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Contributors

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REPORT

ON THE

SANITARY ADMINISTRATION OF THE PUNJAB

AND

PROCEEDINGS OF THE SANITARY BOARD FOR THE YEAR 1917

BY

Colonel H. HENDLEY, K.H.S., M.D., I.M.S., Sanitary Commissioner, Punjab,

AND

THE REPORT ON SANITARY WORKS FOR 1917

BY

MR. A. R. ASTBURY,

Sanitary Engineer, Punjab.





Lahore :

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Section II.—European Army.

No remarks.

Section III.—Native Army.

No remarks.

Section IV.—Jails.

No remarks.

Section VII.—Vaccination.

(Separate report.)

Section VIII.—Sanitary Works, Military.

No remarks.

Section II.—Buropeon Army.

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Section III.-Native Army.

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Section VII.—Vaccination;

Section VIII. Similary Works, Military

(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 Dopartment, No. 1632-S., dated Simla, the 24th June 1918.

READ-

The Report on the Sanitary Administration of the Punjab for the year 1917.

Remarks. The health of the year 1917 was influenced very adversely by the exceptional meteorological conditions. The weather of the first three months presented no abnormal features. April and May, however, were characterized by an unusually heavy rainfall, and an active and early monsoon set in at the beginning of June and continued with little remission until September and in part of the Province till late in October. As a result of this heavy precipitation a severe epidemic of malarial fever spread over the Province from September onwards and the number of deaths during the last four months of the year was considerably in excess of that of the first eight.

The prices of food grains though high have not varied to any substantial extent from those of the preceding year.

2. The year's birth-rate was 45.3 per mille which though slightly less than that of the preceding year, exceeded the average of the previous five years by 1 per mille, and may therefore be regarded as satisfactory. The highest birth-rate was registered in the Rohtak District (55.4 per mille) while other districts in which the births exceeded 50 per mille were Gurgaon (54.5), Ludbiána (53), Karnál (52.2), Amritsar (52.1) and Ferozepore (51). On the other band Simla, as usual, recorded the lowest rate (22.2), followed by Dera Gházi Khan 28.1), Muzaffargarh (33.6) and Jhelum (4.9). It is somewhat surprising to find that, judging by the figures for Rohtak, Gurgaon and Ludhiána, the absence of large numbers of recruits of military age has had no appreciable effect on the birth-rate.

A comparison of the quinquennial averages of each district with the birth-rates in 1917 shows that in 15 of the 28 districts the quinquennial average has been exceeded. Further analysis discloses the curious fact that the districts which return a decrease are with one exception, confined to the western half of the Punjab, while the improvement is similarly limited to the eastern half. The solitary exception is to be found in the isolated district of Kangra where, however, the falling off is insignificant. Ignoring the case of Kangra, a line drawn across the Punjab and following the eastern boundaries of the Siálkot, Gujránwála, Jhang and Multán Districts divides the Province into two parts corresponding exactly with the plus and minus birth-rate areas. There appears to be no obvious explanation of this peculiar feature and it would be interesting to know how far it is more than a mere coincidence. Those districts which show the largest improvement as compared with the quinquennial average are Ludhiána (9 per mille), Gurgaon (5.4) and Montgomery (5); while those in which the decrease has been most marked are the two Indus districts of Miánwáli (-5.4) and Muzaffargarh (-5.2). The figures, however, are somewhat deceptive in the case of such districts as Montgomery where owing to colonization the population must have increased considerably since the census of 1911.

There was an excess of births over deaths in all districts except Simla, Gujránwála, Shahpur, Miánwáli, Multán, Muzaffargarh and Dera Gházi Khan. The excess of births was greatest in Rohtak (24.2 per mille) and of deaths in Dera Gházi Khan (17.6 per mille).

3. The death-rate of the year was 37.9 p-r mille. This exceeds that of the preceding year by 7.2 and the average of the previous quinquennium by 6.7. As already stated the malarial epidemic of the last four months of the year contributed mainly to this unsatisfactory result, deaths from fevers accounting for no less than 70 per cent. of the total. In 21 districts out of 28 the death-rate exceeded the quinquennial average, while in 25 it exceeded the

previous year's figures. Gurgaon was respon sible for the highest rate—52 per mille—the lowest being recorded in Simla (26·3), Jullundur (28·7), and Hoshiarpur (28·9). Among large towns Amritsar returned the very high figure of 66·58, but both Multán and Lahore were considerably above their quinquennial averages. Among smaller towns the rate in Rájanpur was as high as 113·66, while of eight others in which the rate exceeded 70 per mille no less than six are situated in the south-west corner of the Punjab. These high death-rates were all the outcome of the abnormal rainfall and consequent severe epidemic of malaria. On the other hand certain towns have considerably improved upon their averages of the previous quinquennium. Khanna, for instance, shows a betterment of 26·33 per mille, while Murree (15·87) and Gohána (15·81) are well to the good. The death-rate in Murree (18·37) is in striking contrast to that of two years ago when it was as high as 64·63. Infant mortality exceeded that of the previous year by 23 per cent., an increase which agrees closely with the increase in the general death-rate.

- 4. Cholera accounted for 1,365 deaths against 1,651 in the previous year. The ratio of deaths per mile was less than a quarter of the average ratio for the previous five years. The disease exhibited its greatest activity from August to November, the highest mortality being that of September when 46 per cent. of the total deaths took place. Serious epidemics occurred in the Sialkot, Ambála, Gurdáspur and Gujrát Districts, in the towns of Hoshiárpur, Multán and Amritsar and at Lahore Cantonment. The outbreak in the Gujrát District was traced to an imported case from Roorki while that in the Ambála District probably also had its origin outside the Province. The disadvantages arising from the absence of a piped water-supply are strikingly evidenced by the circumstances of the outbreaks at Multán and Jagádhri, and it is satisfactory to note that many towns are contemplating schemes to remedy this defect.
- 5. A gratifying feature of the report is the decrease in the loss of life from small-pox. The number of deaths from this disease was only 1,417, less than half the total of the previous year; and the ratio per mille (0.07) is the lowest on record. The disease reached its climax in the month of May when 201 deaths were registered. The district of Gurgaen was conspicuous for its comparatively high rate of 0.31 per mille. The greatest number of deaths in any one town, namely, 48, occurred in Rewari.
- 6. The mortality from plague though more than double that of the preceding year, deaths numbering 9,724 was again unusually low. The disease was most active in November and December. The areas chiefly affected were the Ráwalpindi and Jhelum Districts and the Central Punjab from Gujránwála to Ambála. The Western Punjab and the extreme south-east remained comparatively free up to the close of the year. In Ráwalpindi, which again proved an active centre for its dissemination, the disease was at its worst in October and November. The grain market appears to be the focus of the disease in this city and efforts are being made to destroy its power for evil. The outbreak in Ambála was most marked during April and May and in Jullundur, Ludhiána and Lahore in December.
- 7. Deaths from fever totalled 510,812, the largest number recorded since 1908, when 697,058 deaths occurred. The death-rate at 26.42 was nearly 10 per mille higher than the quinquennial average. The epidemic which began in September and reached its climax in November was the outcome of the excessive monsoon rainfall. Muzaffargarh with a death-rate of 43.48 per mille suffered in a higher degree than any other district, but in Gurgaon, Gujránwála, Shahpur, Montgomery, Jhang, Multán and Dera Gházi Khan the death-rate was double or more than double that of the preceding quinquennium. The Multán Division experienced an almost unprecedented rainfall during the year and all the districts of this Division exhibit a largely increased death-rate. In Gurgaon the severity of the epidemic was a consequence of the extensive floods.
- 8. The sum distributed by the Sanitary Board in aid of various sanitary works amounted to Rs. 1,70,274, but large grants were made after the close of

the calendar year and before the close of the financial year by which the distributions are governed. Administrative sanction was also accorded to many schemes and the Board has from time to time given much valuable advice to Government in cases referred to it for opinion besides taking the initiative in various matters connected with sanitary reform. The Sanitary Engineer and his staff were fully occupied during the year in advancing numerous drainage and other projects throughout the Province. The post of Sanitary Engineer was held by Mr. A. R. Astbury throughout the year and his report indicates that in spite of the difficulties in the way of obtaining the necessary plant from England the progress of drainage and water-supply schemes has on the whole been satisfactory. A welcome feature is the opinion of the Sanitary Board that the popularity of rural sanitation is at length showing signs of growth. Much credit is due to the local officers and those inhabitants of the Siálkot District who have taken a lead in this respect by putting forward schemes and by arranging for the partial provision of funds from local sources. The future of these improvement schemes in the Siálkot District will be watched with much interest.

9. His Honour is indebted to Coloney Hendley for the energy which he has devoted to the discharge of his duties as Sanitary Commissioner, which office he held throughout the year in Addition to that of Inspector-General of Civil Hospitals. He also desires to thank him for an interesting report. The posts of Deputy Sanitary Commissioner and Additional Deputy Sanitary Commissioner were held throughout the year by Major W. H. C. Forster, I.M.S., and Dr. Khwajah Abdurrahman, respectively, and His Honour's acknowledgments are due to them for their valuable works.

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,

O. F. LUMSDEN,

Financial Secretary to Government, Punjab.

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SANITARY DEPARTMENT.

Memo. of Errata.

In the Annual Sanitary Report of the Punjab for 1917-

- 1. On page 1, paragraph 1, line 6, for "higher" read "lighter."
- 2. On page 1, paragraph 2, substitute the following for the first 3 sentences "Khan Bahadur Sheikh Rahim Bakhsh, M.A., Director of Land Records, Punjab, has furnished me with the usual return which shows that the average retail price of wheat was ${}^{\circ}_{16}$ seers per rupee at Ambala, 9_{16}^{1} at Lahore, 8_{16}^{11} at Rawalpindi and 9_{16}^{9} at Multan during the year 1917. The average rates of barley were 13_{16}^{3} at Ambala, 13_{3}^{3} at Lahore, 13_{16}^{13} at Rawalpindi and 12_{5}^{5} at Multan, and that of jowar 15_{4}^{1} , 12_{2}^{1} , 13_{5}^{1} and 12_{16}^{11} , respectively. As regards bajra the average rates varied from 12_{5}^{1} to 13_{4}^{1} seers at the principal markets of Ambala, Lahore, Rawalpindi and Multan, that of maize from 12_{16}^{1} to 14_{5}^{2} and that of gram from 11 to 12_{2}^{1} seers per rupee."
- 3. On page 2, paragraph 6, lines 14-16, for "Amritsar and Gurdaspur Multan Division," substitute the words "Lahore, Sialkot and Gujranwala," and for the remainder of the sentence substitute the following "In the remaining 2 divisions the rate in 1917 was less except in Gujrat District."
- 4. On page 3, paragraph 10, line 1, substitute the words "In the districts of "for " with the exception of 7 districts, namely."
- 5. On page 6, paragraph 22, line 41, delete the word "cases" after
 - 6. On page 12, paragraph 23, line 5, for "18" read "118."
 - 7. On page 15, line 7, for "Nurpur" read "Nanpur."
- 8. In Appendix A (Proceedings of the Sanitary Board, Punjab), page 2, against Kalka Drainage Scheme, for "Rs. 35,531" read "Rs. 36,531."
- 9. Annual Form No. II against total, sub-column 10, for "878,785" read "378,785."
- 10. Annual Form No. IV, Kangra, against small-pox in sub-column 26, insert "1."
- 11. Annual Form No. IV, Amritsar, against dysentery and diarrhoa, sub-column, 10 for "4" read "49."
- 12. Annual Form No. IV, Shahpur, against all other causes, sub-column 6, for "213" read "2,113."
- 13. Annual Form No. IV, Muzuffargarh, against total, sub-column 16 for "98" read "968."
- 14. Annual Form No. IV, Total for the Province, against dysentery and diarrheea, sub-column 14, for "3 2" read "312."
- 15. Annual Form No. IV, Total for the Province, against total, sub-column 5, for "1,136 3" read "113,603."
- 16. Annual Form No. VI-B, Rohtak District, against Jhajjar town, sub-column 27, for "34.35" read "34.55."
- 17. Annual Form No. VI-B, Gurgaon District, against Rewari town, sub-column 17, for "89" read "869."
- 18. Annual Form No. VI-B, Gurgaon District, against Rewari town, sub-column 21, for "1 "?" read "1.69."
- 19. Annual Form No. VI-B, Karnal District, against Karnal town, sub-column 21, for "17.6" read "17.56."
- 20. Annual Form No. VI-B, Hoshiarpur District, against Khanpur town, sub-column 26, for "3 '31" read "31'31."
- 21. Annual Form No. VI-B, Gujranwala District, against Sharakpur town, sub-column 3, for "2,482" read "4,482."
- 22. Annual Form No. VI-B, Shahpur District, against Sahiwal town, sub-column 7, for "33" read "330."
- 23. Annual Form No. VI-B, Lyallpur District, against Gojra town, sub-column 3, for "541" read "5,417."
- 24. Annual Form No. VIII, against Amritsar, sub-column 4, for "19" read "13."

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Section I.

MR. GILBERT T. WALKER, C.S.I., M.A., Sc. D., F.R.S., Director-General of Observatories, has kindly furnished the following brief summary of the chief meteorological features of the Punjab during the year 1917:—

During January and February weather over the Punjab was remarkably settled, and rainfall was either altogether wanting or much higher than usual. March was also drier than usual, though not to the same extent as the two preceding months. April, on the other hand, was abnormally wet and unusually late snowfall occurred in Simla on the 11th and 22nd. In May there were numerous thunderstorms and duststorms, and the rainfall for the month was largely above normal. The monsoon appeared over the Province on June 2nd, about three weeks ahead of the average date, and gave widespread rain on the 2nd, 3rd, 7th, 17th to 20th and 29th, with the result that the total fall for the month exceeded the normal by upwards of an inch or 65 per cent. The July rainfall was nearly normal in the south-west of the Province and in excess by 13 per cent. in the east and north. A very vigorous monsoon prevailed in August and September, and rain fell almost continuously; the total over the Province exceeded the normal by upwards of 4" or 75 per cent. in the former month and 81" or 306 per cent. in the latter. In October numerous showers occurred in the north and east towards the end of the first week, and there was a burst of exceptionally heavy rain over the eastern half of the Province from the 24th to the 26th. Weather was unusually settled in November. In December winter depressions were of frequent occurrence and precipitation was heavier than usual in the north and east Punjab.

Humidity was distinctly low in February and March, about the average in January and July and decidedly high in all other months. Skies were unusally cloudy during nearly the whole period from April to October and much clearer than usual in February and November. Maximum temperature exceeded the normal by $5\frac{1}{2}^{\circ}$ in February and was lower than usual by 3° or more from April to June and again from August to November; minimum temperature was sensibly normal except in April, May and November, when it was about 4° below it.

- 2. Khan Bahadur Shaikh Rahim Bakhsh, M.A., Director of Land Records, Punjab, has furnished me with the usual return which shows that the average retail price of wheat was 10 seers per rupee at Ambala, 10_{16}^{3} at Lahore, 9_{8}^{7} at Rawalpindi and 10_{16}^{11} at Multan during the year 1917. The average rates of barley were 12_{4}^{3} at Ambala, 13_{16}^{9} at Lahore, 13_{16}^{7} at Rawalpindi and 12_{16}^{7} at Multan, and that of jowar 13_{2}^{1} , 12_{16}^{7} , 12_{16}^{15} and 12_{16}^{13} , respectively. As regards bajra, the average rates varied from 10_{8}^{1} to 12_{8}^{1} seers at the principal markets of Ambala, Lahore, Rawalpindi and Multan, that of maize from 13_{16}^{5} to 15_{16}^{7} and that of gram from 11_{8}^{5} to 12_{8}^{3} seers per rupee. It will be observed that in the case of wheat, maize and gram, the average prices were higher, while for the others it was lower than in the preceding year. This rise was due to heavy exports to meet increased military requirements while the fall was due to the harvests in 1916-17 having been much better than in the previous year.
- 3. An enquiry into the rates of wages was held in all the districts of the Punjab in December last, but the report has not been published as yet. It is believed that wages have generally risen owing to the increased requirements for the army due to the war.

Section V.—Vital Statistics.

- 4. The rough estimated population prepared by adding births and subtracting deaths since the last census report works out in 1917 to 21,005,233, (11,506,888 males and 9,498,345 females) as against the census population of 19,337,146 (10,608,101 and 8,729,045). Calculated on this estimated population the birth-rate is 41.7, i.e., 3.6 less than the rate calculated on the census population and similarly the death-rate 34.9 is less by 3.0. The estimated population is in excess in all the districts of the Province except Simla.
- 5. Previous to the three last months of the year when malaria caused a high death-rate, the year 1917 was a healthy one, the birth-rate was an average one and the death-rate low. Cholera prevailed only to a slight extent, small-pox gave the lowest rate in recent years, plague, though worse than in 1916, showed a less rate than that recorded for some years, while the rates under other heads of mortality were about the average.
- 6. Births.—The birth-rate amounted to 45.3 per mille, i.e., '3 less than it was last year and '1 in excess of the quinquennial average. The actual number of births was 876,733, of which 459,273 were males and 417,460 females. Though less than last year the birth-rate is quite satisfactory. A comparison by districts with the quinquennnial average discloses the fact that in the Ambala Division, the Jullundur Division, with the exception of Kangra, and the Lahore Division with the exceptions of Sialkot and Gujranwala, the rate in 1917 was in excess. In the remaining two Divisions of the province the rate in 1917 was less than the average for the previous 5 years except in the districts of Montgomery and Lyallpur.

Compared with the previous year the rate was greater in the whole of the Ambala Division, except in Karnal where the rate was the same; the Jullundur Division, except Ferozepore, the Lahore Division, except Amritsar and Gurdaspur, the Rawalpindi Division except Gujrat and in the whole of the Multan Division. Compared with the average for the previous 5 years, 15 districts out of 28 show an increase which in one of them, Ludhiana, amounts to 9.0 per mille, in Gurgaon 5.4 and Montgomery 5.0, in all the others it ranges between 3.8 in Rohtak and 0.1 in Ambala. Among those which have a lower rate, Mianwali shows the greatest decrease 5.4, Muzaffargarh 5.2, and Gujranwala 4.1.

In comparing the total number of births by months with the previous year it is to be observed that in the first 5 months and in October the births were in excess, from June to September they were considerably less, slightly less in November and a good deal less in December. The decrease from June to September was probably due to the prevalence of malaria in the autumn of the previous year, but also no doubt to the high death-rate due to malaria during the three last months of the year under review.

- 7. The highest birth-rate, namely, 48·13, was registered in the Central Provinces, the United Provinces coming next with 46·08. The provinces with a rate lower than that of the Punjab were as follows:—Bihar and Orissa 40·4, Burma 36·25, Bengal 35·91, Bombay 35·72, Madras 32·37, North-West Frontier Province 32·11 and Assam 31·35.
- 8. The birth-rate in the 38 principal towns of the Province, those with a population of 10,000 or upwards, amounted to 46.2 per mille: this rate is 0.8 less than it was in 1916 and 1.1 more than the average for the previous 5 years. Of the three largest of these towns, Multan recorded the highest 49, Amritsar 47 and Lahore 37, the corresponding figures for last year were 48, 49 and 40, while the quinquennial average was 45, 47 and 38, respectively. It will thus

be seen that Multan shows an improvement on the last year and the quinquennial average, Amritsar only on the latter, while Lahore shows a lower rate on that of both.

- 9. Rohtak this year recorded the highest birth-rate 55.4. It was Highest and lowest birth rates. Annual closely followed by Gurgaon 54.5 and Ludhiana From No. I. 53.0, all being in excess of the highest rate recorded last year in the Ferozepore District where it was 52.7. The lowest rate as usual was recorded in Simla 22.2, while next in order came Dera Ghazi Khan with 28.1. In the others it varied between 33.6 in Muzaffargarh and 52.2 in Karnal.
- 10. With the exception of 7 districts, namely, Dera Ghazi Khan,

 Breess of births over deaths. Annual Muzaffargarh, Multan, Mianwali, Shahpur,

 Gujranwala and Simla, the death-rate was in

 excess of the birth-rate. The excess was as high as 17.6 in Dera Ghazi Khan,
 13.7 in Muzaffargarh and varied between 3.3 in Shahpur and 7.9 in Gujranwala,
 in the others. In all these districts it should be remarked that owing to fevers
 the total death-rate was exceptionally high, thus accounting for an excess in
 deaths over births. On the other hand the total excess of births over deaths
 amounted to 7.4, but in individual districts was as high as 24.2 in Rohtak, 21.8
 in Ludhiana, 20.1 in Karnal, 19.3 in Ferozepore, 18.4 in Jullundur and 17.3
 in Lyallpur; in the others it ranged between 1.6 in Montgomery and 14.9 in
 Hoshiarpur.
- 11. Deaths.—The death-rate during the year under report amounted to 37.9 which is 7.2 per mille in excess of the rate recorded in the year preceding and 6.7 compared with the average for the previous 5 years. The actual numbers were 733,109 deaths (378,785 males and 354,324 females). This high death-rate is due entirely to fevers which accounted for no less than about 70 per cent. of the total deaths registered. The rates for dysentery and diarrhoea remained the same as in the previous year, while under cholera, small-pox and all other causes there was a slight decrease; under the other heads of mortality, fevers being omitted, there was a slight increase.
- 12. The Bombay Presidency shewed the highest death-rate 40.76, the Punjab and the United Provinces coming next with 37.91 per mille each. The Central Provinces had a rate of 36.06, Bihar and Orissa of 35.2, the North-West Frontier Province of 29.95, Assam of 27.09, Madras of 26.23, Bengal of 26.19 and Burma of 25.30.
- Oujrat, Jhelum and Rawalpindi, the death-rate by districts. Annual Form Gujrat, Jhelum and Rawalpindi, the death-rate by districts was in excess of the average for the previous year, the only exceptions were Kangra, Ferozepore and Rawalpindi. The highest death-rate 52.0 was recorded in Gurgaon, whilst in Multan, Gujranwala, Montgomery, Muzaffargarh and Dera Ghazi Khan the rates were 49.6 and 49.1, 47.9, 47.3 and 45.7 respectively. The lowest rate was recorded as is usual in Simla, 26.3, but this was followed closely by 28.7 in Jullundur and 28.9 in Hoshiarpur, in the others it varied between 30.8 in Kangra and 43.6 in the Amritsar District.
- 14. The healthiest month of the year was February, when the rate recorded was 1.91, this was closely followed by 2.04 in August, 2.06 in July, 2.20 in June, 2.21 in March and April, 2.35 in May, 2.45 in January and 2.94 in September. The first indication that malaria was likely to be widespread and likely to assume an epidemic form was the increased death-rate in September, followed by a higher one in October 5.86. The highest rate recorded was in November 6.75, but the rate again fell to 4.92 in December. It will be seen that the rate in the last quarter equalled the rate recorded in the first 8 months of the year.

15. As usual the highest rates were recorded among infants, 267.52 for males and 256.61 for females, as against 219.32 Death rates according to different disand 206.12 last year. Calculated on the number eases under specified age periods. Annual Form No. IV. of births during the year the rates were 247.35 and 248.60, as against 201.79 and 198.47 in the year preceding. Next in order were children between 1 and 5 and old people above 60, the rates being 85.48 and 92.68 for the former and 84.73 and 87.77 for the latter. The only other age group which had a high rate was that between 50 and 60, the rates being 31.64 and 31.60, in all the others it did not exceed 19.90 the female rate for 40 and under 50 and it was as low as 9.43 the male rate for 20 and under 30. The female rate exceeded the male rate under every age group except between 50 and 60 and under one year of age. The high rate among infants was due chiefly to fevers and all other causes and partly to respiratory diseases, among the other age groups fevers were mainly responsible for the high rate.

16. The Gujranwala and Attock Districts again recorded more deaths under "other classes" than the actual numerical population of those classes, while the following districts recorded very high rates:—Dera Ghazi Khan 431:37, Sialkot 318:52, Jhang 166:67, Montgomery 157:89, and Amritsar 91:69. The total rate for the whole province for this class was 39:34 as against 28:39 last year. The rates for the other classes were Muhammadans 41:20, Hindus 33:65, Indian Christians 42:17 as against 31:52, 29:62 and 33:02 in the year preceding. It will thus be seen that while the increase among Hindus was only 4:03, that for Muhammadans and Indian Christians amounted to 9:68 and 9:15, respectively.

 The rural and urban death-rates were 37.43 and 42.77 respectively as compared with 30.28 and 34.98 last year. The Deaths in towns and rural circles. Annual Form No. VI A and B. urban rate exceeded the rural rate under all the heads of mortality except fevers. Amritsar recorded the highest death-rate among the three largest towns of the Province, 66.58 as against 39.94 in the previous year and 41.63 the quinquennial average. Multan came next with 52.67 against rates of 35.21 and 32.22 for last year and the quinquennial average, while at Lahore the corresponding rates were 44.40, 36.47 and 33.98. These high rates were due to excessive fever mortality in Lahore and Multan and fever and respiratory diseases in Amritsar. Among the smaller towns the highest rate was recorded in Rajanpur, 113 66; the rates in the others were Mithankot 98.88, Firozpur-Jhirka 93.37, Khangarh 84.20, Dajal 81.24, Karor 76.22, Shujabad 72.47, Alipur 71.86, Bhaghbanpura Bogiwal 71.79; in all these fevers were shown as mainly responsible for the high rate. The lowest rates were recorded in Nankana Sahib 8:16, Sargodha 10:40, Gojra 10.89, Garhdiwala 15.52, Fattehabad 16.21 and Akalgarh 16.99, these low rates are due to the absence of malaria in an epidemic form. In the remaining towns the rates varied between 18:37 in Murree and 65:36 in Pathankot.

18. Compared with last year there has been an increase of 37,767 in the total number of entries checked,; the actual numbers checked were 752,491 in the birth and 514,564 in the death registers.

The percentages of omissions detected to total number of entries checked by Divisional Inspectors worked out at 1.46 and 1.52 for male and female births and 0.81 and 0.90 for male and female deaths, those checked by Superintendents of Vaccination and Vaccinators at 1.02 and 1.11 for births and 0.59 and 0.65 for deaths, those by the revenue staff at 1.11 and 0.87 for male and female births and 1.19 and 0.95 for deaths.

The number of chaukidars punished for neglecting to report cases of domestic occurrence was 72, the total fines amounting to Rs. 49, while in municipal towns 186 persons were punished for neglecting to register births and 98 to register deaths, the total fines coming to Rs. 253.

19. There were 133 births recorded at railway stations outside municipal limits and 134 deaths compared with 93 and 96, respectively, the year previously. Of the deaths 3 were due to injuries, 4 to cholera, 6 to diseases

of the respiratory organs, 9 to dysentery and diarrhoea, 28 to all other causes and 84 to fevers; there were no deaths from small-pox or plague.

- 20. There were 229 births and 149 deaths amongst Europeans and Anglo-Indians as against 193 and 102 respectively last year. The deaths were distributed as follows:—All other causes 98, fevers 22, diseases of the respiratory organs 13, cholera and dysentery and diarrheea 7 each, and injuries 2.
- 21. There were 3,953 births recorded among the non-military population of cantonments as against 4,078 in the pretary population of cantonments as against 4,078 in the preceding year and 4,675 deaths as against 3,796. The deaths were classified as follows: Cholera 15, injuries 55, dysentery and diarrhea 179, plague 256, respiratory diseases 572, all other causes 1,338 and fevers 2,260; there was no death from small-pox.

Section VI - Chief Diseases.

22. Cholera.—Cholera showed no marked prevalence. Altogether there were 1,365 deaths, i.e., 286 less than in the previous year, the mortality rate being 0.07 per mille as compared with 0.09 in 1916 and 0.30 the average for the previous five years. This good result is doubtless very greatly due to the early preventive measures taken and to better knowledge of the manner in which the disease is spread.

The mortality was highest in the Sialkot District where 282 deaths occurred, Multan coming next with 183, Ambala 174, Gurdaspur 163, Lahore 14!, Amritsar 121, while in the districts of Hoshiarpur, Gujrat, Lyallpur, Hissar, Gujranwala, Karnal, Shahpur, Kangra, Jullundur, Jhang, Muzaffargarh, Jhelum, Ludhiana, Rawalpindi and Ferozepore, the number of deaths varied between 74 and 2, other districts remaining free.

With the exception of 3 deaths, the province was free from cholera in the first half of the year. The first victim was a Christian child of 3 years of age whose father is an itinerating preacher in the villages in the Fazilka tahsil. Beyond the fact that the father attended the Muktsar fair on the 12th of January and the child contracted the disease on the 17th and died a couple of days later at Fazilka, nothing is known. The second case occurred in a sepoy of a Gorkha regiment which was on its way from Burma to Jhelum. He fell ill at about 2 a.m. on the 7th May in the train near the Roorki Railway Station and was removed from it at Ludhiana, where he died in the Civil Hospital the same afternoon. The 3rd case was a Hindu Jat who had not been away from his native place, Abohar, in the Ferozepore District; he got bad on the 31st May and died on the 9th June. There is a big grain mandi at Abohar to which it is stated a great number of people come from the Bikaner State, only 10 miles off, where it is believed cholera was prevalent at the time.

During the month of July 20 deaths were recorded in the Gujrat District, 10 in Gurdaspur, 3 in Jhang, 2 in Amritsar and 1 each in Jullundur, Ludhiana and Sialkot. In the month of August when the number of deaths rose to 147, the largest number of deaths 76 was recorded in the Ambala District while Lahore came next with 25.

The epidemic assumed serious proportions in the months of September and October when 628 and 463 deaths, respectively, were recorded. In November there were 86 deaths and in December the province became free. In individual districts the highest number of deaths returned in September was 171 in Sialkot and 115 in Multan and in October 101 in Sialkot and 86 in Gurdaspur. Compared with 1916 the mortality was lower in every month except January, September, October and November.

Out of the 142 towns in the province only 31 recorded deaths from cholera, the number being 791. The disease was mainly prevalent in Multan (118), Sialkot (117, Amritsar (108), Jagadhri (103), Lahore (87), Ambala (54), Hoshiarpur (27) and Hissar and Pathankot 22 cases each. In Dharmsala, Fazilka, Batala, Sahowala and Eminabad one death each, Jamke, Jhelum and Muzaffargarh 2 deaths each, in Buria, Hariana, Ludhiana, Jhang-Maghiana and Leiah 3 each, while in Panipat, Jullundur, Baghbanpura Bhogiwal, Dinanagar, Pasrur, Gujranwala, Khushab, Pind Dadan Khan and Shujabad there were from 4 to 17. Serious rural epidemics occurred in villages Chak Ram Das in the Sialkot District, Manwal and Gharota villages in the Gurdaspur District, resulting in 39, 29 and 25 deaths, respectively. The origins of the disease were not ascertained. The population of the Malka village in the Gujrat District, where 56 cases and 19 deaths occurred between the 10th and the 23rd July, numbering 1,073, consists almost entirely of Muhammadans, amongst whom all the cases occurred, presumably, while fasting on account of the Ramzan. The first victim was a lad who had gone to Roorki in the United Provinces to enlist in the army, but who was rejected on account

of his age and returned home on the 9th July. He missed the train at the Ambala Cantonment, where after a drink of water he vomited and purged once. He caught the train on the 9th and reached his home in the village of Malka the following evening when he had violent and frequent vomiting and purging. He remained sick for three days and then began to recover. In the meantime he was attended by a barber who fell ill on the 15th with all the symptoms of cholera and died the next day, the same day the barber's sister-in-law got ill and died. Subsequently two more cases occurred among the people using the water of the well nearest the house of these first cases, but two Hindu families living amongst these people escaped as they drank from a separate well of their own inside the compound of their houses.

The epidemic in Hoshiarpur town commenced on the 9th November and resulted in 23 deaths in the course of a week. As the period of the outbreak corresponds with the Naurata fair, when the Kangra valley is visited by pilgrims from all parts of the province, many of whom pass through Hoshiarpur, it was presumed at the time that the disease was imported from one of the then infected towns of Amritsar, Lahore or Multan. A final outbreak seemed to be due to the contamination of sugarcane juice from one definite source, the man who sold it and others who partook of it suffered from the disease and after its sale was stopped cases ceased to occur.

The epidemic at Jagadhri caused 179 cases and 103 deaths. It was believed that the disease was imported from Hardwar, or at all events from the neighbouring district of Saharanpur in the United Provinces where cholera existed in an epidemic form. Speaking generally it may be said that the disease was limited to the outskirts of the town, lowlying localities inhabited by low-caste people, kamins, etc., where also the subsoil leve! of water is very near the surface. The central part of the town occupied mainly by the better classes remained practically free. After the epidemic died out in Jagadhri the disease appeared in the Ambala City and 64 cases and 54 deaths occurred. It was probably introduced from Jagadhri though the fact that it was so could not be determined. At Multan the first case occurred on the 13th August in the centre of the town, the second was in a Hindu who had come from the village of Kasba, at a distance of 16 miles from Multan, on the 19th August to attend the court, and he developed symptoms of cholera on the 22nd. This case had apparently no connection with the first case. The disease began to spread and the heavy and incessant rains seem to increase this tendency and it was not till the 7th November that the epidemic was stayed.

It will be seen that only in one instance was an outbreak traced directly to the Hardwar pilgrim route, the one that occurred at Malka, but I think we might certainly presume, from the position of Jagadhri, that the epidemic there originated in its vicinity. When it was known in August that cholera was prevalent at Hardwar, all Deputy Commissioners were asked to take such steps as might seem advisable to them to let people know of the fact with a view to their postponing intending visits to this place of pilgrimage or its vicinity.

Owing to the greatly increased cost and difficulty with which potassium permanganate is obtained at present, I proposed keeping a supply of chlorinated lime (bleaching powder) for the disinfection of wells, but I found by experience that it was impossible to obtain it in good condition on account of the time it takes goods to arrive up-country. Most of the powder on arrival in the Punjab had lost a considerable portion of its available chlorine, and some was found to be practically inert. Local bodies were consequently asked to make their own arrangements for further supplies of permanganate of potash when their stock required replenishing.

Owing to the outbreak of cholera in Multan the Military Department becoming anxious about the Army Clothing Factory there, as, some of its employees having been reported to have contracted the disease, it was thought that the clothing might become contaminated, I sent the Additional Deputy Sanitary Commissioner to Multan to co-operate with the Civil Surgeon in organising preventive measures. Under their personal direction and with the zealous assistance of the Health Officer the infected houses, the drains, the clothing of patients and the wells were thoroughly cleansed and disinfected.

At Jagadhri Assistant Surgeon Diwan Chand and Dr. Sadiq did excellent work both in carrying out preventive measures and in treating the sick. The Additional Deputy Sanitary Commissioner Dr. Khwaja Abdul Rahman remained at Jagadhri at the commencement of the outbreak for 10 days and later on for about a week personally supervising the very heavy work of disinfecting the wells, the drains and the houses in which cases occurred.

There was a somewhat prolonged outbreak of cholera amongst the troops and in the bazars of the Lahore Cantonment with regard to which the Civil Surgeon and the Health Officer, Lahore, were asked to render all possible assistance.

The conditions prevailing at Multan are very unsatisfactory, the drainage and water-supply are bad and nothing but the introduction of a proper drainage system and a piped water supply, for which arrangements are being made, can protect the town from recurrences of outbreaks of this and other diseases.

At Jagadhri great difficulty was found, as at Panipat last year, in discovering and disinfecting the numerous wells, public and private. The sub-soil water at Jagadhri is so near the surface that it costs little to sink a well and almost every man can afford the luxury of having his own water supply, and incidentally one that can easily be fouled, in his own compound. The heavy rains this year raised the subsoil level so high and caused such a large amount of surface flow into the badly constructed and protected wells as to make it extremely difficult to keep them free from contamination and rendered it necessary to disinfect them repeatedly before the desired effect was obtained. If a piped water supply is not introduced into a town, where such conditions prevail, the next best thing is to encourage the use of tube wells; in some places as in Hoshiarpur and Ferozepore, many of the people are well aware of the protection so afforded against water-borne diseases, but owing to the war the increased cost of these wells has made their extended use almost prohibitive.

23. Small-pox.—The total deaths from small-pox amounted to 1,417 as compared with 2,886 during the previous year. The death-rate amounted to 0.07 per 1,000 of population as against 0.15 in 1916 and 0.79 for the previous five years. This year's rate is the lowest on record since the introduction of the system of registration of births and deaths in this province. From January in which month 46 deaths were registered, the disease began to increase and the number of deaths rose to 68 in February, 108 in March, 142 in April and 201 in May. From that month onwards the number of deaths decreased and in June, July and August the number recorded was 186, 182, and 105, respectively, while in September, October, November and December there was a further reduction to 95, 99, 94 and 91 respectively.

The mortality rate from small-pox was as high as 0.31 per mile in the district of Gurgaon, 0.20 in Lahore, 0.19 in Lyallpur, 0.18 in Karnal, 0.15 in Montgomery, 0.14 in Ferozepore, 0.13 in Amritsar and 0.12 in Ludhiana; the rate in all the others was below that of the provincial except in Ambala where it was exactly equal with it The lowest rate reported was in the Hissar, Kangra and Jhang Districts where it was 0.001 while in Sialkot, Gujranwala, Gujrat and Rawalpindi it was 0.01.

The proportion of male to female deaths was nearly equal as has been the case in previous years, the rates in 1917 being 0.07 in the case of males and 0.08 in that of females as against 0.14 and 0.16 in the year preceding.

The death-rate from small-pox in urban areas was 0.11 as compared with 0.07 in rural circles and the average rate for towns in which the compulsory Vaccination Act is in force was 0.11 as against 0.14 in the previous year.

One hundred and nine municipal towns escaped the disease and in the remaining 33 towns a total of 185 deaths was registered as against 265 in the previous year. In twenty-four towns the number of deaths reported was five or less while in 6 it varied between 9 and 6. The highest number of deaths was recorded in Rewari 48, Panipat and Amritsar coming next with 37 and 16 respectively.

Among those towns in which the Vaccination Act is not compulsory, the highest number of deaths was recorded in Firozpur-Jhirka 9, Batala 5, Nakodar and Pindi Bhatian 4 each and Faridabad 2.

The mortality was greatest among infants under one year of age, the male death rate being 0.36 and the female 0.37; among children from one to five years of age the rates were 0.32 and 0.34 while in the next five years period 5—10 it was 0.09 and 0.11; over 10 years of age the death-rate gradually fell with increasing age.

In Simla altogether 8 cases occurred during the year—one in May, one in June and one in July while the remaining five occurred in August in the Railway Quarters of the Kalka-Simla Railway; these were discovered owing to the receipt of an anonymous post card sent to the Health Officer, Simla. The enquiry showed that the first victim was a girl aged 10 years who had arrived from Agra 2 weeks before and had apparently contracted the disease there or en route. She stayed with relations who concealed the disease and treated her for it themselves for over a month. Departmental disciplinary action was taken in the case by the Railway authorities. In the 4 other cases infection was directly attributed to this case, 3 in children and 1 in an adult who attended on one of the infected cases. Only one of the 5 cases had been vaccinated. Vigorous precautionary steps,—vaccination and segregation—were taken on the discovery of the outbreak and the spread of the disease ceased.

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

Mortality.—There were 9,724 deaths in the Province compared with 4,151 in the preceding year. It was not a bad year on the whole but there were as many as 4,084 deaths in the last two months, i.e., nearly half the total, indicating from experience a bad epidemic in 1918.

Area of distribution.—Rawalpindi and Jhelum in the north-west, Ambala in the east, and the districts of Lahore, Jullundur, Gurdaspur, Ludhiana and Gujranwala in the centre were worst infected, accounting for more than 76 per cent. of the total mortality. The districts of Simla, Mianwali, Muzaffargarh, Dera Ghazi Khan and Jhang were free. Ferozepore also may be said to have escaped as there was only one death there in April; while in the districts of Sialkot, Gujrat, Multan and Shahpur out of the 106 deaths that occurred, all except 5 in Shahpur were imported from either Rawalpindi or Jhelum.

The disease was known to have been imported in 4 instances from Rawalpindi and Jhelum and in 4 from outside the province. From the way deaths occurred throughout the year in the Nurpur Tahsil of the Kangra District it is doubtful if this hill area was at any time free from the disease. The Patiala State was infected for 9 months of the year.

The case mortality was 69 per cent as compared with 79 per cent. last year. The disease was chiefly bubonic in type.

Seasonal distribution.—There was a marked change in the Seasonal Curve. Usually we get a gradual rise continuing from January to April and then an abrupt fall. This year the rise extended over May and though it dropped in June it was not till July that there was a very definite fall. This was associated with the unusual rainfall in the late spring. The fall in the Seasonal Curve reached its lowest in August when there were only 87 deaths; but from thence onwards the rise was much steeper than would generally be expected. The fact that infection was widely distributed probably accounted for this result, since six districts, viz., Jullandur, Ludhiana, Lahore, Gurdaspur, Gujranwala and Rawalpindi, were rather badly affected.

Measures.—As Sanitary Inspectors had to be employed, instead of medical assistants, for preventive purposes, instructions were issued to all Civil Surgeons to train them thoroughly in anti-plague measures and to satisfy themselves that they were efficient in the carrying out of their duties. As usual the measures depended upon were—

(a) ratting by means of traps, poison and smoke apparatus—concentrated round infected areas and in infected places during epidemics and in selected late infected villages during the off season,

- (b) cresol fumigation and inoculation, where possible, during infection, and
- (c) in some districts evacuation.

The city of Rawalpindi was, as has already been indicated, an important centre for the distribution of the disease. The tahsil in which it stands was never free, the city was reported to be so early in the year but it became markedly infected in August and this continued increasingly till October when it began to show a decrease while in the district there was a considerable increase.

I visited Rawalpindi with Major Norman White, I.M.S., C.I.E.. Officiating Sanitary Commissioner with the Government of India, and later forwarded his report with my own on to Government on what appeared to be the special conditions obtaining in this city, and made certain recommendations. The committee has succeeded in obtaining the services of a fully qualified Health Officer and it should now have no difficulty in putting the city for which it is responsible into a relatively sanitary condition.

Lahore city had a rather bad outbreak at the end of the year which continued on to 1918.

Barium Carbonate was used throughout the year as a rat poison with satisfactory results. One lot was impure, containing as shown after analysis by the Chemical Examiner, nearly 10 per cent. of earthly impurities.

Reporting —There is a continued improvement in the reporting of first infections in most districts. There is, however, great room for improvement in reporting in cities; there is no doubt but that in the large centres of Lahore and Amritsar a greater mortality has occurred from this disease than is shown in the death returns.

Attitude of people.—The attitude of the people towards anti-plague measures is said to have improved. It, however, varies in different districts to different measures, some preferring one particularly and some another. Inoculation in particular has become distinctly more acceptable to the people and it is a matter to be regretted that the amount of vaccine available has been limited owing to the difficulty experienced at Bombay in obtaining glass receptacles. In all 19,400 inoculations were performed, mostly in the districts of Jullundur, Lahore and Ludhiana.

Special Plague Staff.—Qualified Sanitary Inspectors were engaged in all the districts as Plague Supervisors throughout the year and in the summer they were assisted in some districts by the members of the Vaccination Staff.

Dr. Sinha has worked as my assistant in this department throughout the year. He toured in ten districts during the hot weather to inspect preventive work. He was deputed specially to give the Military authorities assistance in checking outbreaks of the disease in Ambala and Lahore Cantonments. The Military authorities expressed themselves as being very grateful for the help given them and I have pleasure in commending Dr. Sinha not only for the assistance he has rendered in this connection but also in the epidemic of malaria in Amritsar in the autumn.

25. Fevers.—The heading "Fever" includes deaths from all kinds of diseases in which fever is a predominating symptom and particularly is this the case with plague which the people will persistently continue to conceal. It is, however, a fairly true index to the prevalance of malaria in the malarial season when again no doubt a good many deaths that should be included in it are returned under the head of "respiratory diseases."

Under "fevers" a total of 510,812 deaths was registered against 376,003 in 1916, showing an increase of 134,809 deaths. The death-rate was 26·42 against 19·44 in 1916 and a quinquennial mean of 16·68. The mortality from fevers was the highest on record since 1908, in which year it amounted to 697,058. The largest number of deaths was recorded in the last quarter of the year in the following order:—November 104,555, October 85,680 and December 73,098 as against 138,161 in November, 169,155 October and 83,364 December 1908. The fever death-rate in all the districts in the province except Kangra and Rawal-pindi was higher than that recorded in the previous year. The highest death-rate was recorded in Muzaffargarh 43·48, Multan coming next with 41·52, Gujranwala 41·36 and Dera Ghazi Khan 40·85 and Montgomery 40·63.

The increased mortality in those districts in the province which showed a higher death-rate from fevers is attributable to the prevalence of malarial fever in an epidemic form in the last quarter of the year as the result of the excessive monsoon rainfall.

The highest death rates were recorded among infants under one year of age, the rates being 156:44 and 152:85 among males and females, respectively, children between 1 and 5 and old people coming next with rates pectively. In the remaining groups the rate did not exceed 23:06 while the lowest recorded was 5:84.

The urban and rural death-rates from fevers were 21:46 and 26:91 compared with 14:87 and 19:90 in the previous year. These rates were lower than those in 1908 when they were 32:53 and 34:90. The three largest towns in the Punjab, Multan, Amritsar and

Lahore recorded rates of 30·46, 29·95 and 25·89, respectively, as against 15·78, 13·57 and 21·13 in the previous year and 23·80, 68·16 and 33·69 in 1908. It will be observed that in Multan the death-rate was very high, even higher than in 1908 and the chief cause of this increase was the very exceptional rainfall for Multan which amounted to 19·83 inches against 6·25 inches in 1916. No such heavy fall has been recorded in Multan in the last 20 years for which period only are records available. The year 1897 shewed a heavy fall but even then it was only 12·55 inches and the death-rate from fever was 14·49. The high fever mortality rate extended to the whole of the Multan Division, and it is of common knowledge that the country to the south-east, Bahawalpur and Sindh, participated, if anything to a greater extent, in this disastrous result of an exceptional autumnal rainfall occurring in, what would be described, ordinarily, as an arid region.

The rainfall in Amritsar itself and its near vicinity was not very exceptional, it was 35.88 as against 30.88 in 1916, but it was spread much more evenly over the whole autumnal period and caused surface flooding which could not be absorbed or drained away with sufficient rapidity. Unfortunately too the sanitary condition of the town and its vicinity left very much to be desired at a time when it was so essential that the health of the people should be in a condition to resist the malarial infection. A special committee has been appointed by Government to consider remedies, additional to those already adopted, to protect Amritsar against repetitions of epidemics similar to those of 1908 and 1917.

In the case of smaller towns rates as high as 95.03 were recorded in Rajanpur, 78.41 in Kot Mithan, 70.51 in Dajal, 63.65 in Firozpur-Jhirka, 60.91 in Khangarh, 54.52 in Karor, 50.43 in Pakpattan, 50.21 in Shujabad, 49.36 in Begowala, 45.67 in Chuharkana, 44.19 in Kamalia and in Hafizabad, Sahiwal, Sohdra, Baghbanpura Bhogiwal and Kila Didar Singh, 43.89, 43.09, 43.08, 43.04 and 40.27, respectively. Firozpur-Jhirka in the Gurgaon District is in the midst of a rural centre which suffered very severely from malaria of a malignant type, mainly due to the flooding of the surrounding country, the result, it is said, of the bursting of protection bunds in the Alwar State.

In Simla 25 cases were reported from enteric fever—22 among Europeans and 3 among Indians. Of the 22 cases among Europeans 12 were imported and 10 were considered to have contracted the disease locally - of the latter 3 occurred at the Alexandra and 3 at the Grand Hotel while the remaining 4 occurred in different parts of Simla. No definite or common source of origin could be traced. Of the total 10 European indigenous cases, 7 were diagnosed as enteric fever, 2 as paratyphoid A and 1 paratyphoid B; under the first group 4 were returned as such on clinical grounds, the remainder after a bacteriological examination. Of the 12 imported cases 7 were of enteric fever and 5 of paratyphoid A. The 3 Indian cases were diagnosed on clinical symptoms only as of enteric fever; of these 1 case was imported. In Multan City 83 deaths from enteric fever were recorded during the year. The Civil Surgeon, Dera Ghazi Khan, states that in the beginning of the year a report was received from the police regarding the death of certain persons in 3 villages of Thana Kot Chutta in his district: on which he immediately proceeded to the spot and after enquiry he came to the conclusion that the 9 deaths that occurred had been the result of an outbreak of enteric fever. In March he received a similar report from Thana Batil and again came to the conclusion from an examination of the cases that the disease was enteric fever; he found it very difficult, however,

to obtain permission to make a satisfactory clinical examination and he was not allowed to take a specimen of blood. There were 14 deaths reported during the outbreak.

26. Dysentery and diarrhea.—The total number of deaths from dysentery and diarrhea amounted to 15,571 as against 15,551 in the previous year, the rate being 0.80 in each year. The quinquenni 1 average was 0.64. Rates as high as 3.53 were recorded in Rawalpindi, 1.76 in Gurdaspur, 1.57 in Gurgaon, 1.51 in Sialkot, 1.50 in Amritsar and 1.26 in Simla, while in Hoshiarpur and Attock they were as low as 0.03 and 0.05.

The urban rate was 2:49 as compared with 2:29 for the previous year and the rural rate 0:64 as against 0:66.

The highest mortality occurred in October and the lowest in February. The largest death rates were returned from the towns of Kot Mithan 9.27, Zaffarwal 8.26, Isa Khel 8.01, Firozpur-Jhirka 7.17 and Pathankot 6.87.

With regard to the marked increase in the death rate at Murree, since the introduction of the water-supply and drainage, referred to in last year's report, it has been found to be impracticable to increase the pipe water-supply, but a scheme is being evolved by which the water storage will be increased in Murree itself. For this purpose the Municipal Committee are giving a site free of cost to enable the Military Department, by whom the pipe water-supply is administered, to build additional reservoirs. The control of the milk supply is a difficult question; it is however one which actively engaged the attention of the Municipal Committee. The number of hawking vendors' licenses has been curtailed in favour of the issue of licenses for sale within bazar limits only and it is hoped that this may have some effect in preventing the admixture of impure water to the milk.

The difficulties experienced in connection with the milk supply here are just as great in other hill stations in this province but it is probable that the people in those in which it is brought in from a distance, as in this, are better able to obtain good water to dilute the milk.

There is a proposal before Government for the routine chemical and bacteriological examination of water-supplies throughout the province which should do much to improve their purity and ensure that they are properly protected against accidental contamination.

- 27. Respiratory diseases.—There were 54,392 deaths recorded as due to respiratory diseases at a rate of 2.51 per mille, which is 0.22 more than last year and 0.43 in excess of the average for the previous five years. Gurdaspur was again conspicuous with its high rate of 13.7, while Amritsar, Simla, Ambala and Sialkot recorded rates as high as 6.4, 6.2, 5.3 and 5.1, respectively. The rates in the others varied between 0.3 in Montgomery and Muzaffargarh and 3.3 in Kangra.
- 28. Injuries.—There were 7,154 deaths due to injuries, the rate being 0.37, the same as it was last year, the deaths were classified as follows: suicide 255 (113 males and 142 females) wounds 499 (356 and 143), accidents 5,283 (3,062 and 2,221), snake-bite 894, injuries inflicted by wild beasts 18 and rabies 105.
- 29. All other causes.—Under the head'all other causes there were 133,623 deaths recorded at a rate of 6.9 which is 0.2 less than last year but 0.4 more than the average for the previous five years. Gurgaon accounted for the highest rate 15.9 and Ludhiana for 11.8, Karnal and Ferozepore 10.0, Rohtak 9.7, while in Gurdaspur the rate was as low as 0.9 and Muzaffargarh, Dera Ghazi Khan, Rawalpindi, Mianwali, 2.9, 3.0, 3.5 and 3.9. The variation in these rates in different districts is 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 1,475 as against 1,151 last year. Of this number 124 were Europeans and 1,351 Indians. There were 8 deaths and 6 failures among Indians and in addition one case is still under enquiry, there were no deaths or failures among Europeans.

Section IX.—Sanitary Works.

- 31. The report on Sanitary Works during 1917 furnished by the Sanitary Engineer to Government, Punjab, is contained in Appendix B to this report.
- 32. Only 50 village sanitary note books were supplied to the Civil Surgeon of Montgomery during the year.
- 33. No rewards for sanitation were given to village communities during the year under report. The District Board, Gurgaon, has for the last few years regularly provided a sum of Rs. 500 in the budget for the purpose of giving rewards in connection with sanitation but as no village has ever attempted to improve its condition no such provision was made this year.
- 34. The number of wells cleaned and parapets constructed fell from 7,640 in the previous year to 5,082 and from 1,316 to 531, respectively. The amount spent for the purpose was Rs 36,063 against Rs. 43,672 last year.

In the Dera Ghazi Khan District 34 wells were cleaned by the owners and several in the Shahpur District by the people themselves. At Sargodha 3 new wells were constructed by private individuals and a tank in the area of village Dhamok on the road from Jaura to Jamali, where drinking water is very scarce, was cleaned and the cost met by the District Board and the people.

In the Ambala District the well on the Jagadhri-Shahabad Road at mile 33 and on the Abdullapur-Jagadhri Road near Chauki at mile 1 were cleaned by the District Board. The District Board also sanctioned a pucca well at a cost of Rs. 1,950 at Gopal Mochan (Tahsil Jagadhri).

- 35. An income of Rs. 1,39,082 was derived from the sale of street sweepings in municipal towns during the year as against Rs. 1,40,854 in the previous year. The largest sums were realized in Lahore, Amritsar and Sialkot.
- 36. There were 1346.97 acres of land under sewage irrigation in the principal towns and Rs. 37,577 were realized for its use. There was an increase of 20.40 acres in land thus irrigated and a sum of Rs. 980 in the amount realized.
- It is extremely difficult to get villagers to change their customs and habits, and until the people themselves show some inclination towards improvement it is hardly possible to help them. Sites near villages are invariably in a filthy condition and manure heaps are stacked in the vicinity of dwelling houses and drinking wells. It is true that when any infectious disease appears and a visit is paid by touring officers the sanitary condition is considerably improved for the time being, but almost immediately after the village reverts to its usual condition. When on tour some effort has been made by district officers to teach elementary principles. The five dispensaries itinerating in the Gurgaon District during the malaria season were made use of in spreading a knowledge of simple facts regarding the more common diseases and explaining the value of village sanitation, and it is hoped that in the future more use will be made of this agency.

The District Board of Gurgaon has framed simple rules in connection with the improvement of village sanitation which Ludhiana has also approved of and intends introducing into rural areas.

The Deputy Commissioner, Sialkot, reports that with the assistance of a grant from Government and of the District Board staff the town of Begowala has realigned two watercourses from the Aik which previously entered the town and were considered to be responsible for outbreaks of malaria; it is too early to say what effect these measures have had on the health of the town.

38. During the year 1916-17 the total number of municipalities in this province was 100, but notified areas were constituted at Baghbanpura, Bhogiwal, Ichhra and Samundri. The total income during the year, excluding the opening balance of Rs. 35,74,515 and "Extraordinary" and debts amounting to Rs. 3,24,736, was Rs. 75,50,946 and the total municipal expenditure on sanitation Rs. 26,37,318 as detailed below:—

				Rs.
(1)	Water-supply			6,39,020
(2)	Drainage			3,26,144
(3)	Conservancy including estab watering, latrines, etc.	lishment,	road	8,45,246
(4)	Health Officers and Sanitary I	nspectors		62,982
(5)	Vaccination			21,111
(6)	Markets and slaughter-houses			62,389
(7)	Roads			6,60,406
(8)	Burning and burial of paupers			3,802
(9)	Other sanitary requirements			16,218

The total income of District Boards, excluding opening balances, amounted to Rs 78,39,562 and the expenditure on sanitation and vaccination Rs. 1,79,946.

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

Works of public utility by private individuals.

Works of public utility by private individuals at their own expense is given below:—

AMBALA DIVISION—Hissar District.—A pucca well on Haluwas-Jonpal Road at a cost of Rs. 2,000 by Bhola Ram, son of Tensukh, Mahajan, Bhiwani. A pucca well in village Jeetwana Bas at a cost of Rs. 400 by Chandu, Lekhu Ram, son of Sawai, Chamar, of Sui, Tahsil Hansi. A pucca well in village Hetampura at a cost of Rs. 1,500 by Ballu, son of Sukh Ram, Mahajan, of Hetampura, Tahsil Bhiwani. A pucca well on Sirsa-Rori Road at a cost of Rs. 1,600 by Baggu, Nagar and Hardatta, sons of Setta Mal, Rota, of village Farma in Tahsil Sirsa. A pucca well in village Bapora at a cost of Rs. 5,000 by Kirori Mal, son of Johri Mal, Mahajan, of Bhiwani Lohar.

Gurgaon District.—A well at Losinghani at a cost of Rs. 550 by Lachhman, Rajput, of Losinghani, Tahsil Gurgaon. A drinking well at Gokalgarh at a cost of Rs. 1,500 by Kidar Nath and Jagan Nath, sons of Ganeshi, Dhusar, and Umri, son of Lachhmi Narain Sahai, Dhusar, of Rewari.

Rohtak District.—A pucca ghat on tank at Kahrawar at a cost of Rs. 3,500 by Lala Harbans Lal, son of Bhola Nath, Mahajan, of Kahrawar. A pucca well at Kahnour at a cost of Rs. 500 by Lala Kidar Nath, son of Bakhtawar, Mahajan, of Kahnour. A pucca well at Kahnour at a cost of Rs. 500 by Risaldar-Major Ghulam Ali Khan, of Kahnour. A pucca well at Binauli on Delhi-Baghpat Road at a cost of Rs. 450 by Lala Radha Kishen, son of Prem Sukh, Mahajan, of Aterna. A pucca well on Bichpari-Gangana Road at a cost of Rs. 425 by Girdhari Dass, Chela of Manohar Dass, Beragi, of Bichpari. A pucca well at Nidana at a cost of Rs. 900 by Lala Dewak Ram, son of Mul Chand, of Dujana. A pucca well with Dharamsala on Jhajjar-Zahidpur Road at a cost of Rs. 1,200 by Pandit Uma Datt, Pleader, Jhajjar.

Karnal District.—One pacca bathing ghat at Samalki village at a cost of Rs. 808by Mussammat Taro, widow of Shadi, Jat, of Samalki. Ambala District.—Construction of a pucca well at Mullana at a cost of Rs. 500 by Shugan Chand, Patwari, Mullana. A pucca dharamsala and a well at Bitha at a cost of Rs. 5,000 by Debi Das, son of Dwarka Das, Brahmin, of Bitha.

JULLUNDUR DIVISION—Kangra District.—A pucca well on the Hamirpur-Nadaun, Road at a cost of Rs. 7,000 by Lala Wazira Mal, son of Lala Balia Mal, Khatri, of Nadaun, Tahsil Hamirpur. A kacha well in Tika Tandoli at a cost of Rs. 3,400 by Pandit Bhangan, son of Pandit Mutsaddi, of Narihana, Tahsil Dehra. A kacha-pucca well at Nurpur at a cost of Rs 2,500 by Tika of Rani Garhwalia, of Gauler, Tahsil Dera. A pucca well at Gorli at a cost of Rs. 1,600 by Lalas Sita Ram and Balik Ram, sons of Mohan, Sud, of Nagrota. A pucca well at Bijuri at a cost of Rs. 800 by M. Devi Singh, son of Chandnun, Rajput, of Bijuri, Tahsil Hamirpur. A pucca well at Kalar at a cost of Rs. 200 by Qazi, son of Piro, Lohar, of Kalar, Tahsil Hamirpur. A pucca well at Kharyalta at a cost of Rs. 650 by Lalas Govindu, Nathu and Billa, etc., sons of Lala Kahna, of Kharyalta, Tahsil Hamirpur.

Hoshiarpur District.—A pipe water-supply for Dharmsal village at a cost of Rs. 2,000 by Nihalu Mal, son of Chiragh Mal, Sud, of Puragpur, Tahsil Dera, Kangra District. A pucca well at village Malewal at a cost of Rs. 200 by Mangan, son of Mali, Gujar, of Kirvewal, Tahsil Garhshankar.

Jullundur District.—A well near the school building at a cost of Rs. 450 by Jaimal Singh, Sarbarah Zaildar of Jamsher. A well at the village of Akalpur by Charagh Din, son of Nizam Din, of village Akalpur, Tahsil Nakodar. A well at a cost of Rs. 300 by Ishar Singh, Lambardar, son of Gulaba, Jat, of Kharkowal, Tahsil Nawashahr.

Ludhiana District.—A dharmsala and well at a cost of Rs. 1,500 by Karta Ramson of Dhunkal Ram, Khatri, of Samrala.

Ferozepore District.—Two wells at Zira and Ratol Rohi at a cost of Rs. 60 each by Lala Mulla Mal, son of Dhannau Mal, Sahukar, of Zira. A trough at the tahsil well at a cost of Rs. 375 by Lala Bul Chand, son of Lala Devi Ditta Mall, Rais, of Fazilka.

Lahore Division—Lahore District.—A drinking well at Kahna at a cost of Rs. 400 by Kirpa Ram, Head Constable, Police Station Kahna. A drinking well at Attari Sarupur at a cost of Rs. 200 by Mir Inayat Ullah, Sub-Inspector of Police, Kahna. A dewan-khana at Lakhoke at a cost of Rs. 2,000 by Muhammad Bakhsh, of Lakhoki, Tahsil Lahore. A drinking well at Hudiara at a cost of Rs. 200 by Sahu, son of Ditta, of Hudiara. A drinking well at Chunian at a cost of Rs. 1,000 by Sodhi Karam Singh of Chunian.

Gurdaspur District.—One pucca sarai at Darangla to accommodate travellers, etc., free of any charges at a cost of Rs. 5,090 by Pala Mal, son of Duna Mal, Sahukar, of village Dorangala, District Gurdaspur.

MULTAN DIVISION—Lyallpur District.—A drinking well for public use in Chak No. 62, R. B., Jaranwala Tahsil, at a cost of Rs. 600 by Ranga Singh. A drinking well for public use in Chak No. 57, G. B., Jaranwala Tahsil, by Bishen Singh, Zaildar, at a cost of Rs. 500.

Multan District.—A well at Tatepur Railway Station, Multan Tahsil, at a cost of Rs. 500 by the Hindu Panchayat of Multan City for the benefit of people on the occasion of the Budhla Sant and Makhdum Rashid fairs.

Section X.

40. I held the post of Sanitary Commissioner throughout the year, in addition to that of Inspector-General of Civil Hospitals. The post of Deputy Sanitary Commissioner was held by Major W. H. C. Forster, I.M.S., in addition to his duties of Professor of Pathology at the Lahore Medical College. Dr. Khawaja Abdur Rahman, M.B., Ch. B. (Edin.), D. P. H. (London), held charge of the appointment of Additional Deputy Sanitary Commissioner.

41. In January I inspected Sonepat and Amritsar, in March Montgomery, Multan, Muzaffargarh, Dera Ghazi Inspection work of Sanitary Commis-Khan, Moga, Ferozepore and Mianwali, in April Simla and Hardwar. The latter in connection with the spread of cholera through the agency of pilgrims in the Punjab, about which I submitted a special report to Government. In May I inspected Jullundur, Khanna, Karnal, Kalka and the Tara Devi plague post. In July I inspected Amritsar in connection with an outbreak of cholera and then proceeded to Rawalpindi in company with Major Norman White, Sanitary Cimmissioner, India, to enquire into conditions that constituted it a focus for the spread of plague each year in the Province and to consider measures in regard to its prevention. In October I inspected the Dharmpur Sanitorium for persons suffering from tuberculous diseases, Sanawar, Ambala, Amritsar, Ludhiana and Simla, and in November Batala, Gurdaspur, Gurgaon and Rewari and in December Gujranwala.

A2. During the cold weather Major W. H. C. Forster, I.M.S., was not able to undertake any touring as his time was occupied with lecturing work at the Medical College and in the supervision of the working of the Vaccine Institute. During the Medical College recess period he toured through 78 towns and villages of the Simla and Ambala Districts and in the Native States, Theog, Jubbal, Rampur, Bashahr, Kumhar sain and Keonthal, mainly for the purpose of inspecting the results of vaccinations performed with his Chloral Hydrate Lymph and the registration of births and deaths. During his tours he made use of such opportunities as presented themselves to bring home to the people and the officials of the States he visited the advantages to be derived by the observance of general sanitary measures.

Early in the year, under instructions from the Local Government, he accompanied the Sanitary Engineer to Government, as Sanitary Expert, to inspect the water supply and sewage works at Lucknow, Cawnpore and Benares (United Provinces) in connection with the proposed drainage scheme for Lahore. In April and May of the year under review at the request of the Inspector-General of Civil Hospitals, he enquired into the prevalence of Tubercle in the Punjab Lunatic Asylum. About the middle of October, he accompanied the Inspector-General of Prisons to Sargodha and Gujar Khan to select a suitable site for a Tuberculosis Jail for the Punjab.

43. During the second week of January 1917, Dr. K. A. Rahman, Additional Deputy Sanitary Commissioner, Inspection work of the Additional Deputy Sanitary Commissioner, Punjab. supervised the medical and sanitary arrangements of Muktsar Maghi Fair in the Ferozepore District and on the 21st of the same month started on his first tour of sanitary and vaccination inspection. By the middle of March he visited and reported on the sanitary condition of the towns of Sirsa, Hansi, Bhiwani, Tohana, Rewari, Hodal, Kunjah, Dingah and Jalalpur Jattan, at the same time inspecting vaccination and registration of births and deaths, as also of Fatehabad, Faridabad, Ballabgarh, Palwal, Hathin, Nuh and Sohna, and 196 villages of Hissar, Gurgaon and Gujrat Districts. From Gujrat he went to Pehowa in the Karnal District to supervise the medical and sanitary arrangements of the annual fair held there, and later on at Choya Saidan Shah and Katas. In May he made a sanitary and vaccination inspection of Wazirabad,

Rupar and Kamalia. During the last week of July he visited Amritsar, Jullundur, Ludhiana and Ambala to try and make arrangements to stock Chlorinated Lime for the disinfection of wells during the cholera season at the Central Disinfection Depôt at Jullundur. From 16th August to 3rd October he visited Jagadhri, Buria, Multan, Lahore Cantonment, Amritsar, Sialkot and Pasrur to advise on outbreaks of cholera. As in previous years he dealt with the cholera enquiries and daily reports of the Province.

On 4th October he attended a meeting at Nankana Sahib convened by the Railway authorities to discuss more efficient facilities for the convenience of pilgrims, after which he visited the Phalgu fair in the Karnal District. In November he went to Fazilka and reported on the sale of municipal land in Mohalla Mehtab Ganj and from there proceeded to the Nankana Sahib to supervise the medical and sanitary arrangements of the fair. In December he made a sanitary and vaccination inspection of Jhajjar and Beri and inspected vaccination and registration of births and deaths in 24 villages of the Rohtak District.

- 44. Civil Surgeons made two hundred and thirteen inspections of towns and 1,240 of smaller towns and villages during the year as against 166 of towns and 1,726 of villages in 1916. Assistant Surgeons inspected 17 towns and 47 villages as compared with 50 towns and 321 villages in the previous year.
- 45. Quinine was distributed freely in the districts affected by malaria through Tahsildars, Zaildars, Lambardars, the Vaccination and Sanitary Staffs, itinerating dispensaries, special malaria gangs, local hakims and influential persons. In some districts pools, tanks, etc., were kerosined for the destruction of mosquitoes and in some the quininisation of school children was successfully carried out. The Municipalities of Lyallpur and Gojra distributed among school children 100,608 tablets of 3 grains each under the quininisation scheme with very good results. A few District Boards at their own expense distributed leaflets on "Malaria fever" issued by the Chief Malaria Medical Officer, Punjab, for the guidance of the public, the District Board, Lahore, alone issued 10,000 copies of these leaflets.

In the Muzaffargarh District large quantities of quinine in powder and tablets of 5 and 3 grains were distributed by the District Board and Municipalities free of charge among the poorer classes. The District Board, Amritsar, distributed quinine free to villagers through the Sub-Committees of the Amritsar District Quinine Distribution Association

In the Amritsar city school children were dosed with quinine during the malaria season on a large scale, 110,370 tablets of quinine being distributed gratuitously by the Municipal Committee from the 6th January to 11th November and the Amritsar Temperance and Ratepayers Associations in addition to distributing quinine freely supplied milk gratis to the poorer people.

In the Gujrat District and city quinine and milk were distributed gratuitously by Shaikh Azmat Ullah, Lala Kidar Nath, Seth Chiragh Din and M. Muhammad Din, the District Board gave away 100 lbs. of the drug and in the town of Dingah subscriptions were raised for this purpose. In the town of Ferozepore quinine was distributed freely to people in receipt of an income up to Rs. 15 per mensem while others were allowed to buy it at half price. In the district quinine to the value of Rs. 215 was sold to Zamindars during the year by the District Board, Ferozepore, none was distributed gratis except at dispensaries.

In the Municipal towns and villages of the Hissar District, Compounders distributed quinine tablets from house to house gratuitously to the extent of about 100 lbs.

- 46. It was not possible to do much in the way of filling up depressions, owing to financial stringency but still in some towns and districts gangs were employed for the purpose notably at Amritsar, Rohtak, Gurdaspur, Gujrat, Jhelum and Mianwali.
- 47. The Deputy Sanitary Commissioner remained ex-officio Professor of Hygiene at King Edward Medical College, Lahore.

 Lectures on Hygiene at Medical Lahore, throughout the year and delivered the prescribed course of lectures and demonstrations on Hygiene to the M. B. S. Class.
- Lectures on principles of Elementary Hygiene to vaccinators.

 Lectures on principles of Elementary Hygiene to vaccinators.

 Lectures on principles of Elementary Hygiene, chiefly for District and Municipal vaccinators. A total number of 64 vaccinators (63 of the district staff and one Superintendent of Vaccination from Nabha State), attended the classes and were given the customary certificates on conclusion of their course.
- 49. The Agent, North-Western Railway, reports that the towns of Mian Channu, Chichawatni, Khanewai, and Jaliania have been laid out in the vicinity of North-Western Railway during 1917.

 Railway stations and construction is in hand.
- 50. The municipalities of Ludhiana and Sialkot have not yet obtained the services of Health Officers, arrangements are being made to secure qualified men on higher pay.

The usual class for Sanitary Inspectors was held in the cold weather. At the examination held at the end of the course 23 passed and were granted certificates.

51. The annual grant of Rs. 200 which has been given to the Society for Promoting Scientific Knowledge, since 3rd October 1911, was increased by Government from the 1st April 1917 to Rs. 1,000 per annum. The Sanitary Board gave a grant of Rs. 23.139, towards the erection of a building and equipment of a building consisting of a lecture hall to accommodate 500 persons, offices, class rooms and sanitary museum, while the sitewas given by the municipality on a nominal rental. The building was completed and opened in November 1917.

At Lahore 14 lectures for the general public and 9 for women and children were delivered and a conversazione with experimental demonstrations on a large scale was held in January 1917. An "Our Day" was celebrated in December when, in addition to interesting scientific experiments and exhibits, demonstrations were arranged of Infant Welfare Work, Home Nursing, and First Aid for Indian Ladies. In addition to lectures delivered at Lahore and other towns, where there are branches of the Society, a number were given in villages by members of the Sanitary League, a special organisation formed for reaching rural populations.

Classes in First Aid, Home Hygiene and Nursing have been held regularly and certificates granted to successful candidates as follows:—302 in First Aid, 11 Home Nursing and 293 Home Hygiene and besides 5 persons obtained labels, 13 medallions and 6 vouchers.

Pamphlets in Urdu, Hindi and Gurmukhi dealing with the prevention of epidemic diseases and a Hindi translation of a book dealing with the bringing up of children besides the "Raushni," the Society's monthly journal, were published and distributed. Very good work was done in the Vernacular Continuation Classes for women and also in the weekly Lantern lectures for women and children.

Large fairs.

Large fairs.

attended and advised on the arrangements nade attendance of 40.000 to 50.000 people, the Pehowa fair with an estimated attendance of from 60,000 to 70,000, the Phalgu fair at which there were about 60,000 people, and the Nankana to which only about 40,000 came. The Civil Surgaon of the district made the sanitary arrangements for and attended the Pakpattan fair but this year owing it was said to the late rains and prevalence of malaria and possibly to the dismantling of the Line only 2,500 persons attended. At none of these fairs was there any outbreak of disease of an infectious nature and the sanitary arrangements were reported as satisfactory.

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

Serum diagnosis for typhoid fever		61	
Serum diagnosis for paratyphoid (a)		99	
Serum diagnosis (b) 5			
Serum diagnosis malta fever		28	
Examination of blood for malaria		27	
Examination of sputum, etc., for tubercle bacillu	s	26	
Examination of tumours		34	
Wasserman test for syphilis		136	
Miscellaneous tests		48	
Examination of brain for negri bodies		371	
Vaccines, etc., sent out		182 doses	
Autogenous vaccine sent out	***	548 ,,	
m-4-1	-	7.500	
Total		1,560	

LAHORE: The 15th May 1918. H. HENDLEY, COL., I.M.S.,

Sanitary Commissioner, Funjab.

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APPENDIX A.

PROCEEDINGS OF THE SANITARY BOARD, PUNJAB.

The constitution of the Board has not varied since last year. I held the post of Secretary to the Board throughout. The Board met 5 times, twice in Lahore, twice in Simla and once in Montgomery.

The balance of Rs. 1,39,768 was fully utilized-

				Rs.
1.	Karnal Drainage Scheme		***	44,104
2.	Sillanwali Drainage Scheme			29,410
3.	Kotli Lobaran Drainage Scheme			4,100
4.	Pipe Line at Chitti Dill Bungalow			594
5.	Sankhatra paving and drainage			950
6.	Roras paving and drainage			248
7.	Rewari Water-Supply Extension Scheme			60,000
8.	Mitranwali notified area paving and drain	nage		362
		Total		1,39,768

A fresh grant of 4 lakhs was placed at the disposal of the Sanitary Board for allotment during 1917-18, and from this the following grants were made up to 31st December 1917, leaving a balance of Rs. 3,69,494 which will be accounted for in the next year's report. It may be mentioned, however, that the whole of the grant of 4 lakhs for 1917-18 was fully utilized as also a sum of Rs. 84,111, out of the additional grant of one lakh placed at the disposal of the Board:—

			Rs.
1.	Gojra Drainage Scheme		2,767
2.	Construction of bridge and Khal at Begowala in Sialkot District.	the .	2,000
3.	Campbellpur Drainage Scheme		4,000
4.	Drainage scheme of Nonar town, Sialkot District		700
5.	Dera Ghazi Khan Water-Supply Extension Scheme		19,689
6.	Sullage farm at Lyallpur		1,350
	Total		30,506

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

					Rs.
1.	Karnal Drainage Scheme				88,268
2.	Sillanwali Drainage Scheme				58,820
3.	Ambala Water-Supply Extens	ion Scheme			19,241
4.	Lahore Water-Supply Extensi	on Scheme			37,269
The I	Board accorded revised administra	ative sanction	n to the	schemes no	oted below-
					Rs.
1.	Gojra Drainage Scheme				12,972
2.	Wazirabad Drainage Scheme				79,219

The following schemes were approved by the Board and recommended to Government in the Public Works Department, Buildings and Roads Branch, for technical sanction :—

			Rs.
1.	Wazirabad Drainage Scheme	 	79,219
2.	Ambala Water-Supply Extension Scheme	 Is here!	90,710

The Government in the Civil Department accorded revised administrative sanction to the Rewari Water-Supply Scheme.

The following schemes were approved by the Board and recommended to Government in the Public Works Department, Buildings and Roads Branch, for technical sanction:—

			Rs.
1.	Sultanwind Drainage Scheme	 Red Link	17,517
2.	Ambala Water-Supply Extension Scheme	 Transfer of	90,710
3.	Kalka Drainage Scheme	 Statistics 2	35,531
4.	Constructing a new chimney to the boiler nection with Ambala Water-Supply Exte		19.241

Government in the Public Works Department, Buildings and Roads Branch, accorded revised technical sanction to the schemes noted below :-

	I labelle			ns.
1.	Boring plant for experimental tube well at District).	Pasrur	(Sialkot	8,208
2.	Wazirabad Drainage Scheme		with him.	79,219
3.	Rewari Water-Supply Extension Scheme		ered des	3,15,878

The Government in the Public Works Department refused to accord revised technical sanction to the Dalhousie Water-Supply Extension Scheme as the work had been completed before application was made.

The sphere of the work of the Board has extended to a more considerable extent as Government referred a number of cases for its opinion which required very considerable deliberation and discussion.

The annual grant of Rs. 200 to the Society for promoting scientific knowledge was enhanced during the year to Rs. 1,000 to assist the Society in propaganda work especially in rural areas.

The Board fully discussed the suggestions made by the Sanitary Engineer to Government, Punjab, as to the maintenance of sanitary works by local bodies and other officers in connection with the working of municipalities, and the conclusions arrived at by the Board were forwarded to the Government for consideration and necessary action.

The Board also considered the advisability of framing rules, similar to those in force in the United Provinces, in regard to projections and tharas and its recommendations are under the consideration of Government.

The Board, this year, went into the question of dealing with the drainage of flooded or waterlogged areas in the province and it requested the Sanitary Engineer to Government, Punjab, to report on the flooding of the Gurgaon and Rohtak Districts, due to the heavy monsoon of the previous year.

The question of restricting the growing of irrigated crops within the Montgomery Municipality was sent by Government, to the Board for opinion; and a meeting was held to discuss it on the spot. The conclusions arrived at after very considerable discussion in which several selected officers took part, were forwarded to Government for consideration.

The Board is on the whole satisfied that there has been some advance in a demand for the sanitation of villages and it has to thank Mr. Abbott, Deputy Commissioner at Sialkot, for affording valuable examples of this in his district, where a number of small schemes of improvement have been carried out with funds partly provided by the localities concerned.

APPENDIX B.

ANNUAL REPORT OF THE SANITARY ENGINEER TO GOVERNMENT, PUNJAB, FOR THE YEAR 1917.

The post of Sanitary Engineer was held by Mr. A. R. Astbury throughout the year.

Lahore. The final sanitation project prepared by Messrs. Lane Brown and Hewlett, Consulting Engineers, estimated to cost 48½ lakhs of rupees was approved by me subject to a technical note. The project now awaits the approval of the Sanitary Board, Punjab. Minor drainage extension to Lahore was carried out at a total cost of a little over Rs. 14,000.

Amritsar.—One new Babcock and Wilcox boiler has been installed in place of the No. 3 boiler that was condemned. The other two boilers have been provided with new drums. The working pressure has now been increased from 80 to 120 lbs. per square inch and more economical pumping should result.

The Brownlie tubes sunk in 21 of the existing percolation wells were tested and found to be working quite satisfactorily. It seems unlikely that it will be necessary to sink more tubes for many years to come. The present daily supply is about 1,250,000 gallons and to provide this Mr. Jarman (the Municipal Engineer) finds 15 or 16 of the wells, provided with tubes, to be enough. This has enabled him to cut off the plain percolation wells and the city now receives the greater part of its water from deep strata.

The number of house connections was increased by 281 and 44 new metered supplies were fixed.

Dhab filling.—This was completed in September. If plenty of earth were to be had a great deal more filling could be done with great advantage.

Dhobi Ghât.—The Municipal Dhobi Ghât near the Gheemandi Gate is a great success. It is supplied with fresh clean water from a tabe—well sunk alongside. The annual income is Rs. 1,800 and the total working expenses, including depreciation, comes to Rs. 1,100 showing an annual profit of Rs. 700.

Conservancy Tramway.—This has been in constant work during the year and the three locomotive engines have given better results since the introduction of the night gang for doing running repairs. Negotiations are in hand for the purchase of two second hand locomotives from the Canal Department, and it is hoped the purchase will be completed in the new year as the quantity of refuse is increasing and additional power is necessary to cope with the quantity.

Mr. Jarman is congratulated on the successful working of the sanitary services under his control.

Simla Water-Supply Extension.—The estimates for laying new mains from 17 stream to Sanjauli for Rs. 1,0°,394, and (2) constructing new filter beds at Dhali for Rs. 1,24,811 have received the final technical sanction of the Local Government in the Public Works Department. Several minor improvements and extensions to the Simla Water-Supply and Drainage System have been carried out at a cost of Rs. 8,443.

Jullundur.—The detailed project amounting to Rs. 5,37,346 for the surface drainage of the town was prepared in this office and submitted for the technical sanction of the Local Government in the Public Works Department. In connection with this scheme an experimental tube well is being sunk in the Empress Gardens. If successful, it will serve as a means of flushing the drains, and until the drainage system is complete, the well can be used for irrigating the gardens. The experiment will also indicate whether a tube-well system is likely to be suitable for the water-supply of Jullundur.

Kalka Drainage Scheme.—Estimated cost Rs. 86,581. The work was started on 16th November 1917. Progress has been slow owing to the difficulty experienced in obtaining coal for brick manufacture. Expenditure to the end of the year was Rs. 4,841.

Rupar Drainage Scheme.—Estimated cost Rs. 37,852. The work was started in November last. This year disposal works and a few drains have been constructed. The flushing tank has been built and the material for other parts of the work has been collected. The work would have been further advanced had not the difficulties in obtaining coal checked the progress.

Dera Ghazi Khan Water-Supply Extension.—Estimated cost Rs. 1,65,617. Very fortunately the pumping machinery arrived safely from England. It has now been erected and has passed the official tests. The reservoirs and engine house have been completed. These water works are causing considerable anxiety owing to the tendency of the tube well strainers to choke. The causes have been under investigation and are believed to be due to the deposition of calcium carbonate. The water is excessively hard and contains carbonic acid gas in solution. The suction of the pump is believed to cause the carbonic acid gas to be

evolved, and the loss of gas in solution causes the deposit to occur. Attempts are being made to prevent the deposition accumulating by inserting a water jet inside the strainer and causing a back-flow daily after pumping ceases.

Shujabad Drainage Scheme.—Estimated cost Rs. 15,302. Except for the burning of some special bricks the work has not yet been started. The project is being revised by the Executive Engineer, Multan, in accordance with technical instructions from this office.

Rawalpindi Supplementary Intramural Drainage Scheme.—Estimated cost Rs. 92,368.

This work has been completed so far as funds are available. About half the work has been done.

Nurpur Fair Area Water-Supply.—Estimated cost Rs. 25,275. The work has not been started yet. The estimate no longer represents the probable cost owing to the rise in price of imported water works stores. Modifications of the scheme are being worked out.

Lyallpur Water-Supply Extension.—Estimated cost Rs. 1,55,530. The estimate was sanctioned during 1916 and work started on 22nd July 1916. The high level tanks clear water reservoir and extension for the storage tanks and pipe line throughout has been completed at a total expenditure of Rs. 86,321. The power-pump has to come from England, and so far it has not been granted a priority certificate. There seems little chance of getting the pump until after the war. Until it arrives the steam-plant and the old worn-out power plant will have to carry on.

Eminabad Drainage Scheme.—Estimated cost Rs. 31,751. Expenditure to the end of the year was Rs. 18,773. The whole of the extramural drainage, disposal works, etc., flushing arrangements have been completed with the exception of the oil engine for lifting water for flushing the drains. The remaining work of intramural drains and pavements has not been put in hand and awaits deposit of the balance Rs. 9,251 by the Municipal Committee.

Wazirabad Drainage Scheme.—Estimated cost Rs. 79,219. The whole of the extramural and the intramural drainage, flushing installation, etc., were completed except one collecting tank at the disposal works which could not be started owing to a rise in the spring level. The material of the tank is at site and nothing can be done in this connection until March 1918 when it is hoped that the sub-soil water will sink sufficiently to allow of the work being completed. Expenditure to the end of the year was Rs. 71,704.

Bhera Drainage Scheme.—Estimated cost Rs. 78,682. The work consisted chiefly of the filling of depressions round the town and leading away the storm water by means of a kutcha outfall channel to low-lying ground about 6 miles from the town. The Executive Engineer reports that the work has already been of great benefit, malaria having diminished and foul water being speedily removed. It is hoped that the local body will realise the great importance of keeping the storm channel clear of weeds and silt. The work has practically been completed.

Reveri Water-Supply.—Estimated amount Rs. 3,15,873. Total expenditure Rs. 2,04,398. Work was started by the District Engineer, Gurgaon, in July 1916 during which year all the distribution mains were laid and most of the work of sinking the supply wells, building staff quarters and engine house was carried out. Owing to abnormal floods of the monsoon of 1917 and subsequent rise in the spring level the progress was less than expected. Much time was occupied in clearing the wells of the silt brought down by the floods. The masonry entablature has been finished and rivetting of the steel tank is in progress. Boring with 6 inches pipe has been done in wells Nos. 1 and 2; sinking of all the four supply wells has been finished; engines and pumps have been fitted and trenching for laying the suction main has been started.

Ambala Water Works.—The excessive monsoon of 1917 caused a sudden rise in the level of the sub-soil water at Handesra, and Ambala suffered a temporary breakdown in the water-supply as the sub-soil water rose 6 inches above the pump room floor and the condenser air-pump and the boiler feed pump were completely submerged. The supply was reopened with great difficulty about 70 hours after the forced stoppage of the main pumps. A pulsometer was attached to the suction air vessel and a makeshift pipe line was built up from odd pipes which were procured from various sources. These makeshift arrangements still continue as the sub-soil water level has not yet dropped far enough to enable the pumps to be started again. This is a curious example of a breakdown through too much water being at the headworks. The sub-soil at Ambala contains much more clay than is usually found in the Punjab alluvium and this renders a supply from percolation wells erratic and uncertain. Some experimental boring work has been undertaken near the Tangri river to try and find a more favourable sub-soil.

Dalhousie. Improvements to Water-Supply.—Sanctioned estimated cost Rs. 15,903. Work has been completed at a total cost of Rs. 14,600.

Gurdaspur Intramural Drainage Scheme.—Estimated cost Rs. 8,324. The work has practically been completed and the improvement to the town is very noticeable.

The survey staff attached to this office has been fully employed on schemes required by local and military authorities. For the Sadr Bazar of Lahore Cantonments I have been asked to prepare a scheme of surface drainage and a water-supply system. I have also been asked to enquire into and report on the working of the storm drainage of Lahore Cantonments. The Military authorities have also asked me to prepare a scheme of surface drainage for the large Sadr Bazar of Ferozepore. I have submitted a report to the Military authorities on the improvements required to the Bhed Nala in Sialkot Cantonments. The following rough and fair schemes were approved for which survey and levelling was done and the projects subsequently worked out in detail in this office:—

	7	1 70 00 00 00	
	R	ough Estimates	
		Rs.	Rs.
1.	Panipat Drainage Scheme (revised in this office)	60,701	
2.	Gojra Drainage Extensions	12,972	
3.	Chuharkana market town water-supply	21,037	
4.	Extending brickwork carriers, Government House, Lahore	1,032	
5.	Protection of Muktsar town from flood	52,195	
			1,47,937
	F	air Estimates.	
		Rs.	
1.	Jullundur Drainage	5,37,346	
2.	Gojra Drainage Extension	13,023	29.95
3.	Experimental tube well for water-		
	supply, Gujranwala	8,449	
4.	Sargodha Water Works Extension	1,84,364	
5.	Tibba Jalian Drainage (Sialkot town)	4,516	
			7,47,698
			Balling.
	Total		8,95,635
		1 4 1	

The total cost of the out-door establishment, including draftsmen employed on the preparation of plans for these schemes, comes out to Rs. 4,919 for the year and works out at about 0.55 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 engineering staff that received technical approval of this office, were 40 in number at a total estimated cost of Rs. 12,28,167. In order to secure continuous specialised control over the working of the three small sewage disposal installations in Lahore, namely—

Government House, Queen Mary's College, King Edward Memorial,

a Sanitary Sub-Division was sanctioned by the Local Government and included in the Sanitary Circle of Superintendence.

During the year I visited Gurdaspur, Simla, Rawalpindi, Lahore, Shujabad, Multan, Dera Ghazi Khan, Kalka, Kasauli, Sanawar, Dharampur, Gujar Khan and Montgomery.

Various sanitary schemes completed or in progress were also inspected by my Personal Assistant and the Sub-Divisional Officer, Sanitary Sub-Division, and advice given in the form of inspection notes. In addition to my duties as Sanitary Engineer I held charge of the office of the Under-Secretary to Government, Punjab, Public Works Department, Buildings and Roads Branch, from 12th July 1917 to the end of the year. This was necessitated by the great shortage of officers in the Buildings and Roads Branch owing to the heavy proportion of officers on military duty. The accompanying statement shows water pumped at the various water works in the province, together with cost of pumping.

STATEMENT A.

STATEMENT OF WATER PUMPED AND USED IN THE WATER WORKS STATIONS, SIMLA, LAHORE, AMBALA, AMRITSAR, SARGODHA, LYALLPUR,
LUDHIANA, SIALKOT, DERA GHAZI KHAN, TOBA TEK SINGH, GOJRA, PIND DADAN KHAN, JARANWALA, RAWALPINDI
AND MURREE AND COST OF PUMPING, 1917. for read and the sale of the s

	1	bevolume v	jul :	to has been	ed to this offi-	tall attach	a vevroa	The
De	node tops	RENGINE.	-	e lien en		lo omedicate had been been been been been been been bee		asked to produce The Militar
To the same of the		water strate level below ground level of all the wells in 1917.	politi pulli	O scolinic	Block Value of the office	winter 677 surriner 674	22' to 22'-9"	incree cour improve fair solution sequently
	701	Original level average of water surface in all the wells.		i Insites	go Bolgens (at Drains	23° to 24°	8.
THE PERSON		Cost of pump- ing per hors, power hour.	Annas.	Govern	aw awo Con	7.6 pies	8 9 .	0 1 7
100		Total cost of fuel, small is stores and establishment.	Re, A. P.	24,182 0 0	8,252 0 0	26,727 12 0	12,897 0 0	21,328 11 2
1		Cost of small stores and establishment at pumping station.	Rs. A. P.	8,529 0 0	2,298 0 0	Stores 3,246 0 0 Establishment 9,372 0 0	Stores 2,973 0 0 Stores 2,992 0 0	7,894 3 8
		Coal or oil consump- tion per horse power hour,		(atvocale)	olewasi all size I/ m	90,000	gid a	8-2 secre
10	NITTY AND COST OF L USED PER ANNUM,	Ceal cost.	Ba.	I Later	ŧ	895 tons Rs. 14,096	75.22 tons, Rs. 1,353	23,238 mds., Rs. 13,434.7.6
I	QUANTITY A	Wood or electric cur- rent units,	Ac.in	500,910 units; cost Rs. 15,663	94,540 units, cost Rs. 2,954	20 maunds Re. 13 12 0	Wood 331'45 tons, Re. 3,579	Ti-man
2 11 11 11	horse year.	Average purep, power during the		129-4	8.02	103.6	6	23 H. P.
	anoqS Sujdu	Delly hours of pur average throu year.	00 110	-	caroH days	Dovernm Governm	24	A formar
	noitoi	Lift including fr in feet.		Cherot 1,800	Chair 2,800	128	75,	**
-	n per	Daily consumptions.	- 82		861,1	19-61	2000	110-08
di di	-1978	Water used daily age, gallons,	dang	Cherot 142,394 Chair 16,468; Gravifa.	tion and Reservoir 201,735	2,833,556	219,286	1,419,808
10 10 10	tpailq,	recy out 30	Sajaz Sajaz Sas	Samma Control		208,126	24,301 House	140,697
1	dev	Name of Water Works.	to dres	necompan accompan ther with c	y duty. The	on militar	roein hen mooihe l	portion o
		Name of W		in in		Lahore	Ambala	Amritaar
						C0	60	-

No

				These figures appertain to the period	August 1917 to 31st De- cember 1917.	PPEND				1	
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1	antipoer	North 28' South 31'	784-28	376-9	i	Water is obtained from Canal Rajbaha.	01	1	1164"	1	A R.ASTBURY
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4,006 mds., Rs. 2,565-15-7	8,700 mds Rs. 2,485-15-0	83 mds, Tons 348-9-3 scers, 72-7-0 5,324-0-10	357 tons., Rs., 6,089-2-3	11	0.41;	21 40 20 80 11 41	Tons 177-2-0 I.s. 2,450-14-0	K. oll 1,796 gas. Rs.	Coal 411 13-2-14	Ha. W	
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12,000 106,860-8	250,531	486,1161	388,137	67,416	121,860		14,178	45,000	420,758	88,000	
12,000	19,578	44,170	62,800	17,000	3,009	6,500	10,590	3,000	1,	contains to d	
1	i	1	1	gen				1	1	1	
5 Sargodha	Lyallpur	Ludhiana	Sialkot	Dera Ghari Khan	Tobs Tek Simeh		Pind Dadan Khan	Jeranwala	P.awalpindi.	Murre	
**			80	•	9	=	12	81	11	100	

Sanitary Engineer to Government, Punjab.

APPENDIX C.

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

	1		OF	TE OF PLETION WORKS OF	DUC	S SINCE	NNUAL THE I OF DRAI TR-SUPP BOTH.	NTRO-	PREC	THE PI	NUAL DEA VE YEARS' THE INTRO AGE OR W Y, OR BO	PERIOD DUCTION	-
To	wags.			-		THE TOWN		and diarrhoes.		7116	Notice of the last	larrhosa.	
			Drainage.	Water-supply.	Cholera.	Small-pox.	Pevers.	Dysentery and d	Cholera,	Small-pox.	Povers.	Dysentery and distribut	REMARKS.
-	1		2	3	4	5	6	7	8	9	10	11	13
	-		-	-		0		-		8	- B	38	
Ambala				1895	0.2	0.4	12-3	3.6	0.5	0.4	193	6.4	v 95
Simla			1893	1893	0.03	0.4	13.0	0.8		11	17.1	1'4	
Ludhiana			1895	1909	0.4	0.6	14.9	1'8	0.4	2.7	20'8	1.6	TO BE
Jagraon			1907		0.7	1.3	11.6	1.6	0.6	1.2	9-3	20	-
Ferozepore		1 1	1916		0.6	0.6	11.2	1.4	0.3	0.7	9.8	11	Poly.
Zira			1913		0-8	23	13-7	0.7	0.3	4.0	16.6	0.9	
Fazilka		- S	1913		1.1	1.2	20.1	20	2.2	2.6	21.4	1.7	2 1
Lahore		191	-	1881	0.8	0.7	17-0	1.7	1'9	1.6	27.8	2-3	The
Amritaar			1885	1904	0.7	1.5	22-6	2.1	0.4	0-7	31.3	1.8	8 8
Gurdaspur			1914		0.3	0.1	14.6	3.4	0.8	0.2	13.2	26	82
Dalhousi				1894	0.1	0.1	11-7	2.0			9.6	2.4	THE STATE OF
Pathankot			1915		1.1	0.03	15.3	5.6	0.8	07	12.4	2.8	E.
Sialkot				1915	1.3		11.7	3.3	3.0	1.3	9.6	2.3	- 8
Gujranwala			1892		0.6	0.6	17.3	13	0.2	0.6	19.7	1.7	
Gujrat			1906		1.0	0.3	18.0	2.0	0.3	0.5	16-9	1.9	
Bhera			1917			***	15.5	1.8	0.03		17.8	17	2
Sargodha	***		1907	1907		0.3	4.4	0.3		availab		0.1	
Jhelum		9	1908		0.1	0.4	10-9	1.8	1.5	0-3	14-0	3.6	6
Pind Dadan Kha	n		1909	1909	0.1	0.9	21.4	3-6	1.1	0.7	23-1	3.4	
Rawalpindi			1907	1887	0.5	0.3	18-7	2.3	0.5	0-1	16.4	0.9	
Murroe			***	1894	0.1	0.1	16-4	2.2	0.7	0.4	14.8	00	
Mianwali	***		***	1904	0.2	0.7	20-5	2.3	1	*0-4	•16·3	*2-1	
Lyallpur			1904	1904	0.1	0.7	11.3	0.5	*2.8		10-5	+	
Gojra			***	1916			4.6	0.5	0.01	1.9	16-9	24	
Multan		90	1907		0.3	0.8	19:0	2.4	2.0	0-6	15.9	1.6	131000
Dera Ghazi Khan				1913		0.6	16-0	2.3	1.7		15.2	3-9	17
Kalka				1890	0-4	0.1	13.5	2.3	17	0.2	10.2	7	
				1 45				1	William?		100000	EL STATE	

^{*}Figures available for four years only;

[†]Figures for 1914 and 1915 only.

ANNUAL FORM No. I.

STATEMENT SHOWING THE BIRTHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

2		3	nd today		4		1	5		0	7	8		9		
ANTON T		ATION ACCOUNTS			BER OF E		P	HR 1,00	OOF	to every 100	deaths per 1,000	births per 1,000-	DUI	FAN PA	1,000)
Districts.	Males.	Females.	Total.	Males.	Pemales.	Total,	Males,	Females.	Total.	Number of males born females born,	Exerss of births over do	Expess of deaths over b	Males.	Pemales,	Total.	
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
AMBALA DIVISION.	438.458	366,431	804,839	20,805	19,023	39,828	25-8	23.6	49.5	109'4	14.6	19.5	25-3	23-5	48.8	0
Robtak	385,401	329,433	714,834	20,696		39,613	29.0	26'5	55.4	109:4	24.2	***	26.9	24.7	51.6	
Burgaon	389,215	339,952	729,167	20,659		39,724	23.3	261	54.5	108'4	25		25.4	23.6	49.1	
Karnal	437,698	362,089	799,787	21,593	20,119	41,712	26.9	25 2	52-2	107:3	20.1		26.3	24.1	50.4	
Ambala	357,470	275,683	632,553	14,781	13,526	28,307	23.4	21:4	44.8	109:3	8.1		23.1	21.6	447	
Simla	22,015	12,955	34.970	409	365	775	11.7	10.2		111.7		4:1	11.1	9-8	20-9	
JULLUNDUR DIVISION.						"					77111	LEGA!	2101			
Kangra	398,401	368,285	766,686	14,593	13,610	28,203	190	17-8	36'8	107:2	6.0	***	19.2	18.0	37.2	į
Iosbiarpur	501,510	417,059	918,569	20,722	19,491	40,213	22.6	21'2	438	106.3	149		21.8	20.2	420)
allundar	440,599	347,357	787,956	19,215	17,910	37,125	24'4	23.7	47:1	107-3	18:4		23.3	23.2	45.5	,
Ludhiana	293,531	223,661	517,192	14,058	13,360	27,418	27:2	25.8	53'0	105-2	21.8		22.8	21.3	440	,
LAHORE DIVISION.	520,858	412,631	933,499	24,963	22,667	47,590	26.7	24/3	51'0	109-8	19-3	-	26.5	291	50-6	
labore	581,498	436,244	1,017,742	26,533	24,297	50,830	26-1	23-9	49.9	109-2	10.4		25.5	23.0	48-6	
mritsar	495,533	383,778	879,311	23,789	22,000	45,849	27.1	25.1	52.1	107.8	8.2		26.8	24:2	50'5	
lurdaspur	466,115	366,445	832,561	21,355	19,569	40,924	25-6	23.5	49-2	109-1	11.0		24.7	23.0	47-7	
Ealkot	530,755	432,524	963,279	23,714	21,889	45,603	24.6	22-7	47.3	1083	5.3		25.1	23.0	48.1	
awalpindi Division.	518,251	405,168	923,419	20,158	17,860	38,018	21.8	19:3	41.2	1129	West of the last o	7.9	24.0	21.3	45.3	
injrat	400,596	345,038	745,634	16,238	14,853	31,091	21.8	19-9	41.6	109.3	8.2		22.8	20'8	43.6	
hahpur	376,586	310,480	687,366	14,306	12,452	26,758	20-8	18.1	39.9	114'9		3.3	21.8	19-3	41.1	
helum	262,228	241,967	504,195	9,372	8,217	17,589	18-6	16.3	34.9	114.1	3.8		201	17-8	37.8	
awalpindi	267,724	239,918	507,642	9,915	9,204	19,019	19-3	18.1	37.5	106.6	5.3		20.7	18-9	39.6	
ttock	270;392	244,894	515,286	9,998	9,022	19,020	19.4	17.5	36.9	110-8	5.2		21.1	18-7	39.8	
MULTAN	179,897	161,480	\$41,877	6,853	5,951	12,804	200	17:4	37:4	115:2		4.8	22.7	20-1	42.8	
DIVISION.	276,119	237,996	Ene Tie	13,205	11,767	24,972	26:2	00.0	49.5	179-9	1.6		23.5	21.1	44.5	
	503,644	285,251	504,115 888,895	23,220	20,785	44,005	261	23.3	495		173		25.5	23.6	49.1	
bang	277,128	238,398	515,526	12,100	10,706	22,806	23-5	20.8	230.0	113-0	26		264	21.8	46'2	
fultan	435,410	365,965	801,375	18,141	15,595	33,736	23.6	19-5		116-3		7.5	22.5	19.9	424	
luzaftargarh	308,350			10,300	8,827	19,127	18:1	15.5	The same	116-7		13.7	20'9	17.9	39-8	
ers Chazi Khau	272,408	261,111	569,461 499,860	7,742	6,332	14,074	15.4	127	1000	122-3	-	17.6	16.7	13.8	30.2	
					-		-	-	-	-	-		-			1
Total	10,608,101	8,729,045	19,337,146	459,273	417,400	876,733	23-8	21.6	45'3	110-0	7.4		23-7	21.6	45 2	J

STATEMENT OF BIRTHS AND DEATHS REGISTERED IN EACH

	1	2	3	4		5		6			7	
10 0	12 T		3	tion per	Popula	TION (CBNs	vs 1911).	Bint			BER OF I	
	Number.	Districts.	Area in square miles.	Average population square mile.	Males.	Females.	Total.	Total number.	Birth rate per 1,000 of popu- lation.	Males.	Females.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12
11	- 17			01								-
		AMBALA DIVISION.									1.0	SIDEA
	1	Hissar	5,213	114	438,458	366,431	804,889	39,828	49:5	14,218	13,875	28,093
	2	Rohtsk	2,248	318	385,401	329,433	714,834	39,613	55:4	11,701	10,617	22,318
	3	Gargaon	2,264	322	389,215	339,952	729,167	39,724	54.5	18,970	18,979	37,949
	4	Karnal	3,153	254	437,698	362,089	799,787	41,712	52-2	13,680	12,106	25,686
	5	Ambala	1,851	342	337,470	275,083	632,553	28,307	44.8	12,103	11,091	23,194
	6	Simla	101	346	22,015	12,965	34,970	575	22.2	514	407	921,
		JULLUNDUR DIVI-									N. S. B.	CHARLES OF STREET
	7	Kangra	9,978	77	\$98,401	368,285	766,686	28,203	36.8	12,160	11,454	23,614
	8	Hoshiarpur	2,247	409	501,510	417,059	918,569	40,213	43 8	13,892	12,652	26,534
1120	9	Jullandur	1,431	551	440,599	347,857	787,956	37,125	47.1	11,456	11,194	22,650
	10	Ludhiana	1,452	356	293,531	223,661	517,192	27,418	53.0	8,198	7,924	16,122
	11	Ferozepore	4,286	218	520,868	412,631	933,499	47,590	51.0	15,558	14,069	29,627
		LAHORE DIVISION.										E POLICA
	12	Lahore	2,824	360	581,498	436,244	1,017,742	50,830	49-9	21,062	19,139	40,201
-	13	Amritear	1,601	549	495,533	388,778	879,311	45,849	52.1	19,529	18,801	38,330
	14	Gurdaspur	1,889	441	466,115	266,446	832,561	40,924	49.2	16,515	15,281	31,796
	15	Sialkot	1,991	484	530,755	432,524	968,279	45,603	47:3	20,953	19,576	40,529
	16	Gujranwala	4,082	236	518,251	405,108	923,419	88,018	41.2	24,211	21,107	45,318
		BAWALPINDI DIVISION.										RELIANT.
	17	Gujret	2,051	364	400,596	815,038	745,634	31,091	41.6	13,008	11,920	24,928
	18	Shahpur	5,097	135	376,886	310,480	687,366	20,758	\$8.9	14,803	14,183	28,986
	19	J helum	2,813	179	262,228	241,967	504,195	17,589	34-9	8,140	7,522	15,662
	20	Rawalgindi	2,010	253	267,724	239,918	507,642	19,019	37.5	8,727	7,637	16,264
	24	Attock	4,025	128	270,892	244,894	515,286	19,020	36-9	8,379	7,787	16,166
	22	Fianwali MULTAN DIVISION.	5,895	63	179,897	161,480	341,377	12,804	37-4	7,215	7,203	14,418
	23	Montgomery	4,465	113	276,119	227,996	504,115	24,972	49-5	12,232	11,925	24,157
	24	Lyallpur	3,340	266	503,644	385,251	888,695	44,005	49-5	14,536	14,047	28,583
	25	Jhang	3,363	153	277,128	238,398	515,526	22,806	44.2	10,798	10,627	21,425
	26	Multan	-6,107	131	435,410	365,965	801,375	33,736	421	20,396	19,346	39,742
	27	Muzaffargarh	6,052	94	308,350	261,111	569,461	19,127	33-6	13,994	12,941	26,935
	28	Dera Ghazi Khan	5,325	94	272,409	227,451	499,860	14,074	25:1	11,947	10,914	22,861
		The Real Property			1017				122.28		The Land	Total Park
				-	1 72 201				-			
		Total	96,654	200	10,608,101	8,729,045	19,837,146	876,733	45.3	378,785	354,324	733,109

No. II.

DISTRICT OF THE PUNJAB DURING THE YEAR 1917.

			-			1111	10,1	17 10	11/1/		11.6-6	-			-	
	8						9							10		11
The second	Number of deaths of males to every 100 deaths of females.			1	DEATHS P		OF POPUL	ATION PRO	ow.				DEAT	N RATI IIS PER ING PER VE YEA	1,000	
The Part of the Part of	f deaths		,			r and	ry dis-		causes.	All	causes			2		Agricul .
-	Number o	Cholera.	Sn.all-pox	Plague.	Fovers.	Dysentery Diarrhos.	Respiratory cases.	Injuries.	All other causes.	Males.	Females.	Total.	Malos,	Females.	Total.	Number.
	13	14	15	16	17	18	19	20	21	23	23	24	25	26	27	28
																17.77
I									0.0	321	37.9	24.0				THE PERSON
Ì	102.5	0.03	0-001	0.02	25.4	0.7	1.6	04	9.7	30 4	32.2	34.9	28-9	30-8	30-0	1 2
١	110-2		0.3	0.01	31.5	1.6	22	0.5	15-9	48.7	55-8	120	31.6	33-1	32-3	3
1	112.2	0.02	0.2	0-2	18.7	06	2·1	0.4	10.0	31.0	33.4	32.1	34.8	38-6	36 5	4
1	109-1	0.3	0.1	2.1	20.4	1.0	5.3	02	7:3	83-9	40-3	36-7	30.9	38-5	34.2	5
-	126-3		0.03		11.5	1.3	6.2	0.4	7.0	23-4	31 4	26.3	19-4	25.0	21.2	6
	57	2 11	1 14		-					-				-		
١	106 2	0.03	0.001	0.03	17:7	1.2	3.3	0.3	8.2	30-5	31.1	308	28-6	30 8	29-7	7
1	109-7	0.1		0-1	19-9	0-03	3.1	03	5.4	27 7	30-3	28-9	29 9	33-8	31-7	8
١	1033	0.02	0.1	1.1	18.0	0.2	2.9	03	5.8	26.0	32-2	28.7	29-6	36.8	32.8	9
١	103-5	0.01	0.1	1.3	14.5	0.4	2.7	0.4	118	27.9	354	31 2	298	87 1	33 0	10
l	1106	0.002	0.1	0.001	18.6	# C-7	2.1	0.3	10.0	29-9	34.1	31-7	28.5	83.1	30.2	11
۱	04 00	N P				A ME				P. A.				-	-	
ł	110-0	0.1	0.2	2.0	25.0	0-7	2.2	0.4	8.9	36 2	43-9	39.5	29-9	35-0	32-1	12
١	103-9	0.1	0.1	0.1	27-8	1.8	6.4	0-4	0.9	39.4	49-6	43·6 38·2	34'3	37-4	37-1	13
1	108-1	0.3	0.03	0.04	28:2	1.5	5.1	0.3	6-6	39-5	45.3	42-1	31 8	372	34-2	14
١	114-7	0.02	0-01	0-6	41.4	0.3	C-9	0.5	54	46-7	52.1	49.1	34.0	38 5	36-0	16
۱		-														
۱	AS DE	4	0.07	0.1	04.7	0.6	2.8	0.4	4.9	32.5	34.6	99:4	20.5	-0.4	24:4	
۱	1091	0.03	001	0.02	24·7 32-7	0.6	1.4	0.4	7.2	398	457	33-4	32·5 25·8	36-7	27.0	17
1	104-4	0.01		0-9	22-4	C+5	2.0	04	50	31-0	31.1	31.1	30.8	33.0	31-9	19
١	1143	0.01	0.01	3.2	18:4	3.5	3.1	0.2	3.5	32.6	31-8	32.2	36.4	39-5	37 9	20
l	107-6		0.02	0.1	24.0	01	19	0.4	4.9	31-0	31.8	31 4	30-3	31.9	31-0	21
	100-2		0.04		36-8	07	0.6	0.2	3-9	40.1	44 6	422	29.0	29 8	29-4	23
I															2.4	1570a
1	102.6		0.2	0:1	40 6	0.2	0.3	0.5	6.2	44.3	52-3	47.9	21.8	24.1	22.8	28
	103-5	0.04	02	0.03	23-4	0.6	13	0-4	6.2	28-9	36.5	32.2	21.3	26.7	23.6	24
1	101.6	0.02	0.001		31.7	0.7	0.4	0.2	8.6	39-0 46-8	44·6 52·9	49-6	25.8	27:2	26-5	25
1	105.4	0.2	0-1	0.004	41.5	0-5	0.3	0.4	2.9	45.4	49.6	47:3	26.7	26.5	27.3	26
1	108-1	0.01	0.03		40-9	08	0/8	0.3	30	43-9	48.0	457	21.9	12.4	22.1	25
	109-5			- 7-12			-	-	14.7-		-				1	-
1		-		-		3 11	7 10	11 114		1,19	1077			-		777
1	106-9	0.1	0.1	C-5	26-4	0.8	2-8	0.4	6.9	35-7	40-8	37-9	29-5	33.3	31-2	
1	S . COX	100	statemen		-		10		-	-	-		-	-	-	

in this or any other statement,

ANNUAL FORM No. III,

DEATHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

1	2	9 6 1						:								-
Number.	Distric	ors.	January.	February.	March.	April.	Мау.	June.	July.	August.	September.	October.	November,	December.	Total denths re- gistered during the year.	-
-	-	-	-	-	-	-	-	_		_		-	-		-	
1	2	-	-3	-	5	6	7	8	9	10	11	12	13	14	15	-
	AMBAT DIVISI		-		-				1				13			ı
1	Hissar		1,455	1,240	1,607	1,730	1,699	2,095	2,080	1,680	2,023	4,220	5,117	3,147	28,093	ı
2	Rohtak		1,332	1,007	1,371	1,704	1,849	1,867	1,694	1,545	1,803	2,729	3,081	2,336	22,318	Ì
3	Gurgnon .		1,382	1,036	1,441	1,741	2,167	2,443	2,191	1,971	2,481	5,990	9,029	6,078	37,949	ı
4	Karnal	***	2,038	1,503	1,802	2,294	2,424	2,453	2,384	1,969	1,815	2,009	2,763	2,217	25,686	I
5	Ambala	***	1,751	1,593	2,125	2,437	2,571	2,016	1,695	1,521	1,506	1,896	2,083	2,000	23,194	ı
6	Simla		55	44	71	93	105	78	95	97	68	87	73	55	921	ı
	JULLUN DIVISI					4										-
3	Kangra		1,900	1,684	1,916	2,083	1,879	1,911	1,968	2,095	2,392	2,231	1,815	1,740	23,614	ı
8	Hoshiar pur	- 3	1,823	1,530	2,185	2,405	2,236	1,909	1,935	1,886	2,347	3,153	2,926	2,309	26,534	
9	Jullundur		1,497	1,313	1,612	1,756	1,790	1,614	1,597	1,742	2,083	2,554	2,699	2,364	22,650	l
0	Ludhiana		1,174	939	1,079	1,250	1,254	1,102	1,151	1,280	1,407	1,741	1,890	1,835	16,122	ı
1	LAHO DIVISIO	RE	1,890	1,617	1,950	1,821	1,926	2,179	1,927	1,830	2,218	3,688	4,818	3,763	29,627	
2	Lahore		2,342	1,803	2,218	2,129	2,587	2,469	2,262	2,362	3,216	5,654	7,120	6,039	40,201	ı
	Amritsar		2,087	1,616	1,920	1,758	2,088	1,847	1,995	2,488	3,559	6,842	7,206	4,924	38,330	١
	Gurdaspur		1,935	1,518	1,742	1,903	1,936	1,743	1,790	1,973	3,341	5,849	4,704	3,362	31,796	ı
	Sialkot		2,482	1,865	1,979	1,860	2,184	1,805	1,939	2,177	4,399	9,047	6,867	3,925	40,529	ı
	Gujranwala	- 22	3,514	2,311	2,169	1,789	2,182	1,843	1,779	1,934	3,233	9,829	8,565	6,270	45,318	ı
-	RAWALP	INDI		16 17										10		
	Gujrat		1,773	1,343	1,476	1,314	1,234	1,213	1,419	1,301	2,015	4,425	4,424	2,991	24,928	ı
	Shahpur		1,483	1,243	1,340	1,208	1,310	1,493	1,274	1,042	2,046	5,404	6,696	4,447	28,986	ı
	Jhelum		1,210	1,004	1,141	955	1,088	807	789	779	1,200	2,167	2,497	2,025	15,682	ı
	Rawalpindi		1,583	1,342	1,426	1,212	1,106	900	828	887	1,249	1,843	2,169	1,724	16,864	l
	Attock		1,407	1,159	1,301	1,079	884	804	807	827	1,094	2,198	2,575	2,031	16,166	
-	Minuwali MULTA DIVISIO		1,208	933	952	836	883	808	616	504	1,052	2,121	2,620	1,845	14,418	
	Montgomer		1,087	878	849	795	956	850	726	735	1,420	4,441	6,511	4,909	24,157	
	Lyallpur		1,500	1,296	1,607	1,648	1,937	1,828	1,447	1,464	2,344	4,626	5,264	3,622	28,583	
	lhang		1,234	1,088	1,149	987	1,088	1,024	754	831	1,347	2,835	5,206	3,882	21,425	
	Multan		2,506	1,639	1,707	1,503	1,747	1,386	1,149	1,165	2,586	7,264	9,880	7,210	39,742	
	Muzaffarga		2,114	1,379	1,341	1,266	1,344	1,067	891	687	1,537	4,913	6,157	4,289	26,935	
	Dera Ghaz		1,672	1,094	1,170	1,178	957	953	749	706	1,148	3,567	5,760	3,907	22,861	-
	Total for Provin		47,439	37,016	42,739	42,734	45,411	42,601	39,821	39,378	56,929	112,323	130,515	95,206	733,109	The Party and district of the Party of
F. C. T. T. C.	Ratio of per 1,0 each mor	0 in	2-45	1-91	2 21	2-21	2:35	2.20	2-06	2.04	294	5.86	6-75	4-92	37.91	-

ANNUAL FORM No. IV.

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

ANNUAL FOR

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFEREN

1	2	3					s		3	7			8
						UNDER O	NE YEAR.	ONE YEAR 5 YE	AND UNDER ABS.	5 YEARS AT		10 YEARS /	AND UND
Number.	Divisions.	Districts.	Drsz.	ARRS.	200	Malos.	Fomales,	Males.	Females.	Males.	Females.	Males.	Females.
1	3	3		4		5	6	7	8	9	10	11	12
1		HISSAR.	Cholera Small-pox Plague Fevers Dysentery and Dir Respiratory disease Injuries All other causes	es		2,765 2 2 2 2 2 1,211	2,490 2 3 3 2 1,027	2,725 1 5 4 1,091	2,946 3 4 6 971	1 776 7 9 9 210	848 8 11 9 198	2222 16 12 12 161	2
_				Total	***	3,972	3,524	3,826	3,930	1,012	1,074	4.25	-
2		ROBTAK.	Cholera Small-pox Plague Ferers Dysentery and Dir Respiratory disease Injuries All other causes	arrhoss es		1,552 32 36 2 3,449	1,352 36 32 2,061	1,759 71 39 13 1992	1,834 78 32 13 787	 475 28 22 22 28 66	 2 459 24 13 12 53	2 1 256 5 10 20 26	
	. 000		KORT EGOIS	Total	DA W	4,075	3,487	2,880	2,748	619	564	320	2
3		делелок.	Cholera Small-pex Plague Fevers Dysentery and Dia Respiratory disease Injuries All other causes	orthon os		2,787 73 210 1,865	3,026 39 65 4 1,544	3,021 42 89 1 2,319	2,797 42 156 4 2,846	973 48 54 3 499	1,072 21 30 9 309	357 28 18 18 18 63	2
	AMBALA,			Total		4,952	4,697	5,527	5,905	1,599	1,470	494	4
4	WA	KARNAL.	Cholera Small-pox Plague Fevers Dysentery and Dia Respiratory disease Injuries All other causes	urhosa	-	16 4 3,588 90 128 2 745	23 10 2,876 45 145 9 987	3 35 2 1,943 40 227 17 956	32 11 1,692 39 129 13 994	1 13 1 371 30 110 10 157	1 11 4 382 13 57 6 120	2 1 1 73 14 88 10 150	10
				Total		4,571	4,095	3,223	2,910	693	594	839	3:
5		AMBALA.	Cholera Small-pox Plague Fevers Dysentery and Dia Respiratory disease Injuries All other causes	orthosa		11 8 31 2,200 78 262 2 699	4 60 1,870 63 250 3 767	4 13 42 1,187 58 239 3 602	7 14 34 1,230 28 256	3 1 15 348 42 160 	6 1 17 375 44 171 1 108	5 1 85 160 60 114 3 61	1 2: 1 5
				Total		3,286	3,020	2,148	2,086	791	723	489	51
6		STMIA.	Cholera	rrhos	-	62 11 32 52	1 51 12 11 32	 12 9 	 13 3 2 7	 4 1 3 6 5	 9 7 1	 4 1 5 18	=
				Total		157	107	24	25	19	28	23	1

No. IV.

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

9		10		11	- 1	12		13		. 14		15	2	16
5 YEAR		20 YEAR UNDER 30	S AND YEARS.	UNDER 40		40 YEAR UNDER 50	RS AND YEARS.	50 YEARS AN 60 YEA		60 YEAR		Тота	In.	
Males.	Females.	Males.	Females.	Males.	Pemales.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	N
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
3 2 117 21 27 14 96	2 114 17 24 12 70	8 3 529 36 48 15 65	699 25 41 14 60	2 1 265 48 111 21 45	1 2 500 22 91 18 46	1 1 399 52 135 28 31	1 420 39 124 19 26	575 61 153 30	394 52 139 28	1,758 75 174 33	1,645 71 159 30	16 1 7 10,121 319 676 168 2,910	10 9 10,295 251 608 151 2,551	1
280	241	704	848	493	680	647	629	819	613	2,040	1,905	14,218	13,875	_
174 7 13 16 24	 1 165 5 20 18 27	3 352 14 35 20 44	1 446 15 41 43 62	 289 9 43 17 22	 2 376 22 40 33 50	393 21 55 20 38	351 12 53 12 30	459 29 135 13 37	343 18 96 8 37	 1,171 57 242 12 48	 1 933 52 213 9 53	12 4 6,880 273 630 161 3,741	16 7 6,443 267 550 162 3,172	
234	236	468	608	380	523	522	458	673	502	1,530	1,261	11,701	10,617	
2 292 34 29 16 59	1 226 33 35 36 42	 1 599 58 38 33 217	 836 58 52 42 155	3 436 41 44 19 219	 693 33 57 28 166	646 66 64 23 200	 667 43 61 34 116	677 39 77 18 226	712 65 72 26 78	1,474 186 201 26 335	1,395 168 218 30 302	104 6 11,262 615 824 157 6,002	121 4 11,708 530 767 235 5,614	
432	873	946	1,144	762	978	999	922	1,037	953	2,222	2,113	18,970	18,979	
4 1 4 70 9 80 20 149	1 3 4 98 10 72 11 92	1 1 6 148 12 40 10 401	1 6 278 9 67 9 310		1 8 176 14 64 42 396	30 269 25 45 25 448	18 574 10 25 18 50	 4 440 10 29 25 385	530 15 82 10 50	815 15 61 10 542	361 35 89 10 622	12 70 72 7,857 253 874 159 4,283	5 71 67 7,131 196 773 141 3,722	
337	291	619	680	619	705	843	696	893	687	1,443	1,117	13,580	12,106	
28 117 138 27 66 9 37	11 77 159 25 76 16 53	27 167 29	7 134 269 32 171 15 86	98 377 23 152 29	9 110 363 12 155 6 96	92 543 25 138 16 117	79 413 6 147 4 94	58 515 9 149 5 210	11 455 8 121 1 124	2 893 21 340 1 301	23 846 14 135 3 353	98 23 677 6,667 365 1,787 97 2,389	76 20 644 6,207 263 1,579 51 2,251	
422	417	753	714	788	751	985	751	948	737	1,563	1,376	12,103	11,091	
 9 1 10 13	17	19	21 1 9 	18	25 1 3		"11 ""6	12	 8 1 6	48	1 28	209 24 133 11 137	194 20 84 2 106	-
	-	56	3!	53	37	54	27	35	25	60	75	514	407	1

ANNUAL FORM

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

	1	2	3	1	4		5		22	6 11	1	7	1	8
			107	TYPA AND	MATE OF	north the same	Under o	NE YEAR.	ONE YEAR	AND UNDER	5 YRARS A 10 YE		10 YEARS A	ND UNDER
				DISB	ASES.									
The state of the s	Number.	Divisions.	Districts.	1	1	-	Males.	Females.	Males.	Females.	Males.	Females.	Malce,	Females.
1	1	2	3	45	4		5	6	7	8	9	10	11	12
	7	OT	KANOBA.	Cholera Small-pox Flague Fevers Dysentery and Di Respiratory disea Injuries All other causes	iarrhœa ses		2,355 71 193 2 878	2,136 49 54 8 705	 1 878 71 30 35 325	 2 769 38 136 8 387	 1 218 25 38 9 165	 196 22 23 9 149	2 88 15 42 25 12i	1 2 83 14 84 12 87
					Total	00 m	3,499	2,952	1,340	1,340	456	400	295	283
	8	2	Новигаврия.	Cholera Small-pox Plague Fevers Dysentery and Di Respiratory diseas Injuries All other causes	arrhora ses	***	1,878 11,718 2 1,907	1,841 7 503 3 1,712	3 2 2,051 1 207 30 255	5 3 2,242 196 15 235	3 1 442 44 18 47	2 3 464 23 15 53		2 196 23 11 22
	T.		Total Control	1007	Total	200	4,517	4,067	2,549	2,696	555	560	270	258
	9	R.	JULIUNDUR.	Cholera Small-pox Plague Fevers Dysentery and Di Bespiratory disease Injuries All other causes		28388	5 14 1,398 57 688 1 2,055	3 20 1,653 51 592 5 2,136	1 10 29 1,784 51 149 21 64	2 15 38 1,921 47 123 25 71	 61 337 5 18 28 8	1 2 63 338 3 12 16 4	 4 58 146 4 5 10	96 181 1 16 8 2
-	_	UNDUR	OTO, EL	SIGN OF	Total	E40	4,218	4,460	2,109	2,341	457	439	231	304
Total Street	10	JULE	LUDBIANA.	Cholera Small-pex Plague Fevers Dysentery and D Respiratory disea Injuries All other causes			7 578 16 162 8 2,465	5 446 7 86 5 2,494	 13 2 399 8 108 5 109	 8 9 283 3 78 14 95	7 11 271 9 65 11 30	11 7 271 6 43 8 44	2 31 297 3 62 6 58	5 26 272 7 75 2 47
-				TE,	Total	10	3,236	3,643	644	490	404	390	459	434
Section of the sectio	11		FRECEPORE.	Cholera Small-pox Plague Fevers Dysentery and D: Respiratory disease Injuries All other causes	iarrhœa		2,620 2 3,006	2,289 2 2,756	24 2,651 52 143 63 979	26 2,675 46 119 32 791	15 576 39 71 37 120	14 590 22 60 20 87	232 21 68 9 69	204 17 47 5 59
1			West.	173,1 B	Total	·	5,642	5,056	3,912	3,659	858	793	404	387
N ACTUS	12	LAHORE.	LAHORE.	Cholera Small-pox Plague Fevers Dysentery and Di Respiratory diseas Injuries All other causes			15 40 3,434 116 100 22 2,751	28 29 3,026 62 64 18 2,527	2 38 125 3,721 101 68 41 842	45 99 3,744 65 51 26 811	2 20 124 899 22 39 29 81	27 112 1,060 16 23 15 40	8 3 111 478 21 35 26 69	5 4 98 660 9 22 8 65
			13	1	Total		6,478	5,754	4,938	4,841	1,216	1,297	751	871

o. IV-CONTINUED.

ISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

9		10		11		12		13		14		15		10
	S AND YEARS.	20 YEAR: UNDER 30		30 YEAR UNDER 40		40 YEAR UNDER 50		50 YEARS UNDER 60		60 YEAR UPWAI		Тота	t	
Males.	Pemales.	Malcs,	Femules.	Males.	Females.	Males.	Pemales.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
13	14	15	16	17,	18	19	20	21	22	23	24	25	26	2"
102 24 71 8 88	1 2 143 35 111 9 128	1 2 318 27 223 15 187	1 2 669 36 122 10 266	4 1 558 47 141 16 125	2 4 588 54 167 10 145	1 527 23 189 14 206	1 2 450 33 179 7 218	1 577 60 75 16 266	1 387 60 146 8 195	1,327 125 353 25 820	1,238 109 127 9 805	9 6,943 488 1,860 165 3,184	16 6,658 450 1,149 90 3,085	7 11
295	428	773	1,106	890	970	961	890	996	797	2,655	2,288	12,160	11,454	-
2 207 32 8 23	1 216 25 9 20	9 7 418 1 71 26 50	2 640 2 96 14 67	9 5 431 1 77 19 46	551 1 8: 13 53	11 4 604 2 93 21 63	4 3 474 71 13 35	10 2 677 1 11× 10 56	425 53 6 28	5 8 2,398 4 276 20 168	1,037 	55 9,308 21 1,656 163 2,644	19 17 8,985 10 1,206 115 2,299	H
276	271	682	822	588	703	797	600	869	513	2,879	2,163	13,882	12,652	-
1 42 138 2 12 6 10	1 1 35 152 1 17 5 6	1 65 270 13 44 15 22	1 59 350 6 46 7 20	1 44 273 14 38 13 19	2 50 341 9 29 5 21	43 312 14 44 14 21	32 289 6 25 6 12	23 452 17 68 11 31	 	44 1,974 46 200 26 56	 36 1,546 28 102 19 27	5 22 423 7,084 223 1,264 145 2,290	10 22 464 7,118 162 1,005 101 2,312	
213	215	431	519	402	4-7	450	373	600	424	2,346	1,759	11,456	11,194	
4 57 276 5 81 24 35	1 64 2°5 10 67 9 38	91 356 12 36 16 56	75 398 5 53 13 72	1 26 546 8 85 27 89	68 520 4 68 6 6 62	59 443 17 72 12 93	 48 556 13 29 7 107	32 348 21 48 8 93	25 443 11 56 11 53	21 233 14 54 9	 13 268 10 34 6 24	2 34 330 3752 113 773 126 3,068	2 30 335 3,742 76 619 81 3,039	
482	474	569	647	782	729	701	760	550	602	871	355	8,188	7,924	-
1 5 160 28 45 14 70	156 21 40 40 58		1 3 420 32 111 20 125	313 36 102 21 109	3°6 27 19 8 108	359 35 125 18 127	345 31 97 8 106	 414 39 135 12 127	331 32 97 6 97	1,303 49 241 7 204	1,003 50 223 4 166	1 69 1 8,985 331 1,043 205 4,933	8,379 280 883 107 4,353	5
323	283	638	712	552	601	665	589	730	583	1,804	1,446	15,558	14,069	-
20 1 97 299 12 48 25 90	10 4 77 447 10 38 10 71	133 755 24 184 36	20 7 157 748 22 95 16 50		10 4 132 420 16 118 18 239	9 1 128 470 29 211 29 194	2 2 121 360 22 153 14 137	97 629 24 214 213 117	1 86 368 16 163 8 70	 90 1,831 60 249 26 360	80 1,604 50 223 12 165	89 80 1,085 12,963 437 1,249 304 4,852	52 121 971 12,437 288 950 145 4,175	1
592	667	1,206	1,005	1,089	957	1,071	811	1,105	712	2,616	2,134	21,062	19,139	-

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4			5		army la	6		7		5
				-		UNDER O	NE YEAR,		AND UNDER		ND UNDER	10 YEARS 15 YE	AND UNDE
Number.	Divisions.	Districts.	Diss.	ASES.		Males.	Females.	Males.	Females.	Malos.	Females.	Males,	Females.
1	2	3				5	6	7	8	9	10	11	12
13		AMBITSAB.	Cholera Small-pox Plague Fevers Dyscutery and Dis Respiratory disease Injuries All other causes	arrhæa es		3,714 162 790 2 1,478	9 4,004 69 667 3 1,310	4 39 2 3,140 65 355 19 1,324	2 30 4 3,484 115 375 13 1,301	5 11 9 642 42 112 37 90	3 4 11 630 4 153 17 69	1 2 3 165 53 50 18 66	15: 3: 8: 1: 4
_			,	Total	==	6,159	6,064	4,948	5,324	946	936	358	35
14	LAHORE-CONCLUBED.	GURDASPUR.	Cholera Small-pox Plague Fevers Dysentery and Dia Respiratory disease Injuries All other causes	arrhora	-	2 1 7 1,443 81 3,434 2 56	1 1 6 1,413 83 2,854 1 29	13 7 15 2,286 212 851 25 56	6 5 15 2,687 198 8(3 32 30	12 1 31 67.4 37 162 24 20	9 4 44 701 37 125 13 17	9 1 39 314 24 83 11 15	4 33 11 8.
_	E-co3		7	l'otal .		5,026	4,858	3,465	3,776	961	956	536	500
15	LAHOB	SIALKOT.	Cholera Small-pox Plague Fevers Dysentery and Dia Respiratory diseases Injuries All other causes	rrhœs		3,830 255 900 1 1,008	3,539 211 713 3 994	19 2 3,436 153 498 38 764	22 6 2 3,807 141 437 33 623	20 1 3 896 62 185 36 233	20 2 992 62 148 22 211	12 583 32 108 24 138	708 83 100 10 113
_			Т	otal .		5,996	5,464	5,010	5,071	1,436	1,457	900	974
16		GUJEANWALA.	Cholera Small-pox Plague Fevers Dysentery and Diar Respiratory diseases Injuries All other causes	rrhoea		5,719 5 141 45 911	4,890 4 79 21 979	3 5 5,446 7 90 29 906	 1 3 5,219 5 87 18 781	1 3 17 1,226 11 13 37 234	13 1,261 9 10 23 127	3 21 409 18 27 22 157	20 514 11 2 6 81
		_	T	otal	= =	6,821	5,978	6,486	6,114	1,542	1,443	657	637
17	Jo.	Gerrar.	Cholera Small-pox Flsgue Fevers Dysentery and Diar Respiratory diseases Injuries All other causes	rhesa		2,177 46 465 11 816	2,062 38 415 10 726	1,676 33 224 28 336	3 1,663 43 206 16 289	627 22 84 16 144	5 2 606 22 59 12 127	3 383 13 11 17 97	2 407 10 6 13 69
	LPINI		To	otal		3,519	3,252	2,300	2,220	897	833	525	508
18	RAWALPINDI	SHARPUR.	Chelera Small-pox Plague Fevers Dysentery and Diarr Respiratory diseases Injuries All other causes			1,853 25 2,361	1,697 19 2,1.3	3,782 9 44 55 41	3,943 3 3 33 52 35	2 1 935 17 51 39 26	956 10 29 32 21	1 433 20 53 20 25	**** *** 441 34 36 12 22
			To	tal		4,239	3,829	3,931	4,066	1,071	1,050	553	525

TO. IV-CONTINUED. DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

			10		11		12		13					1.0
100	9		10	-		Accept the second	10	17 200 AUI	10	-124	14	-1	0	16
	O YEARS.		RS AND BO YEARS,		HS AND 40 YEARS.		BS AND 50 YEARS.		AND UNDER		RS AND ARDS.	Тот	AL.	
Males.	Females,	Males.	Females.	Males.	l'emales.	Males.	Females.	Yales.	Females.	Malcs.	Fomales.	Males,	Females.	Number,
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
6 1 4 133 33 125 15 49	1 1 6 227 29 91 12 31	23 1 11 485 64 203 43 39	9 2 4 698 59 227 22 32	12 7 433 68 280 14 70	5 1 8 457 62 282 8 57	13 2 504 51 260 20 27	8 6 329 36 234 9 17	7 4 640 83 240 23 25	1 348 59 265 10 16	2,490 97 405 26 116	2 1 1,785 89 469 14 96	87 67 42 12,346 718 2,770 225 3,274	34 50 52 12,121 604 2,852 118 2,970	13
366	398	869	1,653	834	850	877	639	1,022	701	3,150	2,456	19,529	13,801	-
9 1 23 195 28 77 6 26	29 246 23 86 4 25	15 56 431 60 181 18 48	62 687 47 196 8 39	76 460 66 187 15 37	54 502 75 179 9 53	42 578 81 200 10 37	14 54 483 40 148 5 83	9 	1 35 376 48 168 1 28	3 1 14 1,581 1:5 717 24 77	20 1,216 94 636 10 43	92 12 338 8,616 801 6,033 147 416	71 10 360 8,492 663 5,286 94 305	14
365	418	809	956	855	880	954	727	993	€57	2,552	2,023	16,515	15,281	
10 1 531 20 83 20 93	8 1 5552 25 82 82 5 104	26 5 680 33 103 24 116	24 1 787 28 83 9 115	11 3 592 31 90 20 119	21 6 691 31 85 8 117	14 4 647 35 89 18 134	15 	9 3 631 44 119 12 150	466 36 106 5 142	18 2 1,926 1.5 452 18 560	13 1,461 87 344 18 466	140 4 24 13,752 780 2,727 211 3,315	142 7 18 13,441 672 2,177 121 2,998	15
768	777	987	997	866	869	941	814	968	763	3,081	2,390	20,953	19,576	
2 1 29 218 19 19 17 88	32 230 13 15 5 63	4 1 37 751 16 26 21 105	1 30 909 10 23 2 55	40 747 17 38 33 201	49 898 18 24 19 91	2 56 1,054 13 33 35 11	31, 871 11 21 13 30	1 1,108 22 54 42 63	34 791 15 51 12 41	40 3,540 23 75 23 34	34 2,409 25 32 12 19	17 9 286 20,217 151 516 304 2,711	2 1 246 17,992 121 344 134 2,267	16
893	358	962	1,030	1,080	1,099	1,204	977	1,331	945	3,735	2,531	24,211	21,107	-
3 1 325 15 13 16 70	2 5 363 9 12 6 70	3 5 460 12 24 25 88	3 2 485 13 19 20 77	9 5 510 15 41 14 94	1 5 647 12 26 12 64	3 1 6 614 25 60 20 51	5 6 556 2 36 8 72	761 25 77 17 83	608 13 55 10 80	1 1 2 1,915 33 136 15 159	2 1 1,545 24 69 9 135	30 6 23 9,448 239 1,145 179 1,938	24 26 8,937 204 904 116 1,709	17
443	467	627	619	688	767	780	703	967	766	2,262	1,785	13,008	11,920	-
2 1 266 28 62 16 25	1 332 21 36 9 24	330 33 74 11 30	2 519 27 45 4 18	2 389 28 89 8 33	2 1 532 31 56 9 25	2 1 480 20 86 5 31	2 486 16 53 3 23	680 16 53 1 35	 1 585 9 35 3 36	 1 2,117 4 35 32	1,726 3 21 	10 7 11,245 175 572 155 2,639	7 11,217 134 363 124 2,334	18
400	423	479	615	551	653	625	583	765	659	2,189	1,777	14,803	14,183	

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3				5		-	6	7			-
		ogo!	der er	Tar B		UNDER OF	SB YEAR.		AND UNDER	5 YEARS AT	ND UNDER	10 YEARS A 15 YE	ND UNDE
Number.	Divisions.	Districts.	Diss	A585.		Males.	Females.	Males.	Pemalos.	Rales.	Females.	Males.	Females.
1	2	3	E 42	02		5	6	7	8	9	10	11	12
19	E	Энегом.	Cholera Small-pox Plague Pevers i) ysentery and D Respiratory disea Injuries All other causes	iarrbœa ses	1 111111111	1 764 22 20 2 1,063	789 789 16 891	"" 11 1,282 38 23 15 115	7 1,384 17 15 16 123	32 415 6 11 14 22	34 421 5 10 18 18	27 208 4 9 13 16	3 19
290	-concrepes.	RAWALPINDI.	Small-pox Plague Perers Dysentery and Di Respiratory diseasinjuries All other causes	ics		1 1 576 782 29 632	1 4 471 653 31 1 618	23 646 102 27 16 55	28 734 79 24 17 53	1 1 80 296 7 23 27 10	79 309 9 18 20 10	115 168 6 34 23 20	11 20 2 1 1 1
21	RAWALPINDI-	-	Cholera	Total	180	2,021	1,779	870 2	935	444	445	366	37
	BAWA	ATTOCE.	Plague Fovers Dysentery and Di Respiratory disease Injuries All other causes	arrhosa es		2 1 959 5 9 1 1,084	914 4 11 1 906	1,842 4 32 17 157	1,389 3 15 17 132	513 12 20 34	521 10 12 26	3 286 24 12 9	25 1
32	201		Cholera	180,0			1000	1.0	0.00		509	334	29
	E II	MIASWALL,	Small-pox Plague Pevers Dysentery and Dis Respiratory disease Injuries All other causes	arrhora es		1,459 29 18 497	1,212 36 14 	1,304 13 8 9 19	1,490 9 15 11 18	557 6 4 10 14	573 2 1 6 12	232 1 2 5 4	25
-	_	_	ie inte	Total		2,005	1,721	1.354	1,547	591	594	244	26
1	12.5	Mo TOOMERY.	Cholera Small-pox Plague Fevers ysentery and Dis Respiratory disease Injuries all other causes	rrhoea	-	9 3,548 8 8 243	3,336 6 10	15 2,492 14 11 13 451	13 2,604 7 12 9 352	18 5 679 3 2 8 95	10 779 3 3 13 84	397 1 2 9 59	407
-	MULTAN.		AI AND S	Total		3,816	3,593	2,996	2,997	805	892	472	48
1	12,11 14 00 14	LYALLPUR.	Cholera Small pox lague Fevers Dysentery and Dia Respiratory disease Is juries All other causes	rrhooa		25 1 2,390 48 159 3 2,690	2,483 35 115 1 2,312	3,706 88 84 60 119	1 39 2 3,943 84 100 52 109	2 12 1 806 29 23 42 30	982 14 28 25 25	1 1 357 8 10 23 20	.41:
1	10.2		100.2	Total		5,256	4,967	4,107	- 4,330	945	1,092	421	451

o. IV-continued.

SEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

9		10		11		1:	3	13	-	14	1	15	1 2 3	16
5 YEAR DER 20	S AND TEARS.	20 YEAT UNDER 30		30 YEAR UNDER 40		40 YEAR		50 YEARS A 60 YE	ND UNDER	60 YRAB		Тота	I.	
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Pemales.	Males.	Yen ales.	Males.	Fomales.	Males.	Females.	Number,
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1 10 152 2 223 6 7	 13 117 1 19 5 21	26 293 10 64 10 20	 51 404 6 74 8 31	 22 377 11 91 23 29	35 413 14 58 11 29	26 361 17 73 16 22	30 362 11 54 1 17	 18 501 14 65 13 21	24 360 6 39 5	 22 1,387 33 202 11 29	1 12 1,149 18 116 7 16	195 5,740 157 580 122 1,344	238 5,538 5,538 86 410 77 1,169	19
200	176	424	574	552	560	515	475	632	445	1,684	1,318	8,140	7,522	-
73 160 11 46 12 13	72 138 4 29 5 23	140 360 16 153 16 31	147 430 4 108 11 56	137 535 13 178 19 24	127 480 12 104 13 53	1 91 518 13 155 9	95 389 7 85 15 35	76 447 11 119 9 27	62 383 7 63 7 21	1 71 1,200 85 205 26 39	78 899 15 96 11 23	4 2 807 4,906 996 968 157 887	 807 4,434 794 584 110 907	2
315	271	716	756	916	789	813	626	689	543	1,577	1,132	8,727	7,637	
201 201 22 5	 182 1 31 3 8	356 1 62 24 10	 1 391 69 4 32	4 497 2 85 24 24	 3 505 81 4 17	5 471 72 12 12	" 1 423 2 54 4 8	 519 74 5	 442 63 2 7	 1,163 2 129 14 34	 3 1,051 1 121 9 9	5 23 6,307 14 521 134 1,375	3 11 6,071 11 473 62 1,156	-
232	225	460	497	636	610	572	492	607	514	1,343	1,194	8,379	7,787	
1 187 1 3 5 2	" 1 "189 " 1 1 1 2	299 5 12 6 15	452 8 18 1 30	342 5 8 10	429 2 16 2 24	438 8 7 4 18	402 11 5 2	494 11 11 10		921 33 27 3 120	849 . 38 20 1 65	6,233 112 100 53 712	6,332 113 94 26 630	
199	194	338	510	373	483	475	434	527	486	1,104	973	7,215	7,203	1
3 3 351 1 5 16 49	 4 1 834 1 7 15 97	10 334 2 4 24 82	1 2 405 1 2 20 99	7 346 2 6 20 96	2 871 3 4 12 147	10 409 2 10 20 100	1 433 3 1 15 143	516 55 14 21 103	 491 3 2 2 2 96	 1 1,151 7 17 5 385	 2 1,100 6 3 3 128	40 46 10,223 45 79 136 1,663	38 9 10,260 34 47 100 1,437	1
428	459	456	530	477	539	551	596	665	595	1,566	1,742	12,232	11,925	
207 6 7 6 10	1 1 210 5 11 8 12	7 36 25	2 3 5 393 9 35 12 40	4 2 3 254 7 32 29 18	2 1 1 343 16 40 5 47	1 1 342 16 52 19 12	 1 281 10 28 6 29	398 24 62 15	294 14 35 5 10	3 1,551 60 176 13 48	1,147 34 84 7	16 89 12 10,338 293 641 235 2,912	15 83 14 10,488 224 486 126 2,611	2
237	248	415	499	349	455	443	355	512	359	1,851	1,287	14,586	14,047	1

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFEREN

1	2	3		4	11			111	6		7		8
		-SAPOT	- "	MENTEN.		Under or	TE YEAR,	ONE YEAR A	AND UNDER		ND UNDER	16 YEARS 1	AND UNDI
			Dts	EASES.									
Number	Divisions.	Districts,				Males.	Females.	Males.	Females.	Males.	Pemales.	Males.	Pomales.
1	2	3		4		5	6	7	8	9	10	11	12
25			on a							100			
20			Cholera Small-pox	***								" 1	
10	446	NG.	Plague Fevers Dysentery and I	Diambon		2,289 51	2,193 38	2,360	2,758 26	627	707	198	3
		JEANG	Respiratory dise	mses	***	10	13	10	7 5	5 3	3 4	6	1539
	us I	1	All other causes		***	1,423	1,263	259	203	61	58	3 47	1
1	Sur!	14		Total		3,776	3,509	2,663	2,999	707	781	261	-
-		-	F. 100			- 0,170	5,000	- 2,000				201	
26	-	-	Cholera Small-pox			7	4	14 5	15 5	14 5	11 2	13	199
EI	110	1	Plague Fevers			5,065	4,754	4,089	4,166	673	690	454	****
	III.	MULTAN.	Dysentery and I Respiratory dis-	Diarrhosa cases		86 22	60 16	21 12	21 21	7 8	12	6 12	4
		M	Injuries All other causes	***		882	761	592	16 524	140	134	12 106	1
	MULTAN-CONCLUDED.					0.004			1 800	-	-		-
_	OMC	-		Total	***	6,064	5,596	4,757	4,768	854	870	604	6
27	N		Cholera	-		4	4	3	2	4	4	1	
	LTA	ARE.	Small-pox Plague			3,121	2,967	3,064	3,123	858	683		
	N	VARG	Dysentery and D	liarrhos	•	12	6	9 6	5 6	4	1	285	2
	200	MUZAPPARGARH.	Respiratory disc			2	3	22 38	27 24	20 18	3 7 9	20	
	1	Mr	All other causes		***	623	554	93	2.5	10	9	10	
	44,0		1 - 1 - 1	Total	•••	3,780	3,552	3,142	3,187	905	707	320	2
28	50.0		Cholera					***					
		KEAN.	Small-pox Plague				1	4	2	1	3	3	
			Fevers Dysentery and I	Diarrhosa		2,318 28	2,086	2,933 24	2,882	952	787 15	315	2
		GHAZI	Respiratory disc		***	26 9	27	12 5	7 5	5 8	5 6	7 5	
		DERA	All other causes			208	187	105	84	59	38	29	
	62	A	100	Total		2,589	2,341	3,683	3,013	1,040	854	360	2
			A THE								4 1,549		
lota	Chole	ora .		***		16	10	68	63	70	69	61	
	Plage			***		101	148 135	323 260	319 259	132 393	137 390	38 513	6
	Peres		nd Diarrhona		***	66,431 2,174	61,816	65,115 1,327	67,423 1,176	17,066 535	17,662 438	7,742	6.1
	Respi	iratory	diseases			8,603	6,823	3,685 618	3,444	1,333 534	1,101	922	8
		ther car		***	-	35,898	33,079	13,874	18,193	2,840	2,163	390 1,643	1,3
				Total		113,6 3	163,782	85,270	86,370	22,903	22,318	11,688	11,4
Popu	lation :	accordi	ng to Census of 19			424,654	404,431	997,515	931,872	1,482,324	1,259,701	1,321,272	931,6
	o per 1,	060 livi	ng for the Provin										
	Chole					0°04 0°36	0.02	0.07	0.07	0.05	0-05 0-11	0°05 0°03	01
	Plage	ne .		446	***	0.24	0.33	0.26 65-28	0°28 72°35	0·27 11·51	0.31	0.39	0
		ntery a	nd Diarrhora	***	***	5:12	152·85 4·10	1.33	1.26	0.36	0-35	5·86 0·29	8.
	Resp		diseases			20-26 0-30	16.87 0.38	3·69 0·62	3°70 0°53	0.80 0.86	0-87 0-28	0.70	01
		ther ca		T		84-77	81-79	113-91	14.16	1.92	1.72	1:24	11
			341 (01.1	Total	***	267-52	256-61	85:48	92.68	15-45	17-72	8.85	12:1

Nors-The population of military cantonments by different ages cannot be

No. IV-CONCLUDED.

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

	9		10		11		12		13	1	14	1	15	-
	ARS AND 20 YEARS.		ARS AND SO THARS	30 YE UNDER	ARS AND 40 YEARS.	40 TE.	ARS AND 50 YEARS		60 YEARS,		ARS AND ARDS,	To	TAL.	
Males.	Females.	Male:	Females.	Males,	Pemales.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
13	14	15	16	17	18	19	20	21	22	23	24	25	26	
1		1	1	3		2	1					7	2	
131 3 1 6 34	127 1 3 1 58	256 9 7 6 56	348 6 7 2 97	231 8 14 4 71	362 9 8 6 80	337 13 11 5 71	286 12 8 2 62	363 28 12 8 89	309 24 14 3 55	1,293 36 34 6 241	958 80 14 1 175	8,085 195 104 54 2,352	8,248 161 83 32 2,161	
176	190	335	461	331	465	439	371	500	405	1,610	1,178	10,798	10,627	
9 3 1 411 8 17 12 117	14 1 472 7 36 7 113	15 4 1 679 3 29 22 139	8 1 919 8 46 8 128	18 2 3 932 11 23 20 150	10 3 972 5 30 2 131	12 1,010 15 23 14 151	874 7 20 5 140	7 1,022 16 25 12 179	839 8 8 20 3 153	2,610 26 49 4 813	2,153 20 33 5 248	102 29 4 16,945 199 219 129 2,769	81 18 16,330 158 257 59 2,443	
578	650	891	1,118	1,158	1,153	1,225	1,051	1,262	1,081	8,008	2,462	20,396	19,346	
218 218 2 3 8 8	187 1 2 24	9 1 676 2 10 14 30	829 2 15 10 100	793 5 8 17 29	 890 2 6 8 74	 890 2 15 17 29	771 771 7 10 7 21	901 4 24 11 10	1 610 3 9 5 6	2,059 10 18 6 19	1,593 6 14 7	6 16 12,865 50 106 137 814	1 15 11,895 34 84 79 833	
241	214	78.5	9/8	854	980	953	816	952	634	2,112	1,633	13,994	12,941	-
133 12 9 7 29	106 4 9 7 39	446 16 15 13 48	 682 17 20 5 78	 596 15 21 14 61	700 9 16 7 78	687 15 21 12 70	541 11 15 5 60	699 34 40 18 66		1,580 43 54- 9	1,253 43 87 7 91	8 10,659 203 210 100 767	9,759 175 165 56 783	-
190	. 165	538	802	707	810	805	632	857	582	1,778	1,431	11,947	10,914	
106 24 471 5,801 369 1,028 333 317	57 21 424 6,189 3)2 1,004 232 1,323	173 15 747 11,693 545 1,967 541 2,205	106 21 724 15,002 488 1,921 349 2,304	115 13 646 12,122 567 2,171 543 2,458	75 13 670 14,031 516 1,978 322 2,480	84 602 14,328 635 2,364 456 2,344	68 4 535 12,924 439 1,819 250 1,758	55 2 401 16,052 724 2,399 390 2,480	35 326 12,564 547 2,027 198 1,516	54 3 322 43,709 1,334 5,138 408 5,163	32 1 3(5 35,101 1,121 3,794 269 4,171	802 708 4,456 259,959 8,590 29,610 4,339 70,321	563 709 4,319 250,853 6,981 24,782 2,815 63,302	
,449	9,562	17,786	20,915	18,635	20,085	20,817	17,797	22,503	17,213	56,131	44,794	378,785	354,324	1
,090	726,853	1,885,914	1,581,886	1,446,929	1,197,335	1,065,657	894,099	711,241	544,726	662,471	510,371	10,608,101	8,729,045	-
0·11 0·02 0·47 5·84 0·37 1·03 0·33 1·32	0-08 0-03 0-58 8-51 0-43 1-38 0-32 1-82	0-09 0-01 0-40 6-15 0-29 1-09 0-29 1-17	0-07 0-01 0-46 9-48 0-31 1-21 0-22 1-46	0-08 0-01 0-45 8-38 0-40 1-50 0-37 1-70	0.06 0.01 0.56 11.80 0.43 1.65 0.27 2.07	0-08 0-003 0-56 13-47 0-60 2-22 0-43 2-20	0.08 0.004 0.60 14.45 0.49 2.03 0.28 1.97	0.08 0.003 0.56 22.57 1.02 3.37 0.55 3.49	0.06 23.06 1.04 3.72 0.36 2.79	0.08 0.003 0.49 66.05 2.01 7.76 0.63 7.79	0.06 0.001 0.60 68.78 2.20 7.43 0.53 8.17	0.08 0.07 0.42 24:51 0.81 2.79 0.41 6.63	0-06 0-08 0-49 28-74 0-80 2-84 0-32 7-25	
9-51	18:16	9:48	13-22	12-88	16-77	19-53	19-90	31-64	31.60	84-73	87-77	35.71	40-59	

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

silable, the ratios shown in columns 5 to 14 are calculated under the orders of the Local Government on the population of the Punjah as constituted cliffention No. 3943-S., dated 1st October 1912.

xvi

ANNUAL FORM No. V.

DEATHS REGISTERED ACCORDING TO CLASSES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

1	2			3					4					5		
1	12.5	POPULATIO	ON ACCORDIN	se to CE	NSUS OF	1911.	Numba	IN OF DEA	THS BE	GISTER	ED.	RATIO		ATHS P		0 07
No.	DISTRICTS.	Muhammadane.	Hindos.	Indian Christians.	Cther classes.	Total.	Muhammadans.	Hindus.	Indian Christians.	Other classes.	Total.	Muhammadans.	Hindus,	Indian Christians.	Other classes.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 2	AMBALA DIVISION. Hissar Robtak	218,600 113,493	\$85,995 600,108	79 1,136	215	804,889 714,834	7,927 3,554	20,165 18,761		1	28,093 22,318	36·26 31·31	34·41 31·26	2.64		34-90
3	Gurgaon	235,653	492,684	687	143	729,167	15,348	22,593	8		37,949	65.13	45.86	11.64		52-04
4	Karnal	224,920	573,947	836	84	799,787	7,427	18,251	5	3	25,686	33-02	31.80	5.98	35.71	32-12
5	Ambala	188,252	443,202	745	354	632,553	7,203	15,979	12		23,194	38-26	36-05	16-11		36 67
6	Simla JULLUNDUR DIVISION.	4,775	27,093	533	2,569	34,970	176	741	3	1	921	36.86	27.35	5-63	0.38	26:34
7	Kangra	38,770	723,570	221	4,125	766,686	1.748	22,455	11		23,614	29-61	31:03	49-77		30-80
8	Hoshiarpur	281,805	633,786	2,954	24	918,569	8,024	18,495	15		26,534	28.47	29-18	5.08		28:8
9	Juliandur	352,329	434,503	1,107	17	787,956	10,124	12,525	1		22,650	28 73	28.83	0.90		287
10	Ludhiana	176,043	340,261	731	157	517,192	5,412	10,701	9		16,122	30-74	31.45	12-31		31-1
11	LAHORE DIVISION.	408,380	524,056	915	148	933,499	14,963	14,656	8		29,627	36-64	27:97	8.74		31-7
19	Lahore	619,735	877,928	15,972	4,107	1,017,742	28,124	11,477	599	1	40,201	45.38	30-37	37-50	0-24	39-5
13	Amritsar	408,571	466,202	4,189	349	879,311	19,200	18,946	152	32	38,330	46-99	4.)-64	36-29	91-69	43-5
14	Gurdaspur	407,701	401,628	23,058	164	832,561	15,756	15,238	799	3	31,796	38-65	37-02	34.64	18-29	38:1
15	Sialkot	599,340	317,942	45,727	270	963,279	26,223	11,697	2,523	86	40,529	43 75	36-79	55-18	318-52	420
	Gujranwala RAWALPINDI DIVISION.	622,430	284,773	16,117	99	923,419	35,692	8,600	801	225	45,318	57-34	30.20	49-70	7	49-0
17	Gujrat	650,893	94,171	463	107	745,634	22,268	2,608	11	41	24,928	34:21	27-69	23.76	4678	23-6
	shabpur	572,565	106,156	8,419	226	687,366	25,433	3,245	308	***	28,986	44.42	30-57	36-58	1	42-1
	Jhelum	449,553	54,384	151	127	504,195	14,215	1,447			15,662	31.62	26-62	1000000		31.0
	Rawalpindi	442,090	64,209	932	411	507,642	14,185	2,156	19	4	16,364	32-09	33-60	20.39	9-73	32-2
	Attock	470,155	45,071	31	29	515,286	15,176	870		120	16,166	32-28	19-30	2000	2	31-3
	Mianwali MULTAN DIVISION.	299,971	41,238	91	77	811,377	12,843	1,569		3	14,418	42.82	38-05		38-96	42-2
23	Montgomery	376,174	127,368	459	114	504,115	18,811	5,138	190	18	24,157	50-01	40-34	413-94	157-89	47-9
	Lyalipur	547,837	309,021	31,889	148	888,895	18,682	8,741	1,154	6	28,583	34-10	28-29	36-19	40-54	32-1
	Jhang	422,468	92,857	177	24	515,526	18,097	3,323	1	4	21,425	42.84		10000	166-67	41-5
26	Multan	660,320	140,359	384	313	801 875	33,016	6,693	33		89,742	50.00	47.68	85.94		49.5
2	Muzaffargarh	494,915	74,481	40	25	569,461	23,447	3,487		1	26,935	47.38	46.82		46-00	47-2
2	l'era Ghazi Khan.	442,234	57,550	25	51	499,860	19,567	3,271	1	22	22,861	44-25	56:84	40-00	431:37	45/1
	Total for the Province,	10,729,972	8,434,583	158,078	14,513	19,337,146	442,044	283,828	6,666	671	733,109	41-20	38-65	42-17	39·34°	37-9

· Figures incorrect due to misclassification.

ANNUAL FORM No. VI.

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS (RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1917.

ANNUAL FORM

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS

1	2	3	4	5	6	1 7	8	9				10	-	-
_	-		-	-	-	-	8	-	-			10		-
		sus uso									In	URIES.		
		2	-			-	-900		Sui	cide.		by		
	A-RURAL CIRCLES.	according	1				Dysentery and Diarrhosa	des.		I	Wounds and accidents.	Killed		
		аесон					d but	Respiratory diseases.			1 acci	and .	-	
		Population of 1911.	i	pox.			tery :	atory			ls and	Snake-bite and		
Number.		of 1	Cholera.	Small-pox.	Plague.	Fevers.) y sen	lespir	Males.	Females.	Voun	nake	Rabies.	Total,
-			-		7			-	-					
1	3	3	4	5	6	7	8	9	10	11	12	13	14	15
	AMBALA DIVISION.													
1	Hissar	725,016	4		15	19,111	305	877	3	5	231	45	1	285
2	Rohtak	654,115		19	11	12,414	398	1,011	10	29	230	27	1	297
3	Gurgaon	675,175		164	9	22,105	917	1,343	13	34	285	43	2	377
4	Karnal	723,742	2	96	71	13,835	285	1,286	1	6	208	50	10	275
5	Ambala	577,034	14	36	1,099	11,935	412	2,964	2		109	12	1	124
6	Simla JULLUNDUR DIVISION.	16,036		1	-	160	43	100			**	1		. 1
7	Kangra	760,548	15	1	25	13,563	919	2,462	7	4	205	32	8	254
8	Hoshiarpur	864 823	44		49	17,473	23	2,540	5	6	211	20	9	251
9	Jullundur	691,816		40	778	12,883	179	1,558	4	3	193	5	3	208
10	Ludhiana	448,172	1	63	662	6,616	86	1,027	4	7	157	6	3	177
11	Ferozepore	878,765	1	125	1	16,570	501	1,699	7	1	235	44	4	294
17	LAHORE DIVISION.													
12	Lahore	751,833	46	187	1,564	18,709	226	667	8	6	225	29	6	274
13	Amritar	711,530	13	100	84	19,575	670	1,783	5	6	207	12	5 2	235
	Gurdaspur Sialkot	784,343 855,399	130	17	568	16,185 25,283	1,310	4,003	0	1	204	40	7	226-
16	Gujranwala	831,894	5	5	441	35,655	162	473	1	3	264	105	10	383
	RAWALPINDI DIVISION.													
17	Gujrat	702,886	54	6	39	17,542	367	1,766	1	4	216	42	6	269
18	Shahpur	630,940			7	21,173	195	718			221	29	4	254-
19	Jhelum	481,307			233	10,755	179	885	1	2	150	38	1	192
20	Rawalpindi	459,639	4	3	1,113	8,768	1,671	1,114	4		196	35	1	236
21	Attock Mianwali	496,291		8	34	12,102	18	935	2	-	156	7		187
22	MULTAN DIVISION.	316,243		13		11,900	113	163			68	,		15
23	Montgomery	479,837		78		19,597	67	95	2	3	170	56	****	23 1
24	Lyalipur	863,900	31	171	26	20,563	490	1,083	5	2	304	34	7	353"
25	Jhang	475,527	6	1		15,483	204	147	2	1	44	34	2	882
26	Multan	709,294	54	44		30,344	77	80	***		111	. 77		188
27	Muzaffergarh	547,005	2	30		23,908	40	121	2		129	77		208
28	Dera Ghazi Khan	463,304		14		18,877	222	277	1	6	105	33	1	146
	The same of the				1				_	_	-	_	-	-
	Total of the Raral Circles	17,576,414	574	1,232	6,868	473,032	11,183	41,983	99	133	5,084	975	92	6,377
1	The state of the s	11,010,919	01.4	1,102	0,000	210,002	11,100	11,000	00	100	0,009	2,0	-	0,017
-			-	-		-							-	-

No. VI.

(RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1917.

1	11	12		0	D.	131	13	2 3	- 6		16		15
	-			1	RATIO O	P DEATHS P	R 1,000 o	P POPULATI	ON.		FROM ALI	CAUSES.	-
-	All other causes.	Total deaths from all causes.	Cholera.	Small-rox.	Plague,	Perera,	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	For the year,	Mean ratio of previous five years.	Namber.
-	16	17	18	19	20	21	22	23	24	25	26	27	28
-	4,132	24,729	0:01	78	0.02	26-36	0.42	1.21	0.39	5-70	34-11	28-93	1
1	5,982	20,132		0.03	0.02	18-98	0.61	1.55	0.45	9:15	3078	29-53	3
	10,570 6,853	35,485 22,703	0.002	0.24	0.10	32·74 19·12	0.39	1.78	0.38	9.47	52·56 31·37	32-15 35-84	3 4
	3,967	20,551	0.02	0.06	1.90	20-68	0.71	5.14	0-21	6.87	35.61	34.01	5
	131	436		0.06		9-98	2.68	6:24	0.00	8.17	27.18	23-26	6
							72.		0.00	0.10	eru voi.	10	
	6,220	23,459	0.02	0.001	0.03	17·83 20·20	0-03	3·24 2·94	0.33	8·18 5·23	28.80	29-71	8
	4,126	19,772		0.06	1-12	18-62	0.26	2:25	0.30	5-96	28.58	32-39	9
	5,392	14,024	0.002	0.14	1.48	1476	0.19	2-29	0.39	12.03	31.27	32.44	10
	8,702	27,893	0.001	0.14	6-001	18-86	0.57	1.93	0-33	9.90	31-74	30.50	11
		- 1				105		100	31543			Darte II	1
	6,865	28,538	0.06	0.25	2-08	24.88	0.30	0·89 2·51	0.38	9·13 7·30	37-96	31.37	12
1	5,196	27,656 29,748	0.02	0.14	0.72	27.51	1.67	13-71	0.29	0.71	38.87	36-23	13
	5,310	36,142	0.17	0.01	0:05	29-50	1.29	4.68	0.34	6.21	42-25	34.93	15
4	4,440	41,364	0.006	0.006	0.53	42-86	0.19	0.57	0.46	5:34	49-96	36.05	16
		7	Paris							144	111	Signi	1
	3,422	23,465	0.08	0.01	0.06	24.96	0.52	2:51	0:38	4.87	33-38	34.42	17
1	4,346	26,693 14,568			0.01	33·56 22·35	0.31	1.12	0:40	6.89	30-27	26-94	19
1	2,324 1,369	14,276	0-01	0.01	2.42	19-07	3-64	2.42	0-51	2-98	31.06	37-56	20
	2,371	15,655		C-02	0-07	24.38	0.04	1.88	0.38	4:78	31.54	31-08	21
	1,200	13,464		0.04		37-63	6.36	0.52	0.24	3.79	42.57	29-24	22
		- 4									100	NO COSE	
	2,907	22,975		0.16		40-84	0:14	0.20	0.48	6.06	47:88	22-48	23
	0,921	28,137 19,648	0.04	0.20	0.03	23·80 32·56	0.57	0.31	0:41	6-28 7-83	32·57 41·32	23·98 25·46	26
	3,724	34,767	0.08	0.002		42-78	0.11	0:11	0.26	5-61	49.02	24-26	26
	1,358	25,667	0.03	0.05		43-71	0.07	0.22	0.38	2.48	46-92	26-95	27
	1,220	20,756	***	0-03	*****	40/74	0.48	0:60	0.32	2-63	44'80	21.75	28
	1	7 8		186	Or		1	2-1	100	-		11.09(1)	100
	116,638	657,807	0-03	0-07	0:39	26-91	0.64	2-39	0:36	6-63	37:43	30.82	1

ANNUAL FORM

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE TOWNS

-			111111111111111111111111111111111111111												_
1	2		3	4	5	6	7	8	9			1	10	n	-
	and the second		\$	****		17 24	-					Inj	URIES.		
			Population according Census of 1911,			-		Dysentery and Diarrhoss,	904	Swie	ide.	dents.	killed	-	
-	B-Towns.	9	r 1911					d ban	Respiratory diseases.			Wounds and accidents.	Snake-bite and killed by wild beasts.		
oct.			lation nsns o	ra.	Small-pox.	. ne.	ź	itery :	ratory		les.	ads an	e-bite and wild beasts.		
Number.			Popu	Cholera	Small	Plague.	Fevors.	Dyse	Resp	Males.	Females.	Wou	Snake	Rabies.	Total.
1	2		3	4	5	6	7	8	9	10	11	12	13	14	15
-	12 12	100		-				1 100	-	-	-	-			-
	HISSAR DISTRIC	CT.													
1 2	Hissar		17,162 14,576	22			254 231	39 40	97 -106		2	· 7 2 17	1	1	10
3 4 5	Bniwani Sirsa Fattehabad	=	31,100 14,629 2,406				366 447 17	117 66 3	145 51 8		ï	3			17
ь	ROHTAK DISTRI	CT.	2,400		***		17	3	8						
6	Rohtak		19,862 10,617		6		335	37 43	63 41		-	1 3	3		4 9
8 9	Beri Gohana		7,798 5,438				199 63	28 9	12		ï	3			4 3 4 3
10	Bahadurgarh Sonepat	***	4,990 12,014		2		72 141	14 16	12 22		ï	9		-	11
	GURGAON DISTRI	ICT.	and the	100				00				1			
12 13	Rewari		24,780 9,485		48	1	42 166	94	149 51	-		3	1		4
14 15	Pirozpur		5,719 5,468		9	/	364 151	41 17	14		=	3	1		4
16 17	Ballabgarh		4,053 4,487		1 2		46 96	11	13 15	1		"1	2 2		3
0	KARNAL DISTRIC	CT.	Eu.			1					P			1	
18 19	Karnal Kaithal	***	21,018 12,912		6		369 223	56 39	. 81 68	1		6 2 8	1		7 4 9 2
20	Panipat Shahabad		26,342 17,054	15	37	68	406 89	42 17 10	123 66			2 2	,		2 3
22	Thanesar AMBALA DISTRI	ICT.	4,719	-			66	10	24			18	-		139
23	Ambala		24,493	54		182	471	98	183	1		12			18
24 25	Jagadhri Burya		12,045 4,272 7,774	103	6	21 19	230 71	61 5 28	89 19 73	1		6	***		6 2 1
26 27	Rupar		6,935				82 85	24	38	1		2			3
Ti	SIMLA DISTRIC											10		1	10
28	Simla KANGRA DISTRI	ICT.	18,934		***		243	1	117			12			12
29	Kangra		3,620				13	14	33			,			,
30	Dharmeala HOSHIARPUR DIST	TRICT.	2,518	1		***	25	5	14			1			1
31	Hoshiarpur		15,980	27		2	212	2	155			. 7			7
32 33	Khanpur Hariana	-	2 523 5,395				31 72	1	17 24			1	1		7 2 2
35	Garhdiwala Dasuya		3,093				32 77	1	31		=	1 2		-	1 2 1 3 2 4
36 37	Tanda Urmar Miani	1.	7,016 4.870				173 71	1	43 11	1		3			3
38 39	Mukerian Una	-	2,053 4,178			1	46 55		22 7			2 4	4.		2
40	JULLUNDUR DIST	RICT.	4,041			***	52	1	6	"					100
41	Jullundur	510	55,854	15		4	751	133	475			19	***	1	20
43	Kartarpur Bungah		8,631 4,602			13	115 34	21 10	58 16	-		2	***		2
44 45	Rabon Phillaur		6 292 5,224				139 78	8	30 23	ï				***	1
46 47	Nurmahal		7,178 8,859		4	77 15	92 110	13 18	59 50			5	***	-	5
_								-						1	-

No. VI.- CONTINUED.

OF THE PUNJAB DURING THE YEAR 1917.

11	12			, A		13						14
	1968.				RATIO OF	DEATHS 1	rsn 1,000 or	POPULATION	r.			
	all car			1		Diar-	1808.			From al.	l causes.	
All other causes.	Total deaths from all causes	Cholera,	Small-pox.	Plague.	Forers.	Dysentery and rhos.	Respiratory diseases.	Injuries.	All other causes.	For the year.	Mean ratio of previous five years.	Number,
16	17	18	19	20	21	22	23	24	25	26	27	28
								He s		-	6	
278 255 631 154 11	700 626 1,277 722 30	1.28	0-07	0-03	14:80 15:16 11:77 30:56 7:07	2·27 2·74 3·76 4·51 1·25	5-65 7-27 4-66 3-49 8-33	0·58 0·21 0·55 0·27	16·20 17·49 20·29 10·53 4·57	40.79 42.95 41.06 49.35 16.21	40 90 37:38 41:59 38:46 25:10	1 2 3 4 5
235 213 134 94 65 190	680 400 372 188 164 352		0:30 0:09 0:17		16:87 9:32 25:52 11:59 14:43 11:74	1-86 4-05 2-95 1-66 2-81 1-38	3·17 3·84 1·54 3·49 2·40 1·83	0 20 0 28 0 51 0 56 6 20 0 92	11·83 20·06 17·18 17·29 13·03 15·81	34-24 37-68 47-70 34-57 32-87 31-80	34-31 31-35 35-34 51-38 34-31 33-89	6 7 8 9 10 11
531 184 102 109 44 76	819 452 584 283 118 208		1.94 9:11 1:57 0:25 0:45	0-04	1-39 17:50 63:65 27:62 11:35 21:40	3-79 5-17 7-17 3-11 2-71 3-57	6:01 5:38 2:45 1:10 5:21 3:34	0°16 0°11 0°70 0°74 0°67	21·43 19·40 17·84 19·93 10·86 16·94	35:07 47:65 93:37 51:76 29:11 46:36	25-97 49-40 31-23 44-40 37-75 39-18	12 13 14 15 16 17
274 155 523 153 47	788 495 1,154 396 150	0.57	0-08 0-46 1-40 0-69	6.15	17:76 17:27 15:41 8:05 13:99	2 66 3 02 1 59 1 54 2 12	3:85 5:27 4:63 5:97 5:09	0:33 0:31 0:34 0:19 0:64	13°04 12°00 19°86 13°84 9 96	37:49 38:34 43:41 35:82 31:79	41:85 47:74 46:40 33:56 39:42	18 19 20 21 22
208 215 84 78 88	1,209 731 204 263 237	2·20 8·55 0·70 	6.50 6.23 	7-43 1-74 4-45 	19-23 19-10 16-62 10-55 12-26	4 00 5 06 1 17 3 00 3 46	7-47 7-89 4-45 9-39 5-48	0-53 0-50 0-47 0-13 0-29	8:49 17:85 19:66 10:3 12:69	49:36 60:89 47:75 88:70 34:17	20-64 45-51 40-54 32-85 33-14	23 24 25 26 27
112	485			-	12:53	0.05	6:18	0.(3	5 92	25 62	19 97	28
35 14	95 60	0 40			3-59 9-3	3 87 1·99	9·12 5·56	0:40	9 67 5 5 6	25:24 23:83	28-12 22-65	29 30
180 28 13 9 43 35 29 28 30 24	585 79 115 48 154 258 115 99 95 87	1-59 0-56 		012	12 47 12 29 13 35 10 35 21 41 24 66 14 58 12 41 18 16 12 87	0·12 0·40 0·19 0·28 0·14 0·21 	9 02 6:74 4:5 1:91 8:62 6:13 2:26 10 72 1:68 1:48	0.41 0.79 0.37 0.82 0.76 0.14 0.62 1.46 0.48 0.99	10 60 1; 10 2 41 2:91 11:95 4:90 5:95 13:64 7:18 5:94	34 45 3 :31 21:32 15:52 42:81 86:06 22:61 48:23 22:74 21:53	35:22 37:10 32:32 30:33 50:88 31:01 29:12 56:43 34:18 23:99	31 32 33 34 35 36 37 38 39 40
219 49 30 32 57 30 49	1,617 260 92 209 162 277 261	0-27	0-45	0-67 1-51 16-73 1-69	13.57 13.33 7.39 22.9 14.93 12.82 12.42	2:40 2:43 2:17 1:27 6:57 1:81 2:03	8:58 6:72 3:43 4:77 4:40 8:22 5:64	0 36 0 46 0 43 0 19 0 84 0 56	3.93 5.69 6.52 5.09 10.91 4.18 6.66	29 21 30·12 19·99 33·22 81·01 38·59 25·46	35 67 40 55 24 38 31 15 37 29 35 55 33 75	41 43 43 44 45 46 47

- ANNUAL FORM

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

1	2	-	3	4	5	6	7	8	9			,	10		I.
			· c	1112	10 40		No service	,				Inst	TRIES,		
Number	B—Towns.	The second second	Population seconding Census of 1911.	Cholers, .	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhos.	Respiratory diseases.	Males.	Females.	Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
1	2		3	4	5	6	7	8	9	10	11	12	13	14	15
-	LUDHIANA DIS	STRICT.							-	1					
49 50 51	Ludhiana Jagraou Raekot Khanna		43,152 15 039 7,510 3,319	3		1 	556 188 107 27	80 16 4 3	245 71 27 23	1		14 10 3 1		 1	15 10 4 1
52 53 54 55 56	FEROZEPORE DI Ferozepore Zira Dharmkot Muktsar Fazilka	STRICT.	24,678 4,378 5,859 8,834 10,985		 3 1 6	: : : ! !	316 40 38 56 344	51 4 6 13 26	104 2 22 22 22 67		 1	6 1 2 3 4			6 1 2 4 5
	LAHORE DIST	RICT.								1				100	
67 68 69 60 61 62 68	Labore Chunian Khudian Kasur Kasur Khem Karn Patti Baghbaupura Bhogiw AMRITSAR DIS		210,271 7,151 2,993 24,783 5,732 7,987 6,993	87	8 1 1 4 	424 2 66	5,443 190 160 871 95 194 301	399 17 2 34 3 19 25	1,297 21 8 124 24 30 33	1	2	128 9 12 2 4 7	4	1	138 10 14 -2 4 7
64 65 66 67	Amritsar Majitha Jandiala Tarn Taran GURDASFUB DI	STRICT	151,939 5,223 6,959 4,260	108	16	9 1	4,533 124 160 75	600 24 7 21	8,776 15 19 29	5	::::	98 2 		2	105 2
68 69 70 71 72 73	Gurdaspur Dina Nagar Pathankot Dalhousie Eatala Dera Nanak		5,133 4,154 7,007 938 26,410 4,556	10 22 1	5	1 43 86	113 107 157 3 475 68	15 23 48 2 47 19	70 57 119 13 829 35		11 14 11	 1 2 10 1		i	1 3 10
	SIALKOT DIST	TRICT.		18						1	1				
74 75 78 77 78 80 81 82 88 84 85 86 86 87	Sialkot Daska Jamke Pasrar Zaffarwal Narowal Sambarial Sahowala Begowala Binepalwala Mitranwali Balomali Kalaswala Daud Chawinda		48,595 6,046 8,542 7,564 3,633 4,464 6,285 3,558 3,768 3,836 3,183 2,815 2,915 3,431 4,695	117 2 14		1 	782 86 45 104 52 112 185 99 186 58 22 60 31 86 52	168 18 12 29 30 10 13 13 13 7 10 10 10 5 3	465 25 17 70 64 40 25 16 17 8 45 3 41 14 41			14 4 1 3 3 2 2 1 1 2 1 1 3		1	14 5 1 3 1 2 2 2 1 1
89 90 91 92 93 94 95 96 97 98 99 100 101 102	GUJRANWALA D Gujranwala Wazirabad Eminabad Kila Didar Singh Akalgarh Eamnagar Sohdara Hañzabad Khangah Dogran Pindi Bhattian Sangla Sharakpur Sbahkot Chuharkana Mandi Nankana Sahib		28,637 17,146 5 526 2 210 3,943 5,256 4,666 5,742 1,267 3,631 980 2,482 1,054 6,131	133	4	85	791 566 132 89 41 136 201 252 22 123 12 83 25 39 42	44 222 5 3 1 10 15 1 3 9 2 2 1 3	173 87 14 10 15 12 32 6 14 15 10 4 1 1 1		1	21 13 4 3 6 4 1		1	222 133 1 4 7 4 1

No. VI-CONTINUED.

TOWNS OF THE PUNJAB DURING THE YEAR 1917-CONTINUED.

11	12		0	1 7	Tr		13				1	T
	É				Ватго от	DEATHS	ran 1,000 o	P POPULAT:	ox.	-		
	all causes	-	1		1.1	pur	100		1	From all	causes.	
All other causes.	Total deaths from all	Cholera.	Small-pox.	Plague,	Perers.	Dysentery Diarrheat.	Respiratory diseases,	Injuries.	All other exuser.	Porthe year.	Mean ratio of provious five years.	Number.
16	17	18	19	20	21	23	23	24	25	25	27	28
\$81 231 81 22	1,783 517 223 75	0.07	0·02 	0-05 0-07 	12 88 12:50 14:25 8:13	1.85 1.06 0.53 0.90	5:68 4:72 3:60 6:63	0°35 0°67 0°53 0°30	8 63 15:37 10:79 6:63	29-73 24-88 29-69 22-60	38-97 39-01 40-55 48-93	48 49 50 51
209 86 63 92 134	686 136 132 193 587	0-C9	0.69 0.17 0.68		12.90 9.14 6.49 6.34 31.32	2-08 0-91 1-02 1-47 3-28	4:11 0:46 3:75 2:49 6:10	0:24 0:23 0:34 0:45 0:46	8-47 19-64 10-75 10-41 12-20	27-80 31-06 22-53 21-85 53-44	22-87 33-94 34-92 34-48 39-49	52 53 54 55 56
1,541 114 23 281 60 81 62	9,337 353 129 826 188 328 502	0.41 1.14	0.04 0.14 0.23 0.70	2·03 0·08 9·44	25:89 26:57 33:12 14:97 16:57 24:29 43:04	1:10 2:88 0:67 1:37 0:52 2:38 2:58	6:17 2:94 1:00 5:00 4:.9 3:76 4:72	0.66 1:40 0:16 0:25 0:50 1:00	7:83 15:94 7:68 31:34 10:47 10:14 8:87	44·40 49·36 43·12 33·33 \$2·80 41·07 71·79	33-98 38-60 38-19 34-98 35-07 29-97 Not avail- able.	57 58 59 60 61 62 63
929 58 33 33	10,076 219 219 160	0-71	0·11 0·23	0.06 0.19 	29-95 23-74 22-99 17-61	3-96 4-60 1-01 4-53	24/95 2-87 2-73 6-81	0.69 0.38 0.23	6:14 10:15 4:74 7:75	66-58 41-93 31-47 37-56	41.63 33.70 31.81 30.33	64 1 5 66 67
25 21 66 .2 43 8	223 220 458 20 996 131	2:41 8:14 0:04	0-19	0:24 6:14 3:25	29-01 25-76 22-41 3-20 17-97 16-93	2-92 5-64 6-87 2-13 1-78 4-17	18:64 11:72 16:95 13:86 13:45 7:68	0.24 0.43 0.38 0.22	4:87 5:06 9:42 2:13 1:63 1:76	43:44 52:96 65:36 21:32 37:68 28:75	25-03 43-62 37-71 26-65 37-68 29-89	68 69 70 71 72 73
610 62 299 43 25 199 40 25 20 24 37 18 16 86 14	2,157 196 106 283 172 183 285 156 253 101 105 82 91 137	2·41 0·58 1·85 0·28 	0.27	0-02 	16-09 14:22 12:70 13:75 14:31 25:09 23:44 27:82 49:36 17:39 6:91 21:31 10:63 24:71 11:08	3:46 2:98 3:39 3:83 8:26 2:24 2:07 3:65 1:36 3:00 3:14 1:78 1:03	9:57 4:13 4:80 9:25 17:63 8:96 8:98 4:50 4:51 2:40 14:14 1:07 14:07 4:02 10:86	C·29 C·28 C·28 C·40 C·28 C·45 C·32 C·28 C·53 C·30 C·31 C·29 C·64	12:55 10:25 8:19 5:68 6:88 4:26 6:36 7:03 5:81 7:19 8:48 4:62 5:49 10:34 2:98	44/39 32/42 29/93 34/77 47/34 46/99 42/16 43/84 61/84 60/28 32/99 29/13 31/22 29/82	Not as a solution of the solut	74 75 76 77 78 99 80 81 82 83 84 85 86 87 88
204 97 18 21 10 34 12 37 13 33 	1,253 785 170 124 67 196 220 333 42 181 18 227 45	0.45	1·10 	G-21	27-62 23-01 23-89 40-27 10-40 25-88 43-03 43-89 17-36 33-87 12-24 18-12 23-72 45-67 6-85	1:54 1:28 0:90 1:36 6:26 1:90 0:21 0:87 0:79 0:82 2:01 1:90 1:17 0:49	6:04 6:77 2:53 4:52 2:28 0:64 5:57 4:74 3:85 5:10 2:23 3:80 1:17 0:16	0.77 0.76 	7·12 5·66 3·26 9·50 2·54 6·47 2·57 6·44 11·25 9·09 8·92 11·39 4·68 0·49	43:75 45:78 20:76 56:11 16:99 37:19 47:15 57:99 33:15 49:85 18:37 50:65 40:80 52:69 8:16	39:33 84:01 35:73 38:73 16:23 39:04 41:19 25:20 31:23 20:39 31:23 20:39 35:56 23:34 Not available.	89 90 91 92 92 94 95 96 97 98 99 100 101 {102 {1:3

ANNUAL FOR M

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE TOWNS

1	2	3	4	5	6	7	8	9				10		
		9			2						Injo	BIBS.	T	
Namber.	P—Towns.	Population according Censys of 1911.	Cholera.	Small-pox,	Plague.	Fovers.	Dysoutery and Diarrhos.	Bespiratory diseases.	Males.	Formalos.	Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
1	2	3	4	5 -	6	7	8	9	10	11	12	13	14	15
	GUJRAT DISTRICT,													
104 105 106 107	Gujrat Jalalpur Kunjah Dinga	18,093 11,615 7,000 5,351			10	414 193 167 69	38 20 14 4	139 91 33 20			13 7 2 1	1 2	1111	14 7 2 3
108	SHAHPUR DISTRICT.	8,739				289	22	23			1	4.0		1
109 110 111 112 113	Sahiwal Bhera Miani Khushab Sargodha	7,658 15,202 5,819 10,159 8,819	17	:	1 2 1 	235 138 300 47	5 50 4	13 68 88 69 11			5 4 8 1	1		5 4 9. 1
	JHELUM DISTRICT.	12,298	2			169	20				2	2		4
114	Pind Dadan Khan	10,590	4		200	354	44	57 48			3			. 3
	RAWALPINDI DISTRICT.	46,642			F01	584	118	427	1		29	1		SI
116	Murree	1,861			501	10	110	11						
118	ATTOCK D'STRICT.	9,045				187	2	25			4		***	4
119	Hazro	9,950				89	5	34	1		3	1		6
190	MIANWALI DISTRICT.	6,224				14	14	12	***					2
121	Bhabkar	5,868 6,868 6,651		:::		187 178 153	13 55	5 7 7	***		1 1			1
123	MONTGOMERY DISTRICT.				***		30	,						
124 e 125 126	Montgomery Kamalia Pakpattan	8,129 8,237 7,912		::	51 3 1	123 364 399	6 2 4	25 2 4			2	 1 2		3 1 2
	LYALLPUR DISTRICT.												100	9
127 128	Lyallpur Gojra	19,578 5,41				224 39	22 5	42 2			8			8
20.00	JHANG DISTRICT.	05.01.				707							1	2
129 130	Jhang-Maghiana Chinist	25 914 14,085	3			* 597 25 t	118 34	20 20	***		1			1
	MULTAN DISTRICT.	25.747	110	3		2,613								
131	Multan Shujabad	85,747 6,834	118		4	313	248 82	378 23	***					
100	MUZAFFARGARH DISTRICT	4,119	2			121	- 6	30			2			2
133 134 135 136 137	Mozaffargarh Khangarh Alipur Leiah Karor	3,349 3,812 8,173 3,503	3	 1		204 126 210 191	8 13 9 10 4	18 16 8 19 14		4 14 14	3 1	 	1	4 2
138 139 140 141 142	DERA GHAZI KHAN DISTRICT. Dera Ghazi Khan Jampur Dajal Rajanpur Kot Mithan	16,858 6,517 6,893 -3,704 2,689				275 225 486 352 203	54 39 21 19 24	57 17 5 10 9		11 11 11 11 11	2 3 1	1		3 5 1
	Total	1,760,782	791	185	1,907	87,780	4,388	12 459	20	9	698	37	13	777
	Total for the Province	19 387,146	1,865	,417	8,775	510,812	15,571	54,892	113	142	5,782	1,012	105	7,154

No. VI -- CONCLUDED.

OF THE PUNJAB DURING THE YEAR 1917-CONCLUDED.

. 11		12						13					14
		- Igeer		10	1	RATIO OF	DEATHS PE	n 1,000 or 1	POPULATION.				
		and a					Pug	1808.			From all	causes.	
All other causes.		Total desides from all estises.	Cholera.	Small-por.	Plague.	Fovers.	Dysontwy Diarrhora.	Respiratory diseases.	Injuries.	All other causes.	For the year.	Mean ratio of previous five years.	Number.
16		17	18	19	20	21	22	23	24	25	26	27	23
	117 52 31 25	732 863 247 121	=======================================	=	0.23	22°15 16°62 23°55 12°89	2-03 1-72 1-97 0-75	7:44 7:83 4:65 3:74	0.75 0.60 0.28 0.56	6:26 4:48 4:37 4:67	\$9-16 81-25 24-84 22-61	87-41 33-44 36-45 27-47	104 165 106 107
	89 113 172 54 170 29	374 468 569 235 615 92	1-87		0°13 0°13 0°13 0°17	27:35 43:09 15:46 23:72 29:53 5:31	2:52 0:78 1:78 0:86 4:92 0:45	2-63 1-70 4-47 5-67 6-79 1-24	0-11 0 65 0-32 0-69 0-89 0-11	10·18 14·76 11·31 9·28 16·74 3·28	42:80 61:11 53:48 40:39 60:54 10:40	19-09 80-61 85-25 40-38 39-69 Not aval- able.	108 109 110 111 112 113
	84 105	536 558	0·16 0·38	=	16-26	18-74 83-43	1:63	463 453	0-93 0-28	6-93 9-92	48-58 52-69	30-57 25-81	114
	422	2,063 25	::	=	10-74	12:09 7:35	2·53 0·73	9-15 8-08	0.86	9-05	44·28 19·37	40:83 34:24	116
	68 97	281 230	=	Ξ	===	29-67 6 94	0.22	2·76 3·43	0.44	6-97 9-76	31·07 23·12	33 57 26:01	118
	22 55 23 42	195 262 264 288				23-62 84-71 25-92 22-90	2·25 2·41 8·01 4·51	1-98 0-93 1-02 1-05	0.37 0.15 0.15	3-53 10-21 8-35 6-31	81·83 48·63 88·44 85·02	25.45 87.82 26.97 84.78	120 121 123 123
	39 96 58	246 468 468	-		6:27 0:86 0:13	15:18 44:19 50:43	0.74 0.24 0.51	3-08 0 24 0-51	0·25 0·12 0·25	4-80 11-65 7-33	30-26 56-82 59-15	20:81 86:40 83:16	124 125 126
	90	387 59	==	0-05	=	11·44 7·20	1·12 0·92	2-15 0-37	0·41 0·18	4·60 2·22	19-77 10 89	13-15 Not avail- able.	127
	447 282	1,157 590	0.12	=	=	23.04 17.96	4:55 2:41	0·77 1·42	0-08 0-07	17-25 20-02	45-81 41-89	37-45 40-43	129
1	,157 75	4,516 459	1:33 1:74	0:04	0.05	30-46 60-21	2-89 5-05	4:35 3:63	5	13·50 11·84	52·87 72·47	32 23 34 67	13t 132
	16 49 90 76 58	162 282 233 319 267	0·49 0·37	0.30	= ::	29-38 60-91 38-04 25-69 54-52	1:94 3:88 2:72 1:22 1:14	3·16 4·78 2·42 2·20 4·00	0-49 1-21 0-24 	3·85 14·63 27·17 9·30 16·56	39-33 84-20 71-86 39-03 76-22	29-13 42-40 36-59 32-69 44-70	138 174 135 136 137
	112 87 43 89 19	501 367 560 421 256				16:32 31:53 70:51 95:03 78:41	2:20 5:83 3:05 5:13 9:27	3:38 2:61 0:73 2:70 3:48	0 18 0.73 0.27 0.39	6.65 13:35 6:24 10:53 7:34	29·73 56·31 81·24 113·66 98·88	21:17 26:43 32:70 81:91 31:83	138 139 140 141 142
1	,015	75,302	0-45	0.11	148	21.46	2:49	7:08	0 44	9-66	42:77	34-59	-
133	3,623	733,109	0.07	0.07	0:45	26.42	0.80	2.81	0.37	6.91	37.91	31.16	1

BIRTHS AND DEATHS REGISTERED IN THE CANTONMENTS OF THE PUNJAB DURING THE YEAR 1917. APPENDIX TO ANNUAL FORM No. VI-B.

		Namber.	30	-	64	00	•	10	9	1	60	0	10	11	128	13	**	2	16	11	18	13	
lo 00	00'I 100	Ratio of births population.	19	27	125	24	18	25	26	122	64	13	64	000	=	16	**	11	11	523	**	80	19
bered	regis	*firld ledoff any odd galrub	18	1,452	88	63	2	10	96	173	820	231	22	101	17	2002	14	423	828	18	61	112	3,953
10 00	Dot 3'00	Hatio of deaths population.	17	31	858	57	=	25	a	18	69	17	3	64	40	14	•	14	10	66	9	14	62
.000071	no ell cu	ort adtach IntoT	16	1,675	8	55	12	12	36	247	843	203	8	11	en /	20 00	20	576	92	*	4	193	4,675
		All other causes	16	123	32	61	9	a	16	\$	289	103	16	10	10	t.	10	83	15	20	01	88	1,338
		.Ledo.T	1.6	14	11	1		1	1	64	t-	64	ı	. 01		*	1	10	1	:	1	1	55
	FIII4	Sonke-bite and by wild beats	18	64	11	!	ŀ	:		i	1		:		1		1	1	****	1	:	-1	16
Intrains.	etasbi	Weards and acc	12	11	1		1	1	:	1	69	1	1	64	1	*	1	10	ŧ	1		1	100
	Swicide.	Pemalos.	11	1				1	1	1	1	i	1	1	1			1	1	1	i	i	CA
	See	Males.	10				:	:	-	1	1	1	1		:	:	:	!	***	:	-	1	-
	'60890	Respiratary dis	6	244	1	1	1	1	1	00	88	1111	Oi .	•	:	88	64	13		1		11	673
190	mdraelb	Dysentery and	8	848	co.	1	1	1	1		30	26	ţ-	00	1	25	1	24	1	0.5		-	179
		Pevers.	7	725	3	192	14	1	20	183	428	245	38	64	14	35	11	813	19	•	64	140	2,260
	1	Plague.	9	106	:	1	:	i,	1	1	1	10	1	:		1	90	124	:	80			256
		.xoq-!liam8	10	1	1	!	1	.1.	:	1	1		1			:	1	ı	1	1	-	1	1
		Cholora,	1 *	1		5 21	1	ı		1		9	1	:	1.	69	. 1	. 1		1		60	15
odt o	P pulation according to the Consus of 1961.			54,223	3,194	2,032	1,847	1139	8,700	13,964	26,158	18,416	1,417	979	3,566	16,274	7.380	39,841	3,357	344	630	18,496	210,954
	ette.				1	:		1	1	i	1.	1	1.	:	i		1		* #	ŧ	i	1	1
-		Cantonments	64	Ambala	Kasauli	Dagshai	Sabathu	Jatogh	Dharmsala	Jullundar	Ferozepore	Lahore	Amritaar	Da Ihousie	Dakloh	Siafleot	Jhelum	Rawalpindi	Campbellpur	Murree	Attock	Multsu	Total
		Namber.	٦.	п	94			10	0	1-	00	0	97	=	200	13	14	15	16	17	18	139	

ANNUAL FORM No. VII.

DEATHS REGISTERED FROM CHOLERA IN THE DISTRICT OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

ANNUAL FORM

DEATHS REGISTERED FROM CHOLERA IN THE DISTRICTS

1	2			3		4						
		-		OF REGIS-	yr	LLAONS.						MOSTRE.
Namber.	Districts.		Number in each district.	Number from which deaths from cholors were reported.	Number in each district.	Number from which deaths from cholers were reported.	January.	Pobresty.	March.	April.	May.	June.
1	2		3	4 -	5	6	7	8	9	10	11	12
	AMBALA DIVISI	on.										*
1	Hissar	***	27	1	968	1						
2	Rohtak	***	19	***	731							***
. 8	Gurgaon		24		1,867				***			
4	Karnal		25	2	1,882	1						-
5	Ambala	***	19		1,715	t	***	***		-		""
,6	Simla		. 3		23						-	***
	JUL: UNDUR			- H7-	11	act in	TRY					
7	Kangra		15		713							:
8	Hoshiarpur		23	10	2,168	15				***		4.
9	Jullandar		17	1	1,215							
10	Ludhians	***	14	2	858	1					1	
11	Ferezepere		24	3	1,500	1	1					1
	LAHORE DIVISI	ON							8 3			
12	Y -1		29	-	1,193			1000				
13	Amritsar		15	7 8	1,039	8		-				
14	Gurdaspur		22	8	2,238							
15	Sialkot		30	12	2,319	14					***	
16	Gujranwala		33	5	1,733	5						
	RAWALPIND		00		1,100							
	DIVISION.							100				
17	Gujrat	"	15		1,826			***				
18	Shabpur		28	1	1,054						-14	***
19	JLelum		,14	2	898		•••					
20	Rawal, indi		14	1	1,177	1						
21	Attock	***	13		628			-			***	-
22	Mianwali	•••	15		396							-94
	MULTAN DIVISI	ON						1		-		1
23	Montgomery		91	-	2,438							
24	Lyalipur		21	2	1,277	. 5						
25	Jhang		13	2	955	1	-					
26	Multan	hen	20	7	1,353	P						
27	Muzaffargarh		23	4	860	3						
28	Dera Ghazi Khan		23		707							
					-	-					-	
	Total for the Province	00	551	87	34,198	97	1				1	1

No. VII.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

_			-			6 7							-
0.				0		* 4 11-	6			7		8	9
research!						many "	TOTAL.	um (RATIO 1,000 c	OF DEATE	IS PER ATION.	,000 for	
July.	August.	Septomber,	October.	November,	December.	Males.	Permales.	Total,	Males.	Females.	Total.	Mean ratio per 1,000 previous five years.	Namber,
13	14	15	16	17	18	19	20	21	22	23	24	25	26
						H line I	1.					vanily	1
4		19	7			16	10	26	0.04	0.03	0.03	0.50	1
					-		***					0.23	2
			***								-	0.23	3
-	2	3	12			12	. 8	17	0.08	0.01	0.02	0.32	4
	76	42	50	. 6		98	76	174	0.27	0.28	0.28	0.12	6
						1			***			7	8
				1		1015					-		
10	12	5	10	4	***	55	19	16 74	0.03	0.01	0.02	0.30	7
1		12	2	48		5	10	15	0.01	0.03	0.02	0.13	8
1			1	1		2	2	4	0-01	0.01	0.01	0-41	10
						1	1	2	0.001	0.003	0.002	0.78	11
										1		line !	
	25	81	35		123	89	52	141	0.15	0-12	0.14	1.37	0
2	9	61	44	5		87	34	121	0.18	0.09	0-14	0.62	13
10	5	62	86			92	71	163	0.20	0:19	0.19	0-11	14
1	9	171	101			140	142	282	0.26	0.33	0.29	0.28	15
		10	9			17	2	19	0.03	0.004	0.02	0 22	16
1	11/2/25	15		-	3 4		10	1			1	100	
20		22	12			30	24	54	0.07	0.07	0.07	0.23	17
-	***	2		15		10	7	17	0.03	0.02	0-02	0-07	18
		2	4			2	4	6	0.01	C-02	0.01	0.03	19
-		4	•••			4		4	0.01		0.01	0:10	20
-										-	-	0.13	21
												0-11	22
15 10	25	133			1916	TREE	1901	1		130		24 11 11 11	100
		***		-								0.24	23
		14	17			16	15	31	0-03	0-04	0.04	0.22	24
3				6		7	2	9	0.03	0.01	0.02	0.01	25
	7	115	60	1		102	81	183	0.23	0.003	0.23	0.02	26
1 -				-					0.62			0.09	27
		-	-					***	-		1000		20
-					-								
38	147	628	463	86		802	563	1,365	0.08	0.06	0.07	C-30	-

ANNUAL FORM

DEATHS REGISTERED FROM SMALL-POX IN THE DISTRICTS

1		2		3		4							5
	Arr es			ES OF RATION.	VILI	AGES.						м	ONTHE
Number.	Dist	FRICTS.	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.						- 10	911	837			
1	Hissar		27	1	963					1	-		
2	Rohtak		19	10	731	12	1		3	2	1	1	2
3	Gurgaon		24	20	1,367	31		12	35	32	58	47	25
4	Karnal		25	16	1,382	69	6	8	8	21	31	3	10
5	Ambala		19	10	1,715	20	1	3	3	2	6	5	11
-6	Simla	***	3	1	23	1				2001	1		
	JULLUNDU	TR DIVISION.								1	1		
7	Kangra		15	1	713	1		***		***			
8	Hoshiarpur		23		2,108								
9	Jullundur		17	7	1,215	12			5	7	5	4	9
0 10	Ludhiana		14	9	858	50	4	1	- 6	4	1	6	15
11	Ferozepore	100	24	11	1,500	52	8	11	4	4	18	19	20
4.	LAHORE	DIVISION.		See !			1			- 33			
12	Lahore	000	29	23	1,193	131	5	1	9	11	14	25	20
13	Amritsar		15	19	1,039	82	4	4	5	6	11	13	13
14	Gurdaspur		22	7	2,238	11				1	2	3	3
15	Sialkot		30	7	2,349	9	1	1	1	3	2	· me	2
16	Gujranwala		33	3	1,733	5				1	2	4	2
	RAWALDIN	DI DIVISION.								BET	10		
	THE TABLE IN	DIVISION.		-				1/4		ar .			
17	Gujrat		15	3	1,326	5				1		1	2
18	Shahpur		23		1,054	***		***	***	***			
19	Jhelum		14		898								
20	Rawalpindi		14	3	1,177	3		1	144	1	1		
21	Attock		13	5	628	7		4		2		1	
22	Mianwali		15	3	396	5				3	3	2	1
-	MULTAN	DIVISION.	17 19	10.		-	1	1		-	0.7	-	
=							4-		-	1			
23	Montgomery	a (5200	21	6	2,439	9	7	6	8	6	4	10	3
24	Lyallpur	***	21	20	1,277	95.	3	10	13	22	29	33	28
25	Jhang		13	1	955	1							
26	Multan	100 00	20	12	1,353	18	2	2	6	3	6	6	9
27	Muzaffargarh		23	9	860	19		1	2	6	8	3	. 5
28	Dera Ghazi Khan	DOG DOG	23	5	707	10	4	3		3			2
1987		-							144		1		-
	Total for	the Province	554	205	34,196	658	46	68	108	142	201	186	182
-	700	A30 - 20 21	17 6	28	Louis	1	1 51		-	-	-	-	_

No. VIII.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

8				1		6		. 7			8	1	9	10
parent						TOTAL.	iny	NUMBI DEATHS ORILL	AMONG	RATIO 1,000 c	OF DEATHS	TICN.	O for pre-	
Angust.	September.	October.	November.	December,	Males.	Females.	Total.	Under one year,	Over one year and under ten years.	Malce.	Females.	Total.	Mean ratio per 1 000 for pre- vious five years.	Number,
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
112	205	ol	1	79										
					1		1	***	1	0.002	-	0.001	0.81	1
3	1		1	13	12	16	28	8	16	0.03	0.05	0-04	0.10	2
9	4	3	2		104	121	225	36	166	0.27	0.36	0.31	0:39	3
6	10	9	6	23	70	71	141	39	91	0.16	0.20	0.18	0.25	5
2	2	1	2	5	23	20	43	12	29	0.06	0.07	0.07	0.19	6
mil.	-		eri.			377.1	1	1		***	UUS	0 00		
1						1	1				0-002	0.001	0.06	7
		***			***		***	***	***	***			0.51	8
2	6	6			22	22	41	8	27	0.05	0.08	0.06	0.85	9
8	10	9			34	30	64	12	39	0.15	0.13	0.12	0.85	10
7	11	9	16	8	69	66	135	23	79	0-13	0-16	0.14	1.38	11
101,5	ISET.	on I	9-1		- 1	stall 3	DOLL !		11			4	7.70	13
25	21	29	23	19	80	121	201	43	130	0.14	0.28	0.20	0.77	13
20	12	13	10	6 2	67	10	117	22	84	0.14	0-13	0.13	0.33	14
	1				4	7	11	2	17	0.01	0.03	0.01	0.77	15
	010			1	9	1	10	1	7	0.02	0.003	0-01	0.43	16
Diffe	100.0		2322			144	112		1			ale and		
COPY !	THE REAL PROPERTY.					1000	1	1		Roles	Fre lak	Miller.		
1			1		6		6	2	2	0.01		0.01	1.09	1.0
			***				***	-		- 14		***	1.24	100
			***	***				***		***			0.87	00
100	250	-	1		5	3	3 8	2		0.03	0.004	0.01	1.32	-
	can"	1	2	1	5	8	13	4		0-03	0.05	0.04	0.29	1
00)	PIT	ST.	-	0.07		Mary I	PR			200	1000	7772	1	1
		1	1				1	6	101	1000		Transation of the	1 20	1
2	5	3	18	6	40	38	78	19	51	0.14	0.17	0-15	1:64	3
8	6	6	8	6	89	83	172	44	111	0.18	0-23	0.12	1.25	
0.07	10 to		1	10023	1	-	1			0.004		0.001	0.84	0.0
5	2	2	4	W	29	18		11	1	0.07	0.05	0.08	0.37	0.0
3	1 1			1	16	15		8			0.08	0.03	0.47	00
1	1			1	8	6	14	1	10	0.03	0.03	0.03	1.05	1
483,73	10,00	THE REAL PROPERTY.	TYC, U.S.		EII.ZO	100	- Lare	101	100	-	Tork of	118 UI 73	-	-
105	95	99	94	91	708	709	1,417	302	911	0.07	0.08	0.07	0-79	-
-	1							1	1	-	1	1	1	1

ANNUAL FORM

DEATHS REGISTERED FROM FEVERS IN THE

111	1	9 .	2		2		4	9				13.75		5
			MANUAL PROPERTY.	District Co.O.	CIRCL	ES OF RATION.	VILLA	ozs.					3	MONTES
1	Number.	Dr	STRICTS,		Number in each district,	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.	Janeary.	February.	March.	April.	May.	June.
	1		2	207	3	4	Б	6	7	8	9	10	11	12
-		AWRAL	A DIVISI		-	-	2							-
	1	Histor	a Divisi	te.	27	27	963	693	932	823	1,093	1,241	1,217	1,452
	2	Rchtak	100	110	19	19	731	717	787	F53	848	1,061	1,150	1,132
	3	Gurgaen	***		24	24	1,367	1,831	732	547	781	908	997	1,197
	4	Karnal			25	25	1,282	1,382	1,287	988	1,158	1,398	1,838	1,817
	5	Ambala	-	-	19	19	1,715	1,705	920	818	1,128	1,383	1,416	1,180
	6	Simla			3	3	23	17	17	12	24	39	61	41
		JULLUND	UR DIVI	SION.								-		
	7	Kangra			15	15	713	678	1,166	928	1,052	1,211	1,152	1,182
	8	Heshiarpur	***	-	23	23	2,108	1,905	1,174	952	1,456	1,683	1,620	1,358
	9	Jullundur	***	(17	17	1,216	802	904	737	1,015	1,168	1,185	1,074
	10	Ludbiana	***	***	14	14	858	714	496	386	471	614	553	542
	11	Ferczepere	E LIVISI		24	24	1,500	1,453	1,000	822	1,020	1,003	1,062	1,177
	12	Inhere		219			2 200		1 100	1.050	1.000	1.014	2044	
	13	Amritsor	***	-	29	29	1,198	1,140	1,430	1,052	1,276	1,214	1,844	1,374
	14	Gurdaspur	104	100	15	15 22	1,039	1,893	953	694	821	875	919	887
	15	Sialkot	11110		30	30	2,849	2,218	1,572	1,112	1,144	1,027	1,263	1,100
- 1	16	Gujranwala			33	38	1,738	1,733	2,905	1,880	1,633	1,264	1,546	1,435
		BAWALPI	NDI DIV											
	17	Gujrat			15	15	1,326	1,270	1,300	918	954	846	779	801
	18	Shahpur		***	23	23	1,054	1,054	939	744	762	756	815	1,026
	19	Jhelum	***		14	14	898	898	819	661	785	611	63C	528
	20	Rawalpindi	-		14	14	1,177	877	1,014	831	875	752	684	609
-	21	Attock	-		13	18	628	628	991	791	891	794	651	583
	22	Mianwali	***		15	15	\$96	396	1,027	600	852	702	762	690)
			N' DIVIS	ION.		1					1			
	23	Montgomery			21	21	2,438	2,325	796	638	630	580	699	638
	24	Lyallpur	***		21	21	1,277	1,249	903	779	1,002	1,034	1,288	1,245
	25	Jhang	•••		13	13	955	906	786	720	708	620	697	667
	26	Multan			20	20	1,353	1,853	1,923	1,239	1,287	1,122	1,398	1.046
	27	Muzaffargarh Doza Ghazi I		***	23	23	860	686	1,900	1,188	1,173	1,112	1,205	969
	28	Dera Ghazi F	han	***	23	23	707	524	1,448	942	922	856	799	780
	in	Total for	the Provi	nce	554	554	34,196	31,606	31,325	23,443	26,797	26,940	28,469	27,064

No. IX.

DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

							6			7		8	9
amen's						1	TOTAL.	-draway		F DEATHS		for (
											-	1,000	
July.	August.	September,	October.	November.	December.	Males,	Females.	Total.	Males.	Females,	Total,	Mean ratio per 1,000 previous five years.	Number,
13	14	15		17						-			
	1.9	10	16	**	18	19	20	21	22	23	24	25	26
100			100	21	90	HOE	450		25			-	I
1,418	1,041	1,253	3,236	4,255	2,455	10,121	10,295	20,416	23.08	28.10	25:46	17-91	1
921	769	963	1,671	2,038	3,480	6,880	6,443	13,313	17:85	19:56	18.61	15.61	2
971	846	1,132	3,948	6,502	4,459.	11,262	11,708	22,970	28.94	14:44	31.20	14/12	8
1,344	1,016	902	1,161	1,738	1,391	7,857	7,181	14,988	17:95	19.69	18.74	19.07	4
1,081	801	797	1,079	1,172	1,089	6,667	6,207	12,874	18 65	29.56	20.35	18:12	5
39	43	40	-44	33	. 10	209	194	403	9'49	14:97	11.2	8.61	6
155	CT.	THE STATE OF	-				al six			3000			
1,159	1,134	1,395	1,295	1,026	901	6,943	6,658	13,601	17:43	18-08	17.74	17'88	7
1.244	1,235	1,554	2,250	2,100	1,613	9,308	8,986	18,294	18-56	21.55	19-92	18'64	8
1,026	1,087	1,212	1,665	1,753	1.376	7,084	7,118	14,202	16.08	20:49	18.02	14:42	9
536	588	642	843	1,037	786	3,752	3,742	7,494	12.78	16.73	14:49	12-19	10
981	846	1,092	2,262	3,414	2,645	8,985	8,879	17,364	17:25	20.31	18-60	13.22	11
1503			Minus				20772			.80		20.00	10
1,293	1,343	1,957	3,998	5,157	2,865	12,566	12,437	25,403	22-20	28.51	24-96	16 08	12
921	1,417	2,026	4,633	5,134	3,500	12,346	12,121	24,467	24.91	31-18	27.83	17.88	13
1,166	562	1,801	2,508	2,849	1,885	8,616	8,492	17,108	18.48	28-17	20-55	14-22	15
1,879	1,257	2,774	6,611	5,3/0	2,817	13,752	13,441	27,193	25.91	31.08	28-23	20.70	16
2,010	1,894	2,668	8,808	7,801	5,496	20,217	17,992	38,209	39.01	44:41	41.26	2010	10
921	500	7 400	0.803	0.70	0.005		0.000	10 005	00.70	25-90	24.66	14.58	17
804	809	1.403	3,561	3,768	2,825	9,448	8,937	18,385	23.58	36.13	32-68	18-53	18
521	586 489	1,482	4,666	5,960	3,922	11,245		22,462 11,278	1 200	22.88	22-37	16-51	19
503	476	€85 800	1,723	1,104	1,689	5,740	5,538	9,840	1 25 17	18.48	18:40	20:10	20
582	573	746	1,858	2,211	1,707	4,906	6.071	12,378	372.0		24.02	19:48	21
510	375	853	1,910	2,379	1,665	6,307	6,832	12,565	24-65	89-21	26.81	21.62	22
02		61	1,010	2,010	1,000	0,,00	0,002	1	6200		1	Sales and	1 22
463	480	1,048	3,859	6.093	4,559	10,223	10,260	20,483	37-02	45.00	40-63	14-97	23
928	901	1,608	8,767	4,405	2,966	10,338	10,488	20,826	20-58	27-22	23.43	18.17	24
472	460	823	2,287	4,782	3,311	8,085	8,248	16,333	29:17	34.60	31.68	14:56	25
824	770	1,869	6,218	9,034	6,550	16,945	16,280	33,275	38-92	44-62	41.52	18-27	26
776	557	1,837	4,558	5,912	4,073	12,865	11,895	24,760	41-72	(45-56	43.48	28-11	27
632	574	1 192	3,211	5,486	3,676	10,679	9,759	20,418	39-13	42.50	40.85	17.50	28
100	113		=	01	100	0.00	1375	TR.	1 =	1 111 0	1007	Will son	Letter .
01.005	00.555		08.000	204.55			050.050	510.000	04.53	90.71	00.10	16.68	
24,685	22,862	35,894	85,€80	104,555	78,098	259,959	250,853	510,812	24.51	28-74	26-42	10.68	
1						1			-	-	1	-	1

ANNUAL FORM

DEATHS REGISTERED FROM DYSENTERY AND DIARRHEA IN THE

1	2			3		4						5
				ES OF REGIS- RATION.	V ₁	LLAGES.						MONTHS.
Number.	DISTRICES		Number in each dis- trict,	Number from which deaths from dysen- tery and diarrhon were reported.	Number in each dis-	Number from which deaths from dysen- tery and diarrhora were reported.	January.	February.	March.	April.	May.	Jure.
1	2		3	4	5	6	7	8	9	10	11	12
N. Contract	AMBALA DIVI	SION.										
1	Hissar		27	27	963	201	32	18	26	18	31	49
2	Rohtak	•10	19	19	731	278	20	14	.19	30	36	45
8	Gurgaon		24	24	1,357	443	30	18	19	29	68	77
14	Karoal	***	25	-25	1,382	153	21	10	10	30	58	36
.5	Ambala		19	19	1,715	321	42	27	45	58	49	52
×6	Simls	****	3	3	23	8	1		1	1	1	6
100	JULLUNDUR DIV	ISION.	1		196	a later		1		TE L		
7	Kangra		15	15	713	369	37	53	57	85	78	77
8	Hoshiarpur		23	15	2,108	20	1	1	6	1	4	2
9	Jullundur		17	17	1,215	96	14	14	23	47	35	35
10	Ludhiana		14	14	858	86	14	5	6	14	19	15
11	Ferozepare		24	21	1,500	91	36	27	29	29	40	54
	LAHORE DIVIS	ION.	24	-				1000	- 11	Y I	76	Test
12	Labore		29	26	1,193	213	40	40	40	35		48
13	Amritsar		15	15	1,039	220	48	26	18	26	46	50
14	Gurdaspur		32	22	2,238	473	50	28	38	51	70	61
15	Sialkot		30	29	2,349	494	65	- 88	45	60	86	79
16	Gujranwsla		33	32	1,733	139	17	8	6	21	16	19
	RAWALPINI DIVISION.											2334
17	Gujrat		15	15	1,326	175	22	23	19	18	- 29	27
18	Shahpur		23	22	1,054	169	17	15	35	20	20	26
19	Jhelum		14	14	893	116	16	1.3	23	19	22	19
20	Rawalpiodi	-	14	14	1,177	209	142	133	154	109	131	122
.31	Attock		13	9	628	14	8			1	1	3
:22	Mianwali		15	14	396	72	19	11	21	10	21	12
1	MULTAN DIVIS	SION.			1000				07/4		000	
:23	Montgomery		21	19	2,438	30	9	2	5	8	7	1
24	Lyallpur		21	21	1,277	243	35	18	17	67	50	40
25	Jhang		13	13	955	201	15	26	19	28	23	26
:26	Multan		-20	14	1,353	47	23	6	23	21	20	12
27	Muzaffargarh	D	23	16	860	21	6	10	8	7	6	1
28	Dera Ghazi Khan		23	21	707	210	30	16	28	-81	115	27
	Total for the Pro-	rince	554	515	34,196	5,112	805	600	737	859	1,020	1,019
						. 1			-			

No. X.
DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

2.5			- Control			1	1/4	6			7		8	9
							2019	TOTAL.	m to a const	RATIO 0 1,000 0	P DEATHS	PER FIGN.	or pre-	
-	July.	Angust.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 for pre- vious five years.	Number.
1	13	14	15	16	17	18	19	20	21	22	23 .	24	25	26
2											NO THE	715 L. 73	EHE	
	46	42	53	98	105	57	319	251	570	0.73	0.58	0.71	0-63	1
1	42	46	66	81	80	61	273	267	540	0-71	0.81	0.76	0.44	2
1	109	107	106	160	225	197	615	196	1,145	0.58	1.55	1 57	0-79	3
1	44	46	50	42 72	70	39 66	253 365	263	449 628	1.02	0.54	0.56	0.49	6
1	12	11	4		3	4	24	20	44	1-09	1.54	1-26	1-38	6
1000		**										120		
200						* 72					1	HI IS	THE PARTY	
1	107	98	98	112	71	65	488	450	938	1.23	1.23	1.22	1-00	7
	3	1	2	3	***	7	21	10	31	1	0.02	0.03	0.06	8
	30	52	46	37	31	22	223	162	385	0.28	0.47	0.49	0.23	9
1	14	10	23	35 96	13	21 89	113	76 230	189	0.84	0-34	0.37	0.47	10
T. E.	25	30	- 0.0	90	110	53	331	250	011	000	000	0-65	0.45	14
			4								Mohar	the and	10.1	
1	50	56	72	102	105	97	437	238	725	0.75	0.66	0-71	0.63	12
1	64	92	124	245	365	218	718	604	1,322	1.45	1.57	1.20		13
	71	104	168	378	297	148	801	-663	1,434	1.72	1.81	1.76		1.6
	69	82	174	460	211	83	780	672	1,453	1.47	1.35	1-51		15
STATE OF	16	29	20	30	53	47	15!	121	272	0.29	0.30	0.29	0-28	16
V					0.0						or ovis	ronig		1
	37	32	48	89	48	51	239	204	413	0.60	0-59	0.39	0.48	17
1	28	. 25	36	30	21	36	175	134	309	0.46	0.43	0-45	0.33	18
1	15	18	25	29	24	17	157	86	243	1	0-36	0-18	and the last in	19
-	109	133	151	188	250	169	936	794	1,730		3.31	3.53	of the said	20
		1	5	6	1	4	14	11	25		0.04	0-05	0.08	31
1000	12	16	22	31	3)	20	112	113	225	0.62	0.70	0.66	0-63	22
776		-								1				1
7	7	8	9	6	7	10	45	34	79	0.16	0.15	0.16	0.11	23
1	37	35	40	54	65	59	293	224	517	1	0.58	0.58	035	24
-	10	23	43	32	1000	54	195	161	356		0.68	0.69	0.57	25
1	11	38	31	39	77	56	199	158	357		0 43	0.45	0.37	26
4	2		4	14	14	12	50	34	64		0.13	0.15	-0:15	27
-	13	23	21	36	80	62	208	175	378	0-75	0.77	0.76	0.43	.28
September 1	1,031	1,201	1,542	2,500	2,496	1,771	8,590	6,981	15,571	0.81	0.80	0:80	064	

ANNUAL FORM

DEATHS REGISTERED FROM RESPIRATORY DISEASES IN THE

1	8 2 1			3		4						5
	MAN WHEN THE PARTY OF THE PARTY			OF REGIS-	VIL	LAGES.						Можтив
Number.	Districts.	Number in each		Number from which deaths from res- piratory diseases were reported.	Number in each district.	Number from which deaths from res- piratory diseases were reported.	January.	February.	March,	April.	May.	June.
-1	2	3		4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										T	
-1	Hissar		27	27	963	271	148	118	137	131	83	71
2	Rohtak		19	19	781	426	108	78	86	94	72	64
- 3	Gurgaon		24	24	1,367	548	108	78	13 *	91	109	85
- 4	Karnal	10	25	25	1,382	413	162	104	119	165	132	198
5	Ambala		19	19	1,715	563	377	330	345	302	312	215-
6	Simla	***	3	3	23	.11	19	10	19	26	28	16
	JULLUNDUR DIVISIO	N.										
7	Kangra		15	15	713	£88	247	269	280	275	159	140
8	Hoshiarpur		23	23	2,108	3,015	282	248	268	287	194	174
0 9	Jullundur		17	17	1,215	573	218	211	281	176	154	141
10	Ludhiana		14	13	858	351	150	113	148	114	94	83
11	Ferozepore		24	24	1,500	418	168	183	212	169	126	115
	LAHORE DIVISION.											
12	Labore 05:0		29	28	1,198	482	221	175	176	161	148	147
13	Amritsar ***	100	15	15	1,039	625	326	259	307	289	291	336
14	Gurdaspur		22	22	2,288	2,173	827	673	759	768	746	645
15	Sialkot		30	30	2,349	1,807	392	345	402	389	361	266
-16	Gujranwala		33	33	1,783	331	97	60 74	94	68	70	61
	RAWALPINDI DIVISIO	N.										
	all the work as -	500				ias I	181	10	100		144	14
17	Gujrat	F B 0	15	15	1,326	480	161	144	205	174	151	154
18	Shahpur	17979	23	23	1,054	341	144	115	145	90	59	50
19	Jhelum		14	14	898	425	128	102	112	68	106	72
20	Rawalpindi	1900	13	14	1,177	565	232	196	216	171	61	87 64
21	Attock Mianwali		15	13	628	93	135	154	135	23	13	14
22	Miniwati	***	10	10	396	20	20		1.9	20	-	
	MULTAN DIVISION.	1000				10	loz d		0			
23	Montgomery		21	21	2,438	63	13	21	15	7	. 10	4
2.5	Lyallpur		21	20	1,277	511	100	99	118	118	100	83
25	Jhang 130 130		13	13	925	139		FR	W4	42	29	18
26	Multan 100		20	15	1,353	29	44	28	45	37	39	32
27	Muzaffargarh		23	22	860	81	41	25	19	18	4	5
28	Dera Ghazi Khan		23	22	707	219	5.6	27	38	27	19	26
	Total for the Persines	-	-		94.100	19 090	4,930	4.190	4,783	4,367	3,780	3,367
-	Total for the Province		54	544	34,196	13,238	4,000	4,200	9,700	2,001	0,100	

No. XI.

DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

							6			7		8	9
- amount						LATER !	TOTAL.		RATIO O	OF DEATH	S PER	o for	
July.	August.	September,	October.	November.	December.	Males.	Females.	Total.	Males.	Pomales.	Total.	Mean ratio per 1,000 previous five years.	Number,
13	14	15	16	17	18	19	20	21	22	23	24	25	26
80 80 77 150 148 10	67 85 52 91 162 16	52 74 82 126 207	118 138 182 95 244 27	128 143 300 170 342 13	151 163 290 135 382 22	676 630 824 874 1,787	608 550 767 773 1,579 84	1,284 1,180 1,591 1,647 3,366 217	1·54 1·63 2·12 2·00 5·10 6·04	1.66 1.67 2.26 2.13 5.74 6.48	1·60 1·65 2·18 2·06 5·32 6·21	1·37 1·83 2·13 2·02 3·74 4·15	1 2 3 4 5 6.
165 164 172 83 125	169 177 164 88 - 122	200 250 234 92	204 306 212 142 171	200 263 203 114 213	201 249 153 171 261	1,360 1,656 1,264 773 1,033	1,149 1,206 1,005 619 883	2,509 2,862 2,269 1,392 1,916	3-41 3-30 2-87 2-63 1-98	3·12 2·89 2·89 2·77 2·14	8-27 3-12 2-88 2-69 2-05	3·10 2·44 4·27 2·55 1·75	7 8 9 10
133 316 674 297 68	770	196 655 1,208 498 64	175 1,025 1,749 746 77	244 865 1,465 507 62	381 582 1,095 381 69	1,249 2,770 6,093 2,727 516	950 2,852 5,286 2,177 344	2,199 5,622 11,379 4,904 860	2·15 5·59 13·07 5·14 1·00	2 18 7·43 14·43 5·03 0·85	2:16 6:39 13:67 5:09 0:93	1.86 3.82 10.76 4.51 0.94	12: 18: 14: 15: 16:
120 55 83 49 68	47 61 65 47	185 44 60 78 73	254 53 54 77 53	157 55 58 127 70	187 78 86 144 50 8	1,145 572 580 968 521 100	904 363 410 584 473	2,049 935 990 1,552 994 194	2:86 1:52 2:21 3:61 1:93 0:56	2·62 1·17 1·69 2·43 1·93 0·68	2-75 1-36 1-96 8-1-93 0-57	2·88 1·01 1·86 2·21 1 37 0·58	17 18 19 20 21 22:
10 68 16 44 7 10	67 13 41 2 25	9 73 6 42 15 35	2 84 19 53 22 52	9 113 34 30 15 28	15 104 10 41 17 32	79 641 104 219 106 210	47 486 83 257 84 165	126 1,127 187 476 190 375	0·29 1·27 0·38 0·50 0·34 0·77	0·21 1·26 0·35 0·70 0·32 0·73	0°25 1°27 0°36 0°59 0°33 0°75	0·31 0·87 1·04 0·04 0·18 0·47	23 24 25 23 27 28

ANNUAL FORM

DEATHS REGISTERED FROM PLAGUE IN THE

1	2	1		3	01 11	4						5
				LES OF	VIL	LAGES.	-		-		м	ONTHS
Number,	Districts.		Number in each dis-	Number from which deaths from pingue on were reported.	Number in each Als- trict,	Number from which deaths from plague were reported.	January.	February.	March.	April.	Мау.	June.
1	2		3	4	5	- 6	7	8	9	10	11	12
	AMBALA DIVISION.											
1	Hissar		27	2	963	1						
2	Rohtak		19	1	731	1		***	100			***
3	Gurgaon		24	3	1,367	2	***		1		8	(++
4	Karnal		25	3	1,382	8	17	1	3	15	60	33
5	Amabla		19	7	1,715	59	51	105	275	323	363	117
6	Simla		3		23	***	1944					-
	JULLUNDUR DIVISIO	N.										-
7	Kangra	***	15	2	713	4			11			4
8	Hosbiarpur	***	23	5	2,108	11	***	***	3		8	
9	Julius dur	***	17	9	1,215	43	13	17	43	62	100	. 52
10	Ludhiana		14	8	858	50	11	19	25	68	74	41
11	Ferozepore	***	24	1	1,500	1		***		1	****	
	LAHORE DIVISION.				1301		-				000	
12	Lahore		29	16	1,193	111	9	15	49	150	302	238
13	Amritsar		15	. 7	1,039	9		4	8	16	28_	4
14	Gurdaspur	***	22	9	2 238	41	29	69	56	120	132	78
15	Sialkot		30	8	2,349	12	6	9	5	3	6	3
16	Gujranwala	***	23	8	1,733	35	2	1	31	77	159	73
	RAWALPINDI DIVISIO	N.	da	20		mi L	BI LI	128		-	1 22	
17	Gujrat		15	3	1,326	23	6	1	9	15	6	4
18	Shahpur		23	6	1,954	4			2	1	4	2
19	Jhelum		14	8	898	31	12	21	48	80	150	41
20	Rawalpindi		14	11	1,177	109	10	20	8	49	42	35
21	Attock Mianwa'i	*	13		628 396	8				***		
	MULTAN DIVISION,				97		9		9,13	1	OF .	1
23	Mon'gomery	***	21	3	2,438	A44.			***	***	413	
:24	Lyslipur		21	1	1,277	01 1	-		***	4	18	4
:25	Jhang		13		955	13	19		***	144	***	
26	Multan	***	20	1	1,853	1000		·				
27	Muzaffargarh	***	23		_ 560	***			15	-		
:28	Dera Ghazi Khan	***	23		707	2		***				
	Total for the Province		554	127	34,196	564	166	282	577	994	1,460	783

No. XII.

DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

	3161139	11 11 0	usman.	10000	1 11 11	1	W W	6	THE Y	HOKO	~	1	. 1	9
	PAR INDI		1136					0			. 7		8	
								TOTAL.	-	1,000 o	F POPULA	TION.	o for	
1	July.	August.	September.	October.	November.	December,	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 for provious five years.	Number.
		-		-							-		7	26
	13		15	16	17	18	19	20	21	22	23	24	25	26
-	8						100	ani.			1		100	
			1			15	7.	9	16	0.02	0.02	0.02	1.64	1
						11	4	7	11	0.01	0.03	0.03	1.93	2
			***	***		1	6	4	10	0.02	0.01	6-01	2.88	3
	2	***				8	72	67	139	0.16	0.19	0.17	3.76	4
	14		1	5	10	57	677	. 644	1,321	1.89	2:34	2-09	3-66	5
-					***	***								6
1	5 17	Total Control									-			
1	100	-		1										
	1		2	3	***	4	9	16	25	0.02	0.04	0-03	0.71	7
1	***	2			11	33	35	17	52	0.07	0.04	0.06	4:48	8
1	5	2	1	4	143	445	423	464	887	0.98	1.34	1.13	6-13	9
1	4			3	113	307	330	335	665	1.12	1.20	1-29	5:07	11
1						***	1	***	1	0.001		0.001	1.20	-11
1		10.	4	W.					1	01-1				
-		15		51	070	*****	1,085	971	2,056	1.87	2.23	2-32	1.94	18
1	33	***	1	100	379	779	42	52	94	0.08	0.14	0-11	5.02	18
	20		11		18	148	338	360	698	0.73	0.98	0.84	6-26	4
	4	1	3	1	1		24	18	42	C:05	0.04	0.04	6-02	15
		1			42	146	286	246	532	0.55	0-61	0.28	7-98	16
1													- GH	
										3				
1			1	1	4	2	23	26	49	0.08	0.03	0.07	8-49	17
-	ACT	134.5	1			1	7	4	11	0.02	0.01	0.02	3·22 6:31	181
9	7	1	14	18	24	7	195	238	433	0.74	0.98	3-18	6:39	20
A	18	59	134	418	439	333	807	807	1,614	8-01	0.04	0.07	3-50	21
	2	***		1	3	18	23	11					0-0-1	22
1		120	***										44	
			100	100	41	100		100	1 1				784	
1	***		***		11	44	46	9	55	0.17	0.04	0-11	0.33	23
1			***				13	14	26	0.02	0.34	0.03	1.98	24
1			***										1:35	25
1	2. "		***		***	4	4		- 4	0.01		0.004	0.08	23
1				181		***							(-01	27
1				-									127	28
1	112	82	172	505	1,250	2,392	4,456	4,319	8,775	0-42	0.43	0.45	3-43	

MONTHLY STATEMENT OF PLAGUE OCCURRENCES IN BRITISH

	9 1 7	-					-						_
		JANI	ARY.	FEBRU	JARY.	Mai	CH.	APE	II.	Ma	Y.	Ju	NE.
.6	District and Native States.												
Serial No.		2.	Deaths.	Cases,	Peaths.	Cases.	Deaths.	Cases,	Deaths,	Cases.	Deaths.	68.	Deaths.
Ser		Cashe.		Ca		Ga	De	-	De	Cas	- A	Cases.	Dea
1	2	3	4		6	7	8	9	10	11	12	13	14
1	Histor												***
2	Rohtak					***							-4-
3	Gurgaou		***			4	1			8	8		
4	Karnal	22	17	1	1	3	3	17	15	65	60	32	33
5	Ambala	83	55	199	128	357	298	479	353	415	368	. 193	117
6	Simla	***			***							1.	
5	Kangra			***	***	11	11	***	***	1		4	4
8	Hoshiarpur	15		44		6	3		62	205	3		
9	Tadhiana	20	13	8	17	126	43	159	68	128	100	103	52
10	P	1				45	25	143	1	2		83	41
12	Labora	19	9	29	15	108	49	211	150	492	302	7.	***
13	Ameliana	1		20	4	18	8	23	16	56	28	411	288
14	Condessor	95	29	79	69	67	56	139	120	143	132	91	78
15	Sialkot	6	6	10	9	13	5	3	3	6	6	3	3
16	Gujranwala		2	17	1	23	31	100	77	227	159	- 92	73
17	Gujrat	. 7	6	2	1	23	9	20	15	15	6	4	4
18	Shahpur					8	2	33	1	32	4	8	2
19	Jhelum	18	12	35	21	86	49	155	91	213	156	68	41
20	Rawalpindi	11	10	26	20	8	8	105	50	85	44	76	36
21	Attock	-								7	5	6	4
22	Mianwali												
23	Montgomery							***					***
24	Lyallpur	***	***					22	4	30	18		4
25	Jhang	***				2							
26	Multan	1											
27	Muzaffargarh												
28	Dera Ghazi Khan												
135	Total British District	237	170	470	305	908	601	1,618	1,026	2,134	1,473	1,175	784
1	Patiala			11	11	6	6	24	24	50	50	13	18
2	Kapurthala						***	10	6	21	13	10	19
3	Maler Kotla							***					***
4	Jind	39	23	26	24	37	21	49	34	24	26	4	5
5	Kalsia				1	760		***					
6	Faridkot		***				114						
7	Nabha										***		
8	Pataudi							***					
9	Bahawalpur	-								-			
10	Nalagarh	-			***								
11	Bilaspur												
	Total Native States	39	23	37	85	43	27	83	64	95	89	27	37
	GRAND TOTAL	276	193	507	340	951	628	1,701	1,090	2,229	1,562	1,202	821
-					100000000000000000000000000000000000000	40.00	the same of the same					1000	

No. I.
DISTRICTS AND NATIVE STATES IN THE PUNJAB DURING THE YEAR 1917.

_															11/05
Jui	LY.	Avo	UST.	SEPTE	MBER.	Осто	DBBR.	Novi	ember.	DECE	MBER.	То	TAG,		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases,	Deaths.	Cases.	Deaths.	Самов,	Deaths.	Serial No.	REMARKS.
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
				1	1					40	15	41	16	1	
	***						***		***	18	11	18	11	2	
	***									1	1	13	10	3	
2	2									8	8	150	139	4	
14	14	"		.2	1	12	7	30	13	69	73	1,853	1,427	5	
					***	***	***				***	***	***	6	
1	1			4	2	5	3	2		15	4	43	25	7	
		2	2				***	14	11	34	33	60	52	8	
9	5	2	2	3	1	15	4	216	143	609	445	1,506	887	9	
9	4					24	3	246	113	553	307	1,259	665	10	
•••												11	1	11	
34	33	2		2	1	73	52	575	387	1,074	780	3,028	2,068	12	
2	2			1	1			3	2	30	29	153	94	13	
27	20	21	17	12	11			23	18	182	148		• 698	14	
8	4	1	1	3	3	3	1	1	1			58	42	15	
	***	2	1					61	42	128	146	658	532	16	
				3	1	2	1	8	4	2	2	86	49	17	
11.1	111	589		2	1				***	1	1	84	11	18	
6	7	3	1	22	14	20	18	33	24	11	7	670	441	19	-
42	19	114	68	233	155	732	489	727	513	368	339	2,527	1,746	20	
	3	2		4	1	1	1	10	- 3	16	18	46	34	21	
								***						22	
	,,,		***		***			22	11	67	44	89	55	23	1000
		***	***					***			***	52	26	24	170-10
			-				100	***		2		4		25	
						***				4	4	4	4	26	
***								***				***		27	
***	***		***	***	***	***		***	***					28	
154	113	149	87	292	193	886	579	1,976	1,285	3,232	2,415	13,225	9,031		
2	2			33	32		*	44	44	229	229	411	411	1	
								3	3	104	- 68	148	109	2	
							***				***			3	
***		***		***	***							179	133	4	
										1	1	1	1	5	
						***			***					6	3
								24	18	21	21	45	39	7	
							***							8	
						***		***				***	-+1	3	
	***			100								***		10	
100	***													11	
2	2			3.2	33	***		71	65	355	319	784	693		1
-	115	149	87	324	225	896	579	2,041	1,350	3,587	2,734	14,009	9,724		

TRICTS AND NATIVE STATES IN THE PURIAL DURING THE PEAR 1997.

			land I v						- area
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