94	308,350	261,111	569,461	15,108	26.5	21,437	17,795	39,232
28	Dera Ghazi Khan ...	5,325	94	272,409	227,451	499,860	9,637	19.3	20,308	17,497	37,805
Total		96,654	200	10,608,101	8,729,045	19,337,146	765,468	39.6	797,343	768,217	1,565,560

NOTE.—Those born dead are not included



## No. II.

## DISTRICT OF THE PUNJAB DURING THE YEAR 1918.

8 Number of deaths of males to every 100 deaths of females.	9 DEATHS PER 1,000 OF POPULATION FROM											10 MEAN RATIO OF DEATHS PER 1,000 DURING PREVIOUS FIVE YEARS.			11 No.
	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	All causes.			Males.	Females.	Total.	
									Males.	Females.	Total.				
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
89.2	0.001	0.3	3.9	84.7	0.3	1.4	0.2	6.4	84.1	112.9	97.2	29.8	32.8	31.2	1
86.8	0.01	0.3	3.6	109.1	0.4	2.1	0.5	10.3	108.8	146.7	126.3	29.9	31.6	30.7	2
91.6	...	0.1	4.1	134.9	0.9	2.4	0.6	12.5	139.1	174.1	155.4	34.8	37.5	36.1	3
95.1	0.1	0.2	0.4	85.4	0.4	1.7	0.4	8.9	86.7	110.2	97.3	34.6	38.1	36.2	4
103.0	0.003	0.1	3.9	63.5	0.6	5.2	0.2	5.6	71.0	89.6	79.1	32.3	39.8	35.6	5
146.0	...	0.1	...	28.3	2.0	9.2	0.1	5.7	42.8	49.8	45.4	20.5	26.4	22.7	6
107.7	0.02	0.03	0.1	40.5	1.3	3.2	0.3	7.2	52.4	52.7	52.6	29.8	31.6	30.7	7
107.6	0.02	0.1	1.3	48.9	0.02	2.6	0.3	4.6	54.8	61.2	57.7	30.2	34.0	31.9	8
106.6	0.1	0.1	9.7	54.3	0.4	2.6	0.3	5.7	67.5	80.3	73.1	29.7	37.0	32.9	9
103.2	0.01	0.2	27.0	68.6	0.4	2.7	0.3	11.2	98.8	125.7	110.4	29.8	37.3	33.0	10
104.3	0.1	0.3	2.1	75.3	0.4	1.9	0.2	7.8	80.6	97.5	88.0	28.7	33.1	30.6	11
111.6	0.02	0.8	23.7	53.2	0.5	2.9	0.4	6.7	81.4	97.2	88.1	32.0	37.8	34.5	12
110.0	0.004	0.6	5.6	62.6	0.8	4.5	0.4	4.8	73.7	86.5	79.7	36.7	44.4	40.1	13
108.9	...	0.1	4.1	63.2	0.8	11.1	0.2	0.8	74.7	87.2	80.2	34.2	40.1	36.8	14
112.6	0.002	0.03	0.4	50.3	0.5	6.8	0.3	5.2	61.1	66.5	63.5	34.9	40.8	37.6	15
112.9	0.003	0.1	4.3	72.2	0.2	0.8	0.4	4.4	77.8	88.2	82.4	38.9	44.2	41.2	16
105.1	0.002	0.04	7.7	59.3	0.3	2.7	0.3	3.9	70.8	78.2	74.2	33.8	37.8	35.7	17
110.9	...	0.02	0.6	56.5	0.3	1.6	0.3	4.2	60.8	66.6	63.5	29.2	32.9	30.9	18
98.6	...	0.03	12.1	47.4	0.4	2.2	0.4	4.6	64.0	70.3	67.0	34.0	34.1	33.0	19
97.1	0.003	0.01	6.5	46.9	3.9	2.8	0.5	3.3	59.6	68.5	63.8	37.1	40.0	38.5	20
103.9	0.003	0.02	0.5	57.1	0.03	1.1	0.3	4.0	61.2	65.0	63.0	31.1	32.7	31.9	21
104.3	...	0.01	0.2	65.1	0.6	0.7	0.3	3.7	68.3	72.9	70.5	31.7	33.5	32.6	22
109.5	0.03	0.1	5.7	77.6	0.1	0.4	0.4	3.8	84.1	93.0	88.2	26.0	29.7	27.6	23
106.6	0.003	0.1	1.5	56.2	0.3	0.9	0.4	5.5	59.0	72.3	64.8	23.1	29.3	25.8	24
103.8	...	0.01	0.2	59.9	0.7	2.0	0.3	8.0	67.2	75.3	71.0	29.4	31.8	30.5	25
112.4	0.003	0.04	3.0	69.8	0.2	0.9	0.3	4.8	77.1	81.6	79.1	29.6	30.6	31.0	26
120.5	...	0.04	0.02	66.0	0.1	0.4	0.3	2.0	69.5	68.2	68.9	31.4	33.5	32.4	27
116.1	...	0.01	0.01	72.1	0.4	1.2	0.2	1.8	74.6	76.9	75.6	26.7	28.0	27.3	28
103.8	0.01	0.2	4.9	66.6	0.5	2.7	0.3	5.7	75.2	88.0	81.0	31.5	35.7	33.4	



## ANNUAL FORM No. III.

DEATHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH  
OF THE YEAR 1918.

1	2	3												4	5
No.	DISTRICT.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>AMBALA DIVISION.</b>															
1	Hissar ...	2,068	1,930	2,142	2,922	3,244	1,806	1,510	1,194	1,288	17,511	36,180	6,436	78,201	1
2	Rohtak ...	1,654	1,422	1,929	2,769	3,671	2,677	1,736	1,271	1,221	21,084	45,775	5,064	90,273	2
3	Gurgaon ...	3,886	2,845	3,290	5,281	7,077	4,250	2,021	1,380	1,393	20,854	54,840	6,183	113,300	3
4	Karnal ...	1,813	1,420	1,467	1,511	2,433	2,750	2,249	1,543	1,471	9,598	42,065	9,544	77,854	4
5	Ambala ...	1,707	1,563	2,051	2,245	2,274	1,721	1,466	1,227	1,112	4,255	23,214	7,206	50,041	5
6	Simla ...	57	51	46	74	79	87	70	104	91	163	518	247	1,567	6
<b>JULLUNDUR DIVISION.</b>															
7	Kangra ...	1,511	1,363	1,445	1,576	2,399	2,491	2,102	1,787	1,811	2,835	13,956	7,016	40,292	7
8	Hoshiarpur ...	1,769	1,552	1,801	2,269	2,963	2,791	2,134	1,629	1,701	5,483	24,448	4,475	53,015	8
9	Jullundur ...	2,612	2,379	4,157	4,518	3,947	2,002	1,770	1,504	1,490	10,455	20,327	2,442	57,603	9
10	Ludhiana ...	2,075	2,923	6,268	5,322	2,907	1,431	1,302	1,034	1,023	9,194	21,187	2,446	57,112	10
11	Ferozepore ...	2,453	1,940	1,974	2,666	3,100	2,142	1,896	1,709	1,907	15,554	40,397	6,427	82,165	11
<b>LAHORE DIVISION.</b>															
12	Lahore ...	4,950	5,263	9,144	9,753	6,394	2,733	2,355	2,118	2,497	15,167	24,570	4,745	89,689	12
13	Amritsar ...	2,718	2,051	2,980	3,645	4,592	2,594	2,163	2,063	2,332	15,831	23,965	4,758	69,692	13
14	Gurdaspur ...	2,520	1,945	2,148	2,374	2,735	2,215	1,784	1,486	1,842	12,076	30,624	5,012	66,761	14
15	Sialkot ...	2,382	1,808	1,651	1,555	2,347	2,076	1,993	1,569	1,890	10,459	27,681	5,778	61,189	15
16	Gojranwala ...	4,457	3,637	3,284	2,806	2,538	1,973	1,553	1,435	1,581	9,212	31,871	11,726	76,073	16
<b>RAWALPINDI DIVISION.</b>															
17	Gujrat ...	2,147	1,536	1,846	2,380	3,782	2,362	1,594	1,234	1,295	7,828	24,237	5,082	55,323	17
18	Shahpur ...	2,723	1,868	1,565	1,303	1,484	1,197	1,145	869	966	7,353	18,921	4,217	43,611	18
19	Jhelum ...	1,438	1,305	1,920	3,476	2,804	1,034	895	737	836	4,790	12,730	1,618	33,783	19
20	Rawalpindi ...	1,560	1,285	1,479	2,116	2,104	1,104	913	822	925	3,658	18,845	2,587	32,398	20
21	Attock ...	1,640	1,281	1,246	1,173	1,039	987	922	854	973	7,032	12,694	2,617	32,458	21
22	Mianwali ...	1,352	1,171	1,073	816	849	708	622	608	731	4,062	10,091	1,975	24,058	22
<b>MULTAN DIVISION.</b>															
23	Montgomery ...	2,969	1,950	1,920	2,015	1,895	1,093	879	751	959	8,109	17,001	4,899	44,440	23
24	Lyallpur ...	2,178	1,722	1,714	1,926	2,381	1,909	1,440	1,300	1,477	13,213	24,542	3,764	57,566	24
25	Jhang ...	2,332	1,827	1,555	1,149	1,249	1,095	901	777	836	4,142	16,796	3,937	36,596	25
26	Multan ...	4,605	3,312	3,644	3,583	2,443	1,458	1,238	1,227	1,465	10,357	22,977	7,104	68,413	26
27	Muzaffargarh ...	3,066	2,402	1,613	1,341	1,237	900	803	765	1,178	7,395	14,090	4,442	39,232	27
28	Dera Ghazi Khan ...	2,555	1,951	1,342	1,280	1,459	936	645	579	975	11,564	11,485	3,084	37,805	28
Total for the Province.		67,197	55,702	66,694	73,994	75,426	50,522	40,101	33,576	37,266	269,224	661,027	134,831	1,565,560	
Ratio of deaths per 1,000 in each month.		3.48	2.88	3.45	3.83	8.90	2.61	2.07	1.74	1.93	13.92	34.18	6.97	80.96	



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ANNUAL FORM No. IV.

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM  
DIFFERENT DISEASES IN THE DISTRICTS OF THE PUNJAB  
DURING THE YEAR 1918.

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## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8			
No.	Divisions.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.			
				Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.		
1	2	3	4	5	6	7	8	9	10	11	12		
1	AMBALA.	HISSAR.	Cholera	...	...	...	...	...	...	...	...	...	
			Small-pox	26	20	51	38	31	28	8	9		
			Plague	...	...	...	...	5	6	22	30		
			Fever	3,390	2,990	3,609	3,806	1,817	1,972	871	1,060		
			Dysentery and Diarrhoea	4	8	5	3	4	5	8	6		
			Respiratory diseases	3	4	4	3	8	6	11	9		
			Injuries	2	2	4	3	7	4	9	3		
			All other causes	1,173	1,132	794	797	188	168	131	128		
			Total	4,598	4,151	4,467	4,650	2,060	2,189	1,060	1,245		
			Cholera	...	...	...	...	...	...	...	...	...	...
2	AMBALA.	ROHTAK.	Small-pox	24	24	36	41	28	28	5	4		
			Plague	52	52	64	65	87	159	111	131		
			Fever	3,435	2,890	4,958	5,335	2,329	2,522	1,850	2,246		
			Dysentery and Diarrhoea	13	14	28	20	14	7	5	13		
			Respiratory diseases	21	18	27	21	30	16	15	20		
			Injuries	5	4	17	13	25	12	8	10		
			All other causes	2,557	2,389	727	751	161	135	52	26		
			Total	6,107	5,391	5,857	6,246	2,674	2,679	2,046	2,451		
			Cholera	...	...	...	...	...	...	...	...	...	...
			3	AMBALA.	GURGAON.	Small-pox	7	...	10	6	4	3	...
Plague	11	10				68	76	101	120	92	123		
Fever	2,881	2,681				4,130	4,546	3,376	3,590	3,108	3,871		
Dysentery and Diarrhoea	15	9				24	18	28	34	40	30		
Respiratory diseases	38	44				46	52	64	72	77	72		
Injuries	...	...				...	1	...	...	2	...		
All other causes	2,439	2,032				823	663	310	295	241	172		
Total	5,391	4,776				5,101	5,362	3,883	4,104	3,560	4,269		
Cholera	...	...				...	...	...	...	...	...	...	...
4	AMBALA.	KARNAL.				Small-pox	1	...	2	3	3	...	2
			Plague	28	19	20	19	23	18	6	8		
			Fever	8	6	16	18	6	13	20	13		
			Dysentery and Diarrhoea	4,278	4,031	4,093	4,158	1,360	1,516	1,268	1,700		
			Respiratory diseases	11	8	12	11	16	10	14	9		
			Injuries	36	42	32	17	46	33	59	34		
			All other causes	4	9	6	11	3	13	16	17		
			Total	1,665	1,533	597	439	399	482	358	317		
			Cholera	...	...	...	...	...	...	...	...	...	...
			5	AMBALA.	AMBALA.	Small-pox	3	4	6	5	6	1	5
Plague	222	190				159	162	120	131	88	88		
Fever	2,809	2,684				2,196	2,330	1,737	1,632	1,839	1,870		
Dysentery and Diarrhoea	42	29				39	22	35	15	12	16		
Respiratory diseases	331	364				322	249	151	132	88	105		
Injuries	15	7				9	2	7	3	6	5		
All other causes	476	333				339	222	159	160	130	129		
Total	3,898	3,611				3,070	2,992	2,215	2,074	2,168	2,214		
Cholera	...	...				...	...	...	...	...	...	...	...
6	AMBALA.	SIMLA.				Small-pox	...	...	...	...	...	...	...
			Plague	...	...	...	...	...	...	...	...	...	
			Fever	76	98	54	57	32	23	32	23		
			Dysentery and Diarrhoea	7	7	1	2	...	6	1	4		
			Respiratory diseases	39	8	10	4	14	7	10	4		
			Injuries	1	...	...	...	...	...	...	...		
			All other causes	9	10	9	...	1	7	4	12		
			Total	132	123	74	63	47	43	48	43		



## No. IV.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1918.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	No.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
...	...	...	...	...	...	...	...	1	...	...	...	1	...	
2	4	1	1	...	...	...	...	...	...	...	...	119	100	
18	20	386	428	318	388	281	294	240	251	211	249	1,481	1,666	
429	472	7,338	9,198	5,156	6,253	3,150	3,825	2,360	2,712	3,689	4,042	31,809	36,330	1
12	9	18	11	16	13	24	18	25	20	31	26	147	114	
19	14	42	39	97	86	111	112	158	134	125	121	578	528	
11	6	13	8	16	10	11	9	13	12	14	16	100	73	
99	96	87	88	71	68	62	43	22	12	18	8	2,645	2,540	
590	621	7,885	9,773	5,674	6,818	3,639	4,301	2,819	3,141	4,088	4,462	36,880	41,351	
1	...	...	...	2	1	...	1	...	...	...	...	3	3	
5	5	...	5	2	2	...	...	...	...	...	...	106	109	
109	99	214	223	145	196	140	168	129	155	128	165	1,179	1,413	
2,645	3,179	6,272	8,263	4,861	6,854	3,509	4,231	2,653	2,889	3,295	3,753	35,807	42,162	2
12	9	15	13	16	7	12	16	20	13	26	21	161	133	
22	36	41	54	46	57	70	66	178	145	319	320	769	753	
12	35	12	41	22	30	19	16	17	9	10	6	147	176	
28	22	55	69	38	56	36	34	46	37	67	66	3,767	3,585	
2,834	3,385	6,613	8,668	5,132	7,203	3,788	4,532	3,048	3,248	3,845	4,331	41,939	48,334	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	2	1	...	1	...	...	...	...	...	...	...	25	12	
129	139	189	220	182	229	222	247	189	201	199	228	1,382	1,593	
4,674	5,789	7,453	8,730	6,110	7,352	4,974	5,339	4,593	4,574	5,134	5,452	46,433	51,914	3
49	35	37	36	36	30	35	31	35	22	48	30	347	275	
64	85	121	100	114	96	97	92	78	77	191	199	890	889	
8	22	28	54	31	47	42	67	26	45	7	25	144	261	
200	169	244	258	195	198	172	178	165	127	113	141	4,902	4,233	
5,126	6,241	8,073	9,398	6,669	7,952	5,542	5,954	5,086	5,046	5,692	6,075	54,123	59,177	
6	1	5	2	4	4	2	2	2	2	1	1	28	17	
9	5	10	9	9	...	...	5	...	...	...	...	105	83	
24	29	35	25	14	17	8	8	9	13	11	6	151	148	
2,038	2,146	5,846	6,487	4,729	5,492	3,427	3,750	2,908	2,850	3,002	3,221	32,949	35,351	4
18	17	19	12	19	15	20	16	26	19	25	21	180	138	
69	33	82	83	89	88	99	97	95	102	87	98	695	627	
12	10	16	25	17	24	37	26	13	18	4	7	128	160	
99	105	226	121	96	85	94	98	71	108	86	94	3,711	3,383	
2,275	2,346	6,289	6,764	4,977	5,726	3,687	4,002	3,125	3,112	3,216	3,448	37,947	39,907	
...	...	...	...	...	...	...	...	1	...	...	...	2	...	
...	2	1	...	1	...	1	...	...	...	...	...	23	16	
58	57	98	89	93	106	119	141	116	117	133	144	1,236	1,225	
1,881	2,015	2,491	2,398	1,798	1,882	1,825	1,682	1,711	1,549	1,945	1,881	20,212	19,923	5
12	14	16	12	13	13	26	13	14	9	27	15	236	158	
117	99	111	97	119	114	164	135	124	121	209	167	1,736	1,533	
5	5	9	9	7	6	10	4	7	1	9	5	84	47	
95	88	101	104	112	108	150	175	83	164	220	212	1,865	1,695	
2,148	2,280	2,828	2,710	2,143	2,280	2,325	2,151	2,056	1,961	2,543	2,424	25,394	24,647	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	1	1	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
63	20	87	52	46	39	51	45	46	21	66	59	553	436	
4	7	...	3	4	6	5	...	4	1	8	1	34	37	6
11	8	26	5	35	29	34	1	19	9	41	7	239	82	
...	1	...	...	...	...	1	...	1	1	...	...	3	2	
9	5	26	37	32	5	13	...	9	8	...	3	112	87	
87	41	139	97	117	79	104	46	79	40	115	70	942	645	



## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8	
No.	Division.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
				Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
7	JULLUNDUR.	KANGRA.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox...	...	...	...	...	...	...	...	...
			Plague ...	...	...	...	...	...	...	...	...
			Fever ...	2,892	2,391	1,572	1,464	700	745	642	636
			Dysentery and Diarrhoea	69	69	59	68	35	23	42	20
			Respiratory diseases	241	180	135	169	79	60	56	85
			Injuries ...	...	...	...	...	...	...	...	...
			All other causes	768	601	396	307	112	98	68	66
			Total	3,972	3,244	2,135	2,012	929	930	813	808
			8	JULLUNDUR.	HOSHIARPUR.	Cholera ...	...	...	...	...	...
Small-pox...	...	...				...	...	...	...	...	...
Plague ...	...	...				...	...	...	...	...	...
Fever ...	2,491	2,304				3,842	3,923	1,413	1,520	1,010	1,049
Dysentery and Diarrhoea	1	1				...	...	...	...	...	...
Respiratory diseases	420	326				213	156	36	29	26	23
Injuries ...	3	1				13	13	13	7	16	13
All other causes	1,631	1,557				170	171	40	32	18	13
Total	4,571	4,216				4,283	4,330	1,564	1,674	1,146	1,198
9	JULLUNDUR.	JULLUNDUR.				Cholera ...	...	...	...	...	...
			Small-pox...	...	...	...	...	...	...	...	...
			Plague ...	...	...	...	...	...	...	...	...
			Fever ...	2,120	2,213	2,925	2,797	2,161	2,216	1,935	1,960
			Dysentery and Diarrhoea	30	23	31	41	11	3	3	2
			Respiratory diseases	597	536	130	107	14	17	10	10
			Injuries ...	2	3	27	17	23	15	14	9
			All other causes	2,033	2,020	72	79	13	7	9	5
			Total	4,757	4,822	3,620	3,587	2,694	2,730	2,366	2,376
			10	JULLUNDUR.	LUDHIANA.	Cholera ...	...	...	...	...	...
Small-pox...	...	...				...	...	...	...	...	...
Plague ...	...	...				...	...	...	...	...	...
Fever ...	1,702	1,512				1,491	1,465	1,422	1,606	1,948	1,863
Dysentery and Diarrhoea	16	10				5	8	4	3	6	3
Respiratory diseases	124	100				62	39	41	26	55	36
Injuries ...	6	1				8	4	11	4	5	6
All other causes	1,847	2,077				246	221	113	83	79	95
Total	3,805	3,892				2,219	2,230	2,221	2,337	2,942	2,716
11	JULLUNDUR.	FEROZPORE.				Cholera ...	...	...	...	...	...
			Small-pox...	...	...	...	...	...	...	...	...
			Plague ...	...	...	...	...	...	...	...	...
			Fever ...	4,078	3,714	4,702	4,282	2,345	2,522	1,920	2,062
			Dysentery and Diarrhoea	...	...	...	...	...	...	...	...
			Respiratory diseases	5	4	102	90	80	55	74	70
			Injuries ...	...	...	...	...	...	...	...	...
			All other causes	1,716	1,588	933	830	137	128	94	96
			Total	5,840	5,353	5,957	5,402	2,697	2,854	2,180	2,355
			12	LAHORE.	LAHORE.	Cholera ...	...	...	...	...	...
Small-pox...	...	...				...	...	...	...	...	...
Plague ...	...	...				...	...	...	...	...	...
Fever ...	3,848	3,122				3,710	3,301	2,442	2,533	2,174	2,010
Dysentery and Diarrhoea	60	54				54	50	6	4	11	3
Respiratory diseases	80	110				113	109	101	90	93	67
Injuries ...	3	3				60	31	58	21	27	9
All other causes	1,478	1,310				1,324	1,301	90	69	116	41
Total	5,925	5,140				6,176	5,741	3,952	3,951	3,989	3,909



## No. IV—CONTINUED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1918.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		No.
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
...	...	4	1	5	...	2	2	2	...	...	...	13	3	7
4	...	1	1	...	1	1	...	...	...	1	2	12	10	
5	3	13	10	6	3	2	5	2	4	...	2	32	33	
651	877	2,080	2,528	1,803	1,896	1,479	1,103	1,318	1,022	2,926	2,372	16,063	14,954	
54	23	68	48	58	60	55	50	44	60	64	43	548	464	
88	99	111	104	164	142	96	91	78	90	235	144	1,283	1,164	
25	11	30	17	40	16	20	15	11	...	11	10	141	79	
118	188	248	445	342	302	279	215	248	128	249	335	2,798	2,695	
945	1,201	2,555	3,154	2,418	2,360	1,934	1,481	1,703	1,304	3,486	2,908	20,890	19,402	8
...	...	2	...	3	4	2	1	1	...	...	...	8	8	
2	1	4	2	3	...	3	2	...	2	...	1	36	31	
53	33	99	92	53	68	65	52	63	60	61	57	578	620	
1,070	1,012	3,029	3,343	2,706	2,638	2,057	1,548	1,730	1,328	3,778	3,081	23,126	21,743	
...	...	1	1	...	...	3	3	...	...	3	1	9	6	
32	43	110	122	109	93	97	61	101	63	209	129	1,353	1,045	
7	4	22	14	18	11	17	9	17	5	19	12	145	89	9
25	14	46	47	42	46	41	31	63	30	143	58	2,219	1,999	
1,189	1,108	3,313	3,621	2,935	2,860	2,285	1,707	1,975	1,488	4,213	3,339	27,474	25,541	
1	...	4	4	2	2	5	5	3	4	1	4	28	23	
3	4	2	1	5	1	...	...	1	...	1	...	44	29	
226	196	501	480	470	481	466	458	410	363	420	529	3,786	3,860	
1,412	1,206	2,254	2,137	2,015	1,707	1,801	1,568	2,104	1,810	3,447	2,896	22,174	20,570	
...	3	7	11	11	6	16	7	15	10	47	25	171	131	10
17	24	47	54	59	37	37	22	78	29	166	100	1,095	936	
10	7	6	12	15	13	5	7	9	4	33	28	144	115	
8	3	19	23	22	21	29	12	29	15	52	21	2,286	2,206	
1,677	1,503	2,840	2,722	2,599	2,268	2,359	2,079	2,649	2,235	4,167	3,603	29,728	27,875	
...	...	2	...	...	...	...	1	...	...	...	1	...	5	
5	4	...	6	...	...	...	...	...	...	...	...	56	66	
940	839	1,045	1,039	1,341	1,136	1,085	945	548	551	297	304	7,203	6,769	11
1,904	1,955	2,280	2,054	2,194	2,268	2,116	1,916	1,632	1,714	1,235	1,214	17,924	17,567	
6	5	9	16	14	9	16	9	17	14	25	20	118	65	
67	42	90	63	82	59	92	75	66	81	84	90	763	611	
7	5	14	7	8	4	15	5	10	1	7	3	91	40	
71	86	83	65	95	88	79	72	100	89	133	81	2,846	2,957	
3,000	2,936	3,523	3,250	3,734	3,564	3,403	3,023	2,373	2,450	1,781	1,713	29,001	28,111	
2	3	6	2	1	5	2	3	1	1	...	...	30	23	12
5	10	3	9	2	5	...	3	...	...	...	...	129	120	
56	73	125	153	132	138	123	120	114	91	140	173	916	1,084	
2,203	2,072	8,942	8,697	3,154	3,383	2,448	2,332	2,518	2,194	3,475	3,252	35,785	34,510	
13	12	23	19	18	14	17	15	21	18	29	20	192	151	
71	55	129	115	113	93	107	84	129	103	153	127	963	796	
16	4	25	12	21	10	17	9	9	4	4	1	147	72	
101	83	149	152	138	123	136	108	163	136	226	210	3,793	3,454	12
2,467	2,312	9,403	9,159	3,579	3,771	2,850	2,674	2,955	2,547	4,027	3,783	41,955	40,210	
4	...	2	2	1	1	1	2	2	...	...	...	13	6	
13	10	7	6	4	6	2	2	...	1	...	...	417	422	
1,413	1,272	1,658	1,373	1,938	1,145	1,806	1,605	1,203	978	966	915	12,779	11,292	
1,888	1,936	4,250	4,140	3,050	3,296	1,928	1,529	1,791	1,543	3,283	2,395	28,364	25,805	
13	2	26	8	37	22	28	6	29	12	42	30	306	191	
75	65	150	161	152	129	185	137	195	147	388	369	1,537	1,384	12
12	10	25	10	29	6	23	8	17	6	19	7	273	111	
83	33	139	132	170	157	87	17	25	16	106	95	3,618	3,171	
3,501	3,328	6,257	5,831	5,381	4,762	4,060	3,306	3,262	2,703	4,804	3,811	47,307	42,382	



## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8	
No.	Divisions.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
1	2	3	4	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
13	LAHORE—CONCLUDED.	AMRITSAR.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	34	38	127	137	32	37	21	17
			Plague ...	342	158	510	321	309	319	210	199
			Fevers ...	3,217	3,238	3,944	4,002	1,728	1,700	1,420	1,582
			Dysentery and Diarrhoea ...	72	32	51	39	18	17	23	29
			Respiratory diseases ...	627	512	261	182	69	105	71	53
			Injuries ...	7	8	25	19	13	7	21	6
			All other causes ...	843	750	519	432	157	112	105	135
			Total ...	5,142	4,736	5,437	5,132	2,326	2,297	1,871	2,021
14		GURDASPUR.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	5	9	7	11	4	5	3	1
			Plague ...	142	186	228	215	116	140	64	99
			Fevers ...	3,041	2,393	2,972	2,878	2,202	2,069	2,187	2,064
			Dysentery and Diarrhoea ...	228	182	60	37	10	10	5	3
			Respiratory diseases ...	1,170	1,170	722	697	278	290	285	250
			Injuries ...	...	2	3	4	7	6	8	5
			All other causes ...	291	201	57	32	3	...	2	3
			Total ...	4,877	4,143	4,049	3,874	2,620	2,520	2,554	2,425
15		SIALKOT.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	8	4	5	6	4	...	...	...
			Plague ...	7	6	14	14	22	22	26	30
			Fevers ...	2,770	2,573	4,708	4,079	2,094	1,895	1,899	1,792
			Dysentery and Diarrhoea ...	71	43	44	46	32	21	16	15
			Respiratory diseases ...	916	783	548	572	246	175	226	199
			Injuries ...	1	3	39	20	17	22	11	18
			All other causes ...	915	757	512	464	147	127	108	119
			Total ...	4,688	4,168	5,870	5,201	2,562	2,262	2,286	2,173
16		GUJRANWALA.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	7	15	14	12	10	11	3	7
			Plague ...	59	53	92	71	97	80	113	92
			Fevers ...	2,998	2,404	3,719	3,384	3,202	2,994	2,829	2,819
			Dysentery and Diarrhoea ...	2	1	9	3	11	6	10	5
			Respiratory diseases ...	69	46	53	41	29	19	11	8
			Injuries ...	9	4	11	7	20	10	23	9
			All other causes ...	1,321	1,163	545	319	130	51	55	30
			Total ...	4,463	3,686	4,443	3,837	3,499	3,171	3,044	2,970
17		GUJRAT.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	5	4	1	4	4	3	2	2
			Plague ...	259	243	299	310	304	393	185	322
			Fevers ...	2,199	2,370	2,048	2,164	1,818	1,809	1,925	1,976
			Dysentery and Diarrhoea ...	13	6	8	7	7	4	11	7
			Respiratory diseases ...	325	327	191	161	49	59	35	28
			Injuries ...	2	1	16	3	20	10	10	8
			All other causes ...	437	403	206	140	142	114	128	98
			Total ...	3,240	3,359	2,769	2,789	2,344	2,392	2,296	2,441
18	RAWALPINDI.	SHARUR.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	...	1	2	...	8	2	...	1
			Plague ...	...	...	...	...	6	13	9	12
			Fevers ...	1,344	1,085	2,590	2,387	1,844	1,701	1,654	1,644
			Dysentery and Diarrhoea ...	...	...	7	5	5	4	4	3
			Respiratory diseases ...	...	...	28	21	33	25	26	28
			Injuries ...	...	...	42	27	21	14	23	10
			All other causes ...	1,572	1,277	6	10	3	3	4	...
			Total ...	2,916	2,363	2,675	2,443	1,920	1,762	1,730	1,698



## No. IV—CONTINUED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1918.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	No.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
2	...	...	...	...	1	...	...	1	...	...	...	3	1	13
15	10	12	14	4	5	...	...	...	...	...	...	245	258	
135	172	190	271	241	312	259	325	102	251	152	118	2,450	2,446	
1,982	1,634	3,781	3,373	3,069	2,720	2,480	1,982	2,350	1,810	4,839	4,200	28,810	26,241	
25	40	39	20	43	29	61	22	54	24	25	26	411	278	
92	121	125	165	210	185	130	195	219	134	311	229	2,115	1,881	
40	19	22	18	19	23	21	15	23	10	6	4	197	129	
59	73	165	115	71	53	99	105	62	35	188	149	2,268	1,959	
2,350	2,069	4,334	3,976	3,657	3,328	3,050	2,644	2,811	2,264	5,521	4,726	36,499	33,193	14
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1	1	2	...	...	...	...	...	...	...	...	...	22	27	
70	43	154	163	161	189	191	195	175	152	378	401	1,679	1,733	
2,407	2,284	4,100	4,076	3,330	3,148	2,439	2,239	2,101	1,872	2,455	2,322	27,234	25,345	
9	2	20	14	10	16	17	8	15	5	24	15	398	292	
157	211	393	396	376	328	348	219	324	185	920	504	4,973	4,250	
6	2	23	15	8	8	17	4	11	8	10	5	93	59	15
5	2	6	7	12	4	8	2	2	...	12	7	398	258	
2,655	2,545	4,698	4,671	3,897	3,643	3,020	2,667	2,628	2,222	3,799	3,254	34,797	31,964	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1	...	1	...	1	...	...	...	...	...	...	...	2	...	
18	23	33	32	19	27	19	29	11	16	16	18	185	217	
1,844	1,716	2,319	2,302	2,249	2,204	2,125	1,784	1,957	1,619	3,549	2,997	25,514	22,961	
19	14	16	11	18	9	21	9	17	11	35	29	289	308	16
244	174	271	212	217	195	211	159	183	128	477	380	3,539	2,976	
10	4	17	10	13	7	9	8	14	5	18	13	139	110	
105	102	127	97	126	108	119	95	125	91	430	332	2,714	2,392	
2,241	2,033	2,786	2,664	2,644	2,550	2,504	2,084	2,308	1,871	4,525	3,769	32,414	28,775	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1	...	1	...	1	...	...	...	...	...	...	...	3	...	
...	2	...	...	...	...	...	...	...	...	...	...	34	47	17
179	96	276	283	592	519	350	261	291	231	115	129	2,154	1,815	
2,881	2,683	4,527	4,111	3,468	3,537	3,585	3,307	3,179	2,619	4,659	3,747	35,045	31,605	
6	7	19	16	16	9	21	11	17	7	10	5	121	70	
31	23	59	46	71	59	48	37	43	23	54	10	468	312	
31	11	35	10	39	18	24	16	27	15	19	7	238	107	
30	17	41	38	53	79	25	51	39	16	30	11	2,269	1,775	
3,159	2,839	4,958	4,504	4,240	4,221	4,053	3,683	3,596	2,911	4,887	3,909	40,342	35,731	18
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1	...	...	...	...	1	...	...	...	...	...	...	1	1	
...	2	...	...	...	...	...	...	...	...	...	...	12	15	
136	163	297	306	343	343	283	304	242	201	421	398	2,769	2,983	
1,890	1,779	2,342	2,197	2,211	2,243	2,354	2,069	2,324	2,124	3,604	2,785	22,715	21,516	
10	7	7	6	13	11	20	9	15	11	23	23	127	91	
42	34	81	24	58	47	75	75	105	71	148	96	1,059	922	19
11	12	21	6	16	12	17	9	14	11	21	14	148	86	
102	122	94	91	79	93	87	85	115	104	125	101	1,522	1,356	
2,199	2,119	2,792	2,630	2,720	2,750	2,836	2,551	2,815	2,522	4,342	3,417	28,353	26,970	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
11	16	19	20	28	39	40	44	34	34	27	24	174	202	20
1,943	1,825	2,559	2,474	2,159	2,117	1,867	1,749	1,701	1,504	2,596	2,085	20,257	18,564	
9	7	21	14	30	21	22	18	22	16	11	12	131	100	
51	47	146	86	109	92	93	61	74	45	68	33	638	438	
15	9	15	12	11	4	5	5	3	1	...	...	135	82	
1	...	...	...	...	...	...	...	...	...	...	...	1,586	1,290	
2,030	1,904	2,760	2,606	2,337	2,273	2,027	1,877	1,834	1,600	2,702	2,154	22,931	20,680	







## No. IV—CONTINUED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1918.

9		10		11		12		13		14		15		No.
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
175	230	363	436	405	512	341	424	266	279	356	348	2,787	3,288	19
518	526	1,434	1,652	1,798	1,942	1,652	1,700	1,353	1,200	1,777	1,572	11,936	11,947	
2	3	3	11	18	10	17	9	18	6	24	18	116	71	
23	12	63	72	91	80	83	82	78	50	216	132	616	499	
7	4	17	9	16	6	11	7	14	5	16	10	121	79	
13	15	35	36	26	47	27	24	30	8	46	27	1,198	1,112	
737	790	1,915	2,217	2,355	2,597	2,137	2,246	1,759	1,619	2,445	2,107	16,778	17,005	
...	...	1	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
106	116	189	288	255	346	192	266	157	204	188	190	1,459	1,849	20
546	664	1,550	2,301	1,705	2,092	1,290	1,197	1,001	790	1,833	1,570	11,630	12,155	
3	7	12	14	18	10	10	5	6	5	28	10	1,050	932	
35	39	113	94	160	89	119	83	102	55	186	121	846	582	
12	9	20	10	26	4	17	8	9	7	16	4	158	81	
13	19	22	53	40	49	32	22	19	11	44	27	815	834	
715	854	1,906	2,760	2,204	2,590	1,660	1,581	1,294	1,072	2,300	1,923	15,961	16,437	
...	...	...	...	1	...	...	...	...	...	1	...	2	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
7	6	14	27	20	22	18	19	20	16	19	25	123	148	21
1,140	1,100	2,604	2,714	2,194	2,310	1,598	1,490	1,435	1,358	1,864	1,575	14,911	14,497	
1	...	1	...	...	1	1	...	1	...	1	2	9	7	
19	15	35	42	70	42	34	28	39	30	84	45	321	250	
6	4	12	5	17	6	13	9	4	3	5	3	95	48	
10	17	21	25	27	27	21	23	23	16	27	16	1,076	963	
1,183	1,142	2,687	2,813	2,329	2,408	1,685	1,569	1,522	1,423	2,001	1,666	16,541	15,917	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	1	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
367	399	1,601	1,772	1,596	1,686	1,596	1,475	1,531	1,448	1,399	1,224	11,285	10,974	22
3	1	19	12	23	20	15	9	11	8	14	6	115	76	
1	1	26	14	31	22	39	21	19	12	18	13	154	95	
9	1	5	8	11	2	8	4	11	3	4	1	70	30	
11	12	70	77	53	63	51	29	32	37	41	43	674	578	
391	415	1,725	1,886	1,721	1,798	1,718	1,543	1,609	1,511	1,479	1,388	12,283	11,775	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	2	2	1	4	1	1	3	...	...	...	...	10	7	23
4	1	2	6	...	...	...	...	...	...	...	...	24	38	
196	198	121	129	110	121	128	115	275	205	435	451	1,482	1,399	
1,757	1,619	2,408	2,163	2,280	2,143	1,778	1,664	1,419	1,308	2,213	2,073	20,406	18,694	
4	...	9	2	7	1	7	4	1	3	3	6	43	20	
...	2	8	11	10	14	25	18	40	12	16	10	115	80	
9	20	26	14	12	16	17	10	18	2	9	3	112	99	
82	51	74	37	54	23	38	55	134	103	140	124	1,038	873	
2,055	1,893	2,650	2,368	2,477	2,319	1,994	1,869	1,887	1,633	2,816	2,667	23,230	21,210	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	4	3	5	1	5	...	1	...	...	...	...	1	2	24
137	112	108	111	107	83	48	80	46	55	31	29	619	668	
1,917	1,855	2,335	2,293	2,382	2,348	2,368	2,156	2,466	2,176	3,593	2,963	25,760	24,267	
9	13	22	13	15	17	16	13	16	8	22	10	151	101	
28	23	47	40	48	29	51	32	53	33	100	82	438	345	
16	13	20	22	24	16	18	9	16	14	15	9	175	145	
41	85	45	75	56	89	86	60	53	38	64	48	2,524	2,339	
2,150	2,105	2,580	2,559	2,633	2,587	2,587	2,351	2,650	2,324	3,825	3,141	29,702	27,864	



## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT.

1	2	3	4	5		6		7		8	
No.	Divisions.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
				Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
25	MULTAN—CONCLUDED.	JHANG.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	...	...	...	...	...	...	...	...
			Plague ...	...	...	...	...	...	...	...	...
			Fever ...	...	...	...	...	...	...	...	...
			Dysentery and Diarrhoea ...	...	...	...	...	...	...	...	...
			Respiratory diseases ...	...	...	...	...	...	...	...	...
			Injuries ...	...	...	...	...	...	...	...	...
			All other causes ...	...	...	...	...	...	...	...	...
			Total ...	...	...	...	...	...	...	...	...
			26	MULTAN.	Cholera ...	...	...	...	...	...	...
Small-pox ...	...	...			...	...	...	...	...	...	...
Plague ...	...	...			...	...	...	...	...	...	...
Fever ...	...	...			...	...	...	...	...	...	...
Dysentery and Diarrhoea ...	...	...			...	...	...	...	...	...	...
Respiratory diseases ...	...	...			...	...	...	...	...	...	...
Injuries ...	...	...			...	...	...	...	...	...	...
All other causes ...	...	...			...	...	...	...	...	...	...
Total ...	...	...			...	...	...	...	...	...	...
27	MURTAZGAH.	Cholera ...			...	...	...	...	...	...	...
		Small-pox ...	...	...	...	...	...	...	...	...	...
		Plague ...	...	...	...	...	...	...	...	...	...
		Fever ...	...	...	...	...	...	...	...	...	...
		Dysentery and Diarrhoea ...	...	...	...	...	...	...	...	...	...
		Respiratory diseases ...	...	...	...	...	...	...	...	...	...
		Injuries ...	...	...	...	...	...	...	...	...	...
		All other causes ...	...	...	...	...	...	...	...	...	...
		Total ...	...	...	...	...	...	...	...	...	...
		28	DERA GHAI KHAN.	Cholera ...	...	...	...	...	...	...	...
Small-pox ...	...			...	...	...	...	...	...	...	...
Plague ...	...			...	...	...	...	...	...	...	...
Fever ...	...			...	...	...	...	...	...	...	...
Dysentery and Diarrhoea ...	...			...	...	...	...	...	...	...	...
Respiratory diseases ...	...			...	...	...	...	...	...	...	...
Injuries ...	...			...	...	...	...	...	...	...	...
All other causes ...	...			...	...	...	...	...	...	...	...
Total ...	...			...	...	...	...	...	...	...	...
Total for the Province—				...	...	...	...	...	...	...	
Cholera ...	...	...	...	...	...	...	...	...	...	...	
Small-pox ...	...	...	...	...	...	...	...	...	...	...	
Plague ...	...	...	...	...	...	...	...	...	...	...	
Fever ...	...	...	...	...	...	...	...	...	...	...	
Dysentery and Diarrhoea ...	...	...	...	...	...	...	...	...	...	...	
Respiratory diseases ...	...	...	...	...	...	...	...	...	...	...	
Injuries ...	...	...	...	...	...	...	...	...	...	...	
All other causes ...	...	...	...	...	...	...	...	...	...	...	
Total				...	...	...	...	...	...	...	
Population according to Census of 1911				...	...	...	...	...	...	...	
Ratio per 1,000 living for the Province—				...	...	...	...	...	...	...	
Cholera ...	...	...	...	...	...	...	...	...	...	...	...
Small-pox ...	...	...	...	...	...	...	...	...	...	...	...
Plague ...	...	...	...	...	...	...	...	...	...	...	...
Fever ...	...	...	...	...	...	...	...	...	...	...	...
Dysentery and Diarrhoea ...	...	...	...	...	...	...	...	...	...	...	...
Respiratory diseases ...	...	...	...	...	...	...	...	...	...	...	...
Injuries ...	...	...	...	...	...	...	...	...	...	...	...
All other causes ...	...	...	...	...	...	...	...	...	...	...	...
Total				...	...	...	...	...	...	...	...

NOTE.—The population of Military cantonments by different ages cannot be

NOTE.—As the correct population of the different age periods according to the census of 1911 of the Punjab Province as at present constituted is not prior to the separation of the (new) Delhi Province,—vide Punjab Government



## No. IV—CONCLUDED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1918.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		No.
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
...	...	...	...	...	...	...	...	...	...	...	...	...	...	25
4	1	...	...	...	...	...	...	...	...	...	...	4	2	
957	850	2,095	2,401	1,690	2,096	1,408	1,287	1,275	1,028	2,379	1,883	15,536	15,355	
5	4	10	10	17	15	23	19	18	13	50	29	229	147	
30	23	71	45	73	47	83	86	64	71	94	84	560	450	
4	10	9	8	9	3	5	2	3	4	5	3	86	50	
67	66	106	106	116	111	108	99	140	124	267	179	2,178	1,919	
1,067	956	2,295	2,574	1,921	2,274	1,638	1,502	1,503	1,247	2,804	2,182	18,635	17,961	26
1	...	1	...	...	...	...	...	...	...	...	...	2	1	
3	3	...	...	...	...	1	...	...	...	...	...	20	16	
145	135	186	149	221	167	207	176	236	184	151	122	1,311	1,092	
2,058	2,386	4,102	4,043	4,008	3,649	3,577	2,853	3,022	2,435	4,264	3,318	29,433	26,476	
8	4	6	6	6	7	5	4	2	3	20	9	100	85	
52	71	63	89	40	52	26	19	28	18	67	33	368	370	27
24	7	19	10	22	6	14	8	12	6	13	...	177	84	
121	118	137	112	124	113	140	108	161	105	210	131	2,141	1,737	
2,412	2,724	4,514	4,409	4,421	3,994	3,970	3,168	3,461	2,751	4,725	3,613	33,552	29,861	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1	1	2	...	2	2	1	1	...	...	...	...	15	6	
1	2	1	1	3	1	2	1	...	...	...	...	7	5	28
1,158	902	3,608	3,451	3,479	3,178	2,412	2,052	1,961	1,342	2,804	1,981	20,554	17,006	
2	...	3	2	4	4	5	4	7	3	13	5	45	27	
8	4	17	19	19	24	27	13	21	4	27	8	134	93	
4	7	20	4	15	10	9	4	8	5	12	...	128	61	
9	26	36	114	33	78	21	20	19	9	35	12	554	597	
1,183	942	3,747	3,591	3,555	3,297	2,477	2,095	2,016	1,363	2,891	2,006	21,437	17,795	29
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	1	...	...	...	1	...	...	...	...	...	...	1	5	
...	...	...	...	2	...	1	...	...	...	...	...	3	...	
1,062	790	3,316	3,482	3,231	2,914	2,300	1,968	1,760	1,240	2,709	2,228	19,325	16,709	
12	3	5	4	15	7	18	8	14	5	10	6	125	50	
22	20	72	51	110	83	58	29	24	20	16	11	336	264	30
3	1	2	1	5	4	9	4	10	4	14	6	58	29	
18	23	25	27	41	32	43	39	24	31	30	32	460	440	
1,117	838	3,420	3,565	3,404	3,045	2,429	2,048	1,832	1,330	2,779	2,283	20,308	17,497	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	7	30	12	26	20	15	20	14	7	3	7	151	106	31
77	73	59	67	35	30	12	15	2	5	2	3	1,530	1,502	
4,351	4,075	6,323	6,354	7,213	6,544	6,446	6,296	4,886	4,422	4,867	5,030	48,008	47,907	
45,265	45,751	97,063	102,837	78,471	83,327	63,594	59,840	56,199	50,149	81,817	72,141	651,500	635,527	
320	248	451	345	506	382	536	336	484	326	698	464	5,909	4,440	
1,486	1,423	2,599	2,403	2,871	2,416	2,644	2,130	2,716	1,992	5,009	3,662	28,581	24,205	
332	253	483	371	487	322	431	297	347	209	320	202	3,687	2,504	32
1,630	1,640	2,427	2,551	2,264	2,327	2,083	1,800	2,002	1,598	3,102	2,563	57,977	52,317	
53,483	53,470	109,435	114,940	91,873	95,268	75,761	70,734	66,650	58,908	95,818	84,072	797,343	768,217	
994,990	726,853	1,885,914	1,581,882	1,446,929	1,197,335	1,065,657	894,099	711,241	544,726	662,471	510,371	10,008,101	8,729,645	
0.02	0.01	0.02	0.01	0.02	0.02	0.01	0.02	0.02	0.01	0.004	0.01	0.01	0.01	
0.08	0.10	0.03	0.04	0.02	0.03	0.01	0.02	0.002	0.01	0.003	0.01	0.14	0.17	33
4.38	5.61	3.35	4.02	4.98	5.47	6.05	7.04	6.87	8.49	7.35	9.86	4.53	5.45	
45.53	62.94	51.47	65.01	64.23	69.59	59.68	66.93	79.02	92.06	123.50	141.35	61.42	72.81	
0.32	0.34	0.24	0.22	0.35	0.32	0.50	0.38	0.68	0.59	1.05	0.91	0.56	0.51	
1.49	1.96	1.38	1.52	1.98	2.02	2.48	2.38	3.82	3.65	7.56	7.18	2.69	2.77	
0.33	0.35	0.26	0.23	0.34	0.27	0.40	0.33	0.49	0.38	0.43	0.40	0.35	0.29	
1.64	2.26	1.29	1.61	1.56	1.86	1.95	2.01	2.81	2.93	4.68	5.02	5.47	5.99	34
13.80	73.56	58.03	72.66	63.50	79.57	71.09	79.11	93.71	108.14	144.64	164.73	75.16	83.01	

excluded, as it is not shown separately in the census returns.

available, the ratios shown in columns 5 to 14 are calculated under the orders of the Local Government on the population of the Punjab as constituted notification No. 2943-S., dated 1st October 1912.



## ANNUAL FORM No. V.

DEATHS REGISTERED ACCORDING TO CLASSES IN THE DISTRICTS OF THE PUNJAB  
DURING THE YEAR 1918.

1	2	3					4					5					6
No.	DISTRICT.	POPULATION ACCORDING TO CENSUS OF 1911.					NUMBER OF DEATHS REGISTERED.					RATIO OF DEATHS PER 1,000 OF POPULATION.					No.
		Muhammads.	Hindus.	Indian Christians.	Other classes.	Total.	Muhammads.	Hindus.	Indian Christians.	Other classes.	Total.	Muhammads.	Hindus.	Indian Christians.	Other classes.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
AMBALA DIVISION.																	
1	Hissar ...	218,600	585,995	79	215	804,889	23,442	54,788	1	...	78,231	107.24	93.49	12.66	...	97.19	
2	Rohtak ...	113,493	600,168	1,136	37	714,834	18,506	76,734	33	...	90,273	119.00	127.85	29.05	...	126.29	
3	Gurgaon ...	235,653	492,684	687	143	729,167	38,316	74,937	12	35	113,300	162.60	152.10	17.47	244.76	155.38	
4	Karnal ...	224,920	573,947	836	84	799,787	22,056	55,782	14	2	77,854	98.06	97.19	16.75	23.81	97.34	
5	Ambala ...	188,252	443,202	745	354	632,553	15,186	34,832	23	...	50,041	80.67	78.59	30.87	...	79.11	
6	Simla ...	4,775	27,093	533	2,569	34,970	262	1,313	12	...	1,587	54.87	48.46	22.51	...	45.38	
JULLUNDUR DIVISION.																	
7	Kangra ...	38,770	723,570	221	4,125	766,686	2,166	38,117	8	1	40,292	55.87	52.68	36.20	0.24	52.55	
8	Hoshiarpur ...	281,805	633,786	2,954	24	918,569	16,784	36,140	91	...	53,015	59.56	57.02	80.81	...	57.71	
9	Jullundur ...	352,329	434,503	1,107	17	787,956	27,733	29,859	10	1	57,603	78.71	68.72	9.03	58.82	73.10	
10	Ludhiana ...	176,043	340,261	731	157	517,192	20,387	36,695	30	...	57,112	115.82	107.84	41.04	...	110.43	
11	Ferozepore ...	408,380	524,056	915	148	933,499	38,248	43,895	22	...	82,165	93.66	83.76	24.04	...	88.02	
LAHORE DIVISION.																	
12	Lahore ...	619,735	377,928	15,972	4,107	1,017,742	63,031	24,999	1,659	...	89,689	101.71	66.15	103.87	...	88.13	
13	Amritsar ...	408,571	466,202	4,189	349	879,311	34,940	34,390	358	4	69,692	85.52	73.77	85.46	11.46	79.26	
14	Gurdaspur ...	407,701	401,628	23,068	164	832,561	33,447	31,228	2,064	22	66,761	82.04	77.75	89.47	134.16	80.19	
15	Sialkot ...	599,340	317,942	45,727	270	963,279	39,057	17,361	4,686	85	61,189	65.17	54.60	102.48	314.81	63.52	
16	Gujranwala ...	622,430	284,773	16,117	99	923,419	59,509	13,911	2,152	501	76,073	95.61	48.85	133.52	?	82.38	
RAWALPINDI DIVISION.																	
17	Gujrat ...	650,893	94,171	463	107	745,634	47,610	7,254	38	421	55,323	73.14	77.03	82.07	?	74.20	
18	Shahpur ...	572,565	106,156	8,419	226	687,366	37,877	4,792	942	...	43,611	66.15	45.14	111.89	...	63.45	
19	Jhelum ...	449,553	54,364	151	127	504,195	31,446	2,333	4	...	33,783	69.95	42.91	26.49	...	67.00	
20	Rawalpindi ...	442,090	64,209	932	411	507,642	29,280	3,074	36	8	32,398	66.23	47.87	38.63	19.46	63.82	
21	Attock ...	470,155	45,071	31	29	515,286	30,440	1,745	...	273	32,453	64.74	38.72	...	?	62.99	
22	Mianwali ...	299,971	41,238	91	77	341,377	21,762	2,292	...	4	24,058	72.55	55.58	...	51.95	70.47	
MULTAN DIVISION.																	
23	Montgomery	376,174	127,368	459	114	504,115	33,710	10,201	468	61	44,440	89.61	80.09	?	535.09	88.15	
24	Lyallpur ...	547,837	309,021	31,889	148	888,895	36,447	18,061	3,031	27	57,566	66.53	58.45	95.05	182.43	64.76	
25	Jhang ...	422,468	92,857	177	24	515,526	32,032	4,552	1	11	36,596	75.82	49.02	5.65	458.33	70.99	
26	Multan ...	660,320	140,359	384	312	801,375	54,808	8,523	240	47	63,413	82.69	60.72	625.00	150.64	79.13	
27	Muzaffargarh	494,915	74,481	40	25	569,461	35,574	3,658	...	...	39,232	71.88	49.11	...	...	68.89	
28	Dera Ghazi Khan.	442,234	57,550	25	51	499,860	33,699	4,056	...	50	37,803	76.20	70.48	...	980.39	75.63	
Total for the Province.		10,729,972	8,434,583	168,078	14,513	19,337,146	872,550	675,522	15,935	1,553	1,585,560	81.32	80.09	100.80	107.01	80.96	

\* Figures incorrect due to misclassification.



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ANNUAL FORM No. VI.

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS (RURAL  
CIRCLES) OF THE PUNJAB DURING THE YEAR 1918.

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## DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS

1	2	3	4	5	6	7	8	9	10					
No.	A.—RURAL CIRCLES.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AMBALA DIVISION.														
1	Hissar ... ..	725,016	...	154	1,852	68,189	120	661	3	6	128	27	...	164
2	Rohtak ... ..	654,115	6	152	2,003	73,089	194	1,222	3	36	226	28	1	294
3	Gurgaon ... ..	675,175	...	22	2,524	93,825	417	1,406	25	88	258	18	...	389
4	Karnal ... ..	723,742	39	62	266	64,138	195	933	...	10	221	40	9	280
5	Ambala ... ..	577,034	2	35	2,288	37,952	263	2,812	3	3	96	16	1	119
6	Simla ... ..	16,036	...	1	...	480	60	60	...	...	3	...	...	3
JULLUNDUR DIVISION.														
7	Kangra ... ..	760,548	14	21	65	30,898	996	2,402	7	5	173	30	4	219
8	Hoshiarpur ... ..	864,823	3	43	1,155	42,589	11	2,047	10	12	156	32	4	214
9	Jullundur ... ..	691,616	55	52	6,792	38,703	105	1,247	5	13	192	8	3	221
10	Ludhiana ... ..	448,172	5	33	12,716	31,763	106	956	2	2	93	12	7	116
11	Perozepre ... ..	878,765	48	194	1,667	67,528	250	1,436	6	4	171	26	1	208
LAHORE DIVISION.														
12	Lahore ... ..	744,464	13	82	22,937	42,988	144	790	6	6	153	22	3	190
13	Amritsar ... ..	711,530	2	97	4,555	48,082	358	1,225	6	5	157	9	1	178
14	Gurdaspur ... ..	784,343	...	24	3,173	50,335	600	8,619	1	2	108	16	2	129
15	Sialkot ... ..	855,899	...	19	362	45,691	368	4,749	5	6	181	22	5	219
16	Gujranwala ... ..	831,894	1	1	3,859	62,369	111	423	...	2	199	75	13	289
RAWALPINDI DIVISION.														
17	Gujrat ... ..	702,886	2	21	5,721	42,410	166	1,727	1	1	183	36	...	221
18	Shahpur ... ..	630,940	...	1	263	36,884	151	705	...	...	168	28	2	198
19	Jhelum ... ..	481,307	...	13	5,545	22,999	143	1,010	1	...	147	42	...	190
20	Rawalpindi ... ..	459,639	...	3	3,258	22,470	1,863	952	2	...	161	33	1	197
21	Attock ... ..	496,291	2	7	271	28,801	10	512	3	...	117	20	...	140
22	Mianwali ... ..	316,243	...	4	51	20,871	109	185	...	...	85	5	...	90
MULTAN DIVISION.														
23	Montgomery ... ..	479,837	17	58	2,794	38,131	35	117	2	...	136	68	...	206
24	Lyallpur ... ..	863,900	2	84	1,273	49,375	233	733	4	5	270	38	2	319
25	Jhang ... ..	475,527	...	3	21	29,575	234	837	2	...	77	50	1	130
26	Multan ... ..	709,294	1	24	346	52,528	37	296	1	...	169	81	...	251
27	Mazaffargarh ... ..	547,005	...	18	10	36,566	45	170	...	1	121	63	...	185
28	Dera Ghazi Khan ... ..	463,304	...	4	...	34,544	72	125	5	1	49	26	...	81
Total of the Rural Circles ...		17,569,045	212	1,232	85,802	1,208,923	7,396	38,359	103	208	4,198	871	60	5,440



## No. VI.

(RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1918.

11	12	13								14		15
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.								FROM ALL CAUSES.		Number.
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
3,832	69,972	...	0.21	2.55	87.16	0.17	0.92	0.23	5.29	96.51	30.23	1
6,225	83,190	0.01	0.23	3.07	111.74	0.30	1.87	0.45	9.52	127.18	30.13	2
8,145	106,728	...	0.03	3.74	138.96	0.62	2.08	0.58	12.06	158.07	36.04	3
6,052	71,965	0.05	0.09	0.37	88.62	0.27	1.19	0.39	8.33	99.43	35.43	4
2,876	46,447	0.03	0.06	3.97	65.77	0.46	4.87	0.21	5.16	80.49	35.25	5
80	684	...	0.06	...	29.93	3.74	3.74	0.19	4.99	42.65	24.40	6
5,427	40,042	0.02	0.03	0.09	40.63	1.31	3.16	0.29	7.14	52.65	30.71	7
3,832	49,894	0.003	0.05	1.34	49.25	0.01	2.37	0.25	4.43	57.69	31.73	8
2,914	51,119	0.08	0.08	9.82	55.94	0.15	1.80	0.32	5.70	73.89	32.64	9
5,156	50,853	0.01	0.07	28.37	70.87	0.24	2.14	0.26	11.50	113.47	32.54	10
6,757	78,118	0.05	0.22	1.93	76.54	0.28	1.63	0.24	7.69	88.90	30.66	11
4,582	71,723	0.02	0.11	30.81	57.74	0.19	1.06	0.26	6.15	96.35	33.48	12
3,229	57,676	0.002	0.14	6.40	67.51	0.50	1.72	0.25	4.54	81.06	35.67	13
517	63,397	...	0.03	4.05	64.17	0.76	10.99	0.16	0.66	80.83	36.64	14
4,108	55,516	...	0.02	0.42	53.41	0.43	5.55	0.26	4.80	64.90	38.19	15
2,535	70,488	0.001	0.001	4.64	74.85	0.13	0.51	0.35	4.25	84.73	41.51	16
2,658	52,926	0.002	0.03	8.14	60.34	0.24	2.46	0.31	3.78	75.30	35.66	17
2,386	40,588	...	0.001	0.42	58.46	0.24	1.12	0.31	3.78	64.33	30.82	18
2,119	32,019	...	0.03	11.52	47.78	0.30	2.10	0.39	4.40	66.53	32.84	19
1,204	29,947	...	0.01	7.09	48.89	4.05	2.07	0.43	2.62	65.15	38.09	20
1,907	31,650	0.004	0.01	0.55	58.03	0.02	1.03	0.28	3.54	63.77	31.99	21
1,104	22,414	...	0.01	0.16	66.00	0.34	0.58	0.28	3.49	70.88	32.62	22
1,742	43,100	0.04	0.12	5.82	79.47	0.07	0.24	0.43	3.63	89.82	27.84	23
4,744	56,763	0.002	0.10	1.47	57.15	0.27	0.85	0.37	5.49	65.71	26.15	24
3,394	34,194	...	0.01	0.04	62.19	0.49	1.76	0.27	7.14	71.91	29.65	25
2,739	56,522	0.001	0.03	0.49	74.48	0.05	0.42	0.35	3.86	79.69	30.13	26
977	37,971	...	0.03	0.02	66.85	0.08	0.31	0.34	1.79	69.42	32.00	27
536	35,362	...	0.01	...	74.56	0.16	0.27	0.17	1.16	76.33	26.90	28
93,907	1,441,271	0.01	0.07	4.88	68.81	0.42	2.18	0.31	5.35	82.03	33.06	



## DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE TOWNS

1	2	3	4	5	6	7	8	9	10					
No.	R.—TOWNS.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
HISSAR DISTRICT.														
1	Hissar ... ..	17,162	...	25	12	982	29	96	...	...	2	...	...	2
2	Hansi ... ..	14,576	...	...	489	1,159	19	91	...	...	2	1	...	3
3	Bhiwani ... ..	31,100	1	37	794	1,707	46	164	...	1	3	...	...	4
4	Sirsa ... ..	14,629	...	2	...	1,003	46	86	...	...	...	...	...	...
5	Pattehshad ... ..	2,406	...	1	...	99	1	8	...	...	...	...	...	...
ROHTAK DISTRICT.														
6	Rohtak ... ..	19,862	...	26	4	1,499	33	110	...	...	5	1	...	6
7	Jhajjar ... ..	10,617	...	26	60	912	19	76	...	...	5	2	...	7
8	Beri ... ..	7,798	...	1	434	612	10	31	...	...	3	...	...	3
9	Gohana ... ..	5,438	...	5	...	471	6	18	...	...	3	...	...	3
10	Bahadurgarh ... ..	4,990	...	2	86	555	6	23	...	...	3	...	...	3
11	Sonepat ... ..	12,014	...	3	...	831	26	42	...	...	7	...	...	7
GURGAON DISTRICT.														
12	Rewari ... ..	24,780	...	...	380	864	109	252	...	...	3	3	...	6
13	Palwal ... ..	9,485	...	...	3	1,220	37	43	...	...	4	...	...	4
14	Ferozpur ... ..	5,719	...	...	...	712	20	28	...	...	...	...	...	...
15	Hodal ... ..	5,498	...	1	68	741	15	14	...	...	1	...	...	1
16	Ballabgarh ... ..	4,053	...	...	...	381	6	21	...	1	...	...	...	1
17	Faridabad ... ..	4,487	...	14	...	604	18	15	1	...	2	1	...	4
KARNAL DISTRICT.														
18	Karnal ... ..	21,018	5	...	1	1,271	50	115	...	...	...	1	...	1
19	Kaithal ... ..	12,912	...	2	...	764	19	53	...	...	3	...	...	3
20	Panipat ... ..	26,342	1	89	...	1,677	32	121	...	...	3	1	...	4
21	Shahabad ... ..	11,054	...	85	32	274	20	89	...	...	...	...	...	...
22	Thanesar ... ..	4,719	...	...	...	176	2	11	...	...	...	...	...	...
AMBALA DISTRICT.														
23	Ambala ... ..	24,493	...	2	128	865	45	259	1	...	3	...	...	4
24	Jagadhri ... ..	12,045	...	...	40	542	39	123	...	...	3	...	...	3
25	Burya ... ..	4,272	...	...	5	218	11	21	...	...	...	...	...	...
26	Sadhauna ... ..	7,774	...	...	...	288	20	65	...	...	3	1	...	4
27	Rupar ... ..	6,935	...	2	...	270	16	39	...	...	1	...	...	1
SIMLA DISTRICT.														
28	Simla ... ..	18,934	...	1	...	509	11	261	...	...	2	...	...	2
KANGRA DISTRICT.														
29	Kangra ... ..	3,620	2	1	...	74	15	31	...	...	...	...	...	...
30	Dharmala ... ..	2,518	...	...	...	55	1	14	...	...	1	...	...	1
HOSHIARPUR DISTRICT.														
31	Hoshiarpur ... ..	16,980	...	4	43	648	1	136	...	...	9	...	...	9
32	Khaspur ... ..	2,523	...	...	...	71	2	22	...	...	...	...	...	...
33	Hariana ... ..	5,395	...	4	...	189	...	31	...	...	2	...	...	2
34	Garhdiwala ... ..	3,093	...	2	...	136	...	3	...	...	1	...	...	1
35	Dasuya ... ..	3,597	...	13	...	307	...	36	...	...	3	...	...	3
36	Tanda Urmar ... ..	7,016	...	1	...	324	...	55	...	...	2	...	...	2
37	Miani ... ..	4,870	13	...	...	374	1	9	...	...	...	...	...	...
38	Mukerian ... ..	2,053	...	...	...	106	...	34	...	...	1	...	...	1
39	Una ... ..	4,178	...	...	...	118	...	17	...	...	...	...	...	...
40	Anandpur ... ..	4,041	...	...	...	107	...	8	...	...	2	...	...	2
JULLUNDUR DISTRICT.														
41	Jullundur ... ..	55,354	1	12	338	1,965	98	526	1	...	24	...	...	25
42	Kartarpur ... ..	8,631	...	1	130	433	21	63	...	...	4	...	...	4
43	Bughal ... ..	4,602	...	...	...	203	9	10	...	...	3	...	...	3
44	Rahon ... ..	6,392	...	...	...	440	6	17	...	...	...	...	...	...
45	Phillaur ... ..	5,224	...	4	50	254	14	39	...	...	...	1	...	1
46	Nurmahal ... ..	7,178	...	1	98	308	11	67	...	...	4	...	...	4
47	Nasodar ... ..	8,859	...	3	238	438	38	62	...	...	1	...	...	1



## OF THE PUNJAB DURING THE YEAR 1918.

11	12	13										14
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.										No.
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
										For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
327	1,473	...	1.46	0.70	57.22	1.69	5.59	0.12	19.05	85.83	39.41	1
250	2,011	...	...	33.55	79.51	1.30	6.24	0.21	17.15	137.97	37.82	2
615	3,368	0.03	1.19	25.53	54.89	1.48	5.27	0.13	19.77	108.20	42.44	3
150	1,287	...	0.14	...	68.56	3.14	5.88	...	10.25	87.98	38.64	4
11	120	...	0.42	...	41.15	0.42	3.33	...	4.57	49.88	24.36	5
274	1,952	...	1.31	0.20	75.47	1.66	5.54	0.30	13.80	98.28	35.26	6
254	1,354	...	2.45	5.65	85.90	1.79	7.16	0.66	23.92	127.53	35.92	7
151	1,343	...	0.13	55.66	78.48	1.28	3.97	0.38	19.35	159.27	38.11	8
115	618	...	0.62	...	86.61	1.10	3.31	0.55	21.15	113.64	51.20	9
105	780	...	0.40	17.23	111.22	1.20	4.61	0.60	21.04	156.31	34.55	10
228	1,137	...	0.25	...	69.17	2.16	3.50	0.58	18.98	94.64	33.34	11
489	2,100	...	...	15.33	34.87	4.40	10.17	0.24	19.73	84.75	27.97	12
177	1,484	...	...	0.32	128.62	3.90	4.53	0.42	18.66	156.46	47.17	13
82	842	...	...	...	124.50	3.50	4.90	...	14.34	147.23	43.50	14
116	956	...	0.18	12.44	135.52	2.74	2.56	0.18	21.21	174.84	47.59	15
51	460	...	...	...	94.00	1.48	5.18	0.25	12.58	113.50	36.61	16
75	730	...	3.12	...	134.61	4.01	3.34	0.89	16.71	162.69	40.70	17
263	1,706	0.24	...	0.05	60.47	2.38	5.47	0.05	12.51	81.17	40.91	18
205	1,046	...	0.15	...	59.17	1.47	4.10	0.23	15.88	81.01	47.00	19
426	2,350	0.04	3.38	...	63.66	1.21	4.59	0.15	16.17	89.21	48.67	20
111	561	...	3.17	2.89	24.79	1.81	8.04	...	10.04	50.75	34.25	21
37	226	...	...	...	37.20	0.42	2.33	...	7.84	47.89	35.99	22
201	1,504	...	0.08	5.22	35.32	1.84	10.57	0.16	8.21	61.41	35.23	23
167	914	...	...	3.42	45.00	3.24	10.21	0.25	13.86	75.88	49.68	24
62	317	...	...	1.17	51.03	2.57	4.92	...	14.51	74.20	42.04	25
62	439	...	...	...	37.05	2.57	8.36	0.51	7.98	56.47	36.20	26
92	420	...	0.29	...	38.93	2.31	5.62	0.14	13.27	60.56	34.64	27
119	903	...	0.05	...	26.88	0.58	13.78	0.11	6.28	47.69	21.27	28
38	161	0.55	0.28	...	20.44	4.14	8.56	...	10.50	44.48	27.85	29
18	89	...	...	...	21.84	0.40	5.56	0.40	7.15	35.35	22.88	30
166	1,007	...	0.24	2.53	38.16	0.06	8.01	0.53	9.78	59.31	35.69	31
24	119	...	...	...	28.14	0.80	8.72	...	9.51	47.17	37.89	32
22	248	...	0.74	...	35.03	...	5.75	0.37	4.08	45.97	31.88	33
9	151	...	0.65	...	43.97	...	0.97	0.32	2.91	48.82	29.10	34
56	415	...	3.61	...	85.35	...	10.01	0.83	15.57	115.37	50.88	35
13	395	...	0.14	...	46.18	...	7.84	0.28	1.85	56.30	35.40	36
22	319	2.67	...	...	58.28	0.21	1.85	...	4.52	65.50	29.20	37
27	168	...	...	...	51.63	...	16.56	0.49	13.15	81.83	52.31	38
22	157	...	...	...	28.24	...	4.07	...	5.27	37.58	32.36	39
25	142	...	...	...	26.48	...	1.98	0.49	6.19	35.14	21.38	40
295	3,260	0.02	0.22	6.11	35.50	1.77	9.50	0.45	5.33	58.89	35.68	41
54	706	...	0.12	15.06	50.17	2.43	7.30	0.46	6.26	81.80	36.22	42
45	270	...	...	...	44.11	1.96	2.17	0.65	9.78	58.67	29.29	43
30	493	...	...	...	69.93	0.95	2.70	...	4.77	78.35	31.88	44
42	404	...	0.77	9.57	48.62	2.68	7.47	0.19	8.04	77.34	36.91	45
19	508	...	0.14	13.65	42.91	1.53	9.33	0.56	2.65	70.77	36.11	46
63	843	...	0.34	26.87	49.44	4.29	7.00	0.11	7.11	95.16	31.63	47



**ANNUAL FORM**  
**DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE**

1	2	3	4	5	6	7	8	9	10					
No.	B—Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Typhoid.	Dysentery and diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>LUDHIANA DISTRICT.</b>														
48	Ludhiana	43,153	...	75	494	2,410	82	249	...	...	6	...	2	8
49	Jagraon	15,039	...	9	508	733	20	117	...	...	4	...	...	4
50	Raekot	7,510	...	...	203	424	2	29	...	...	...	...	...	...
51	Khanna	3,319	...	5	51	161	4	21	...	...	3	...	...	3
<b>FEROZEPUR DISTRICT.</b>														
52	Ferozepore	24,078	1	51	6	892	42	173	1	...	1	1	...	3
53	Zira	4,378	...	...	...	352	9	19	...	...	2	...	...	2
54	Dharmkot	5,859	...	2	...	293	9	37	...	...	2	...	...	2
55	Muktsar	8,834	...	1	111	497	9	17	...	...	4	...	...	4
56	Fazilka	10,985	4	1	188	733	24	77	...	...	...	...	...	...
<b>LAHORE DISTRICT.</b>														
57	Lahore	210,271	6	713	282	8,349	297	1,810	3	...	146	2	...	151
58	Chunian	7,151	...	1	322	349	6	41	1	...	2	...	1	4
59	Khudian	2,992	...	2	54	155	4	7	1	...	2	...	...	3
60	Kasur	24,788	...	31	327	1,049	16	91	1	...	19	...	1	21
61	Khem Karn	5,732	...	1	39	216	3	15	...	...	...	...	1	1
62	Patti	7,987	...	5	2	431	19	106	...	...	4	...	...	4
63	Baghbanpura-Bhagival	6,993	...	1	49	467	4	39	...	...	4	1	...	5
64	Ichhra	5,489	...	...	2	93	1	17	...	...	...	...	...	...
65	Pattoki Mandi	1,880	...	3	57	72	3	5	...	...	5	...	...	5
<b>AMRITSAR DISTRICT.</b>														
66	Amritsar	151,339	2	391	306	6,175	280	2,700	3	1	133	3	5	145
67	Majitha	5,223	...	2	1	292	25	30	...	...	1	...	...	1
68	Jandiala	6,959	...	10	30	372	5	19	...	...	1	...	...	1
69	Tarn Taran	4,260	...	3	4	180	21	22	...	...	1	...	...	1
<b>GURDASPUR DISTRICT.</b>														
70	Gurdaspur	5,133	...	...	2	205	12	83	...	...	1	...	...	1
71	Dinanagar	4,154	...	1	42	276	9	57	...	...	2	...	...	2
72	Pathankot	7,007	...	4	23	410	13	76	...	...	2	1	...	3
73	Dalhousie	938	...	...	...	27	2	22	1	...	1	...	...	2
74	Batala	25,430	...	20	171	1,154	44	322	1	...	13	1	...	15
75	Dera Nanak	4,556	...	...	1	172	10	44	...	...	...	...	...	...
<b>SIALKOT DISTRICT.</b>														
76	Sialkot	48,595	2	7	24	575	48	1,268	...	...	15	2	1	18
77	Daska	6,046	...	1	...	187	9	27	...	...	2	...	...	2
78	Jamki	3,542	...	...	...	140	8	27	...	...	1	...	...	1
79	Pasrur	7,564	...	5	...	241	8	55	1	...	2	...	...	3
80	Zaffarwal	3,633	...	...	...	156	5	37	...	...	1	...	...	1
81	Narowal	4,464	...	...	...	200	2	47	...	...	4	...	...	4
82	Sambarial	6,285	...	1	...	189	5	16	...	...	...	...	...	...
83	Sahowala	3,558	...	...	...	164	2	8	...	...	2	...	...	2
84	Bogowala	3,768	...	...	...	233	1	11	...	...	...	1	...	1
85	Bhopalwala	3,336	...	...	...	156	7	10	...	...	1	...	...	1
86	Mitranwali	3,183	...	...	...	14	15	158	...	...	2	...	...	2
87	Badomali	2,815	...	...	16	72	2	27	...	...	...	1	1	2
88	Kalaswala	2,915	...	...	...	92	8	20	...	...	1	...	...	1
89	Daud	3,481	...	...	...	186	6	16	...	1	1	...	...	2
90	Chawinda	4,695	...	...	...	179	3	29	...	...	...	...	...	...
<b>GUJRANWALA DISTRICT.</b>														
91	Gujranwala	28,637	1	67	2	1,365	32	172	...	1	13	3	...	17
92	Wazirabad	17,146	...	...	...	736	21	78	...	...	3	...	...	3
93	Eminabad	5,526	...	9	1	261	5	10	...	...	1	2	...	3
94	Kila Didar Singh	2,210	...	...	...	151	1	1	...	...	1	1	...	2
95	Aksalgarh	3,943	1	2	...	173	1	15	...	...	5	1	...	6
96	Ramnagar	5,256	...	...	1	348	3	11	...	...	4	...	...	4
97	Sodra	4,606	...	...	1	305	1	6	...	...	4	...	...	4
98	Hafizabad	5,742	...	2	...	339	5	22	...	...	7	...	...	7
99	Khangah Dogran	1,267	...	...	...	63	1	4	...	...	1	...	...	1
100	Pindi Bhattian	3,631	...	...	...	134	2	15	1	...	...	...	1	2
101	Sangla	980	...	...	...	32	...	...	...	...	...	...	...	...
102	Sharakpur	4,482	...	...	62	170	7	7	...	...	2	...	...	2
103	Shabkot	1,054	...	...	...	57	...	5	...	...	...	...	...	...
104	Chuharkana Mandi	854	...	...	4	74	...	8	...	...	...	...	...	...
105	Nankana Sahib	6,131	...	...	49	173	1	3	...	...	5	...	...	5



## No. VI—CONTINUED.

## TOWNS OF THE PUNJAB DURING THE YEAR 1918—CONTINUED.

11		12		13										14											
		RATIO OF DEATHS PER 1,000 OF POPULATION.																							
All other causes.		Total deaths from all causes.												From all causes.											
				Cholera.		Small-pox.		Plague.		Fever.		Dysentery and diarrhoea.		Respiratory diseases.		Injuries.		All other causes.		For the year.		Mean ratio of previous five years.		No.	
16		17		18		19		20		21		22		23		24		25		26		27		28	
296		3,514		...		1.74		11.45		55.85		1.90		5.77		0.19		6.86		83.75		34.89		48	
229		1,820		...		0.60		33.78		48.74		1.88		7.78		0.27		15.23		107.72		39.43		49	
76		784		...		...		27.03		56.46		0.27		8.86		...		10.12		97.74		35.18		50	
46		291		...		1.51		15.37		48.51		1.21		6.33		0.90		13.86		87.68		37.60		51	
132		1,800		0.04		2.07		0.24		36.15		1.70		7.01		0.12		5.35		52.68		24.58		52	
43		425		...		...		...		86.40		2.06		4.34		0.46		9.82		97.08		29.74		53	
72		415		...		0.34		...		50.01		1.54		6.32		0.34		12.29		70.83		28.30		54	
78		717		...		0.11		12.57		56.26		1.02		1.92		0.45		8.83		81.16		31.76		55	
165		1,190		0.36		0.09		16.93		66.73		2.18		7.01		...		15.02		108.33		43.19		56	
1,514		13,122		0.08		3.29		1.34		39.71		1.41		8.61		0.72		7.20		62.41		37.15		57	
125		848		...		0.14		45.03		48.80		0.84		5.73		0.56		17.48		118.68		41.17		58	
19		244		...		0.67		18.05		61.80		1.34		2.34		1.00		6.35		81.55		34.22		59	
267		1,802		...		1.25		13.19		42.33		0.65		3.67		0.85		10.77		72.71		35.92		60	
85		360		...		0.17		6.80		37.68		0.52		2.62		0.17		14.83		62.81		35.62		61	
76		643		...		0.63		0.25		53.96		2.38		13.27		0.50		9.82		80.51		38.63		62	
74		639		...		0.14		7.01		66.78		0.57		5.58		0.72		10.58		91.38		Not available.		63	
20		133		...		...		0.36		16.94		0.18		3.10		...		3.64		24.23		Not available.		64	
27		172		...		1.60		30.22		38.30		1.60		2.66		2.66		14.36		91.49		Not available.		65	
883		10,882		0.01		2.58		2.02		40.80		1.85		17.84		0.96		5.83		71.90		47.28		66	
54		405		...		0.38		0.19		55.91		4.79		5.74		0.19		10.34		77.54		36.72		67	
34		471		...		1.44		4.31		53.46		0.72		2.73		0.14		4.89		67.68		33.19		68	
27		258		...		0.70		0.94		42.25		4.93		5.16		0.23		6.84		60.56		33.10		69	
12		315		...		...		0.89		39.94		2.34		16.17		0.19		2.34		61.37		37.09		70	
24		411		...		0.24		10.11		66.44		2.17		13.72		0.48		5.78		98.94		47.04		71	
30		559		...		0.57		3.28		53.51		1.86		10.85		0.43		4.28		79.78		43.98		72	
...		53		...		...		...		28.78		2.18		23.45		2.13		...		56.50		23.01		73	
65		1,791		...		0.76		6.47		43.66		1.66		12.18		0.57		2.46		67.76		39.32		74	
8		235		...		...		0.22		37.75		2.19		9.66		...		1.76		51.58		31.30		75	
571		2,513		0.04		0.14		0.49		11.83		0.99		26.09		0.37		11.75		51.71		39.71		76	
38		264		...		0.17		...		30.93		1.49		4.47		0.33		6.29		43.67		30.23		77	
25		201		...		...		...		39.53		2.26		7.62		0.28		7.06		56.75		37.21		78	
30		342		...		0.66		...		31.86		1.06		7.27		0.40		3.97		45.21		34.21		79	
19		218		...		...		...		42.94		1.38		10.18		0.28		5.23		60.01		37.60		80	
14		267		...		...		...		44.80		0.45		10.53		0.90		3.14		59.81		40.23		81	
28		239		...		0.16		...		30.07		0.80		2.55		...		4.46		38.03		Not available.		82	
16		192		...		...		...		46.09		0.56		2.25		0.56		4.50		53.96		Not available.		83	
19		265		...		...		...		61.84		0.27		2.92		0.27		5.04		70.33		Not available.		84	
29		203		...		...		...		46.76		2.10		3.00		0.30		8.69		60.85		Not available.		85	
32		221		...		...		...		4.40		4.71		49.64		0.63		10.05		69.43		Not available.		86	
20		139		...		...		5.68		25.58		0.71		9.59		0.71		7.10		49.38		Not available.		87	
12		143		...		...		...		31.56		2.74		10.29		0.34		4.12		49.06		Not available.		88	
30		240		...		...		...		53.43		1.72		4.60		0.57		8.62		68.95		Not available.		89	
15		226		...		...		...		38.13		0.64		6.18		...		3.19		48.14		Not available.		90	
206		1,862		0.03		2.34		0.07		47.67		1.12		6.01		0.59		7.19		65.02		42.10		91	
82		920		...		...		...		42.92		1.22		4.55		0.17		4.78		53.65		38.69		92	
20		309		...		1.63		0.18		47.23		0.90		1.81		0.54		3.62		55.92		38.11		93	
17		172		...		...		...		68.33		0.45		0.45		0.90		7.69		77.83		42.53		94	
6		204		0.25		0.51		...		43.88		0.25		3.80		1.52		1.52		51.74		17.75		95	
37		404		...		...		0.19		66.21		0.57		2.09		0.76		7.04		76.86		27.60		96	
16		333		...		...		0.21		65.37		0.21		1.29		0.86		3.43		71.37		44.19		97	
26		401		...		0.35		...		59.04		0.37		3.83		1.22		4.53		69.84		32.29		98	
6		75		...		...		...		49.72		0.79		3.16		0.79		4.74		59.19		24.63		99	
22		175		...		...		...		36.90		0.55		4.13		0.55		6.06		48.20		35.80		100	
4		36		...		...		...		32.65		...		...		...		4.08		36.72		30.41		101	
34		282		...		...		13.83		37.93		1.66		1.56		0.45		7.59		62.92		39.31		102	
9		71		...		...		...		54.08		...		4.74		...		8.54		67.36		29.60		103	
7		93		...		...		4.68		86.65		...		9.37		...		8.20		108.90		Not available.		104	
17		248		...		...		7.99		28.22		0.16		0.49		0.82		2.77		40.46		Not available.		105	



## DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

1	2	3	4	5	6	7	8	9	10					
No.	B.—Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
GUJRAT DISTRICT.														
106	Gujrat	18,692	...	4	6	890	22	125	...	...	6	...	...	6
107	Jalalpur	11,615	...	...	...	388	19	83	...	...	6	...	...	6
108	Kunjab	7,090	...	1	...	306	9	19	...	...	...	...	...	...
109	Dinga	5,351	...	1	25	237	2	27	...	...	1	...	...	1
SHAHPUR DISTRICT.														
110	Shahpur	8,739	...	...	...	98	5	176	...	...	1	...	...	1
111	Sahiwal	7,658	...	...	...	351	10	30	...	...	3	...	...	3
112	Bhera	15,202	...	3	35	701	31	65	...	...	8	...	...	8
113	Miani	5,819	...	10	60	283	6	22	...	...	5	1	...	6
114	Khushab	10,159	...	...	17	285	24	67	...	...	...	...	...	...
115	Sargodha	8,849	...	...	1	219	4	11	...	...	1	...	...	1
JHELUM DISTRICT.														
116	Jhelum	12,298	...	...	42	459	18	54	...	...	4	...	...	4
117	Pind Dadan Khan	10,590	...	...	488	434	26	51	...	...	6	...	...	6
RAWALPINDI DISTRICT.														
118	Rawalpindi	46,642	2	2	50	1,284	118	468	1	...	39	1	...	41
119	Murree	1,361	...	...	...	31	1	8	...	...	1	...	...	1
ATTOCK DISTRICT.														
120	Pindigheb	9,045	...	...	...	357	...	29	...	1	...	...	...	1
121	Hazro	9,950	...	1	...	250	6	30	...	...	2	...	...	2
MIANWALI DISTRICT.														
122	Mianwali	6,324	...	1	...	357	13	26	...	...	1	1	...	3
123	Bhakkar	5,388	...	...	1	367	7	5	...	...	...	...	...	...
124	Ira Khel	6,868	...	...	...	510	30	19	...	...	2	...	...	2
125	Kalsabagh	6,654	...	...	...	204	32	14	...	...	6	...	...	6
MONTGOMERY DISTRICT.														
126	Montgomery	8,129	...	3	19	121	14	61	...	...	...	...	...	...
127	Kamalia	8,237	...	...	58	446	10	14	...	...	1	2	...	3
128	Pakpattan	7,912	...	1	10	402	4	3	...	...	2	...	...	2
LYALLPUR DISTRICT.														
129	Lyallpur	19,578	1	7	3	509	18	48	...	...	1	...	...	1
130	Gojra	5,417	...	...	11	83	1	2	...	...	...	...	...	...
JHANG DISTRICT.														
131	Jhang-Maghiana	25,914	...	1	59	806	103	124	...	...	2	1	...	3
132	Chiniot	14,085	...	2	...	510	40	49	...	...	3	...	...	3
MULTAN DISTRICT.														
133	Multan	85,747	2	12	2,034	2,810	138	422	...	...	7	2	...	9
134	Shujabad	6,894	...	...	23	271	10	20	...	...	1	...	...	1
MUZAFFARGARH DISTRICT.														
135	Muzaffargarh	4,119	...	1	2	218	4	20	...	...	1	...	...	1
136	Khengarh	3,349	...	...	...	179	11	8	...	...	...	...	...	...
137	Alipur	3,312	...	...	...	138	1	12	...	...	...	...	...	...
138	Leiah	8,173	...	...	...	287	6	7	...	...	1	1	...	2
139	Karor	3,503	...	2	...	172	5	10	...	...	1	...	...	1
DERA GHAZI KHAN DISTRICT.														
140	Dera Ghazi Khan	16,853	...	2	3	499	51	413	...	...	4	...	...	4
141	Jampur	6,517	...	...	...	260	11	46	...	...	2	...	...	2
142	Dajal	6,893	...	...	...	864	29	6	...	...	...	...	...	...
143	Rajanpur	3,704	...	...	...	199	10	4	...	...	...	...	...	...
144	Kot Mithan	2,589	...	...	...	168	2	6	...	...	...	...	...	...
Total		1,768,101	45	1,800	9,813	78,104	2,962	14,427	18	6	673	41	13	751
Total for the Province		19,337,146	257	3,032	95,615	1,287,027	10,358	52,786	121	214	4,871	912	73	6,191



## No. VI—CONCLUDED.

## TOWNS OF THE PUNJAB DURING THE YEAR 1918—CONCLUDED.

11	12	13										14
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.										No.
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
										For the year.	Mean ratio of the previous five year.	
16	17	18	19	20	21	22	23	24	25	26	27	28
108	1,161	...	0.21	0.32	47.61	1.18	6.69	0.32	5.78	62.11	39.46	106
49	545	...	...	...	33.41	1.64	7.15	0.52	4.22	46.92	31.80	107
35	370	...	0.14	...	43.16	1.27	2.68	...	4.94	52.19	37.77	108
28	321	...	0.19	4.67	44.29	0.37	5.05	0.19	5.23	59.99	27.88	109
37	317	...	...	...	11.21	0.57	20.14	0.11	4.23	36.27	25.49	110
80	474	...	...	...	45.83	1.31	3.92	0.39	10.45	61.90	36.69	111
191	1,034	...	0.20	2.30	46.11	2.04	4.28	0.53	12.56	68.02	35.65	112
48	435	...	1.72	10.31	48.23	1.03	3.78	1.03	8.25	74.76	40.77	113
108	501	...	...	1.67	28.05	2.36	6.60	...	10.63	49.32	39.91	114
26	262	...	...	0.11	24.75	0.45	1.24	0.11	2.94	29.61	Not available.	115
108	676	...	...	3.42	36.59	1.46	4.39	0.33	8.78	54.97	34.87	116
83	1,088	...	...	46.08	40.98	2.46	4.82	0.57	7.84	102.74	39.04	117
440	2,405	0.04	0.04	1.07	27.53	2.53	10.03	0.88	9.43	51.56	42.46	118
5	46	...	...	...	22.78	0.73	5.88	0.73	3.67	33.80	31.15	119
51	438	...	...	...	39.47	...	3.21	0.11	5.64	48.42	30.40	120
81	370	...	0.10	...	25.13	0.60	3.02	0.20	8.14	37.19	25.99	121
18	317	...	0.16	...	41.29	2.09	4.18	0.32	2.89	50.93	27.28	122
81	461	...	...	0.19	68.11	1.30	0.93	...	15.03	35.56	41.43	123
4	565	...	...	...	74.26	4.87	2.77	0.29	0.58	82.27	25.48	124
45	301	...	...	...	30.66	4.81	2.10	0.90	6.76	45.24	34.57	125
55	273	...	0.37	2.34	14.88	1.72	7.50	...	6.77	33.58	23.08	126
87	618	...	...	7.04	54.15	1.21	1.70	0.36	10.56	75.03	39.72	127
27	449	...	0.13	1.26	50.81	0.51	0.38	0.25	3.41	56.75	38.42	128
94	681	0.05	0.36	0.15	26.00	0.92	2.45	0.05	4.80	34.78	14.71	129
25	122	...	...	2.03	15.32	0.18	0.37	...	4.62	22.52	Not available.	130
428	1,528	...	0.04	2.28	31.10	3.94	4.79	0.12	16.52	58.77	39.60	131
275	879	...	0.14	...	36.21	2.84	3.48	0.21	19.52	62.41	42.20	132
1,070	6,497	0.02	0.14	23.72	32.77	1.61	4.92	0.10	12.48	75.77	37.51	133
69	394	...	...	3.63	42.78	1.53	3.16	0.16	10.89	62.20	42.56	134
24	270	...	0.24	0.49	52.93	0.97	4.86	0.24	5.83	65.55	31.27	135
22	220	...	...	...	53.45	3.28	2.39	...	6.57	65.69	52.43	136
17	168	...	...	...	41.67	0.30	3.62	...	5.13	50.72	44.44	137
64	366	...	...	...	35.12	0.73	0.86	0.24	7.83	44.78	35.58	138
47	237	...	0.57	...	49.10	1.43	2.85	0.29	13.42	67.66	52.36	139
190	1,162	...	0.12	0.18	29.61	3.03	24.51	0.24	11.27	68.95	22.26	140
66	385	...	...	...	39.90	1.69	7.06	0.31	10.13	59.08	33.57	141
68	467	...	...	...	52.81	4.21	0.87	...	9.87	67.75	42.33	142
23	236	...	...	...	53.73	2.70	1.08	...	6.21	63.71	47.79	143
17	193	...	...	...	64.89	0.77	2.22	-	6.57	74.55	43.72	144
16,387	124,289	0.03	1.02	5.55	44.17	1.68	8.16	0.42	9.27	70.20	36.74	
110,294	1,565,560	0.01	0.16	4.94	66.56	0.54	2.73	0.32	5.70	80.96	33.42	



## APPENDIX TO ANNUAL FORM No. VI-B.

BIRTHS AND DEATHS REGISTERED IN THE CANTONMENTS OF THE PUNJAB,  
DURING THE YEAR 1918.

No.	CANTONMENTS.	Population according to the Census of 1911.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.	Total births registered during the year.	Ratio of births per 1,000 of population.	No.
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Total.						
									Males.	Females.									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Ambala	54,223	1	5	47	1,316	45	162	...	...	7	...	7	511	2,094	39	1,128	21	1
2	Kasauli	3,194	...	...	...	51	2	13	...	...	...	11	11	36	113	35	103	32	2
3	Dagshai	2,032	...	3	...	38	...	10	...	...	...	...	...	55	106	52	44	22	3
4	Sabathu	1,847	...	...	...	63	1	...	...	...	...	...	...	9	73	40	38	21	4
5	Jatogh	471	...	...	...	15	...	...	...	...	...	...	...	15	30	64	7	15	5
6	Dharmasala	3,700	...	...	...	69	...	...	...	...	...	...	...	7	76	21	111	30	6
7	Jullundur	13,964	...	1	57	223	8	79	...	...	3	1	4	78	450	32	149	11	7
8	Ferozepore	26,158	2	...	11	1,073	20	106	...	...	9	...	9	273	1,494	57	763	29	8
9	Lahore	18,416	...	4	8	294	12	199	1	...	4	...	5	23	545	30	271	15	9
10	Amritsar	1,417	...	1	...	336	2	72	1	...	2	1	4	26	441	311	23	16	10
11	Dalhousie	644	...	...	...	24	3	...	1	...	1	...	2	15	44	68	18	28	11
12	Bakloh	3,566	...	...	...	59	...	1	...	...	...	...	...	4	64	18	50	14	12
13	Sialkot	16,274	...	...	...	215	16	240	...	...	3	...	3	88	562	35	281	17	13
14	Jhelum	7,380	...	...	1	24	2	...	...	...	1	...	1	12	40	5	20	3	14
15	Rawalpindi	39,841	...	2	...	467	8	134	...	...	3	...	3	79	693	17	402	10	15
16	Campbellpur	3,357	...	...	...	58	1	...	...	...	...	...	...	24	83	25	59	18	16
17	Murree	344	...	...	...	31	1	...	2	...	...	...	2	17	51	148	18	52	17
18	Attock	630	10	...	...	...	...	1	...	...	1	...	1	11	23	37	2	3	18
19	Multan	13,496	...	1	3	246	...	16	1	...	...	...	1	55	322	24	60	4	19
Total		210,954	13	17	127	4,602	121	1,033	6	...	34	13	53	1,338	7,304	35	3,547	17	



DEATHS REGISTERED FROM CHOLERA IN THE DISTRICTS OF THE PUNJAB  
DURING EACH MONTH OF THE YEAR 1918.

1	2	3	4	5														6			7			8	9		
No.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.														TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
	AMBALA DIVISION.																										
1	Hissar	27	1	963	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	0.002	...	0.001	0.21	1		
2	Rohtak	19	1	781	2	...	...	...	...	...	...	...	...	6	...	...	...	3	3	6	0.01	0.01	0.01	0.19	2		
3	Gurgaon	24	...	1,367	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.20	3		
4	Karnal	25	7	1,382	10	...	...	...	...	...	4	37	4	...	...	...	...	28	17	45	0.06	0.05	0.06	0.24	4		
5	Ambala	19	2	1,715	2	...	...	...	...	...	1	1	...	...	...	...	...	2	...	2	0.01	...	0.003	0.16	5		
6	Simla	3	...	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.06	6		
	JULLUNDUR DIVISION.																										
7	Kangra	15	2	713	8	...	...	...	...	...	...	...	2	5	9	...	...	13	3	16	0.03	0.01	0.02	0.30	7		
8	Hoshiarpur	23	4	2,108	3	...	...	...	...	...	2	...	2	12	...	...	...	8	8	16	0.02	0.02	0.02	0.15	8		
9	Jullundur	17	5	1,215	9	...	...	...	...	47	1	3	5	...	...	...	...	28	28	56	0.06	0.06	0.07	0.23	9		
10	Ludhiana	14	1	858	1	...	...	...	...	...	...	5	...	...	...	...	...	...	5	5	...	0.02	0.01	0.41	10		
11	Ferozapore	24	5	1,500	6	...	...	...	1	...	1	7	24	20	...	...	...	30	23	53	0.06	0.06	0.06	0.77	11		
	LAHORE DIVISION.																										
12	Lahore	31	2	1,191	2	...	...	...	...	...	...	...	16	2	1	...	...	12	6	19	0.02	0.01	0.02	1.36	12		
13	Amritsar	15	3	1,039	2	...	...	...	1	...	1	1	...	1	...	...	...	2	1	4	0.01	0.002	0.004	0.62	13		
14	Gurdaspur	22	...	2,238	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.14	14		
15	Sialkot	30	1	2,349	...	...	...	...	...	...	...	2	...	...	...	...	...	2	...	2	0.005	...	0.002	0.23	15		
16	Gujranwala	33	3	1,735	1	...	...	...	...	1	1	1	...	...	...	...	...	3	...	3	0.01	...	0.003	0.21	16		
	RAWALPINDI DIVISION.																										
17	Gajrat	15	1	1,326	1	...	...	...	2	...	...	...	...	...	...	...	...	1	1	2	0.002	0.002	0.002	0.54	17		
18	Shahpur	23	...	1,054	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.08	18		
19	Jhelum	14	...	898	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.03	19		
20	Rawalpindi	14	1	1,177	...	...	...	...	...	1	...	...	1	...	...	...	...	1	1	2	0.003	0.004	0.003	0.09	20		
21	Attock	13	2	628	2	...	...	...	...	...	...	...	2	...	...	...	...	2	...	2	0.01	...	0.003	0.004	21		
22	Mianwali	15	...	386	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.02	22		
	MULTAN DIVISION.																										
23	Montgomery	21	2	2,488	2	...	...	...	...	...	...	17	...	...	...	...	...	10	7	17	0.04	0.03	0.03	0.24	23		
24	Lyallpur	21	2	1,277	1	...	...	...	...	...	1	2	...	...	...	...	...	1	2	3	0.001	0.01	0.003	0.24	24		
25	Jhang	13	...	935	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.02	25		
26	Multan	20	2	1,353	1	...	...	...	...	...	2	...	1	...	...	...	...	2	1	3	0.004	0.002	0.003	0.10	26		
27	Mutafargarh	23	...	840	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.01	27		
28	Dera Ghazi Khan	23	...	707	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.01	28		
	Total for the Province.	556	47	34,194	53	...	...	...	4	49	14	77	57	46	10	...	...	181	109	297	0.01	0.01	0.01	0.20			



## DEATHS REGISTERED FROM SMALL-POX IN THE DISTRICTS

1	2	3	4	5								
No.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.						
		Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.	January.	February.	March.	April.	May.	June.	July.
1	2	3	4	5	6	7	8	9	10	11	12	13
AMBALA DIVISION.												
1	Hissar ... ..	27	10	963	43	...	14	12	37	71	31	3
2	Rohtak ... ..	19	15	731	34	31	25	59	53	32	8	7
3	Gurgaon ... ..	24	8	1,367	10	1	2	12	9	9	3	...
4	Karnal ... ..	25	15	1,382	57	49	37	27	24	12	3	5
5	Ambala ... ..	19	12	1,715	25	1	...	4	8	2	1	6
6	Simla ... ..	3	2	23	1	...	...	...	...	1	...	...
JULLUNDUR DIVISION.												
7	Kangra ... ..	15	11	713	18	...	...	1	...	...	...	...
8	Hoshiarpur ... ..	23	12	2,108	25	1	...	...	...	1	...	1
9	Jullundur ... ..	17	15	1,215	31	3	...	4	3	12	6	8
10	Ludhiana ... ..	14	9	858	17	...	2	1	2	...	1	3
11	Ferozepore ... ..	24	13	1,500	58	8	8	5	13	21	27	31
LAHORE DIVISION.												
12	Lahore ... ..	31	26	1,191	75	2	3	...	...	22	6	54
13	Amritsar ... ..	15	14	1,039	91	6	3	7	4	4	28	16
14	Gurdaspur ... ..	22	12	2,238	18	2	2	1	1	1	3	3
15	Sialkot ... ..	30	16	2,349	17	...	1	1	1	2	...	1
16	Gujranwala ... ..	33	5	1,733	1	...	...	...	...	...	...	...
RAWALPINDI DIVISION.												
17	Gujrat ... ..	15	9	1,326	11	...	1	13	2	1	1	...
18	Shahpur ... ..	23	3	1,054	1	...	...	...	...	1	...	...
19	Jhelum ... ..	14	5	898	8	...	...	...	2	...	1	...
20	Rawalpindi ... ..	14	4	1,177	3	...	...	...	2	...	...	...
21	Attock ... ..	13	6	628	5	...	...	...	1	...	1	...
22	Mianwali ... ..	15	5	396	4	...	1	...	1	...	...	...
MULTAN DIVISION.												
23	Montgomery ... ..	21	15	2,438	22	2	1	3	2	7	7	9
24	Lyallpur ... ..	21	3	1,277	34	1	3	1	2	8	21	17
25	Jhang ... ..	13	5	955	3	...	...	...	1	...	1	1
26	Multan ... ..	20	10	1,353	13	...	...	1	...	6	3	6
27	Muzaffargarh ... ..	23	7	860	17	...	...	1	1	3	4	1
28	Dera Ghazi Khan ... ..	23	4	707	3	...	...	...	1	...	2	...
Total for the Province ...		556	271	34,194	645	107	103	153	170	216	158	171



## No. VIII.

## OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1918.

					6			7		8			9	10
					TOTAL.			NUMBER OF DEATHS AMONG CHILDREN.		RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
August.	September.	October.	November.	December.	Males.	Females.	Total.	Under one year.	Over one year and under ten years.	Males.	Females.	Total.		
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
42	8	...	...	1	119	100	219	46	148	0.27	0.27	0.27	0.47	1
...	...	...	...	...	106	109	215	48	133	0.28	0.33	0.30	0.09	2
...	...	...	...	1	25	12	37	7	23	0.06	0.04	0.05	0.16	3
1	4	15	9	2	105	83	188	47	80	0.24	0.23	0.24	0.21	4
4	5	1	...	7	23	16	39	7	18	0.06	0.06	0.06	0.53	5
...	...	...	...	1	1	1	2	...	1	0.05	0.08	0.06	0.14	6
5	6	2	...	8	12	10	22	5	3	0.03	0.03	0.03	0.03	7
1	...	9	1	53	36	31	67	18	29	0.07	0.07	0.07	0.42	8
5	4	3	2	23	44	29	73	10	36	0.10	0.08	0.09	0.62	9
8	...	2	17	86	56	66	122	26	69	0.19	0.30	0.24	0.73	10
40	20	14	6	56	129	120	249	52	144	0.25	0.29	0.27	1.14	11
95	86	116	180	275	417	422	839	289	449	0.72	0.97	0.82	1.01	12
11	9	9	106	300	245	258	503	72	333	0.49	0.67	0.57	0.55	13
1	1	1	4	29	22	27	49	14	27	0.05	0.07	0.06	0.29	14
4	2	2	2	17	22	11	33	12	15	0.04	0.03	0.03	0.51	15
...	...	...	5	76	34	47	81	22	47	0.07	0.12	0.09	0.20	16
...	1	1	3	4	12	15	27	9	12	0.03	0.04	0.04	0.57	17
...	...	...	1	12	10	4	14	1	12	0.03	0.01	0.02	0.61	18
1	...	...	1	8	4	9	13	1	7	0.02	0.04	0.03	0.20	19
...	...	...	...	3	2	3	5	1	2	0.01	0.01	0.01	0.15	20
...	...	...	2	4	4	4	8	4	2	0.01	0.02	0.02	0.68	21
2	1	...	...	...	4	1	5	...	4	0.02	0.01	0.01	0.23	22
7	8	...	1	15	24	38	62	13	29	0.09	0.17	0.12	0.75	23
9	10	7	4	8	34	57	91	11	55	0.07	0.15	0.10	0.81	24
...	...	...	2	1	4	2	6	2	3	0.01	0.01	0.01	0.62	25
5	2	2	2	10	20	16	36	4	18	0.05	0.04	0.04	0.31	26
...	1	7	1	2	15	6	21	1	7	0.05	0.02	0.04	0.39	27
1	...	2	...	...	1	5	6	3	1	0.003	0.02	0.01	0.74	28
242	168	193	349	1,002	1,530	1,502	3,032	725	1,707	0.14	0.17	0.16	0.49	



## DEATHS REGISTERED FROM FEVERS IN THE DISTRICTS OF THE

1	2	3	4	5							
No.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.					
		Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
AMBALA DIVISION.											
1	Hissar ...	27	27	963	963	1,432	1,175	1,104	1,112	1,617	1,311
2	Rohtak ...	19	19	731	731	981	731	803	1,005	1,831	1,558
3	Gurgaon ...	24	24	1,367	1,353	2,696	1,795	1,759	2,837	4,562	3,048
4	Karnal ...	25	25	1,382	1,382	1,116	934	867	938	1,317	1,522
5	Ambala ...	19	19	1,715	1,713	816	723	808	877	947	1,079
6	Simla ...	3	3	23	23	19	17	16	18	29	30
JULLUNDUR DIVISION.											
7	Kangra ...	15	15	713	703	726	677	749	808	1,406	1,522
8	Hoshiarpur ...	23	23	2,108	2,092	1,164	958	1,076	1,347	2,000	2,186
9	Jullundur ...	17	17	1,215	1,108	975	926	1,968	1,518	1,718	1,466
10	Ludhiana ...	14	14	858	835	556	497	475	341	548	596
11	Ferozepore ...	24	24	1,500	1,500	1,653	1,172	1,044	1,080	1,434	1,257
LAHORE DIVISION.											
12	Lahore ...	31	31	1,191	1,157	2,320	1,598	1,219	966	1,364	1,578
13	Amritsar ...	15	15	1,089	1,032	1,750	1,189	1,224	1,285	1,750	1,717
14	Gurdaspur ...	22	22	2,238	2,217	1,162	809	734	750	1,028	1,150
15	Sialkot ...	30	30	2,349	2,319	1,472	1,076	943	810	1,261	1,305
16	Gujranwala ...	33	33	1,733	1,733	3,597	2,537	1,822	1,371	1,472	1,495
RAWALPINDI DIVISION.											
17	Gujrat ...	15	15	1,326	1,297	1,623	1,132	980	797	673	974
18	Shahpur ...	23	23	1,054	1,054	2,302	1,451	1,126	854	875	899
19	Jhelum ...	14	14	898	898	1,041	829	699	568	617	599
20	Rawalpindi ...	14	14	1,177	1,177	777	624	655	672	656	536
21	Attock ...	13	13	628	628	1,258	1,000	945	853	750	759
22	Mianwali ...	15	15	396	396	1,185	1,010	950	679	737	582
MULTAN DIVISION.											
23	Montgomery ...	21	21	2,438	2,438	2,648	1,544	1,163	827	799	748
24	Lyallpur ...	21	21	1,277	1,277	1,593	1,165	963	934	1,380	1,425
25	Jhang ...	13	13	955	926	1,761	1,386	1,054	745	844	829
26	Multan ...	20	20	1,353	1,353	4,066	2,787	2,455	2,073	1,745	1,224
27	Muzaffargarh ...	23	23	860	734	2,917	2,286	1,512	1,231	1,149	823
28	Dera Ghazi Khan ...	23	23	707	700	2,313	1,793	1,230	1,088	1,307	845
Total for the Province		556	556	34,194	33,739	45,911	33,816	30,343	28,314	35,816	33,063



## No. IX.

## PUNJAB DURING EACH MONTH OF THE YEAR 1918.

						6			7			8	9
THS.						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previ- ous five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
1,048	765	842	16,574	35,248	5,911	31,809	36,330	68,139	72.55	99.15	84.66	19.53	1
1,060	702	622	19,963	44,328	4,385	35,807	42,162	77,969	92.91	127.98	109.07	13.60	2
1,310	852	874	19,644	53,617	5,353	46,433	51,914	98,347	119.30	152.71	134.88	17.24	3
1,327	877	854	8,676	40,988	8,884	32,949	35,351	68,300	75.28	97.63	85.40	19.71	4
864	727	604	3,543	22,414	6,733	20,212	19,923	40,135	56.54	72.43	63.45	18.81	5
23	61	54	98	391	233	533	439	989	25.12	33.65	28.28	9.52	6
1,268	1,114	1,130	2,249	12,943	6,435	16,063	14,964	31,027	40.32	40.63	40.47	18.29	7
1,649	1,212	1,172	4,786	23,407	3,912	23,126	21,743	44,869	46.11	52.13	48.85	19.16	8
1,256	1,010	954	9,517	19,396	2,040	22,174	20,570	42,744	50.33	59.22	54.25	15.38	9
661	533	535	8,487	20,476	1,786	17,924	17,567	35,491	61.06	73.54	68.62	12.81	10
1,054	867	1,015	14,358	39,618	5,793	35,785	34,510	70,295	65.70	83.63	75.20	14.65	11
1,611	1,267	1,599	13,597	23,481	3,674	28,364	25,805	54,169	48.78	59.15	53.22	18.33	12
1,492	1,387	1,568	14,705	23,175	3,829	28,810	26,241	55,051	58.14	68.38	62.61	20.66	13
986	776	985	10,741	29,452	4,006	27,234	25,345	52,579	58.43	69.16	63.15	15.95	14
1,257	976	1,122	8,599	24,695	4,959	25,514	22,961	48,475	48.07	53.09	50.32	18.89	15
1,280	1,096	1,204	8,683	31,059	11,044	35,045	31,605	66,650	67.62	78.00	72.18	23.21	16
954	773	904	7,313	23,447	4,661	22,715	21,516	44,231	56.70	62.36	59.32	17.07	17
831	613	642	6,753	18,518	3,957	20,257	18,564	38,821	53.75	59.79	56.48	17.91	18
578	482	566	4,425	12,224	1,255	11,936	11,947	23,883	45.52	49.37	47.37	18.17	19
530	518	589	3,182	13,004	2,042	11,630	12,155	23,785	43.44	50.66	46.85	30.39	20
712	682	754	6,782	12,481	2,432	14,911	14,497	29,408	55.15	59.20	57.07	20.91	21
524	480	573	3,837	9,786	1,857	11,235	10,974	22,209	62.45	67.96	65.06	26.47	22
679	588	734	7,867	16,758	4,745	20,406	18,694	39,100	73.90	81.99	77.56	20.42	23
1,073	908	1,027	12,374	23,845	3,278	25,760	24,207	49,967	51.15	62.83	56.21	15.94	24
652	524	514	3,313	15,710	3,559	15,536	15,355	30,891	56.06	64.41	59.92	18.93	25
1,001	935	1,085	9,648	22,212	6,678	29,433	26,476	55,909	67.60	72.35	69.77	23.74	26
701	647	1,048	7,109	13,836	4,301	20,554	17,006	37,560	66.66	65.13	65.96	28.20	26
564	495	823	11,115	11,450	3,011	19,325	16,709	36,034	70.94	73.46	72.09	22.76	28
26,345	21,876	24,393	247,938	637,959	120,753	651,500	635,527	1,287,027	61.42	72.81	66.56	19.12	



## DEATHS REGISTERED FROM DYSENTERY AND DIARRHŒA IN THE

1	2	3	4	5							
No.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.					
		Number in each district.	Number from which deaths from Dysentery and Diarrhoea were reported.	Number in each district.	Number from which deaths from Dysentery and Diarrhoea were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
AMBALA DIVISION.											
1	Hissar ... ..	27	22	963	90	46	24	22	27	27	27
2	Rohtak ... ..	19	19	731	166	23	15	10	39	54	43
3	Gurgaon ... ..	24	24	1,367	264	96	53	33	72	92	53
4	Karnal ... ..	25	25	1,382	172	28	17	13	22	58	48
5	Ambala ... ..	19	18	1,715	161	33	25	31	37	54	46
6	Simla ... ..	3	3	23	11	5	3	2	4	11	20
JULLUNDUR DIVISION.											
7	Kangra ... ..	15	15	713	664	38	33	37	58	144	231
8	Hoshiarpur ... ..	23	11	2,108	9	1	2	2	1	3	1
9	Jullundur ... ..	17	16	1,215	58	25	17	13	33	36	46
10	Ludhiana ... ..	14	14	858	43	15	10	18	20	40	27
11	Ferozepore ... ..	24	14	1,500	113	36	15	29	34	29	34
LAHORE DIVISION.											
12	Lahore ... ..	31	30	1,191	144	52	30	32	44	57	50
13	Amritsar ... ..	15	15	1,039	190	89	52	31	75	75	82
14	Gurdaspur ... ..	22	22	2,238	278	73	34	22	43	111	115
15	Sialkot ... ..	30	30	2,349	186	32	20	24	35	74	75
16	Gujranwala ... ..	33	27	1,733	106	17	8	18	15	31	21
RAWALPINDI DIVISION.											
17	Gujrat ... ..	15	15	1,326	93	24	12	7	7	29	34
18	Shahpur ... ..	23	23	1,054	114	24	19	18	17	24	20
19	Jhelum ... ..	14	14	898	99	22	11	11	14	16	22
20	Rawalpindi ... ..	14	14	1,177	231	181	129	157	139	137	132
21	Attock ... ..	13	5	628	7	2	1	...	...	2	4
22	Mianwali ... ..	15	15	396	81	24	20	13	12	10	14
MULTAN DIVISION.											
23	Montgomery ... ..	21	17	2,438	26	6	8	6	10	4	2
24	Lyallpur ... ..	21	21	1,277	201	35	31	28	24	28	23
25	Jhang ... ..	13	13	955	225	38	26	38	25	17	20
26	Multan ... ..	20	13	1,353	32	33	19	13	10	10	8
27	Muzaffargarh ... ..	23	17	860	45	18	8	7	5	4	7
28	Dera Ghazi Khan ... ..	23	20	707	59	59	33	18	13	11	8
Total for the Province ...		556	492	34,194	3,868	1,075	675	653	835	1,188	1,213



No. X. PUNJAB.

## DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1918.

						6			7			8	9
1918.						Total.			Ratio of Deaths per 1,000 of Population.			Mean ratio per 1,000 for previous five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
14	15	21	18	10	10	147	114	261	0.34	0.31	0.32	0.71	1
26	18	10	11	22	23	161	133	294	0.42	0.40	0.41	0.53	2
61	50	40	32	12	28	347	275	622	0.89	0.81	0.85	0.06	3
39	30	28	8	6	21	180	138	318	0.41	0.38	0.40	0.51	4
47	31	19	36	18	17	286	158	394	0.66	0.57	0.62	0.68	5
19	1	1	1	3	1	34	37	71	1.54	2.86	2.03	1.22	6
143	79	68	75	69	37	548	464	1,012	1.38	1.26	1.32	1.14	7
...	1	1	3	...	...	9	6	15	0.02	0.01	0.02	0.05	8
36	11	24	23	14	24	171	131	302	0.39	0.36	0.38	0.53	9
23	11	9	12	10	19	118	96	214	0.40	0.43	0.41	0.46	10
33	30	33	25	14	26	192	151	343	0.37	0.37	0.37	0.63	11
45	44	40	22	48	33	306	191	497	0.53	0.44	0.49	0.67	12
53	56	57	55	37	27	411	278	689	0.83	0.72	0.78	1.15	13
80	43	65	70	17	17	308	292	600	0.85	0.80	0.83	1.45	14
50	32	36	33	30	16	289	208	497	0.54	0.48	0.52	1.33	15
22	11	12	23	9	4	121	70	191	0.23	0.17	0.21	0.29	16
27	23	15	28	4	8	127	91	218	0.32	0.23	0.29	0.53	17
28	21	16	27	7	10	131	100	231	0.35	0.32	0.34	0.40	18
17	13	13	12	13	23	116	71	187	0.44	0.29	0.37	0.42	19
120	108	122	100	262	215	1,050	932	1,982	3.92	3.83	3.90	3.78	20
1	2	1	1	1	1	9	7	16	0.03	0.03	0.03	0.08	21
7	16	19	16	23	17	115	76	191	0.64	0.47	0.56	0.60	22
2	1	5	2	14	3	43	20	63	0.16	0.09	0.12	0.11	23
22	14	22	9	4	12	151	101	252	0.30	0.26	0.28	0.39	24
14	29	27	61	65	16	229	147	376	0.83	0.62	0.73	0.61	25
27	13	19	9	11	12	100	85	185	0.23	0.23	0.23	0.40	26
2	2	5	5	8	1	45	27	72	0.15	0.10	0.13	0.16	27
8	7	13	3	2	...	125	50	175	0.46	0.22	0.35	0.53	28
1,006	712	746	780	853	622	5,909	4,449	10,358	0.56	0.51	0.54	0.70	



## DEATHS REGISTERED FROM RESPIRATORY DISEASES IN THE

1	2	3		4		5					
No.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MON					
		Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
AMBALA DIVISION.											
1	Hissar ...	27	24	903	173	156	174	128	107	91	60
2	Rohtak ...	19	19	731	641	122	112	115	131	166	138
3	Gurgaon ...	24	24	1,307	483	290	196	196	214	161	107
4	Karnal ...	25	25	1,382	403	159	97	136	63	166	178
5	Ambala ...	19	19	1,715	1,203	344	277	279	282	275	256
6	Simla ...	3	3	23	12	17	15	10	22	24	16
JULLUNDUR DIVISION.											
7	Kangra ...	15	15	713	703	234	192	199	196	225	179
8	Hoshiarpur ...	23	23	2,106	957	210	164	175	209	241	214
9	Jullundur ...	17	17	1,215	372	202	147	178	191	224	163
10	Ludhiana ...	14	14	858	360	147	148	151	139	143	108
11	Perozepore ...	24	24	1,500	266	185	199	175	145	175	168
LAHORE DIVISION.											
12	Laure ...	31	31	1,191	641	301	254	224	233	251	140
13	Amritsar ...	15	15	1,039	575	374	303	335	318	466	336
14	Gurdaspur ...	22	22	2,238	1,103	848	597	561	544	718	804
15	Sialkot ...	30	30	2,349	1,428	411	320	292	264	359	278
16	Gujranwala ...	33	32	1,783	395	87	93	80	56	84	58
RAWALPINDI DIVISION.											
17	Gujrat ...	15	15	1,326	451	167	121	111	121	135	152
18	Shahpur ...	23	23	1,054	379	106	132	124	104	53	46
19	Jhelum ...	14	14	896	424	107	96	103	84	85	73
20	Rawalpindi ...	14	14	1,177	539	180	175	107	97	95	92
21	Attock ...	13	13	628	177	88	62	44	44	52	46
22	Mianwali ...	15	15	296	97	21	29	24	14	17	23
MULTAN DIVISION.											
23	Montgomery ...	21	21	2,498	82	32	22	17	16	13	10
24	Lysallpur ...	21	21	1,277	309	107	132	116	73	98	67
25	Jhang ...	13	13	955	451	...	34	24	36	27	27
26	Multan ...	20	17	1,352	67	40	51	50	27	34	25
27	Muzaffargarh ...	23	23	860	95	14	12	13	20	7	8
28	Dera Ghazi Khan ...	23	20	707	121	49	20	8	50	38	13
Total for the Province ...		556	546	34,194	13,017	4,983	4,179	3,969	3,780	4,523	3,715



## DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1918.

						6			7			8	9
THS.						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
65	63	58	86	53	65	578	523	1,106	1.32	1.44	1.39	1.45	1
95	73	104	209	149	108	789	753	1,532	2.00	2.29	2.13	1.60	2
69	50	66	207	143	90	890	889	1,779	2.29	2.62	2.44	2.04	3
84	94	67	144	74	60	695	627	1,322	1.59	1.73	1.65	2.01	4
253	219	200	827	337	170	1,736	1,583	3,319	4.86	5.75	5.24	4.54	5
12	24	22	43	109	7	239	82	321	10.86	6.33	9.18	4.47	6
166	130	132	192	371	237	1,283	1,164	2,447	3.22	3.16	3.19	3.31	7
163	127	139	255	335	161	1,353	1,045	2,398	2.70	2.51	2.61	2.63	8
162	135	136	242	183	68	1,095	936	2,031	2.49	2.69	2.58	3.21	9
89	86	88	134	56	85	763	611	1,374	2.60	2.73	2.66	2.63	10
118	98	133	324	41	58	963	796	1,759	1.85	1.93	1.88	1.85	11
141	146	173	619	247	192	1,537	1,384	2,921	2.64	3.17	2.97	1.93	12
274	310	323	440	218	294	2,115	1,881	3,996	4.27	4.90	4.54	4.46	13
636	592	699	1,177	1,118	934	4,973	4,250	9,223	10.67	11.60	11.08	11.49	14
260	202	272	1,177	2,290	800	3,539	2,976	6,515	6.67	6.88	6.76	4.76	15
41	50	45	104	45	37	468	312	780	0.90	0.77	0.84	0.97	16
153	137	111	209	363	163	1,059	922	1,981	2.64	2.67	2.66	2.91	17
50	42	45	198	129	47	633	433	1,076	1.69	1.41	1.57	1.13	18
78	55	84	93	137	120	616	469	1,115	2.35	2.06	2.21	1.93	19
65	64	70	131	133	164	546	582	1,428	3.16	2.43	2.81	2.52	20
39	33	39	54	34	35	321	250	571	1.19	1.02	1.11	1.55	21
17	19	19	22	31	13	154	95	249	0.86	0.59	0.73	0.60	22
4	8	32	14	17	10	115	80	195	0.42	0.35	0.39	0.31	23
24	32	29	18	16	71	433	345	783	0.87	0.90	0.88	0.94	24
18	17	26	318	428	55	560	450	1,010	2.02	1.89	1.96	0.92	25
33	41	32	141	217	47	363	370	733	0.85	1.01	0.92	0.15	26
7	7	9	63	47	20	134	93	227	0.44	0.36	0.40	0.24	27
5	13	60	359	1	4	336	264	600	1.23	1.16	1.20	0.57	28
3,129	2,867	3,213	7,300	7,377	3,711	28,581	24,205	52,786	2.69	2.77	2.73	2.52	



## DEATHS REGISTERED FROM PLAGUE IN THE

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		Months.					
		Number in each district.	Number from which deaths from plague were reported.	Number in each district.	Number from which deaths from plague were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
AMBALA DIVISION.											
1	Hissar ... ..	27	17	963	75	86	170	544	1,304	981	8
2	Rohtak ... ..	19	13	731	68	46	147	527	1,084	702	23
3	Gurgaon ... ..	24	13	1,367	94	3	176	651	1,239	890	16
4	Karnal ... ..	25	8	1,382	29	23	15	71	92	83	14
5	Ambala ... ..	19	15	1,715	130	208	247	631	753	589	28
6	Simla ... ..	3	...	23	...	...	...	...	...	...	...
JULLUNDUR DIVISION.											
7	Kabgra ... ..	15	3	713	7	6	21	9	21	7	...
8	Hoshiarpur ... ..	23	14	2,108	299	79	139	204	373	361	41
9	Jullundur ... ..	17	15	1,215	426	1,048	983	1,610	2,419	1,562	23
10	Ludhiana ... ..	14	14	858	559	908	1,562	5,228	4,345	1,637	71
11	Ferozepore ... ..	24	20	1,500	134	1	25	210	863	824	53
LAHORE DIVISION.											
12	Lahore ... ..	31	31	1,191	742	1,595	2,394	7,181	8,016	4,042	353
13	Amritsar ... ..	15	15	1,039	235	113	215	982	1,659	1,843	80
14	Gurdaspur ... ..	22	14	2,238	59	387	418	774	970	601	60
15	Sialkot ... ..	20	13	2,349	47	...	11	38	131	194	23
16	Gujranwala ... ..	33	28	1,723	155	382	650	1,073	1,063	625	109
RAWALPINDI DIVISION.											
17	Gujrat ... ..	15	13	1,326	147	24	25	489	1,214	2,730	927
18	Shahpur ... ..	23	16	1,054	36	...	5	31	63	255	22
19	Jhelum ... ..	14	14	898	203	60	166	892	2,825	1,938	152
20	Rawalpindi ... ..	14	11	1,177	298	251	217	418	1,069	1,058	190
21	Attock ... ..	13	6	628	26	5	13	56	76	111	10
22	Mianwali ... ..	15	2	396	5	...	...	1	40	3	6
MULTAN DIVISION.											
23	Montgomery ... ..	21	20	2,438	614	62	178	502	944	924	196
24	Lyallpur ... ..	21	8	1,277	172	1	38	200	547	455	34
25	Jhang ... ..	13	7	955	7	...	3	4	26	31	11
26	Multan ... ..	20	14	1,353	33	17	63	757	1,121	409	4
27	Muzaffargarh ... ..	23	5	860	5	...	1	...	1	10	...
28	Dera Ghazi Khan ... ..	23	1	707	...	...	1	2	...	...	...
Total for the Province ...		556	847	34,194	4,605	5,235	8,685	23,035	32,263	23,015	2,459



## No. XII.

## DISTRICTS OF THE PUNJAB, DURING EACH MONTH OF THE YEAR 1918.

						6			7			8	9
TSS.						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
...	...	...	...	...	54	1,481	1,668	3,147	3.38	4.55	3.91	1.19	1
...	...	...	...	...	63	1,179	1,413	2,592	3.06	4.28	3.63	1.42	2
...	...	...	...	...	...	1,882	1,593	2,975	3.55	4.69	4.08	2.54	3
1	...	...	...	...	...	151	148	299	0.34	0.41	0.37	2.87	4
5	...	...	...	...	...	1,293	1,225	2,461	3.46	4.45	3.89	3.31	5
...	...	...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	1	...	32	33	65	0.08	0.09	0.08	0.02	7
1	...	...	...	...	...	578	620	1,198	1.15	1.49	1.30	4.01	8
...	1	...	...	...	...	8,786	8,860	7,646	8.59	11.11	9.70	5.85	9
1	...	...	...	...	...	7,203	6,769	13,972	24.54	30.26	27.02	4.71	10
9	...	...	...	...	5	916	1,084	2,000	1.76	2.63	2.14	1.23	11
...	...	...	...	...	...	12,779	11,292	24,071	21.98	25.88	23.65	2.30	12
4	...	...	...	...	...	2,450	2,446	4,896	4.94	6.37	5.57	4.59	13
...	...	...	...	1	1	1,679	1,733	3,412	3.60	4.73	4.10	6.04	14
4	...	1	...	...	...	185	217	402	0.35	0.50	0.42	5.84	15
25	37	...	...	...	5	2,164	1,815	3,979	4.18	4.48	4.31	7.34	16
...	...	...	...	...	...	2,769	2,983	5,752	6.91	8.65	7.71	8.26	17
...	...	...	...	...	...	174	202	376	0.46	0.65	0.55	3.23	18
28	...	...	3	7	4	2,787	3,288	6,075	11.63	13.59	12.05	6.36	19
68	1	...	12	24	10	1,459	1,849	3,308	5.45	7.71	6.52	7.32	20
...	...	...	...	...	...	123	148	271	0.45	0.60	0.53	3.51	21
...	...	...	...	...	2	31	21	52	0.17	0.13	0.15	0.001	22
...	...	...	...	...	...	...	...	...	...	...	...	...	...
68	...	2	10	...	...	1,482	1,399	2,881	5.37	6.14	5.71	0.29	23
1	...	...	...	...	11	619	668	1,287	1.23	1.73	1.45	1.44	24
1	...	...	...	...	4	42	38	80	0.15	0.16	0.16	1.33	25
...	2	...	...	8	2	1,311	1,092	2,403	3.01	2.98	3.00	0.05	26
...	...	...	...	...	...	7	5	12	0.02	0.02	0.02	0.04	27
...	...	...	...	...	...	3	...	3	0.01	...	0.01	...	28
427	112	38	30	44	161	48,009	47,607	95,615	4.53	5.45	4.94	3.27	



## STATEMENT

## MONTHLY STATEMENT OF PLAGUE OCCURRENCES IN BRITISH

Serial No.	Districts and Native States.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Hissar ...	106	86	285	170	751	544	1,771	1,304	1,430	981	35	8
2	Rohtak ...	46	46	208	147	713	527	1,283	1,084	784	702	19	23
3	Gurgaon ...	4	3	202	176	774	651	1,345	1,239	903	890	10	16
4	Karnal ...	30	23	8	15	67	71	133	92	86	83	8	14
5	Ambala ...	316	225	406	260	740	637	915	758	633	595	14	28
6	Simla ...	...	...	...	...	...	...	...	...	...	...	...	...
7	Kangra ...	8	6	22	21	21	9	28	21	4	7	1	...
8	Hoshiarpur ...	83	79	144	139	219	304	353	373	365	361	45	41
9	Jullundur ...	1,514	1,050	1,761	989	2,603	1,625	3,710	2,443	2,057	1,572	27	23
10	Ludhiana ...	1,589	908	3,262	1,862	9,079	5,228	7,042	4,345	2,497	1,557	102	71
11	Ferozepore ...	3	2	31	28	327	212	828	869	1,032	824	70	58
12	Lahore ...	1,967	1,597	2,906	2,887	8,376	7,182	9,765	8,016	4,819	4,044	389	353
13	Amritsar ...	184	113	251	215	1,366	982	2,494	1,659	2,015	1,843	123	80
14	Gurdaspur ...	209	337	322	418	738	774	1,156	970	683	801	297	60
15	Sialkot ...	...	...	16	11	44	38	134	191	196	194	23	28
16	Gujranwala ...	580	362	790	650	1,377	1,073	1,341	1,063	960	656	160	109
17	Gujrat ...	43	24	256	23	612	499	1,628	1,214	2,930	2,730	1,373	927
18	Shahpur ...	...	...	19	5	37	31	75	63	293	255	44	22
19	Jhelum ...	90	60	275	166	1,007	892	3,164	2,815	1,923	1,939	86	152
20	Rawalpindi ...	269	251	277	217	536	418	1,425	1,069	1,326	1,058	233	190
21	Attock ...	3	5	17	13	56	56	76	76	145	111	113	10
22	Mianwali ...	...	...	...	...	1	1	62	40	13	3	13	6
23	Montgomery ...	121	62	252	178	808	562	1,126	944	1,201	924	343	195
24	Lyallpur ...	1	1	50	38	199	200	664	547	700	455	34	24
25	Jhang ...	...	...	4	3	4	4	44	26	55	81	12	11
26	Multan ...	31	17	156	83	1,040	757	1,693	1,123	433	410	...	4
27	Muzaffargarh ...	...	...	2	1	1	...	13	1	...	10	...	...
28	Dera Ghazi Khan ...	...	...	...	1	4	2	...	...	...	...	...	...
Total British Districts		7,147	5,307	11,922	8,721	31,410	23,109	42,298	32,295	27,484	20,035	3,559	2,459
1	Patiala ...	823	823	2,012	2,012	2,778	2,778	2,596	2,596	3,768	3,768	1,131	1,131
2	Kapurthala ...	124	96	102	68	558	320	485	321	192	70	...	...
3	Maler Kotla ...	...	...	...	...	...	...	...	...	...	...	...	...
4	Jind ...	...	...	34	15	127	69	529	405	317	269	...	...
5	Kalsia ...	17	7	42	22	60	37	4	1	4	3	...	...
6	Faridkot ...	9	4	36	12	369	264	660	331	392	258	2	1
7	Nabha ...	28	28	27	27	558	546	664	595	601	542	58	58
8	Patandi ...	...	...	...	...	...	...	12	7	11	9	...	...
9	Babawalpur ...	19	6	111	59	728	593	464	383	128	90	2	3
10	Nalagarh ...	...	...	...	...	...	...	...	...	...	...	...	...
11	Bilaspur ...	...	...	...	...	...	...	...	...	...	...	...	...
Total Native States ...		1,020	904	2,364	2,215	5,178	4,007	5,414	4,639	5,413	5,009	1,193	1,192
GRAND TOTAL ...		8,167	6,271	14,286	10,936	36,588	27,116	47,712	36,934	32,897	25,044	4,752	3,652

N. E.—The total deaths during the year in the cantonments of Ambala, Jullundur, Ferozepore, Lahore,



## No. I.

## DISTRICTS AND NATIVE STATES IN THE PUNJAB DURING THE YEAR 1918.

JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.		TOTAL.		Serial No.	REMARKS.
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.		
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
...	...	...	...	...	...	...	...	...	...	63	54	4,446	3,147	1	
...	...	...	...	...	...	...	...	2	...	65	63	3,120	2,592	2	
...	...	...	...	...	...	...	...	...	...	...	...	3,238	2,975	3	
1	1	...	...	...	...	...	...	...	...	...	...	333	299	4	
...	5	...	...	...	...	...	...	...	...	...	...	3,024	2,508	5	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	
...	...	1	...	1	...	...	...	3	1	...	...	89	65	7	
1	1	5	...	...	...	...	...	...	...	...	...	1,246	1,193	8	
...	...	5	1	...	...	...	...	...	...	...	...	11,677	7,703	9	
3	1	...	...	...	...	...	...	...	...	...	...	23,574	13,972	10	
12	9	...	...	...	...	...	...	...	...	8	9	2,321	2,011	11	
1	...	...	...	...	...	2	...	...	...	...	...	28,205	24,079	12	
11	4	...	...	...	...	...	...	...	...	...	...	6,899	4,896	13	
...	...	...	...	...	...	...	...	...	1	1	1	3,406	3,412	14	
4	4	...	...	1	1	...	...	...	...	...	...	418	402	15	
45	25	40	37	...	...	...	...	...	...	10	5	5,203	3,979	16	
...	236	...	71	...	35	...	5	...	3	...	...	6,842	5,752	17	
...	...	...	...	...	...	...	...	...	...	...	...	468	376	18	
31	28	...	...	...	...	3	3	12	7	2	4	6,593	6,076	19	
77	58	3	1	...	...	19	12	41	24	12	10	4,218	3,308	20	
...	...	...	...	...	...	...	...	...	...	1	...	411	271	21	
5	...	2	...	...	...	...	...	...	...	12	2	106	62	22	
151	63	15	...	10	2	25	10	...	...	14	...	4,066	2,881	23	
...	1	...	...	...	...	...	...	...	...	19	11	1,667	1,287	24	
1	1	...	...	...	...	...	...	...	...	6	4	126	80	25	
...	...	2	2	...	...	...	...	15	8	2	2	3,372	2,406	26	
...	...	...	...	...	...	...	...	...	...	...	...	16	12	27	
...	...	...	...	...	...	...	...	...	...	...	...	4	3	28	
343	427	73	112	12	38	49	30	73	44	220	165	124,590	95,742		
88	88	...	...	...	...	...	...	...	...	8	8	13,204	13,204	1	
...	...	...	...	...	...	...	...	...	...	...	...	1,461	875	2	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	
...	...	...	...	...	...	...	...	...	...	17	11	1,024	769	4	
...	...	...	...	...	...	...	...	...	...	...	...	127	70	5	
...	...	...	...	...	...	...	...	...	...	...	...	1,468	870	6	
...	...	...	...	...	...	...	...	...	...	...	...	1,936	1,796	7	
...	...	...	...	...	...	...	...	...	...	...	...	23	16	8	
...	...	...	...	...	...	...	...	...	...	...	...	1,452	1,134	9	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	
88	88	...	...	...	...	...	...	...	...	25	19	20,695	18,734		
431	515	78	112	12	38	49	30	73	44	245	184	145,285	114,476		

Jhelum and Multan were 47, 57, 11, 3, 1 and 3, respectively.



# STATE OF NEW YORK

NAME		RESIDENCE		DATE		AMOUNT		REMARKS	