

Annual public health report of the Province of Bihar and Orissa; and Annual vaccination report.

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ANNUAL PUBLIC HEALTH REPORT

OF THE

PROVINCE OF BIHAR AND ORISSA

FOR THE YEAR

1930

AND THE

ANNUAL VACCINATION REPORT

FOR THE YEAR

1930-31

BY

Major S. L. MITRA, D. P. H., I. M.S.,



PATNA

SUPERINTENDENT, GOVERNMENT PRINTING, BIHAR AND ORISSA

1931

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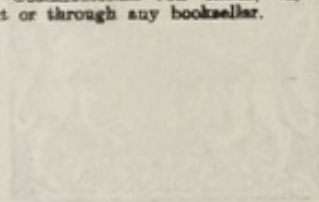
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CONTENTS.

	PARA.	PAGE.		PARA.	PAGE.
SECTION I—METEOROLOGY	1	SECTION VII—HISTORY OF VACCINATION ...	22	10
Rainfall and grain prices	1	...		
SECTION II—EUROPEAN ARMY ...	}		SECTION VIII—SANITARY WORKS (MILITARY) ...	23	<i>ib.</i>
SECTION III—INDIAN ARMY ...	}	2	...		
SECTION IV—JAILS ...	}		SECTION IX—SANITARY WORKS (CIVIL)—		
			General ...	24	<i>ib.</i>
SECTION V—GENERAL POPULATION—VITAL STATISTICS—			Expenditure on sanitation in municipal towns ...	25	11
General Census	3	Chief sanitary works in municipal towns ...	26	<i>ib.</i>
Births	4	Expenditure on sanitation by district boards ...	27	<i>ib.</i>
Provincial birth-rate	<i>ib.</i>			
Birth registration	5			
Deaths	6	SECTION X—PERSONNEL, PROCEEDINGS AND PROGRESS—		
Death registration	7	Director of Public Health ...	28	12
Mortality according to age, class and sex	8	Touring ...	29	<i>ib.</i>
Verification of the registration of vital occurrences	9	Municipal inspections ...	30	<i>ib.</i>
A—Compulsory areas	<i>ib.</i>	Inspection of schools and unions ...	31	<i>ib.</i>
B—Rural areas	<i>ib.</i>	Lectures ...	32	13
Publication of Vital Statistics	10	Special duties and reports ...	33	<i>ib.</i>
			Health Officers ...	34	14
SECTION VI—HISTORY OF CHIEF DISEASES—			School Medical Officers ...	35	15
Comparative incidence of chief diseases	11	The Epidemic Cadre of Assistant Surgeons ...	36	<i>ib.</i>
Cholera statistics	12	Public Health Bureau ...	37	16
Cholera in the Province	13	Village Sanitation ...	38	<i>ib.</i>
Cholera preventive measures	14	Sanitation of fairs and melas ...	39	<i>ib.</i>
Small-pox	15	Jharia Mines Board of Health ...	40	18
Fever statistics	16	Public Health Laboratory ...	41	19
Sale of quinine	17	The Sanitary School ...	42	20
Free supply of quinine to schools	18	Personal ...	43	<i>ib.</i>
Free supply of Cinchona Febrifuge	19	Vaccination Report ...	20 to 24	
Plague statistics	20			
Dysentery and diarrhoea	21			

CONTENTS

Page	Page	Page	Page
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
31	31	31	31
32	32	32	32
33	33	33	33
34	34	34	34
35	35	35	35
36	36	36	36
37	37	37	37
38	38	38	38
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
47	47	47	47
48	48	48	48
49	49	49	49
50	50	50	50
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52	52	52	52
53	53	53	53
54	54	54	54
55	55	55	55
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57	57	57	57
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61	61	61	61
62	62	62	62
63	63	63	63
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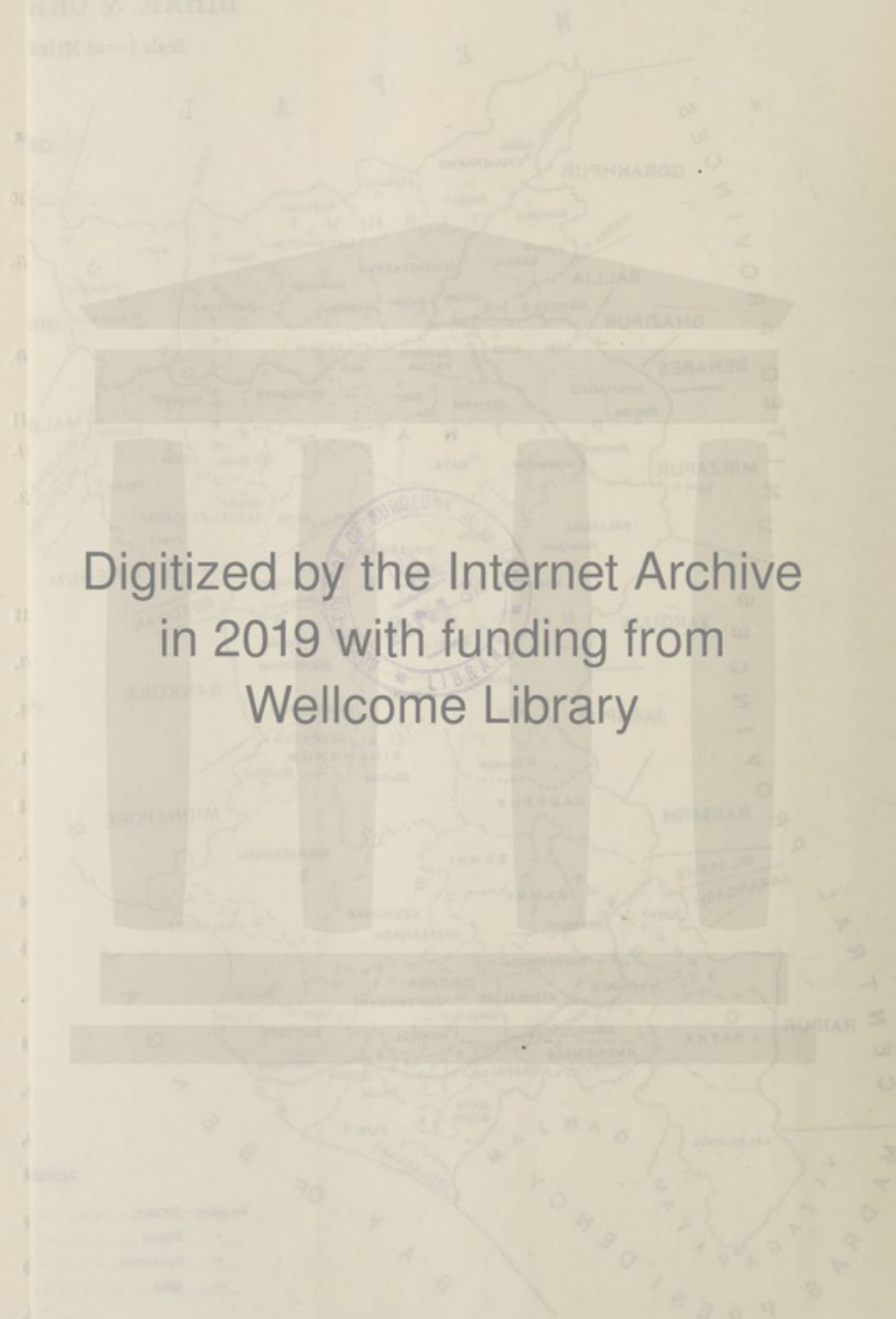
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| 2 NILGIRI | 6 ATHGARH |
| 3 NARSINGHPUR | 7 KHANDPARA |
| 4 BARAMBA | 8 RANPUR |

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Annual Public Health Report of the Province of Bihar and Orissa for the year 1930.

INTRODUCTION.

SECTION I — *Meteorology.*

1. Rainfall and grain prices.—

The following brief account of the Meteorological conditions in Bihar and Orissa during the year 1930 is extracted from the report of the Director-General of Observatories :—

The total rainfall for the year was on the whole below normal in the province. It was in slight defect in all the districts of the province except Shahabad, Ranchi, Manbhum and Palamau where it was in slight excess.

In the month of January, the rainfall was in slight defect in Bihar and was in large defect in other places, the weather being wholly dry in Chota Nagpur and Orissa. Humidity was in defect in Orissa.

In February, the usual western disturbances hardly affected the province except for one which gave local rain in Chota Nagpur and Orissa. The month's rainfall was in large defect throughout the province. Minimum temperature was below normal in Orissa and Chota Nagpur. Humidity was in defect in Orissa.

During March, the rainfall was in slight excess in Bihar, in slight defect in Orissa and in large defect in Chota Nagpur. Humidity was in defect in Orissa and Chota Nagpur and the maximum temperature was above normal in Chota Nagpur.

In April, five western disturbances caused thunder showers in Orissa, and the rainfall was in moderate excess in Chota Nagpur and in moderate to large defect elsewhere. The skies were more clouded than usual in Bihar and Chota Nagpur. Humidity was in defect in Bihar. The maximum temperature was below normal throughout the province.

In May the rainfall was in moderate defect in Orissa and in large defect in Bihar and Chota Nagpur. Humidity was in defect in Bihar and Chota Nagpur.

In June the bay monsoon extended feebly in Bihar and Orissa by the middle of the month and was active in Bihar and Chota Nagpur between the 18th and 23rd. Conditions were unsettled off the Orissa coast and widespread and local heavy rain fell in Orissa near Puri on the 1st July. Humidity was in defect in Orissa and Chota Nagpur and the maximum temperature was above normal in these places.

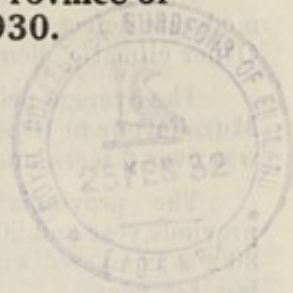
In July there were heavy rains in Chota Nagpur and the rainfall for the month was in large excess and the mean maximum temperature was below normal in this area.

In August the rainfall was below normal in Bihar and Orissa. Other climatic elements were roughly normal.

In September there were widespread rains in the province. Other climatic elements were more or less normal.

In October the rainfall was in large defect in Bihar and Orissa. The other climatic conditions were practically normal.

In November, the total rainfall was in large excess in Bihar and Orissa. Humidity was in excess and maximum temperature was lower than usual in Chota Nagpur.



In December the rainfall was in excess by 245 per cent in Bihar, in moderate defect in Chota Nagpur, the month being absolutely dry in Orissa. Other climatic elements were roughly normal.

The average price of common rice varied from 5 seers to the rupee in Muzaffarpur to 16 seers 12 chataks in Angul. In the majority of districts it was over 6 seers, and the price fell towards the end of the year.

The provincial death-rate rose to 29·6 as compared with 26·9 in the previous year and 26·9 the average of the last ten years; the birth-rate rose to 36·2 as compared with 35·6 in the previous year and 36·0, the average of the last ten years.

2. SECTION II.—*European Army.*

SECTION III.—*Indian Army.*

SECTION IV.—*Jails.*

These sections are no longer dealt with in provincial Public Health report.

SECTION V.

General Population—Vital statistics.

3. General census.—

The population of the province according to the census taken in 1921 with the subsequent corrected figure for the Shahabad district was 34,004,546 which figure has been used in calculating all the ratios in this report. The population and vital occurrences of the tributary States of Orissa are not included in this report.

4. Births.—

The total number of births in this province during the year was 1,231,315 as compared with 1,212,624 in the previous year. The provincial birth-rate for the year 1930 was 36·2 as compared with 35·6 in 1929 and 38·3 in 1928. The average birth-rate for the last ten years was 36·0.

5. Birth Registration.—

The highest birth-rates of the year were recorded in the district of Angul (48·4) and the lowest birth-rate in the district of Purnea (25·3). Tikari, Revelganj and Lalganj head the municipalities with the high rates of 55·1, 49·3 and 46·5 respectively, whilst Deoghar, Dhanbad and Madhupur have recorded the lowest rates, namely 2·9, 3·3 and 6·6 respectively.

The general birth-rate for the towns in the province was 22·4 and for the districts excluding towns 36·7. The majority of the towns and districts reported rates near the mean figures. The exceptions, both high and low, are few, and the variations occur amongst comparatively small populations and do not greatly affect the average rate.

6. Deaths.—

The total number of deaths in the province during the year was 1,006,386 as compared with 915,393 in the previous year. The provincial death-rate for 1930 was 29·6 as compared with 26·9 in 1929 and 25·3 in 1928. The average death-rate for the last ten years was 26·9.

The rise in the death-rate seems to be mainly due to cholera which was prevalent in severe epidemic form in some parts of the province accounting for a total of 155,215 deaths, that is, an excess of 51,181 over the figure for 1929, which accounts for more than half the total increase in the number of deaths in 1930 over the figure for the previous year.

7. Death Registration.—

The highest district death-rates were recorded in Muzaffarpur (41·8), Darbhanga (41·2), Monghyr (34·8) and the lowest in Singhbhum (17·5), Manbhum (18·6) and Santal Parganas (22·3). Amongst the towns of the province, the highest rates were recorded in Gaya (37·8), Lalganj (36·0), Tikari (31·9) and the lowest in Dumraon (1·7), Deoghar (3·1) and Dhanbad (3·2). Obviously these low figures are due to defective registration.

A severe epidemic of cholera which broke out in Muzaffarpur, Darbhanga and Monghyr districts contributed largely in bringing about this high death-rate in the districts.

The rate of increase in the population, i.e. the excess of birth-rate over the death-rate in the province was 6·6 as compared with 8·7 in the previous year.

8. Mortality according to age, class and sex.—

The rate of mortality calculated on the census figures of 1921 for children under one year of age amongst male infants was 190·4 and amongst female infants 156·3 per mille as compared with 182·6 and 152·0, the corresponding rates for 1929. But when based on the actual births recorded in 1930 the infant mortality was 148·3 for males and 126·9 for females per mille, with a total infant mortality of 137·8 per mille, against a total infant mortality of 135·0 per mille in 1929. The rate for the urban areas was 149·2 and that for the rural areas 137·5. At the close of the first year of life, the rates fell to 78·6 for males, and 68·2 for females, as compared with 64·9 and 68·2 in the preceding year. There was a fall in all the rates at the other age periods also. The lowest rates were recorded for the age periods between 10 and 15 years as in the preceding year. As usual the total combined mortality amongst males was higher than that amongst females in the ratio of 108 to 100.

There were as usual considerable differences in the death-rates amongst the different classes of the community. The death-rate was highest amongst Hindus (30·4) and lowest amongst Christians (16·2). The Muhammadan death-rate was 26·9 and that of other classes (24·2).

9. Verification of the registration of vital occurrences.—

In the 58 municipal towns, where registration is compulsory, the accuracy of 17,605 vital occurrences was investigated by the health officers of the large towns, and by the officers of the Vaccination Department. Five hundred and twenty-five omissions were detected, 438 prosecutions were instituted, and 397 convictions were obtained. Since the withdrawal of the Government contribution to municipalities towards the pay of the health officers, most municipalities have dispensed with the services of these officers, and the bulk of these verifications of vital occurrences is done by the vaccination inspectors maintained by Government. This has resulted in a diminution of the number of verifications.

Registration of the vital occurrences is incomplete and the figure can hardly be regarded as accurate. It is needless to emphasize the importance of correct registration of vital statistics upon which depend all the improvements in the health condition of the locality concerned and indirectly of the whole province. Until the larger municipalities realize their responsibility and see their way to appointing health officers paid from their own funds, no great improvement in this important aspect of public health, viz., accurate vital statistics, can be expected. Only three municipalities, namely Patna, Gaya and Puri have wholetime health officers and the salaries of the officers are paid by Government. The Muzaffarpur municipality maintained a wholetime health officer only up to October. The Bhagalpur municipality employs a part-time health officer of the Assistant Surgeon class, who is one of the local practitioners of the town.

In rural areas 4,428 vital occurrences were verified by the vaccination staff as against 10,368 in 1929 and as such the number is too small to be of much value. Until district boards are able to start public health organizations on the lines suggested by Government, and get their health staffs to take more interest in the verification of vital statistics, no great improvement can be expected.

10. Publication of vital statistics.—

The preparation and publication every week of the vital statistics of all the municipalities in the province with a population of 20,000 and over have been carried out throughout the year.

Weekly epidemic reports from all districts showing the number of seizures and deaths from cholera, small-pox, plague and influenza are also collected, summarized, and circulated. The reports are published in the Government Gazette, and also by the courtesy of the management, in several newspapers of the province. By the publication of these statistics it is hoped to keep the public informed of the actual state of health of the large towns, and of the prevalence of disease in the districts, and to demonstrate the utility of vital statistics.

SECTION VI.

History of the chief diseases.

11. Comparative incidence of chief diseases.—

The annexed statement compares the ratios under the chief heads of mortality in 1930 with the average ratio of the previous ten years:—

	Urban.		Rural.		Combined.	
	Ten years' average.	1930.	Ten years' average.	1930.	Ten years' average.	1930.
1	2	3	4	5	6	7
Cholera	1·6	1·9	1·5	4·7	1·5	4·6
Small-pox	0·6	0·4	0·4	0·2	0·4	0·2
Plague	0·9	0·03	0·3	0·1	0·4	0·1
Fevers	12·3	7·8	18·6	19·3	18·3	18·9
Dysentery and Diarrhoea	1·2	0·9	0·6	0·5	0·7	0·5
Respiratory diseases	0·7	0·6	0·2	0·2	0·2	0·2
Injuries	0·5	0·4	0·4	0·3	0·4	0·3
All other causes	7·1	5·4	4·9	4·7	5·0	4·7
Total	24·9	17·6	27·0	30·0	26·9	29·6

It will be seen from the above statement that the figure for deaths from "Fever" although highest (18·9) does not exceed very much the decennial figure (18·3). The total number of deaths from cholera (155,215) exceeded the previous year's mortality (104,034) by 51,181. The death-rate (4·6) exceeded last year's death-rate (3·0) by (1·6) and the decennial average by 3·1.

Generally speaking communicable disease like cholera and plague are confined endemically to certain definite areas in this province where the disease starts practically every year and assumes epidemic proportions, the

spread having more or less a direct relationship with the general sanitation of the locality, the economic condition of the people and the meteorological conditions. Cholera, for example always invariably shows itself in the districts of Bhagalpur, Monghyr, Muzaffarpur, Darbhanga and Purnea being worst during the months of April, May and June ; plague in Monghyr, Muzaffarpur, Saran and Darbhanga being most prevalent during the months of February and March.

The incidence of attacks and deaths from these diseases depends chiefly on the facilities for the spread of the infection and the application of the preventive measures at our disposal. The success of the preventive measures naturally depends on the application of the up-to-date measures of prevention and also to a very great extent on having the necessary staff to do it with. Local epidemics being mainly of local interest, the control of it depends on and is entrusted to the hands of the local authorities. In districts and municipalities where there are well-organised health staff, preventive measures are fairly promptly taken ; but in 1930, only 11 out of 21 districts and 5 out of 58 municipalities had qualified health officers and only a very few had the proper staff to deal effectively with local epidemics.

The large towns are hot-beds of consumption and this disease together with pneumonia and influenza causes the death-rate from respiratory diseases to be many times greater in towns than in rural areas. The incidence of tuberculosis is much more than it is usually thought particularly in towns which are considered to be health resorts. Improvement in the incidence of this disease can only be hoped for with the improvement of the sanitary consciousness of the people.

12. Cholera statistics.—

The provincial death-rate from cholera rose from 3.0 in the previous year to 4.6 in 1930. The district of Darbhanga recorded the highest death-rate from cholera, namely 15.8, and amongst the towns, Roserah (12.2), Samastipur (11.4) and Muzaffarpur (9.7), recorded the highest rates.

13. Cholera in the province.—

True to its normal relationship, the incidence of cholera varied in inverse ratio with the rainfall. As stated in page 1 of the report, the rainfall for the year was below normal and in no month of the year was the province free from cholera. It was in large defect in Chota Nagpur and Orissa during the cold weather period when cholera was highest in these areas. During the hot weather period, the rainfall was in large defect in Bihar and less so in Chota Nagpur and Orissa and cholera showed itself most in the districts of Bihar during this period. During the monsoon period there was most rainfall out below normal in Bihar, cholera was most in the Bihar districts. During the retreating monsoon period, the rainfall was in large excess in Bihar and Orissa and the unusually big epidemic of cholera in Bihar had declined.

Cholera epidemic in North Bihar, 1930.—

The epidemic of 1929 in North Bihar persisted through the winter months in many of the districts. In January 1930, although there was a considerable reduction in the mortality from the disease, it had by no means subsided altogether. Thus, there were 109 deaths recorded in Darbhanga, 20 in Muzaffarpur, 18 in Monghyr, 129 in Bhagalpur, 4 in Champaran and 159 in Purnea. In February, the disease still continued and in March, there was an increase in all these districts. The increase in the incidence of the disease was noticed in Darbhanga, Muzaffarpur and Monghyr from the week ending 22nd March and in all these districts the epidemic appears to have started in the thanas and villages where cholera had persisted through the winter months, indicating a recrudescence rather than a fresh infection.

In Darbhanga and Muzaffarpur, the adjoining thanas in each district appear to have started the epidemic almost simultaneously each helping the other in spreading the infection. Monghyr was infected from Darbhanga. In Bhagalpur, the real epidemic did not start until April and most probably, the district was affected from the adjoining portions of Monghyr and Darbhanga

districts. In Champaran, cholera continued in two of the thanas on the Muzaffarpur border and the epidemic spread from one of the thanas to the rest of the district. In the Purnea district, cholera continued from the previous year and there was a sharp outbreak in the 1st week of April. In the Saran district the thanas first affected bordered Gorakhpur and Ballia districts in the United Provinces and the Muzaffarpur district, but the epidemic did not reach the proportion in this district as it did in the other districts in North Bihar.

From about the middle of April, the epidemic was generalised and most of the thanas in Darbhanga, Muzaffarpur, Monghyr, Bhagalpur and Champaran districts were affected. It reached its maximum in the latter part of March, continued up to the end of August and then gradually subsided.

14. Cholera preventive measures.—

There were early indications of a severe epidemic of cholera in the province and the sanction of Government was obtained to the employment of an additional temporary staff of 25 epidemic doctors and an increased number of epidemic vaccinators 140, over and above these, 29 epidemic doctors were appointed for preventive measures during the Kumbh mela at Allahabad. The demand for Government epidemic doctors and vaccinators varied considerably in the different districts. In general, the demand was less from districts where approved health organisations exist, which is only natural. In the Purnea district, for instance, where there is a well-organised health staff under a qualified health officer, there was a sharp outbreak of cholera which began during the week ending 5th April and was quickly brought under control by the district health staff with the help of a few Government epidemic doctors. In the Patna district also, there were few calls on Government for assistance in dealing with the epidemics, and the few demands that were made, were for doctors to assist in anti-cholera inoculation work.

In districts where no health officers exist, and where for financial reasons the health organisation is inadequate, demands for Government epidemic doctors were greater. This illustrates the importance of a well-organised health staff in a district, and justifies, if such justification is necessary, the expenditure on such an organisation.

Four districts were supplied with Government paid health officers at Gaya, Bhagalpur, Muzaffarpur and Saran, and two more health officers were contemplated to be put in two more districts. It is highly to be hoped that the health organisation should be extended to other districts and that the district board authorities will appreciate the importance of having their own health officers.

The public health cadre of the province includes 13 epidemic doctors of the Assistant Surgeon class, who are sent out to districts to assist the local bodies in dealing with epidemic diseases. These men are supplied either at the request of the Civil Surgeon, or the chairman of the district board. In addition a reserve of 100 epidemic vaccinators is maintained during the cholera season, i.e., April to September, who are trained in disinfection work. Altogether 38 epidemic doctors and 140 epidemic vaccinators were employed by Government during 1930 to assist local bodies in dealing with epidemics of cholera. Civil Surgeons are also provided with a reserve supply of disinfectants, i.e., Bleaching powder and Permanganate of Potash, and Kaolin for the treatment of cases. Since 1928 Government also supply cholera vaccine free of charge, and there has been a steadily increasing demand for this vaccine as the following figures will show. In 1926 a total of 5,790 doses cholera vaccine were issued for the whole province. In 1927 the figure rose to 38,566, in 1928 to approximately 240,000 in 1929 to 656,300 and in 1930, approximately 731,000 doses were issued. No compulsion is exercised, and the progressive development of this voluntary preventive measure is an indication of its value. As with vaccination against small-pox, the demand for inoculation is to some extent dependent on the presence of cholera and the virulence of the epidemic. But there are indications in some districts, more specially in rural areas that

where inoculations have been done one year, the people clamour for it the next year, even when cholera is not prevalent in the immediate neighbourhood. When cholera inoculation as a preventive measure has been popularized to the extent that it has in the province without any compulsion, there would appear to be no justification for making it compulsory. The fact that the people are now crying out for inoculation is sufficient proof of its value.

Preventive inoculation against cholera may now be regarded as definitely established in the province, and the aim of the Public Health Department should now be to convince the people by means of lectures, and propaganda work of all kinds, of the importance of getting themselves protected before cholera actually appears amongst them. To do this it would be necessary to conduct a campaign during the winter months. An attempt was made this year to inaugurate such a campaign in the Purnea district, but it was started rather late, and owing to an early outbreak of cholera in North Bihar, the Government epidemic doctors who were employed on this duty had to be withdrawn to deal with the epidemic. But with the great strides that have been made already, it is not unreasonable to predict success in the near future for such a campaign.

The use of Bacteriophage.—

As mentioned in the last annual report, an experiment with bacteriophage on a larger scale was carried out at Puri during the Rath Jatra festival by Dr. I. N. Asheshov, officer-in-charge of the Bacteriophage Inquiry. Details of the experiment will be dealt with under "Fairs and Melas".

An outbreak of cholera in two villages (Bitho and Lakhanpura Bigha) in the Gaya district in August presented suitable opportunities for the use of bacteriophage both for the water-supplies and treatment of cases. At Bitho, there were four attacks even after the drinking water wells were treated with bacteriophage but there were no deaths amongst the cases treated with bacteriophage. The disease disappeared much earlier than usual. In Lakhanpura Bigha there were two attacks after the treatment of the wells in the village with bacteriophage. But both recovered and the disease disappeared on the third day. No disinfection or preventive inoculations were carried out in these two villages.

In view of cholera still persisting in the neighbouring districts it was feared that during the Sonapur fair in November, the pilgrims would spread cholera throughout Bihar. The mela started on the 2nd November and two cases of cholera were reported on the 4th and 5th instant. On the 7th November, bacteriophage was put into all the wells and drinking water reservoir with the object of preventing the development of an epidemic and of letting the pilgrims carry the phage wherever they go. No further cases occurred after the use of the phage. Sonapur mela it would be noted is as crowded as the Car festival at Puri.

The results obtained in these small experiments have been encouraging. It is believed that the administration of a potent appropriate bacteriophage has both preventive and curative powers. It was therefore decided to try bacteriophage on a large scale in the province in 1931. Two districts Muzaffarpur and Purnea only were chosen because a lot of cholera was anticipated in these places and the supply of bacteriophage was limited. The results obtained so far show that (a) the incidence of cholera after use of the phage compare very favourably with that of the last ten years, (b) that the deaths were much fewer, (c) that the local infections in these districts did not develop into generalised epidemics, and (d) the disease disappeared much earlier than usual. The ultimate result is being watched with interest.

The particular advantages of the use of bacteriophage are (a) it does not call for any technical skill or the personal attendance of a medical man and may be given even to the village chaukidars for use, (b) no disinfection or inoculation is necessary, (c) it is decidedly very much cheaper than any of the known preventive methods, and (d) it is colourless, odourless and tasteless and hence most suitable for use in the villages.

15. Small-pox.—

The death-rate for 1930 was the same as for the year 1929, namely 0·2. As has been indicated in the previous reports, small-pox is generally never entirely absent from any district of the province in any year. The usual quinquennial outbreak of small-pox started in 1925 and assumed its maximum in 1927-28 when Orissa was most affected and vaccination was very thoroughly pushed. This probably accounts for the decline of the disease in 1929. The state of vaccination in the province is by no means satisfactory and one may reasonably expect the usual periodic increase within the next two years.

The danger of the province being overwhelmed suddenly by the apprehended pandemic is not yet over and all local authorities and civil surgeons were requested to push on mass vaccination and re-vaccination. The protective value of vaccination is well established and the only way to establish immunity from small-pox is to bring up the vaccination state of the people.

The subject of the introduction of compulsory vaccination throughout the province has been under consideration and it was thought desirable to introduce compulsory vaccination to those districts only in which the district board employ an approved Public Health Organisation Scheme under a qualified health officer so that they may be able to undertake the responsibilities in a satisfactory manner. In 1929, sections 92—96 of the Local Self-Government Act was extended to the District Board, Patna and the administrative control of vaccination was transferred to them from the Civil Surgeon. This district worked out a scheme in which they organised free and compulsory vaccination by the employment of licensed vaccinators only. As the scheme entailed no extra expenditure on the part of the district board as well as Government, it was recommended to other districts of the province which maintain a Health Organisation Scheme and have a health officer, namely Patna, Gaya, Muzaffarpur, Saran, Darbhanga, Bhagalpur, Purnea, Cuttack, Puri and Balasore. Only Muzaffarpur District Board submitted a workable scheme which differs from the Patna scheme in the respect that the vaccinators would not deposit to the district board the fee realised from home vaccinations which would go to remunerate them for the free vaccinations done at the depôts. The districts of Bhagalpur and Darbhanga although willing to take up the work have not yet come to any definite decision. All the other district boards plead their inability from reasons of either financial difficulty or unsuitability of the Patna scheme to local conditions.

In 1930 the districts of Gaya and Monghyr recorded the highest death-rate from this disease, namely 0·5. In the Sambalpur and Palamau districts a mortality rate of 0·4 was recorded. These were the highest figures recorded for the year.

The following districts returned the lowest death-rates from small-pox:—

Puri 0·02, Ranchi 0·05, Champaran 0·06 and Muzaffarpur 0·07.

In town areas small-pox was most severe in Monghyr and Jamalpur which returned death-rates of 3·2 and 2·5.

The total number of deaths from this disease in 1930 was 7,455 as compared with 6,671 of the previous year.

Government provides vaccine lymph free of charge to local bodies and maintains a staff of inspectors in every district to supervise the work of vaccinators. The vaccinators are however licensed men in most of the districts and charge for the work they do.

16. Fever Statistics.—

The death-rate from fevers during the year 1930 was 18·9 as compared with 17·7 in 1929 and the decennial average of 18·3.

The highest mortalities were recorded in the districts of Angul 16·2, Palamau 25·3 and Muzaffarpur 23·9; and amongst towns Tikari 25·9, Lalganj 20·0 and Gaya 19·0.

The term "Fever" embraces all diseases where a temperature above normal has been a symptom. Malaria is probably the chief of these diseases, but the high death-rate from "Fever" cannot be ascribed to malaria alone. Blackwater fever is not uncommon in certain parts of the Singhbhum forest area. Kala-azar is also quite common in the Gangetic plains throughout the province.

Under the existing system of collection of vital statistics, especially in rural areas, more accurate records are not possible. There is a dearth of medical men, if not a complete absence of them, except in towns and thana headquarters, and the diagnosis of the cause of death is made by the village chaukidar or the patients' relations. No great improvement, in what should be valuable data, can be expected until every district has a well-organised health staff and until this staff is especially employed in verifying the cause of death in outlying villages.

The severe outbreak of malaria in Supaul subdivision of the Bhagalpur district continued during the year under report. Temporary dispensaries were opened up in the affected tract, and quinine and cinchona were distributed from village to village by the special staff employed by the district board, and under the supervision and direction of epidemic assistant surgeons detailed by the Public Health Department.

17. Sale of Quinine.—

The sale of quinine treatment at the various post offices in the province has been in force for many years. These treatments are supplied to the post offices by the Civil Surgeons who obtain their requirements from the Presidency Jail at Calcutta, where the products of the cinchona plantations in Bengal are made up into tablets. Twenty tablets packed in small glass tubes constitute one treatment. These treatments are now sold by the post offices at 5½ annas per treatment, but the amount purchased annually cannot be regarded as satisfactory.

The sale of quinine treatments during 1930 amounted to a total of 501.2 pounds of quinine sulphate as compared with 584.7 pounds in the previous year. The largest quantities were taken by Cuttack, Purnea, Champaran, Ranchi, Bhagalpur and Santal Parganas districts. Quinine was chiefly sold through the agency of postmasters, and to a slight extent through other agencies.

18. Free supply of quinine to schools.—

During the fever season, quinine was supplied free to certain schools for the use of scholars in the districts of Muzaffarpur, Hazaribagh, Ranchi, Cuttack, Puri, Balasore, Sambalpur, Shahabad, Purnea, Monghyr, Bhagalpur, Santal Parganas, Darbhanga, Singhbhum, Champaran, Gaya and Saran.

Out of the total number of 7,597 scholars in those schools, 2,945 took quinine regularly; 98,946 tablets of quinine of four grains each were consumed by the scholars.

The free issue of quinine to these schools has now gone beyond the stage of being an experiment. The school masters are unanimous in their appreciation of this measure, and there is an ever-increasing demand for the drug from the school children.

19. Free supply of Cinchona Febrifuge.—

During an outbreak of malaria in Singhbhum, five pounds of cinchona febrifuge and 15 pounds of cinchona in tablets were issued for free distribution. seventy-five pounds of cinchona in tablets were also issued free to the Chota Nagpur Settlement in Ranchi.

20. Plague Statistics.—

The death-rate from plague for the year 1930 was 0.1 as compared with 0.2 in the previous year, the average rate for the last ten years was 0.4. The

disease is practically confined to the districts north of the river Ganges, and there were only a very few cases in the Shahabad and Monghyr districts during the months of January and February.

Monghyr, Muzaffarpur, Darbhanga and Saran suffer the most in the winter months, and the disease dies out altogether in the hot weather and rains. As there is generally no cholera in the province during the winter months, there is no difficulty in sending epidemic doctors of the Public Health Cadre to deal with these outbreaks. Anti-plague inoculations are carried out with vaccine obtained from the Parel laboratory and kept in cold storage at the vaccine depôt at Namkum for quick despatch when and where required.

The districts which reported the highest mortality were Muzaffarpur (0·5), Saran (0·4) and Darbhanga (0·3) and the town which suffered most was Hajipur (1·7). The rate of mortality in towns was 0·03 and in rural areas was 0·1.

21. Dysentery and Diarrhœa.—

The death-rate from dysentery and diarrhoea was 0·5 as compared with 0·6 in the previous year, and an average rate of 0·7 for the last ten years.

As usual, this disease was most prevalent in the Orissa Division, and of the total deaths amounting to 16,511 this division reported 12,257.

The towns which recorded the highest death-rate from these diseases were Furi (5·3), Sambalpur (3·9), Revelganj (2·4), Kendrapara (2·3) and Jajpur (2·3).

The prevalence of dysentery and diarrhœa in Orissa is probably associated with the climatic conditions, and is to a large extent due to the bad state of the water-supply in many parts of this division.

Malarial fever is also very prevalent in Orissa, and its victims are rendered weak, debilitated, and anæmic, and less able to resist subsequent attacks of these more fatal diseases.

These diseases resemble cholera in their nature and in their incidence. They belong to the group of intestinal diseases, the transmission of which is associated with the infection of the individual by contact, or with the contamination of the water-supplies by excreta, or of food by flies. They tend to become epidemic under the same conditions and by the same means which favour the spread of cholera, and their prevention, like that of cholera, can best be effected by the improvement of water-supplies, by better conservancy and by prompt disinfection of the excreta of the sick.

SECTION VII.

History of Vaccination.

22. The annual vaccination report is submitted as an annexure to this report.

SECTION VIII.

Sanitary Works (Military).

23. This section is no longer dealt with in Provincial Public Health Reports.

SECTION IX.

Sanitary Works (Civil).

24. General.—

The figures given in paragraphs 25 and 27 relate to the financial year 1929-30.

25. Expenditure on sanitation in municipal towns.—

The statement below shows the receipts and the expenditures for sanitary purposes during the year 1929-30 as compared with those of the previous year:—

Number of municipalities.	Total receipts including opening balance.		Heads of Expenditure.	1928-29.	1929-30.	Percentage of expenditures to the total receipts.	
	1928-29.	1929-30.				1928-29.	1929-30.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
58	49,35,145	55,55,475	Conservancy ...	11,62,372	11,37,290	23.5	20.4
			Drainage ...	1,24,957	1,13,968	2.5	2.0
			Water-supply ...	3,51,037	3,07,990	7.1	5.5
			Vaccination ...	14,788	14,667	0.3	0.2
			Epidemics ...	28,398	28,907	0.6	0.5
			Markets and fairs ...	76,154	66,469	1.5	1.2
			Other sanitary charges	7,965	2,899	0.2	0.05
			Public Health staff ...	53,197	48,841	1.1	0.8
			Total ...	18,18,868	17,21,031	36.8	30.9
			* Contagious diseases hospitals.	1,46,546	2,08,120	...	...

* This represents cholera hospitals and leper asylums, etc. An expenditure of Rs. 2,08,120 has been incurred in 1929-30. The expenditure is mainly met from Government grants.

26. Chief Sanitary works in municipal towns.—

The details of expenditure under this head are dealt with in the report of the Superintending Engineer, Public Health Department.

27. Expenditure on sanitation by district boards.—

The following statement shows the receipts and expenditures of district boards under the principal headings of sanitation:—

Number of district boards.	Total receipts including opening balance.		Heads of Expenditure.	1928-29.	1929-30.	Percentage of expenditures to the total receipts.	
	1928-29.	1929-30.				1928-29.	1929-30.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
19	1,87,32,923	1,82,60,110	Conservancy ...	3,23,116	3,61,602	1.7	1.9
			Drainage ...	8,501	18,685	0.04	0.1
			Water-supply ...	2,57,658	2,22,307	1.4	1.2
			Vaccination ...	21,799	21,985	0.1	1.2
			Epidemics ...	50,880	77,369	0.3	0.4
			Markets and fairs ...	21,104	22,470	0.1	0.1
			Other sanitary charges	...	99	...	0.00005
			Total ...	6,83,058	7,24,518	3.6	3.9

SECTION X.

*Personnel, proceedings and progress.***28. Director and Assistant Directors of Public Health.—**

The office of the Director of Public Health was held by Lieutenant-Colonel J. A. S. Phillips, I.M.S., up to the 8th October when he proceeded to England on combined leave. Major S. L. Mitra, I.M.S., took charge on the 9th October and was in charge for the remaining period of the year.

Of the Assistant Directors of Public Health, Dr. J. L. Das was in charge of the South Bihar Circle up to the 31st March, Major S. L. Mitra, I.M.S., from the 1st April to the 8th October. Dr. R. M. Prasad took over this circle on the 9th October and was in charge for the remaining period of the year.

Dr. A. N. Chatterji was in charge of the North Bihar Circle up to the 8th March. Dr. J. L. Das was in charge of this circle from 9th March to the 4th April. Major S. L. Mitra, I.M.S., was in charge from 5th to the 22nd April. Dr. A. N. Chatterji took charge on the 23rd April and was in charge for the remaining period of the year.

Dr. B. P. Mazumdar was in charge of the Chota Nagpur and Orissa Circle up to the 4th April and of the Chota Nagpur Circle from the 5th April to the end of the year except for a short period of 17 days from the 10th to 26th June when Major S. L. Mitra, I.M.S., was in additional charge.

The new circle of Orissa was created from the 5th April by separating the five districts in Orissa division from the Chota Nagpur and Orissa Circle. Dr. J. L. Das was in charge of this circle from the 5th April to the end of the year.

29. Touring.—

During the year, the Director of Public Health remained on tour for 76 days as compared with 87 days in the previous year, and the Assistant Directors of Public Health of the North Bihar, South Bihar, Chota Nagpur and Orissa Circles for 174, 121, 187, and 118 days, respectively, as compared with 122, 82 and 172 days (Chota Nagpur and Orissa Circle) in the previous year.

30. Municipal inspections.—

During the year under report 35 out of the 58 municipalities in the province were inspected by the Assistant Directors of Public Health and full reports on these inspections were submitted to Government. In the South Bihar, Chota Nagpur and Orissa Circles practically every municipality was visited. Owing to the severe cholera epidemics in North Bihar the number of municipalities inspected was not complete. The financial position of these municipal towns remained unchanged.

Motor transport is now being employed in some of the larger municipalities, notably in Patna and Muzaffarpur for the removal of rubbish. The experiment has been successful, and is likely to be taken up by many other municipalities in the near future.

31. Inspection of Schools and Unions.—

Government have for many years now employed a special staff of school medical officers for the inspection of high schools in the province. This is described in greater detail in a subsequent section.

In addition to these inspections, the Assistant Directors of Public Health also inspect high schools in their respective circles. These inspections deal more especially with the sanitation of the school buildings, but the officers also report on the work done by the regular school medical officers, and question the boys on the lectures in hygiene and sanitation that the school medical officers are required to deliver. During the year 38 high schools were thus inspected.

The sanitation of the school buildings is on the whole satisfactory. Certain minor defects pointed out by the Assistant Directors are quickly remedied—bigger issues have of necessity to wait until funds are available.

It is only of recent years that the number of village unions has increased and the efforts made to improve the sanitation in these unions have not been very great. The difficulty in the way of more rapid improvement has been the smallness of the funds at the disposal of the union committees. They are dependent for the most part on contributions from district boards, whose resources are limited. However some little progress is reported and when more money is available either by more liberal grants from district boards, or by direct taxation, further improvements will follow.

32. Lectures and Magic Lantern demonstrations.—

In addition to the work done by the officer in charge of the Publicity Bureau, the Assistant Directors seize every opportunity to deliver lectures and addresses both in towns and villages when touring during the cold weather months. They have their own magic lanterns with complete sets of slides on all public health subjects. There were requests from Co-operative Societies for lectures and demonstrations at their meetings, and whenever possible these requests are met.

The epidemic doctors also endeavour to explain the causation of the particular epidemic disease they are sent out to deal with in villages, and also distribute leaflets and pamphlets obtained from the Publicity Bureau.

This work is appreciated and serves a very useful educative purpose in spreading a knowledge of the principles and factors which affect public health.

33. Special Duties and Reports.—

In addition to the routine work mentioned in this report and the vaccination report, the officers of the department carried out many special duties.

All the larger melas in the province were visited by the Assistant Directors of the circles concerned, more particular attention being paid to the three important ones, namely the Rath Jatra at Puri, the Pitripaksh at Gaya, and the annual fair at Sonapur, and the Director of Public Health attended the Rath Jatra and Sonapur melas.

The usual arrangements were made for the prevention of cholera at these three melas, and a special staff of epidemic doctors was deputed to carry out inoculations, and to supervise the sanitary arrangements. These epidemic doctors worked under the direct control of the Assistant Director of Public Health who was present throughout the mela.

The Director of Public Health attended the Medical Research Workers Conference at Calcutta in December.

The Assistant Director of Public Health, South Bihar Circle, was deputed to Mogalserai for duty in connection with Kumbh mela in January. He was present at Gaya during the Pitripaksh mela and directed and supervised the arrangements made there. He investigated many outbreaks of cholera in his circle.

The Assistant Director of Public Health, North Bihar Circle, was present at Sonapur throughout the mela period, and organised and supervised the arrangements made there. In May and June, he toured extensively in the affected districts of North Bihar investigating the outbreak of cholera and advising and supervising the arrangements made by the district authorities to deal with the epidemic. He supervised the malarial survey of Purnea town and investigated the public health conditions of the flood-affected area of Purnea. During the winter season he investigated into the outbreak of plague in Hajipur.

The Assistant Director of Public Health, Chota Nagpur Circle, enquired into the outbreak of cholera at Giridih, Chakradharpur and in Bhadrak

subdivision. He enquired into the outbreak of typhoid in Angul town. He also enquired into the outbreak of diphtheria in the schools at Namkum. He enquired into the mosquito nuisance at Kanke.

The Assistant Director of Public Health, Orissa Circle, visited Puri in connection with the Snan and Rath Jatra festivals and prepared a conservancy scheme for the Angul town.

An investigation was started under the guidance of the Director of Public Health in December 1929 into the state of pulmonary tuberculosis at Ranchi. Dr. S. K. Chatterji, a medical officer of health of the Government Public Health Cadre, made a house-to-house enquiry in the town and his report which has been submitted to Government reveals the fact that pulmonary tuberculosis is much more common in that area than is generally believed to be the case.

A malaria survey of the Purnea town was taken up in 1930 in pursuance of His Excellency the Governor's reply to the address presented to him by the Purnea Municipality. Dr. A. N. Chatterji, Assistant Director of Public Health, North Bihar Circle, assisted by Dr. D. B. Mukharji, a medical officer of health, carried out a malaria survey of the town which lasted till January 1931.

34. Health Officers.—

(a) *In municipalities.*

Only five of the larger municipalities in the province employ health officers—namely Patna, Gaya, Puri, Muzaffarpur and Bhagalpur. The three former have health officers paid for by Government. Muzaffarpur employed a qualified health officer at the expense of municipal fund up till October, whilst the Bhagalpur municipality paid an allowance to one of the local practitioners for part-time work in the town. This cannot be regarded as a satisfactory arrangement, but is better than nothing. There seems to be no immediate prospect of the reappointment of health officers to other towns, unless local bodies are prepared to augment their income by increased taxation which they are not. The absence of most health officers is most acutely felt when an epidemic occurs, the sanitary staff of the town under the sanitary inspectors are unable to control the epidemic as a rule, and help in the shape of an epidemic doctor from the Public Health Department is generally required. These epidemic doctors, as has been stated, are primarily for duty in rural areas, and it ought not to be necessary to depute them to towns where health organisations exist.

(b) *In districts.*

Since 1924 many districts in the province have started district health organisations on the lines of the scheme outlined by Government. Eleven out of the 21 districts in 1930 had these organisations which were approved by Government, namely Patna, Gaya, Hazaribagh, Manbhum, Puri, Cuttack, Balasore, Bhagalpur, Muzaffarpur, Purnea and Darbhanga. All these districts employed a qualified health officer and five of these districts, namely Patna, Muzaffarpur, Puri, Cuttack and Balasore received a contribution from Government towards the expenses connected with their health organisations. The districts of Manbhum and Hazaribagh dispensed with their health officers and portion of the staff on grounds of financial difficulty resulting in a disorganisation of their public health scheme.

In most of the other districts there is a small nucleus of an organisation, but no health officer is employed. Considerable progress has been made by the district health organisations where health officers are employed.

The Assistant Directors of Public Health submitted reports on the working of these district health organisations which in all cases revealed considerable progress in matters connected with public health and sanitation, more especially in the prevention of disease. A very large number of cholera inoculations was performed by the staff of districts concerned, and most infected villages were visited by the health officers themselves.

35. School Medical Inspection.—

The medical inspection of boys in high schools was started as an experiment in 1920. An assistant surgeon was appointed to each division of the province, and the information collected at these examinations was recorded on certain forms which have since been standardized. The importance of this aspect of public health, i.e., the early detection of physical defects in children with a view to correcting them, was soon appreciated. The work has grown and in 1926 one sub-assistant surgeon per division was recruited to help the school medical officers in their duties. Both the school medical officers and the assistant school medical officers are members of the public health cadre of the province. A Lady School Medical Officer has been appointed since January 1929 who worked throughout the year.

The duties of school medical officers are of a threefold nature. (1) A series of lectures on hygiene are delivered every year by them in all the high schools in their divisions. (2) The school buildings and hostels are inspected and reported on. (3) The scholars are medically inspected and physical defects recorded.

(1) The lectures on hygiene are fairly comprehensive and are illustrated by magic lantern demonstrations, attendance at these lectures is compulsory but as hygiene is neither a compulsory subject, nor an optional subject in the matriculation examination, the lectures do not receive the attention from the scholars which they merit.

(2) The inspection of the school premises and hostels has resulted in many minor improvements in these institutions.

(3) The medical inspection of the scholars has made steady progress, and there are now valuable records of every boy in every high school. A new card index form was introduced during 1929 which accompanies the boy when he is transferred from one school to another.

Amongst the many physical defects brought to light by these medical inspections, perhaps the most important is the prevalence of defective vision and the fairly general need of spectacles. Parents and guardians are informed of the defects detected, and advised on the manner in which these should be remedied. Cases requiring medical treatment are sent to the dispensary, and the dispensary doctor is required to note on the form which goes with the boy the treatment that has been given.

Most of the school medical officers have commented in the past on the apathy and indifference of parents and guardians with regard to the physical defects brought to their notice, but it is encouraging to note that more attention is now being paid to these reports.

A few cases of early Tuberculosis and some cases of early leprosy were reported by all the school medical officers, and the importance of early diagnosis in both these diseases, and suitable treatment when they have been detected, cannot be exaggerated. These medical inspections were extended to boys in middle English schools during 1929 on the same lines as for high schools. The Government school medical officers deal with middle English schools in the larger towns where high schools exist, and the other middle schools are dealt with by district medical officers, where such exist, or by arrangements made by the district board authorities.

36. The Epidemic cadre of Assistant Surgeons.—

Government maintains a permanent cadre of 13 epidemic doctors of the Assistant Surgeon class who are sent out to help local bodies in dealing with outbreaks of epidemic diseases. When cholera is very prevalent, a temporary staff of doctors is recruited, and in 1930, 25 temporary doctors were employed, in addition to the 13 permanent epidemic doctors, on cholera duty. The work of these epidemic doctors is by no means easy, as it is mostly in the interior of the country where adequate accommodation is not always available. Long distances have to be covered and many villages visited during the course of the day.

Government also maintains a reserve of 100 epidemic vaccinators from April to September. These men are trained in disinfection work, and allotted to the Civil Surgeons of the various districts for duty when required. In times of severe epidemics their number is increased and in 1930, 140 men were actually employed. A supply of disinfectants is also maintained by Civil Surgeons as a reserve which is provided by Government.

37. Public Health Bureau.—

No special officer was in charge up to 23rd June, the Director of Public Health doing the work in addition to his other duties. Dr. S. K. Chatterji held charge of the Bureau from 24th June till the end of the year. He wrote articles on public health subjects for publication in the local press.

The course of lectures to police probationers at Hazaribagh which was started at the request of the Inspector-General of Police in 1926, were delivered as usual.

38. Village Sanitation.—

Where district health organisation exists some effort is being made to improve the sanitation in villages, but progress is slow. The Assistant Directors of Public Health inspected some of the village unions during their winter tours. No permanent help in the way of sanitary improvement and advice to the rural organisations is expected until the districts have suitable health organisations.

39. Sanitation of fairs and melas.—

There are a large number of melas all over the province. The smaller ones only draw people from the neighbouring districts, but the bigger ones attract pilgrims from all over India. The two sacred Hindu towns of Gaya and Puri are visited by pilgrims all the year round, and in the latter town besides the three big melas—the Dol Jatra, Snan Jatra and the Rath Jatra or Car Festival—there are no less than 60 other minor functions which attract pilgrims.

The three chief melas in the province are the Rath Jatra at Puri, usually held in either June or July, the Pitripaksh mela at Gaya, generally, in September, and the fair at Sonapur in November. The Rath Jatra occurring as it does at the height of the cholera season, is the most important mela held in the province from the public health point of view. Cholera is generally prevalent in the Puri district at the time and also in the neighbouring districts of Orissa from where the bulk of the pilgrims come. Pilgrims from Bengal, Central Provinces and Madras are also liable to bring in the infection with them. The various ceremonies connected with this festival are well calculated to spread the disease. The staff of epidemic doctors detailed by the Public Health Department, and the sanitary staff of the town, which is considerably increased for the occasion, have to be constantly on the watch to detect early cases of the disease, to remove the patients to the cholera hospital and to disinfect the infected lodging houses.

The Snan Jatra mela which is of less importance than the Rath Jatra precedes the latter by about a fortnight, but as the two ceremonies are so close together, the same precautions are taken for the former as for the latter.

The Inspector-General of Civil Hospitals details a special staff of four sub-assistant surgeons for duty in the cholera hospital, and the Public Health Department deposes five doctors for duty in the town, and one for inoculation duty at the railway station; this man is helped by the doctors detailed to the cholera hospital as long as their services can be spared from hospital duty.

Inoculation centres are also established at the Balasore and Cuttack railway stations, and an effort is made to persuade pilgrims travelling by train to submit to inoculation at these places.

The town of Puri is divided into six wards, with a doctor in charge of each ward. Their duty is to visit the lodging houses, to remove all cases of infectious disease to the hospital as soon as they are discovered, to supervise the disinfection of the infected houses, to supervise the sanitation of the whole of their area, and to personally disinfect the wells.

Before the Snan Jatra, lodging houses are inspected by the health officer of the town who satisfies himself that every house is fit for occupation before recommending it for a license.

In 1927 an attempt was first made to protect pilgrims coming to Puri for the Snan Jatra against cholera by inoculation. A special grant was obtained from Government for the purchase of vaccine, and every effort was made to persuade people to submit to the operation. That year a total of 12,618 inoculations were done, most of these at Puri, although some were also done at Balasore and Cuttack. Since 1927 the number of inoculations has steadily increased and the pilgrims are less reluctant to submit to the operation than they were at first. Thus in 1928, 25,176 inoculations were done; in 1929, 39,727 and in the year under report 61,040. These figures do not include the inoculations carried out by the Public Health Department of Bengal at Howrah, Kharagpur and at other stations on the Bengal-Nagpur Railway in Bengal.

The results of the inoculation campaign may be summarized as follows:—

Of an estimated population, both pilgrims and residents of 120,000, 61,040 were inoculated and 58,960 were unprotected. Amongst the inoculated there were 7 attacks of cholera with no death, while amongst the uninoculated there were 49 attacks and 12 deaths.

—	Numbers.	Attacks.	Percentage of attacks to total.	Deaths.	Percentage of deaths to attacks.
1	2	3	4	5	6
Inoculated	61,040	7	0·01	...	...
Uninoculated	58,960	49	0·08	12	24·5

The case incidence amongst the uninoculated was approximately ten times greater than amongst the inoculated and the mortality per cent of the attacks approximately nine times greater amongst the uninoculated.

It should be remembered also that the majority of the cases amongst the inoculated developed symptoms of cholera within 48 hours of inoculation, when full immunity could not have been established.

A further experiment with bacteriophage was carried out by Dr. I. N. Asheshov, officer in charge of the bacteriophage enquiry. A section of the town with an estimated population of 38,800, out of which 17,200 were pilgrims was selected for the experiment, and the wells in this area were all treated with bacteriophage and the people were encouraged to drink this water. Only 7 cases of cholera occurred in the area thus treated as against 21 cases in the rest of the town. The untreated area contained 37,550 people out of which 20,700 were pilgrims. The case incidence was approximately three times less in the area where the wells had been bacteriophaged than in the rest of the town, where the wells were chlorinated. Before the experiment was started there were 13 cases in the bacteriophaged area against 7 in the other. Although the total number of cases were relatively small for any statistical calculations, it can be remarked that only 3 cases of cholera occurred amongst people who received bacteriophage in the water, while there were 25 cases amongst those who did not receive bacteriophage. The impression after daily observations in Puri is favourable.

Besides treating the wells in the town, the railway station well was also phaged, from where the water is distributed to the taps in the shelters for outgoing pilgrims. This was done with a view to prevent the carrying of cholera out of Puri and to distribute bacteriophage as far as possible. No cases were detected in the trains during the period which was remarkable. Usually cholera rages in an epidemic form each year in Orissa districts after

the Car Festival but this year the figures did not go up, which may be due to the dissemination of bacteriophage by the pilgrims returning to their own villages from Puri. It is hoped that this experiment will be carried out on a still larger scale in 1931.

Pitripaksh mela at Gaya.—Very similar arrangements were made for this mela as in previous years and there was very little cholera during the mela. The few cases of dysentery that occurred were removed to the hospital promptly. The infected lodging houses were disinfected.

Sonepur fair.—This is almost entirely a commercial fair where cattle, horses and elephants are brought for sale. An important Hindu bathing ceremony takes place during the fair, which attracts thousands of pilgrims from the neighbouring districts. The site of the mela is a bare plain for eleven months of the year, which, for one month, usually November, becomes covered with huts and tents and is visited by many thousands of people.

Similar arrangements were made here by the Public Health Department and the district board authorities as in previous years, but as it was held this year when cases of cholera were still occurring in the neighbouring districts all the wells and tanks were treated with bacteriophage with the idea of preventing an outbreak locally and disseminating the bacteriophage through the visitors returning to their own places.

New sheds have recently been constructed for the accommodation of cases of infectious disease, and a permanent water-supply from deep borings has been arranged which is distributed by means of pipes and hydrants throughout the mela area. These two improvements were carried out during 1929.

Other important melas in the province are the Sivaratri mela at Deogarh, the melas at Hijla and Purulia and the Singheshwar mela in the Madhipura subdivision of the Bhagalpur district. The Assistant Directors visited these and helped the local authorities in the arrangements made for them; epidemic doctors are detailed when necessary or when asked for.

Kumbh mela.—The mela was held at Allahabad in January 1930. Sufficient quantities of cholera vaccine were supplied free of cost to Civil Surgeons and Chairmen of district boards throughout the province in December 1929 for the inoculation of pilgrims going to Allahabad. Government sanctioned the employment of 25 temporary sub-assistant surgeons, twenty of these men and one assistant surgeon of the Public Health Cadre were sent to Moghalsera under the supervision of the Assistant Director of Public Health, South Bihar Circle. These officers accompanied the pilgrim and passenger trains from Moghalsera to stations on the East Indian Railway up to Asansol. One sub-assistant surgeon was sent to Balasore to carry out inoculations amongst the prospective pilgrims.

Eight sub-assistant surgeons were sent to Tirhut Division and one Assistant Surgeon of the Public Health Cadre was detailed to supervise the work of these sub-assistant surgeons. One assistant surgeon was sent to Katihar.

Altogether 39 cases of cholera and 3 of small-pox were detected and sent to the nearest hospitals. The arrangements made were most satisfactory. With cholera present before the Kumbh mela in the districts that suffered most during the cholera epidemic, it is obvious that the infection was a local one, that the epidemic would have occurred had not the Kumbh mela been held, and that the Kumbh mela had very little, if anything, to do with the epidemic.

40. Jharia Mines Board of Health.—

The sanitary control of the Jharia and adjoining coal-mining areas vests in the Jharia Mines Board of Health which now control the whole area of the Dhanbad subdivision (except Dhanbad municipality), the population of which is 453,949.

A tabulated statement (Appendix XXX) is attached which shows the incidence of epidemic disease during the year. Cholera, small-pox and influenza accounted for a total of 120 deaths amongst the colliery population of about 126,000.

Of the 120 deaths, 42 occurred in 118 cases of cholera which shows a mortality of 35 per cent and the death ratio of 0.4 per 1,000 as compared with the provincial ratio 4.6. In the whole area there were 192 deaths from cholera and 73 from small-pox in a total population of 453,948 which gives mortality ratios of 0.4 for cholera and 0.1 for small-pox.

The mining settlements were visited by the Director of Public Health and the Assistant Director of Public Health during the year, and close touch has always been maintained by the Public Health Department with the sanitary administration of the coalfield.

The Jharia Mines Board of Health and their Chief Medical Officer and staff are to be congratulated on the satisfactory results of the year's work and on the steady progress achieved.

41. Public Health Laboratory.—

During the year, 1,527 items were examined as compared with 1,186 in the previous year. The provincial bacteriophage investigation was continued during the year under the guidance of Dr. I. N. Asheshov, whose Bacteriophage Enquiry is being conducted in the public health laboratories at Patna. Considerable progress was made in this interesting study, and a suitable bacteriophage was given out for trial in certain parts of the province as stated before.

I.—CHEMICAL EXAMINATION.

	Items
Water	252
Ghee	353
Mustard oil	237
Atta and flour	10
Milk	24
Miscellaneous	112
Total	988

II.—BACTERIOLOGICAL EXAMINATION.

Water	525
Miscellaneous	14
Total	539
Grand Total	1,527

The number of food samples examined shows a very high percentage of adulteration. For example 42 per cent of the ghee samples, 40 per cent of mustard oil samples and 29.1 per cent of milk samples were found to be adulterated.

Full use is not made by local bodies of this opportunity of checking the adulteration of foodstuffs, and the Assistant Directors find it necessary to draw the attention of the Executive Officers of municipalities to the importance and necessity of sending samples to the laboratory for analysis, and the subsequent prosecution of vendors found to be selling adulterated articles of food.

Dr. K. N. Bagchi held charge of the public health laboratories up to 6th May when he proceeded to England on combined study leave. Babu J. C. Das, B.Sc., took charge on the 7th May and was in charge for the remaining period of the year, and carried out his duties in an efficient manner.

42. The Sanitary School.—

One class of instructions was held at the sanitary school for the training of health inspectors during the year. Twenty-seven students were trained, of whom 17 passed out successfully. Dr. S. K. Mullik, Health Officer, Patna City municipality, was deputed as Superintendent of the school.

43. Personnel.—

The work of all the Assistant Directors of Public Health including Dr. A. N. Chatterji, who officiated in place of Dr. T. Sebastian in the North Bihar Circle and had to make most arduous efforts during the cholera epidemic in his area and Dr. R. M. Prasad, who officiated in my place as Assistant Director of Public Health, South Bihar Circle, has been satisfactory.

Dr. S. K. Chatterji, who had been doing bacteriophage work in addition to his duties as Personal Assistant and officer-in-charge, Public Health Bureau, deserves credit particularly for working out the epidemiological factors and for his work at the laboratory which has been commendable.

Dr. B. Naik, Health Officer, Puri, is a most promising officer and did excellent work in connection with the melas at Puri and towards the improvement in the sanitation of the town. He deserves encouragement.

S. L. MITRA, MAJOR, I.M.S.,

Offg. Director of Public Health.

Annual Vaccination Report of the Province of Bihar and Orissa for the year 1930-31.

1. Following the example of the Governments of Bombay and the United Provinces, it has been decided by the Government of Bihar and Orissa to include the Annual Vaccination Report with the Annual Public Health Report in future.

The statistics in the two reports are for different periods, those in the Annual Public Health Report being for the calendar year, whereas those in the Vaccination Report are for the financial year, in order that the figures for the complete vaccination season of October to March may be included in it.

2. *Staff*.—Lieutenant-Colonel J. A. S. Phillips, I.M.S., held charge of the department up to 8th October 1930, and Major S. L. Mitra, I.M.S., from the 9th October to the end of the year.

The undermentioned officers held charge of the four circles for periods as noted against their names :—

- (1) *South Bihar Circle*.—Major S. L. Mitra, I.M.S., from 1st April 1930 to 8th October 1930 and Dr. R. M. Prasad from 9th October 1930 to 31st March 1931.
- (2) *North Bihar Circle*.—Dr. J. L. Das from 1st April to 4th April 1930, Major S. L. Mitra, I.M.S. from 5th to 22nd April 1930, Dr. A. N. Chatterji from 23rd April 1930 to 31st March 1931.
- (3) *Chota Nagpur and Orissa Circle*.—Dr. B. P. Mazumdar was in charge of this circle from 1st to 4th April 1930 and of the Chota Nagpur Circle from 5th April 1930 to 31st March 1931.

Dr. B. P. Mazumdar held charge of the Vaccine Depôt at Namkum throughout the year.

- (4) *Orissa Circle*.—Dr. J. L. Das was in charge of this newly-constituted circle from 5th April 1930 to 31st March 1931.

The inspecting staff consisted of 20 District Inspectors of Vaccination and 69 Sub-Inspectors of Vaccination (including three deputed for duty at the Vaccine Depôt) in addition to the one Sub-Assistant Surgeon combining vaccination inspection with other duties in Angul. The total number of vaccinators employed in the province during the year was 1,103 licensed and 246 paid, against 1,122 licensed and 255 paid in the previous year.

In municipalities and in districts of Puri and Hazaribagh, vaccination was done by paid vaccinators; but otherwise the work throughout the province was carried out under the licensing system, except for the employment of paid vaccinators by district boards, and employed temporarily by Civil Surgeons for short periods to deal with outbreaks of small-pox.

3. *Operations performed*.—The total number of operations performed during the year amounted to 1,171,152 as compared with 1,191,854 last year.

This shows a slight decrease in the number of operations as compared with the figure for 1929-30.

Vaccination is not yet a popular measure with the masses in the province. When small-pox is prevalent, the people show some degree of willingness to have their children protected, and in 1926 and 1927 when the disease raged in epidemic form a greater number of vaccinations was recorded. In 1929 there were fewer cases of small-pox in comparison with 1928, so that there was not therefore the same incentive, and there were approximately 10,488 fewer vaccinations performed, in 1930 there has been a small increase over the figure for 1929.

Of the total number of operations performed, 1,140,692 were done by the staff of the Vaccination Department as compared with 1,167,527 done last year. 1,002,173 operations were primary and 138,519 were revaccinations against 1,067,688 primary operations and 99,839 revaccinations done last year.

There was a decrease of 65,515 in the number of primary operations and an increase of 38,680 in the number of revaccinations during the year. Of the total operations performed (1,140,692), 1,078,433, equal to 94.36 per cent were successful as compared with 1,107,693, equal to 94.87, last year.

The number of operations performed in municipalities increased by 4,859 as compared with last year's returns. The total number of operations performed was 53,284 and the number of successful operations was 40,836 of which 33,336 were primary and 7,500 were revaccinations, as compared with 33,877 and 4,186 respectively last year. The ratios of success in municipalities were 97.71 per cent for primary operations and 39.13 per cent for revaccinations as compared with 97.76 per cent and 30.62 per cent, respectively last year.

The number of operations performed in rural areas was 1,087,408 as compared with 1,119,202 last year and the ratios of successes were 99.52 per cent for primary operations and 62.17 for revaccinations.

4. *Vaccination in districts.*—The district of Patna reported decrease of 384 in the number of operations performed, Shahabad and Gaya reported increases; Shahabad (575) and Gaya (1,328). Vaccination in the rural areas of the district of Patna is now controlled by the health officer, and he is investigating the cause of this reduction.

Patna Division.

The districts of Muzaffarpur, Champaran, Darbhanga and Saran recorded decreases of 7,051, 8,849, 9,105 and 17,124 respectively.

Tirhut Division.

The districts of Bhagalpur and Monghyr recorded decreases. Purnea and the Santal Parganas districts recorded increases, viz. 263 and 6,877 respectively.

Bhagalpur Division.

The districts of Cuttack, Balasore and Angul recorded decreases of 6,860, 2,621 and 1,815 respectively. The districts of Puri and Sambalpur recorded increases of 1,331 and 5,899 respectively.

Orissa Division.

The districts of Hazaribagh, Ranchi, Manbhum and Singhbhum recorded increases of 1,166, 22,617, 5,785 and 6,622 respectively, whereas Palamau recorded decrease of 965.

Chota Nagpur Division.

5. *Vaccination in towns and compulsory areas.*—Statement VI shows that during the year, 14,797 children under one year of age, out of an available number of 23,115 or 64.01 per cent were successfully vaccinated.

The towns of Muzaffarpur, Hajipur, Jamalpur, Darbhanga, Patna, Bihar, Barh, Lalganj, Jajpur, Cuttack, Kendrapara, Forbesganj and Dhanbad show the smallest proportion of work done.

6. *Work done in the Native States under the supervision of the Political Agent and Commissioner.*—Vaccination work in the Orissa Feudatory States has steadily developed during the recent years under the direction and encouragement of the Political Agent and Commissioner.

Both vaccination and, to a large extent, revaccination are practically compulsory in the majority of these States.

During the year under report 196,555 primary operations and 301,181 revaccinations were performed as compared with 194,967 and 273,144, respectively in the previous year. The progress made in vaccination in these States has been steady and it is hoped that this will be maintained.

7. *Protection of infants.*—During the year under report, the number of children under one year available for vaccination was 1,076,911 and the

number of successful operations was 339,415 equal to 315 per thousand against 358,332 or 346 per thousand successful operations out of 1,035,666 children available during the previous year. The protection of infants in municipalities is separately shown in statement VI. It gives a ratio of 640 per thousand of the surviving infant population as compared with 739 in the previous year.

These figures are unsatisfactory, inasmuch as they show that far more than half of the total number of operations is performed on children over one year of age. Civil Surgeons and Assistant Directors of Public Health are unanimous in attributing the opposition to vaccination to be concerned more with the age of the child than with the operation itself, as there is a strong prejudice against vaccination of infants at an early age. The advantages in retaining the limit of age for compulsory primary vaccination as it now stands are obvious, but prejudices in India die hard and it will take years of education to dispel this one.

8. *Incidence and mortality of small-pox.*—During the last ten years the total number of deaths from small-pox in the districts of this province has been 130,621.

During the first quinquennium, the number of deaths was 42,592 and during the second, 88,029. In each of last five years the mortality was as follows:—35,626, 26,843, 10,775, 6,648 and 8,137.

The provincial ratios of the mortality from small-pox over thousand of population during the last five years have been 1.05, 0.79, 0.31, 0.19, and 0.24.

In the Annual Vaccination Report for 1926-27, it was stated that small-pox which had been raging in epidemic form was showing signs of subsiding. There was a considerable decrease in the incidence of the disease in 1927-28; in 1928-29 there was a further reduction, and in 1929-30 there has been a still further reduction in the number of cases and in 1930-31, there has been a small increase over the figure of 1929-30.

9. *Prevention of small-pox.*—The statistics given in previous paragraphs showing the number of operations performed during the year are not satisfactory, and indicate the insufficiency and inefficiency of the existing arrangements for vaccination in the province. The agency exists but its efforts are defeated for the most part by the attitude of the people towards this simple and efficient method of protection.

Small-pox is a preventable disease, and vaccination can prevent it, and in the light of this knowledge, and in the face of the unsatisfactory vaccination state of the people there is a great necessity for a more vigorous and complete vaccination policy.

During the year, the question of compulsory vaccination and the best method of carrying it out received careful consideration.

In the Patna district, where the responsibility for vaccination in rural areas now vests with the district board, vaccination when performed at a depôt is free, but a fee of four annas is charged for every operation done in private dwellings or in villages. Vaccinators are paid one anna per operation done in the depôt, and receive a percentage of the fees collected for operations done outside the depôt. This scheme is, more or less, self-supporting, and will probably be adopted by some other districts.

10. *Inspection of work.*—During the year under report the Assistant Directors of Public Health inspected 67,439 primary vaccinations as against 72,460 in the previous year.

The inspecting work done by the Assistant Directors of Public Health has been comprehensive and they have submitted valuable reports on the efficiency of the staff and work in the 20 districts in the province.

The Civil Surgeons of the province inspected 30,616 primary and 6,192 revaccination operations against 29,645 primary and 5,829 revaccinations last year.

It should be noted that the methods of inspection of Civil Surgeons and Assistant Directors of Public Health are different. Civil Surgeons inspect the new work which has just been done and the numbers returned by them are therefore smaller, whereas Assistant Directors of Public Health inspect all the children under ten years of age, and look at old work as well as new work, and also look for unvaccinated children and children who are marked with small-pox, and they also examine vaccinator's registers and other records in the villages where they can be verified and checked.

11. *Supply of vaccine.*—The Vaccine Depôt at Namkum supplied the province with vaccine throughout the year. A large supply of vaccine is held in reserve and the necessary stores and supplies for manufacture are in ample stock, 1,658,616 doses of vaccine were manufactured during the year as compared with 2,093,061 doses last year. The number of doses issued was 2,833,143 against 2,826,301 in 1929-30. The number of doses in stock at the end of the year was 4,092,943. The number of cattle used during the year was 403 as compared with 557 in the previous year, and the average yield of crude vaccine was over 42 grammes per animal. The working cost of the depôt for the year amounted to Rs. 27,065 as compared with Rs. 27,926 in the previous year. The average cost of the vaccine per dose works out at 3.13 pies on the gross expenditure, and the sale-proceeds of vaccine lymph was Rs. 22,385.

12. *Vaccine Depôt and Cold Storage.*—During the year under report, Coccidiosis broke out twice during the working season. Owing to these unforeseen circumstances, the vaccination of calves could not be started till the 22nd December 1930, after which the work continued smoothly.

The total mortality amongst calves was 3.9 per cent.

The cold storage and the machinery worked satisfactorily throughout the year. The engines and other machinery were cleaned and overhauled. Some tools were purchased to enable the engineer to carry out urgent repairs. The administrative approval for the construction of a small workshop has been obtained and the work is likely to be taken up soon.

Throughout the year, cholera and influenza vaccines were stocked in the depôt and issued throughout the province as required.

13. *Experimental work.*—All seed vaccine was manufactured at the depôt and worked satisfactorily. 4,339.5 grammes of seed vaccine were prepared.

The rejuvenation of the seed vaccine was maintained by passage through children, rabbits, buffalo-calves and cow-calves.

14. *Cost of the department.*—The total cost of the Vaccination Department (excluding the Vaccine Depôt) during the year, as detailed in statement II, was Rs. 1,71,879 or Rs. 17,832 more than the previous year.

The cost per successful operation was two annas and six pies against two annas and two pies in the previous year.

15. *Personnel.*—In conclusion, I desire to bring to the notice of Government the good work done by the Assistant Directors of Public Health in connection with the inspection of vaccination in their respective circles, i.e., Dr. B. P. Mazumdar in the Chota Nagpur Circle, Dr. J. L. Das in the Orissa Circle, Dr. A. N. Chatterji in the North Bihar Circle and Dr. R. M. Prasad in the South Bihar Circle.

Dr. B. P. Mazumdar was in supervising and controlling charge of the Vaccine Depôt in addition to his own duties and showed great keenness and interest in all matters connected with the depôt.

Dr. C. N. Banerji, the Superintendent of the depôt, performed his duties in a satisfactory manner.

S. L. MITRA, MAJOR, I.M.S.,
Offg. Director of Public Health.

1	2	3			4		
No.	Districts.	Population according to the Census of 1921.			Number of Births registered.		
		Male.	Female.	Total.	Male.	Female.	Total.
PATNA DIVISION.							
1	Patna	807,701	766,586	1,574,287	31,188	30,166	61,354
2	Gaya	1,074,668	1,078,262	2,152,930	50,476	48,963	99,459
3	Shahabad	896,905	922,273	1,819,178	35,849	34,236	70,085
	Total	2,779,274	2,767,121	5,546,395	117,513	113,365	230,878
TIBHUT DIVISION.							
4	Saran	1,132,355	1,207,598	2,339,953	43,530	42,402	85,932
5	Champanan	968,478	972,363	1,940,841	35,034	33,704	68,738
6	Muzaffarpur	1,324,991	1,429,954	2,754,945	48,801	47,298	96,099
7	Darbhanga	1,420,719	1,492,810	2,913,529	46,488	45,271	91,759
	Total	4,846,543	5,102,725	9,949,268	173,853	168,675	342,528
BHAGALPUR DIVISION.							
8	Monghyr	1,005,530	1,024,435	2,029,965	40,704	39,342	80,046
9	Bhagalpur	1,014,384	1,019,886	2,034,270	32,127	30,763	62,890
10	Purua	1,043,333	981,275	2,024,608	26,277	24,862	51,139
11	Santal Parganas	895,879	902,760	1,798,639	30,110	29,199	59,309
	Total	3,959,126	3,927,856	7,886,982	129,218	124,166	253,384
ORISSA DIVISION.							
12	Cuttack	952,543	1,112,135	2,064,678	41,278	39,114	80,392
13	Balasore	466,122	514,382	980,504	17,734	16,494	34,228
14	Angul	88,690	93,884	182,574	4,477	4,364	8,841
15	Puri	455,543	496,108	951,651	19,279	18,396	37,675
16	Sambalpur	387,895	461,571	849,466	17,014	16,271	33,285
	Total	2,350,793	2,618,080	4,968,873	99,782	94,639	194,421
CHOTA NAGPUR DIVISION.							
17	Hazaribagh	674,021	652,925	1,326,946	28,019	27,574	55,593
18	Banchi	658,591	675,882	1,334,473	26,586	26,004	52,590
19	Palamau	367,371	365,023	732,394	16,645	16,241	32,886
20	Manbhum	799,405	749,372	1,548,777	24,204	23,067	47,271
21	Singbhum	380,035	379,399	759,438	11,027	10,717	21,744
	Total	2,829,427	2,823,601	5,653,028	106,481	103,603	210,084
	Total for the Province	16,765,163	17,239,383	34,004,546	626,847	604,468	1,231,315

DIX I.

districts of Bihar and Orissa Province, during the year 1930.

5			6	7	8	9			10
Ratio of births per 1,000 of population.			Number of males born to every 100 females born.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	Mean ratio of births per 1,000 during previous five years.			No.
Male.	Female.	Total.				Male.	Female.	Total.	
19.8	19.1	38.9	103	11.1	...	20.2	19.5	39.7	1
23.4	22.7	46.1	103	13.0	...	22.2	21.9	44.1	2
19.7	18.8	38.5	104	12.6	...	20.3	19.0	39.3	3
21.2	20.4	41.6	103	12.3	...	21.1	20.2	41.3	
18.6	18.1	36.7	103	10.0	...	18.7	17.8	36.5	4
18.0	17.3	35.4	103	3.3	...	18.8	18.2	37.0	5
17.7	17.1	34.8	103	...	7.0	18.7	18.0	36.7	6
15.9	15.5	31.4	103	...	9.8	17.9	17.3	35.2	7
17.5	16.9	34.4	103	...	1.8	18.5	17.8	36.3	
20.0	19.4	39.4	103	4.6	...	21.2	20.3	41.5	8
15.8	15.1	30.9	104	4.0	...	18.2	17.3	35.5	9
13.0	12.3	25.3	106	1.2	...	15.6	14.7	30.3	10
16.7	16.2	32.9	103	10.6	...	15.8	15.3	31.1	11
16.3	15.8	32.1	104	4.9	...	17.7	17.0	34.7	
20.0	18.9	38.9	105	10.6	...	17.8	16.7	34.5	12
18.0	16.8	34.9	107	7.0	...	16.5	15.4	31.9	13
24.5	23.9	48.4	102	17.3	...	24.6	23.6	48.2	14
20.2	19.3	39.5	104	13.7	...	18.8	17.9	36.7	15
21.5	20.0	42.1	104	15.2	...	19.7	18.8	38.5	16
20.1	19.0	39.1	105	11.5	...	18.3	17.2	35.5	
21.9	21.5	43.5	101	16.1	...	22.4	21.9	44.3	17
19.9	19.5	39.4	102	16.2	...	19.9	19.2	39.1	18
22.7	22.1	44.8	102	12.9	...	22.9	22.9	45.8	19
15.6	14.9	30.6	104	12.0	...	16.4	15.5	31.9	20
14.5	14.1	28.6	102	11.1	...	15.0	14.4	29.4	21
18.8	18.3	37.1	102	13.8	...	19.2	18.7	37.9	
18.4	17.8	36.2	104	6.6	...	18.8	18.1	36.9	

Annual Form No. 11.—Statement of Births and Deaths registered

1	2	3	4	5			6		7		
				Population (Census, 1921).			Births.		Number of deaths registered.		
				Male.	Female.	Total.	Total number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.
No.	District.	Area in square miles.	Average population per square mile.								
PATNA DIVISION.											
1	Patna	2,069	761	807,701	766,586	1,574,287	61,354	38.9	22,337	21,568	43,905
2	Gaya	4,714	457	1,074,668	1,078,262	2,152,930	99,459	46.1	36,810	34,555	71,365
3	Shahabad	4,373	415	806,905	922,273	1,819,178	70,085	38.5	24,253	22,928	47,181
	Total	11,156	497	2,779,274	2,767,121	5,546,395	230,898	41.6	83,400	79,051	162,451
TIRHUT DIVISION.											
4	Saran	2,683	872	1,132,355	1,207,598	2,339,953	85,932	36.7	33,628	28,812	62,440
5	Champaran	3,531	549	988,478	972,363	1,960,841	68,738	35.4	33,355	29,130	62,485
6	Muzaffarpur	3,036	907	1,324,091	1,429,954	2,754,045	96,099	34.8	59,059	56,209	115,268
7	Darbhanga	3,348	870	1,420,719	1,492,810	2,913,529	91,759	31.4	63,081	56,975	120,056
	Total	12,598	789	4,846,543	5,102,725	9,949,268	342,528	34.4	189,123	171,126	360,249
BHAGALPUR DIVISION.											
8	Monghyr	3,920	518	1,005,530	1,024,435	2,029,965	80,046	39.4	36,595	34,157	70,752
9	Bhagalpur	4,226	481	1,014,384	1,019,386	2,033,770	62,890	30.9	29,228	25,456	54,684
10	Purnea	4,993	405	1,043,333	981,275	2,024,608	51,139	25.3	26,003	22,878	48,881
11	Santal Parganas	5,462	329	595,879	902,766	1,798,639	59,339	32.9	21,252	18,939	40,191
	Total	18,601	423	3,959,126	3,927,866	7,886,982	253,384	32.1	113,078	101,450	214,528
ORISSA DIVISION.											
12	Cuttack	3,654	656	932,543	1,112,135	2,044,678	80,812	38.9	28,888	29,638	58,526
13	Balasore	2,085	470	466,122	514,382	980,504	34,228	34.9	13,283	14,155	27,438
14	Angul	1,681	112	88,099	93,884	182,574	8,841	48.4	2,964	2,811	5,675
15	Puri	2,499	389	455,543	496,108	951,651	37,675	39.5	12,309	12,286	24,595
16	Sambalpur	3,824	296	387,895	461,571	789,466	33,285	42.1	11,967	10,291	21,258
	Total	13,743	361	2,350,793	2,618,080	4,968,873	194,421	39.1	68,411	69,111	137,522
CHOTA NAGPUR DIVISION.											
17	Hazaribagh	7,021	181	624,021	652,925	1,276,946	55,593	43.5	18,184	16,795	34,979
18	Ranchi	7,102	187	658,591	675,882	1,334,473	52,599	39.4	16,485	14,524	31,009
19	Palamu	4,916	149	367,371	366,923	734,294	32,886	44.8	12,238	11,150	23,388
20	Manbhum	4,147	373	799,405	749,272	1,548,777	47,271	39.6	15,890	13,036	28,926
21	Singbhum	3,891	195	380,039	379,599	759,638	21,744	28.6	7,331	6,001	13,332
	Total	27,077	988	2,823,427	2,823,601	5,653,028	210,094	37.1	70,128	61,508	131,636
	Total for the Province	83,180	409	16,765,163	17,239,383	34,004,546	1,231,315	36.2	524,140	482,243	1,006,383

DIX I—contd.

in the districts of Bihar and Orissa Province, during the year 1930.

8	9											10			11
	Number of deaths of males to every 100 deaths of females.	Death-rate per 1,000 of population from—								Mean ratio of deaths per 1,000 during previous five years.			No.		
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Male.	Female.	Total.		Male.		Female.	Total.
103	3.3	0.2	...	14.5	0.7	0.6	0.5	7.8	27.6	28.1	27.8	28.2	28.7	28.4	1
106	3.6	0.5	0.0009	22.3	0.69	0.05	0.2	6.2	34.2	32.0	33.1	29.7	27.5	28.6	2
105	1.4	0.2	0.01	18.6	0.04	0.02	0.2	5.2	27.0	24.8	25.9	29.1	26.5	27.8	3
105	2.9	0.4	0.005	18.9	0.3	0.2	0.3	6.3	30.0	28.5	29.3	29.1	27.5	28.3	
117	2.2	0.2	0.4	14.0	0.3	0.3	0.4	8.7	29.7	23.9	26.7	26.7	21.1	23.8	4
114	7.8	0.06	...	20.0	0.09	0.006	0.3	3.8	34.4	29.9	32.1	25.3	21.6	23.5	5
105	13.7	0.07	0.5	23.9	0.1	0.05	0.5	2.7	44.5	39.3	41.8	27.7	24.3	25.9	6
110	15.8	0.2	0.3	22.2	0.08	0.01	0.3	2.2	44.4	38.1	41.2	24.9	21.5	23.2	7
110	10.5	0.1	0.3	20.3	0.1	0.09	0.4	4.2	39.0	33.5	36.2	26.2	22.2	24.2	
107	6.8	0.5	0.3	21.9	0.09	0.03	0.3	4.8	36.4	33.3	34.8	27.2	24.9	26.0	8
115	3.4	0.1	...	20.9	0.04	0.02	0.2	2.1	28.8	24.9	26.9	24.7	22.3	23.5	9
113	2.8	0.08	...	20.1	0.03	0.01	0.2	0.9	24.9	23.3	24.1	25.2	24.1	24.7	10
112	0.3	0.2	...	19.1	0.1	0.1	0.3	2.0	23.7	21.0	22.3	20.8	18.1	19.4	11
111	3.4	0.2	0.08	20.6	0.08	0.06	0.3	2.5	28.5	25.8	27.2	22.1	22.5	23.5	
97	0.7	0.3	...	13.6	3.3	0.5	0.5	9.4	30.3	26.6	28.3	36.7	30.9	33.5	12
93	2.0	0.2	...	14.0	0.4	0.07	0.4	10.5	25.4	27.5	27.9	34.4	32.0	33.2	13
102	...	...	...	26.2	0.2	0.1	0.9	3.6	32.3	29.9	31.1	39.2	27.4	29.8	14
100	0.4	0.02	...	9.0	3.5	1.2	0.4	11.1	27.0	24.7	25.8	34.9	31.0	32.8	15
108	0.2	0.4	...	12.5	1.9	1.3	0.3	10.1	28.5	25.4	26.9	28.3	25.5	26.9	16
99	0.8	0.2	...	13.1	2.5	0.7	0.5	9.8	29.1	26.4	27.6	34.2	30.2	32.1	
108	1.7	0.1	...	21.5	0.04	0.02	0.2	3.6	29.1	25.7	27.4	26.9	23.4	25.1	17
113	...	0.05	...	19.5	0.3	0.06	0.3	3.0	25.0	21.5	23.2	23.6	20.0	21.8	18
109	1.0	0.4	...	23.3	0.02	0.006	0.3	4.7	33.3	30.4	31.9	30.2	27.9	29.0	19
121	0.2	0.1	...	16.4	0.06	0.07	0.2	1.5	19.8	17.3	18.6	18.2	16.4	17.3	20
122	0.1	0.2	...	15.1	0.06	0.01	0.3	1.6	19.3	15.8	17.5	17.2	14.2	15.7	21
114	0.6	0.2	...	19.3	0.1	0.04	0.3	2.8	24.8	21.8	23.3	22.8	20.0	21.4	
108	4.6	0.2	0.1	18.9	0.5	0.2	0.3	4.7	31.2	28.0	29.6	26.8	24.0	25.4	

Annual Form No. III.—Deaths registered in the districts of Bihar

1	2								
No.	District.				January.	February.	March.	April.	May.
PATNA DIVISION.									
1	Patna	...	...	...	2,125	1,932	2,673	5,491	4,839
2	Gaya	...	...	...	3,662	2,809	3,112	5,503	6,888
3	Shahabad	...	...	...	2,863	2,299	2,625	2,911	3,701
	Total				8,650	7,040	8,410	13,905	15,143
TIRHUT DIVISION.									
4	Saran	...	...	...	4,474	3,475	4,174	5,769	7,230
5	Champanan	...	...	...	3,809	3,016	3,181	3,937	9,300
6	Muzaffarpur	...	...	...	6,997	5,138	5,666	12,311	27,078
7	Darbhanga	...	...	...	7,165	5,774	6,254	17,099	24,838
	Total				22,445	17,463	19,275	39,116	68,446
BHAGALPUR DIVISION.									
8	Monghyr	...	...	...	5,012	3,300	4,633	9,093	12,582
9	Bhagalpur	...	...	...	5,464	3,438	3,689	6,122	8,005
10	Purnea	...	...	...	5,551	4,088	3,596	5,069	6,337
11	Santal Parganas	...	...	...	3,004	2,346	2,644	3,746	4,316
	Total				19,031	13,172	14,562	24,030	31,240
ORISSA DIVISION.									
12	Cuttack	...	...	...	5,338	4,777	5,346	4,940	3,654
13	Balasore	...	...	...	2,678	2,624	2,705	2,257	1,268
14	Angul	...	...	...	431	363	541	642	701
15	Puri	...	...	...	2,533	2,060	2,250	2,148	1,706
16	Sambalpur	...	...	...	1,715	1,268	1,776	1,743	2,244
	Total				12,695	11,092	12,618	11,730	9,673
CHOTA NAGPUR DIVISION.									
17	Hazaribagh	...	...	...	2,133	1,610	2,038	3,685	3,424
18	Ranchi	...	...	...	1,967	1,764	2,113	2,883	2,717
19	Palamau	...	...	...	1,572	1,163	1,232	2,573	1,747
20	Manbhum	...	...	...	1,955	1,691	1,916	2,994	2,713
21	Singbhum	...	...	...	1,121	837	1,055	1,306	1,099
	Total				8,748	7,065	8,374	13,351	11,700
	Total for the Province				71,569	55,772	63,239	102,132	136,207
	Ratio per 1,000 of population				2.1	1.6	1.8	3.0	4.0

DIX I—contd.

and Orissa Province, during each month of the year 1930.

3							4	
June	July	August	September	October	November	December	Total deaths registered during the year.	No.
4,822	4,138	4,044	4,694	3,126	3,033	2,968	43,905	1
7,258	6,629	10,092	8,419	7,005	5,587	4,701	71,365	2
4,898	3,514	5,674	5,256	5,311	4,400	3,729	47,151	3
16,978	14,281	19,810	18,369	15,442	13,020	11,398	162,451	
7,244	5,797	5,995	5,297	4,406	4,421	4,158	62,440	4
8,551	7,559	4,814	4,181	4,391	5,177	4,570	62,485	5
16,308	8,928	6,032	5,753	6,155	7,844	7,058	115,268	6
20,582	8,405	5,747	5,037	5,762	6,684	6,709	120,056	7
52,635	30,688	22,588	20,208	20,714	24,126	22,495	366,249	
8,227	4,296	4,698	4,717	4,795	4,943	4,456	70,752	8
4,608	3,372	3,224	3,564	4,160	4,685	4,353	54,684	9
4,158	3,201	2,646	2,516	3,297	4,007	4,315	48,881	10
3,849	2,996	4,183	3,378	3,024	3,261	3,462	40,211	11
20,842	13,865	14,753	14,175	15,376	16,896	16,566	214,528	
4,002	4,177	3,700	4,786	4,437	5,185	8,204	58,546	12
1,587	1,869	1,777	2,306	2,105	2,287	3,775	27,438	13
500	401	459	505	403	333	396	5,675	14
2,169	2,148	1,699	1,883	1,463	1,694	2,842	24,595	15
1,787	1,773	2,012	2,306	1,551	1,384	1,709	21,268	16
10,045	10,368	9,647	11,786	9,959	10,963	16,926	137,522	
3,084	2,475	4,025	3,559	3,271	2,713	2,962	34,979	17
2,347	2,091	2,883	3,947	2,798	2,591	2,903	31,009	18
2,140	2,130	2,062	2,225	2,415	2,204	1,845	23,388	19
2,539	1,956	3,104	2,977	2,707	2,155	2,311	28,928	20
1,061	1,065	1,163	1,294	1,110	1,077	1,204	13,332	21
11,111	9,717	13,242	14,002	12,301	10,800	11,225	131,636	
111,661	78,919	80,040	78,600	73,792	75,825	78,630	1,006,386	
3-3	2-3	2-3	2-3	2-2	2-2	2-3	2-6	

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1930—contd.

3

one year.

Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
8	9	10	11	12	13	14	15	16	
2,078	1,598	3,676	1,172	1,068	2,240	5,772	4,765	10,537	1
2,742	2,367	5,109	1,732	1,465	3,197	9,175	7,531	16,706	2
1,900	1,000	2,900	889	723	1,612	7,348	5,792	13,140	3
1,834	1,175	3,009	978	680	1,658	5,815	4,200	10,015	4
987	841	1,828	694	500	1,194	5,506	4,540	10,136	5
1,617	1,508	3,125	1,154	945	2,099	5,973	5,035	11,008	6
1,331	1,156	2,487	759	636	1,395	4,796	3,696	8,492	7
1,797	1,572	3,369	1,107	959	2,066	5,293	4,423	9,716	8
1,060	863	1,923	637	455	1,092	3,330	2,749	6,079	9
1,188	962	2,150	414	328	742	3,062	2,472	5,534	10
957	751	1,708	624	567	1,191	2,992	2,479	5,471	11
3,077	2,841	5,918	1,212	1,068	2,300	8,698	7,646	16,344	12
1,513	1,409	3,012	390	354	744	4,130	3,862	7,992	13
336	354	690	147	136	283	898	892	1,790	14
1,179	1,036	2,215	479	413	892	3,861	3,274	7,135	15
783	683	1,466	426	366	792	3,611	3,114	6,725	16
1,128	983	2,111	508	425	933	3,304	2,810	6,114	17
992	791	1,783	529	421	950	3,104	2,453	5,557	18
755	670	1,425	456	425	881	2,809	2,459	5,268	19
743	511	1,254	250	217	467	2,303	1,758	4,061	20
296	227	523	125	114	239	946	742	1,688	21
27,493	23,438	50,931	14,682	12,355	27,037	92,966	76,692	169,678	
...	...	...	...	...	...	488,341	490,725	979,066	
...	...	...	...	...	...	190.4	156.3	173.3	

Annual Form No. IV.—Deaths registered according to age in the

1	2	3		4		5		6	
No.	District.	1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
		17	18	19	20	21	22	23	24
PATNA DIVISION.									
1	Patna	5,407	5,390	1,188	1,081	590	337	484	516
2	Gaya	9,086	8,738	2,390	2,096	1,288	965	953	967
3	Shahabad	4,383	4,183	1,156	973	616	469	634	632
TIRHUT DIVISION.									
4	Saran	6,685	5,851	2,051	1,776	1,361	939	1,091	894
5	Champanan	6,359	5,877	2,592	1,931	1,264	896	1,094	830
6	Muzaffarpur	13,437	13,642	6,508	5,384	3,323	2,108	1,857	1,396
7	Darbhanga	15,282	14,547	7,690	6,107	3,408	2,210	2,414	1,740
BHAGALPUR DIVISION.									
8	Monghyr	10,207	9,825	3,158	2,588	1,468	1,138	948	876
9	Bhagalpur	6,322	5,650	2,503	2,038	1,321	795	966	838
10	Purnea	4,346	3,856	2,159	1,649	1,330	888	1,081	1,068
11	Santal Parganas	4,551	4,156	1,754	1,435	995	751	1,066	1,028
ORISSA DIVISION.									
12	Cuttack	4,251	4,713	1,396	1,238	721	673	962	1,357
13	Balasore	1,534	1,583	518	521	350	394	498	600
14	Angul	617	625	132	111	87	73	102	110
15	Puri	1,661	1,810	457	426	272	225	379	507
16	Sambalpur	1,997	1,775	565	454	390	239	364	392
CHOTA NAGPUR DIVISION.									
17	Hazaribagh	5,060	4,552	1,553	1,263	776	610	612	638
18	Ranchi	4,288	3,634	1,151	881	735	661	652	643
19	Palamau	3,339	2,935	888	685	484	363	400	372
20	Manbhum	2,495	2,318	1,088	895	841	551	1,156	942
21	Singhbhum	1,526	1,337	561	509	396	283	385	319
Total for the Province ...		112,833	106,807	41,563	34,041	21,926	15,696	18,696	16,685
Population ...		1,434,380	1,565,592	2,735,082	2,648,138	2,170,629	1,827,533	1,433,777	1,350,656
Ratio per 1,000 of population ...		78.6	68.2	15.1	12.8	10.1	8.5	12.6	12.3

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1930—concl.

7		8		9		10		11		12
20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
25	26	27	28	29	30	31	32	33	34	
1,274	1,630	1,297	1,454	1,435	1,173	1,461	1,349	3,429	3,833	1
2,677	3,123	2,555	2,525	2,386	2,067	2,599	2,355	3,701	4,148	2
1,838	2,207	1,961	1,948	1,693	1,304	1,484	1,408	3,140	4,012	3
2,788	2,446	3,272	2,769	2,625	1,976	2,423	2,075	5,522	5,875	4
3,229	3,000	3,638	3,212	3,208	2,402	2,310	2,239	4,065	4,113	5
4,949	4,689	5,663	5,238	4,995	4,485	4,647	4,590	7,712	9,642	6
6,012	5,778	6,242	5,577	5,555	4,625	5,051	5,174	6,631	7,521	7
2,409	2,741	2,739	2,321	2,703	2,137	2,938	2,697	4,672	5,211	8
2,826	2,668	3,165	2,676	2,913	2,207	2,622	2,368	3,260	3,497	9
2,185	3,763	3,287	2,972	2,849	2,009	2,277	1,894	2,627	2,297	10
2,097	2,187	2,076	1,847	1,804	1,389	1,520	1,404	2,397	2,283	11
2,380	3,235	2,517	2,625	2,375	2,143	2,429	2,306	3,049	3,520	12
1,336	1,987	1,410	1,575	1,273	1,168	1,194	1,280	1,640	1,275	13
187	201	205	163	182	164	236	243	216	219	14
932	1,438	1,007	976	1,116	842	1,238	1,143	1,381	1,645	15
724	886	793	693	845	622	840	778	1,028	1,248	16
1,305	1,551	1,392	1,256	1,297	1,016	1,429	1,411	1,555	1,688	17
1,207	1,163	1,169	1,045	1,152	950	1,494	1,421	1,533	1,673	18
928	1,023	962	967	897	780	839	824	692	742	19
1,554	1,493	1,663	1,184	1,485	967	1,282	1,083	2,023	1,847	20
694	562	707	673	695	363	640	546	781	867	21
44,416	47,861	47,720	43,837	43,393	34,869	40,946	28,590	60,459	67,166	
2,609,645	2,967,551	2,453,639	2,602,387	1,725,545	1,748,766	963,182	1,018,973	749,626	1,018,002	
17.0	16.1	19.4	16.8	25.1	19.9	42.5	37.8	80.6	65.9	

Annual Form No. V.—Deaths registered according to class in the

1 No.	2 District.	3 Population according to											
		Christians.			Hindus.			Muhammādans.			Buddhists.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
PATNA DIVISION.													
1	Patna	2,023	1,152	3,175	725,139	681,502	1,407,641	76,899	81,539	158,438	26	1	27
2	Gaya	220	208	428	973,961	959,028	1,932,989	100,203	118,899	219,192	6	...	6
3	Shahabad	984	1,178	2,162	834,106	851,797	1,685,903	61,514	68,995	130,509	3	1	4
TIRHUT DIVISION.													
4	Saran	272	101	373	1,001,386	1,061,784	2,063,170	130,643	145,676	276,319	...	...	...
5	Champaran	1,258	1,524	2,782	818,772	816,438	1,635,210	148,375	154,353	302,728	6	1	7
6	Muzaffarpur	422	397	819	1,164,927	1,243,172	2,408,099	159,593	186,310	345,903	...	...	...
7	Darbhanga	268	253	521	1,237,399	1,293,799	2,531,198	183,019	198,743	381,762	...	...	...
BHAGALPUR DIVISION.													
8	Monghyr	892	757	1,649	910,686	920,485	1,831,181	89,505	99,115	189,020	15	...	15
9	Bhagalpur	604	478	1,082	904,910	908,056	1,812,966	105,964	108,229	214,193	22	...	22
10	Purnea	686	664	1,350	613,529	572,501	1,186,030	417,090	397,312	814,402	29	2	31
11	Santal Parganas	5,378	5,623	11,001	409,646	413,732	823,378	90,140	90,256	180,396	...	...	...
ORISSA DIVISION.													
12	Cuttack	1,006	1,490	2,496	922,861	1,074,834	1,997,195	28,289	16,036	64,416	146	126	272
13	Balassore	557	635	1,192	447,257	494,628	941,885	14,558	15,217	29,775	...	...	...
14	Angul	62	61	123	64,194	68,058	132,232	177	128	305	...	...	...
15	Puri	662	624	1,286	445,230	485,056	930,276	9,483	10,291	19,774	49	47	96
16	Sambalpur	1,527	1,585	3,112	380,508	394,014	774,522	1,823	1,696	3,519	1	...	1
CHOTA NAGPUR DIVISION.													
17	Hazaribagh	1,113	1,010	2,123	522,399	548,348	1,070,747	66,080	69,921	136,001	...	...	...
18	Ranchi	98,134	99,082	197,216	279,178	279,652	558,830	26,469	25,902	52,311	...	...	...
19	Palamanu	3,605	3,678	7,283	309,493	308,156	617,649	32,512	32,490	65,002	...	...	...
20	Manbhum	2,973	2,674	5,647	730,736	691,636	1,422,372	50,241	40,312	90,553	27	4	31
21	Siogbbhum	5,761	5,548	11,309	204,626	195,376	400,002	9,622	6,042	15,664	...	...	...
Total for the Province		128,407	128,722	257,129	13,901,933	14,261,542	28,163,475	1,802,720	1,887,462	3,690,182	330	182	512

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1930—contd.

Other classes.			Total.			Christians.			Hindus.			Muhammadans.			No.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
2,614	2,392	5,006	807,701	765,586	1,574,287	8	4	12	20,404	19,796	40,130	1,925	1,837	3,762	1
158	127	315	1,074,668	1,078,263	2,152,930	3	...	3	33,500	31,434	64,934	3,304	3,171	6,425	2
298	302	600	896,905	923,373	1,819,178	59	78	177	22,802	21,654	44,456	1,352	1,196	2,548	3
54	37	91	1,132,355	1,207,598	2,339,953	...	...	...	30,158	25,991	56,149	3,470	2,821	6,291	4
67	47	114	968,478	973,363	1,940,841	43	29	72	29,125	25,351	54,676	4,187	3,550	7,737	5
49	75	124	1,324,991	1,439,954	2,754,945	9	13	22	52,325	50,081	102,406	6,725	6,115	12,840	6
33	15	48	1,420,719	1,492,810	2,913,529	7	9	16	55,718	59,524	106,242	7,356	6,442	13,798	7
4,032	4,068	8,100	1,065,530	1,024,435	2,029,965	7	8	15	33,321	31,372	64,693	3,066	2,774	5,840	8
2,884	2,623	5,507	1,014,384	1,019,386	2,033,770	4	6	10	26,623	23,237	49,860	2,396	2,307	4,803	9
11,999	10,796	22,795	1,043,333	981,375	2,024,608	6	5	11	15,142	13,325	28,467	10,813	9,522	20,335	10
390,715	393,149	783,864	893,879	902,766	1,796,639	48	48	96	11,423	10,193	21,616	2,551	2,336	4,887	11
150	149	299	952,543	1,112,135	2,064,678	9	11	20	28,181	28,972	57,153	698	675	1,373	12
3,760	3,902	7,632	466,122	514,382	980,504	8	11	19	12,747	13,624	26,371	496	420	826	13
24,237	25,657	49,914	88,690	93,884	182,574	2	3	5	1,911	1,764	3,675	3	6	9	14
129	90	219	455,543	496,168	951,651	7	7	14	12,644	12,965	24,109	258	214	472	15
4,036	4,276	8,312	387,896	461,571	789,466	8	6	14	10,984	10,138	21,122	29	31	60	16
24,429	33,646	68,075	624,021	652,925	1,276,946	13	3	15	16,399	15,122	31,431	1,628	1,460	3,088	17
254,870	271,246	526,116	658,591	675,882	1,334,473	1,750	1,566	3,316	3,882	3,394	7,276	562	463	1,025	18
21,761	21,699	43,460	367,371	366,023	733,394	55	53	108	11,189	10,216	21,405	931	803	1,734	19
15,428	14,746	30,174	729,405	749,372	1,548,777	62	51	113	13,558	11,093	24,651	676	567	1,243	20
160,090	172,433	332,463	380,609	379,399	789,438	55	62	117	3,394	2,670	6,073	113	65	178	21
931,773	961,475	1,893,248	16,765,163	17,239,383	34,004,546	2,202	1,973	4,175	444,940	412,155	837,095	53,649	46,625	99,274	

Annual Form No. V.—Deaths registered according to class in the

1 No.	2 District.	3 Number of deaths registered—consolid.									Ratio of deaths			
		Buddhists.			Other classes.			Total.			Christians.			
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
PATNA DIVISION.														
1	Patna					1			22,337	21,568	43,905	3.9	3.4	3.7
2	Gaya					3			36,810	34,555	71,365	13.6	...	7.0
3	Shahabad								24,253	22,928	47,181	100.6	66.2	81.8
TIRHUT DIVISION.														
4	Saran								33,628	28,812	62,440	...	...	...
5	Champanan								33,355	29,130	62,485	34.1	19.0	25.8
6	Muzaffarpur								59,059	56,209	115,268	21.3	33.7	26.8
7	Darbhanga								63,031	56,975	120,056	26.0	35.5	30.7
BHAGALPUR DIVISION.														
8	Monghyr					1	3	4	36,595	34,157	70,752	7.7	10.7	9.1
9	Bhagalpur					5	6	11	29,228	25,456	54,684	6.6	12.5	9.2
10	Purnea					42	26	68	26,093	22,878	48,971	8.7	7.5	8.1
11	Santal Parganas					7,230	6,332	13,562	21,252	18,959	40,211	8.9	8.5	8.7
ORISSA DIVISION.														
12	Cuttack								28,888	29,658	58,546	8.0	7.4	8.0
13	Balasore					122	100	222	13,283	14,155	27,438	14.3	17.3	15.9
14	Angul					943	1,038	1,981	2,864	2,811	5,675	32.2	42.1	40.6
15	Puri								12,309	12,286	24,595	10.5	11.2	10.8
16	Sambalpur					46	26	72	11,067	10,201	21,268	5.2	3.7	4.4
CHOTA NAGPUR DIVISION.														
17	Hazaribagh					235	210	445	18,184	16,795	34,979	10.8	2.9	7.0
18	Ranchi					10,291	9,101	19,392	16,435	14,534	31,009	17.8	15.8	16.8
19	Palamau					63	78	141	12,238	11,150	23,388	15.2	14.4	14.8
20	Manbhum					1,594	1,327	2,921	15,890	13,038	28,928	20.8	19.0	20.0
21	Singbhum					3,769	3,195	6,964	7,331	6,001	13,332	9.5	11.1	10.3
Total for the Province						24,349	21,493	45,842	524,140	482,246	1,006,386	17.9	15.3	16.2

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1930—conold.

per 1,000 of population.															
Hindus.			Muhammadans.			Buddhists.			Other classes.			Total.			No.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
23.1	23.9	23.5	25.0	22.5	23.7	...	...	...	...	0.4	0.1	27.6	28.1	27.8	1
24.4	32.8	33.6	37.9	26.2	29.3	...	...	...	15.9	...	9.5	34.2	32.0	33.1	2
27.3	25.4	26.3	21.9	17.3	19.5	...	...	...	...	...	...	27.0	24.8	25.9	3
30.1	24.4	27.2	26.5	19.3	22.7	...	...	...	...	...	...	29.7	23.9	26.7	4
35.5	31.2	33.4	29.2	22.9	25.5	...	...	...	...	...	...	34.4	29.9	32.1	5
44.9	40.2	42.5	42.1	32.8	37.1	...	...	...	...	...	...	44.5	39.3	41.8	6
45.0	39.0	41.9	40.2	32.4	36.1	...	...	...	...	...	...	44.4	38.1	41.2	7
30.8	34.1	35.4	34.1	28.0	30.9	...	...	...	0.2	0.7	0.5	36.4	33.3	34.8	8
29.4	25.6	27.5	24.5	20.4	22.4	...	...	...	2.0	2.2	2.0	28.8	24.9	26.9	9
24.6	23.3	24.0	20.6	23.9	24.9	...	...	...	3.5	2.4	3.0	24.9	23.3	24.1	10
27.9	24.6	26.2	28.3	25.8	27.1	...	...	...	18.5	16.2	17.3	23.7	21.0	22.3	11
30.5	26.9	28.6	24.6	18.7	21.3	...	...	...	...	...	...	30.3	26.6	28.3	12
28.5	27.5	27.9	27.8	27.6	27.7	...	...	...	32.5	25.6	29.0	28.4	27.5	27.9	13
29.8	25.9	27.8	16.9	46.9	29.5	...	...	...	39.0	40.4	39.8	32.3	29.9	31.1	14
27.0	24.8	25.9	27.2	20.7	23.9	...	...	...	...	...	...	27.0	24.7	25.8	15
28.8	25.7	27.2	15.9	18.2	17.0	...	...	...	11.3	6.0	8.6	28.5	25.4	26.9	16
31.2	27.5	29.3	24.6	20.8	22.7	...	...	...	6.8	6.2	6.5	29.1	25.7	27.4	17
13.8	12.1	13.0	21.2	17.8	19.5	...	...	...	40.3	33.5	36.8	25.0	21.5	23.2	18
36.1	33.1	34.6	28.6	24.7	26.6	...	...	...	2.9	3.6	3.2	33.3	30.4	31.9	19
18.5	16.0	17.3	13.4	14.0	13.7	...	...	...	103.3	89.9	96.8	19.8	17.3	18.6	20
16.5	13.7	15.2	11.8	10.7	11.3	...	...	...	23.5	18.5	20.9	19.3	15.8	17.5	21
32.0	28.9	30.4	29.2	24.7	26.9	...	...	...	26.1	23.3	24.2	31.2	28.0	29.6	

Annual Form No. VI.—Deaths registered from different causes in the

No.	Districts and Towns.	Population according to Census of 1921.	Births.				Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.
			Male.	Female.	Total.	Birth rate.						
DISTRICTS EXCLUDING TOWNS.												
PATNA DIVISION.												
1	Patna ...	1,871,055	29,083	28,278	57,361	41.8	5,086	498	...	21,504	900	923
2	Gaya ...	2,072,030	40,250	47,789	97,039	46.8	7,658	1,102	2	46,514	156	46
3	Shahabad ...	1,717,872	34,734	32,337	68,071	39.6	2,633	468	24	33,588	43	16
TIRHUT DIVISION.												
4	Saran ...	2,277,490	42,470	41,359	83,829	36.8	5,116	399	1,031	32,356	659	602
5	Champaran ...	1,902,722	34,573	33,291	67,864	35.6	15,240	114	...	38,589	15	9
6	Muzaffarpur ...	2,687,750	47,699	46,255	93,954	34.9	37,485	196	1,407	65,295	421	85
7	Darbhanga ...	2,837,043	45,236	44,183	89,419	31.6	45,436	581	988	64,136	172	17
BHAGALPUR DIVISION.												
8	Monghyr ...	1,938,313	39,565	38,327	77,892	39.8	13,774	747	616	43,982	66	20
9	Bhagalpur ...	1,939,479	31,467	30,170	61,637	31.4	6,958	185	...	41,908	55	19
10	Purnea ...	1,993,071	26,001	24,608	50,609	25.5	5,555	172	...	40,365	54	18
11	Santal Parganas ...	1,759,955	29,905	29,039	58,944	33.4	565	473	...	34,244	263	296
ORISSA DIVISION.												
12	Cuttack ...	1,988,042	40,476	38,399	78,875	39.7	1,531	603	...	27,601	6,718	1,071
13	Balasore ...	963,467	17,535	16,326	33,861	35.1	2,017	235	...	13,640	427	57
14	Angul ...	182,574	4,477	4,364	8,841	48.4	...	...	...	4,779	46	24
15	Puri ...	912,957	18,957	18,122	37,079	40.6	331	23	...	8,195	2,196	1,079
16	Sambalpur ...	775,972	16,765	16,050	32,815	42.2	162	308	...	9,774	1,503	1,008
CHOTA NAGPUR DIVISION.												
17	Hazaribagh ...	1,292,767	27,520	27,111	54,631	44.3	2,228	182	...	27,141	55	30
18	Ranchi ...	1,292,224	26,155	25,642	51,797	40.0	...	71	...	25,846	404	71
19	Palamanu ...	723,577	16,551	16,164	32,715	45.2	736	340	...	18,499	19	5
20	Manbhum ...	1,502,413	23,738	22,673	46,431	30.9	384	159	...	25,057	102	104
21	Singbhum ...	738,814	10,789	10,478	21,267	28.7	93	187	...	11,365	38	5
Total for the Province		32,829,507	612,966	591,965	1,204,931	36.7	152,968	6,952	4,068	634,268	15,402	5,505
TOWNS.												
PATNA DISTRICT.												
1	Patna City ...	119,976	1,129	973	2,102	17.5	46	9	...	726	127	90
2	Bihar ...	36,720	432	407	839	22.8	70	25	...	172	18	21
3	Dinapore ...	30,877	342	349	691	22.3	16	2	...	301	24	42
4	Barh ...	8,464	145	117	262	30.9	12	1	...	71	10	13
5	Khagole ...	7,195	57	42	99	13.7	11	...	...	46	8	5
GAYA DISTRICT.												
6	Gaya ...	67,562	909	864	1,773	26.2	171	74	...	1,294	16	55
7	Tikari ...	4,827	131	135	266	55.1	19	...	...	125	5	3
8	Daudnagar ...	8,511	186	195	381	44.7	1	3	...	108	17	14

DIX I—contd.

districts and towns of Bihar and Orissa Province, during the year 1930—contd.

		11					12	13	14										15
		Injuries.					All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.										No.
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.	Cholera.			Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.			
Male.	Female.															For the year.	Mean of previous five years.		
90	97	218	287	4	696	11,498	41,195	3.7	0.3	...	15.7	0.7	0.6	0.5	8.3	30.0	27.8	1	
31	33	122	271	6	403	12,520	68,461	3.7	0.5	0.0009	22.4	0.07	0.02	0.2	6.0	33.0	28.1	2	
44	37	144	158	4	387	9,335	45,294	1.5	0.2	0.01	19.4	0.02	0.009	0.2	5.4	25.9	28.3	3	
68	114	291	458	13	944	19,926	61,033	2.2	0.1	0.4	14.2	0.3	0.3	0.4	8.7	26.8	23.9	4	
10	9	238	374	2	633	7,463	62,063	8.0	0.05	...	20.2	0.007	0.004	0.3	3.9	32.6	23.6	5	
29	37	500	600	24	1,259	7,034	113,182	13.9	0.07	0.5	24.2	0.1	0.03	0.4	2.6	42.1	25.9	6	
26	19	435	544	21	1,035	5,245	117,610	16.0	0.2	0.3	22.7	0.06	0.006	0.3	1.8	41.6	23.0	7	
6	10	149	385	1	560	9,355	69,120	7.0	0.4	0.3	22.4	0.03	0.01	0.3	4.8	35.3	26.1	8	
28	22	129	290	4	473	3,955	53,533	3.5	0.09	...	21.3	0.02	0.01	0.2	2.0	27.3	23.7	9	
34	68	91	267	2	462	1,814	48,400	2.8	0.08	...	20.3	0.03	0.009	0.2	0.9	24.4	24.9	10	
53	49	144	344	16	606	3,560	40,006	0.3	0.2	...	19.4	0.1	0.1	0.3	2.0	22.7	19.5	11	
97	312	372	160	42	983	18,683	57,390	0.8	0.3	...	13.9	3.4	0.5	0.5	9.5	28.9	34.1	12	
42	91	225	111	7	476	10,262	27,114	2.0	0.2	...	14.1	0.4	0.05	0.4	10.6	28.1	33.4	13	
16	22	67	56	2	163	663	5,675	...	...	...	26.2	0.2	0.1	0.9	3.6	31.1	28.8	14
32	59	210	82	5	388	10,264	23,476	0.3	0.02	...	8.9	3.5	1.2	0.4	11.2	25.7	32.6	15	
23	25	131	70	7	256	7,866	20,877	0.2	0.3	...	12.5	1.9	1.2	0.3	10.1	26.9	23.9	16	
57	88	106	84	1	336	4,561	34,533	1.8	0.1	...	22.0	0.04	0.02	0.2	3.7	28.0	25.5	17	
32	38	147	178	10	465	3,954	30,751	...	0.05	...	20.0	0.3	0.0	0.3	3.0	23.8	22.2	18	
13	16	115	130	2	276	3,440	23,315	1.0	0.4	...	25.5	0.02	0.006	0.4	32.2	30.0	19		
28	22	147	70	31	298	2,385	28,489	0.2	0.1	...	16.7	0.06	0.06	0.2	1.5	18.9	17.5	20	
29	28	78	81	1	217	1,203	13,108	0.1	0.2	...	15.4	0.05	0.006	0.3	1.6	17.7	11.7	21	
788	1,205	4,058	5,090	205	11,316	155,186	985,705	4.7	0.2	0.1	19.3	0.5	0.2	0.3	4.7	30.0	25.5		
14	6	26	4	1	51	322	1,371	0.4	0.07	...	6.0	1.0	0.7	0.4	2.7	11.4	18.5	1	
...	...	6	...	...	6	183	495	1.9	0.7	...	4.7	0.5	0.5	0.1	4.9	13.4	22.7	2
1	1	8	...	...	10	159	554	0.5	0.06	...	9.7	0.7	1.3	0.3	5.1	17.9	24.6	3
...	...	11	2	...	13	67	187	1.4	0.1	...	8.3	1.2	1.5	1.5	7.9	22.0	28.1	4	
...	...	2	...	...	2	31	103	1.5	...	...	6.4	1.1	0.7	0.2	4.3	14.3	26.0	5
5	3	21	3	...	32	920	2,552	2.5	1.1	...	19.0	0.2	0.8	0.5	13.6	37.8	43.0	6	
...	...	1	...	...	1	1	154	3.9	...	...	25.9	1.0	0.6	0.2	0.2	31.9	24.2	7
...	...	1	2	1	4	51	196	0.1	0.3	...	12.7	2.0	1.6	0.5	6.0	23.3	22.0	8	

Annual Form No. VI.—Deaths registered from different causes in the

1	2	3	4				5	6	7	8	9	10
No.	Districts and Towns.	Population according to census of 1931.	Births.				Cholera.	Small-pox.	Plague.	Typhoid.	Dysentery and diarrhoea.	Respiratory diseases.
			Male.	Female.	Total.	Birth-rate.						
TOWNS—contd.												
SHAHABAD DISTRICT.												
9	Arrah ...	40,769	335	240	575	14.1	12	5	...	239	14	6
10	Buxar ...	10,098	157	129	286	28.3	3	16	...	71	7	1
11	Dumraon ...	14,132	67	53	120	8.4	...	...	...	17	1	3
12	Jagadispur ...	8,564	128	109	237	27.6	...	2	...	53	3	1
13	Sasaram ...	22,308	332	282	614	27.5	1	6	...	155	6	7
14	Bhabhua ...	5,435	95	86	182	33.4	20	1	...	38	...	3
SARAN DISTRICT.												
15	Chapra ...	42,415	620	563	1,183	27.8	144	1	...	346	50	62
16	Rowelganj... ..	8,186	203	201	404	49.3	13	11	...	89	20	6
17	Siwan ...	11,862	237	279	516	43.5	4	2	...	73	3	3
CHAMPARAN DISTRICT.												
18	Bettiah ...	24,291	261	222	483	19.8	66	8	...	115	...	...
19	Motihari ...	13,828	200	191	391	28.2	12	...	...	137	3	3
MUZAFFARPUR DISTRICT.												
20	Muzaffarpur ...	32,735	529	463	992	30.2	317	8	2	247	58	31
21	Sitamarhi... ..	10,532	148	111	259	24.5	75	2	1	119	15	17
22	Hajipur ...	16,760	263	293	561	33.4	89	4	29	174	23	12
23	Lalganj ...	7,148	157	176	333	46.5	60	...	...	143	3	5
DARBHANGA DISTRICT.												
24	Darbhanga ...	53,700	836	740	1,576	29.3	302	22	3	325	79	13
25	Rosernah ...	8,187	94	84	178	21.7	100	1	...	69	5	...
26	Samastipur ...	8,017	102	73	175	21.8	92	...	...	9	2	...
27	Madhubani ...	16,582	220	191	411	24.8	158	...	...	130	4	8
MONGHYR DISTRICT.												
28	Monghyr ...	46,825	678	600	1,278	27.3	44	151	...	273	99	35
29	Jamalpur ...	24,827	461	415	876	35.3	84	62	2	282	33	9
BHAGALPUR DISTRICT.												
30	Bhagalpur ...	68,878	582	519	1,101	15.9	54	9	...	569	40	34
31	Colgong ...	5,413	78	74	152	28.0	...	8	...	79	4	6
PURNIA DISTRICT.												
32	Purnea ...	14,102	91	88	179	12.6	6	1	...	149	2	6
33	Kibhanganj ...	7,904	54	32	86	10.8	13	...	...	65	...	...
34	Katihar ...	14,532	60	70	130	8.9	...	...	...	54	...	...
35	Forbesganj ...	4,963	71	64	135	27.2	25	2	...	60	3	5

DIX I—contd.

districts and towns of Bihar and Orissa Province, during the year 1930—contd.

		11				12	13	14										15
		Injuries.				All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.										No.
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
Male.	Female.															For the year.	Mean of previous five years.	
...	...	...	1	...	3	48	327	0.2	0.1	...	5.8	0.3	0.1	0.07	1.1	8.0	18.7	9
1	...	5	...	...	6	38	142	0.3	1.6	...	7.0	0.7	0.09	0.6	3.7	14.0	28.0	10
...	...	...	...	...	...	4	25	...	...	...	1.2	0.07	0.2	...	0.2	1.7	13.6	11
...	...	2	...	...	2	33	84	...	0.2	...	6.1	0.3	0.1	0.2	2.6	9.8	22.3	12
...	...	11	3	...	14	44	233	0.04	0.2	...	6.9	0.2	0.3	0.6	1.9	10.4	19.4	13
...	...	...	1	...	1	13	76	3.6	0.1	...	6.9	...	0.5	0.1	2.3	13.9	21.7	14
...	...	17	5	...	22	306	1,023	3.4	0.02	...	8.1	1.2	1.4	0.7	9.3	24.2	21.9	15
...	...	3	2	...	5	55	199	1.6	1.3	...	10.8	2.4	0.7	0.6	6.7	34.3	24.1	16
...	...	5	1	...	6	88	180	0.3	0.1	...	6.0	0.2	0.2	0.6	7.4	15.1	16.3	17
...	...	1	...	...	1	37	227	2.7	0.3	...	4.7	...	...	0.04	1.5	9.3	16.4	18
1	...	2	1	...	3	36	195	0.8	...	...	9.9	0.2	0.2	0.2	2.6	14.1	19.5	19
2	2	34	5	...	39	296	1,001	2.8	0.2	0.06	7.5	1.7	0.9	1.2	9.0	30.5	28.9	20
...	...	13	...	...	13	74	316	7.1	0.4	0.09	11.3	1.4	1.6	1.2	7.0	30.0	22.2	21
...	2	13	...	...	16	173	511	4.7	0.2	1.7	10.3	1.3	0.7	0.9	10.3	30.4	29.7	22
...	...	1	3	...	4	43	258	8.3	...	...	20.0	0.4	0.6	0.5	6.0	36.0	35.5	23
5	2	15	1	3	20	912	1,682	5.6	0.4	0.05	6.0	1.4	0.2	0.5	10.9	31.3	31.3	24
...	...	...	...	...	...	10	183	12.2	0.1	...	8.4	0.6	...	...	1.2	22.6	18.2	25
...	...	4	...	...	4	72	179	11.4	...	...	1.1	0.2	...	0.4	8.9	22.3	20.1	26
...	...	1	...	...	1	99	400	9.5	...	...	7.8	0.2	0.4	0.06	5.9	24.1	22.2	27
...	...	7	4	...	11	344	957	0.9	3.2	...	5.8	2.1	0.7	0.2	7.3	20.4	23.3	28
...	1	14	...	2	17	186	675	3.4	2.5	0.08	11.3	1.3	0.3	0.7	7.5	27.2	26.5	29
2	1	10	1	1	15	283	1,004	0.8	0.1	...	8.2	0.3	0.5	0.2	4.1	14.5	17.6	30
...	...	1	...	...	1	29	127	...	1.4	...	14.6	0.7	1.1	0.2	5.2	23.4	24.2	31
2	...	3	...	...	5	2	171	0.4	0.07	...	10.5	0.1	0.4	0.3	0.1	12.1	15.9	32
3	2	...	...	...	5	...	83	1.6	...	...	8.2	...	...	0.6	...	10.4	13.0	33
...	...	...	1	...	1	3	58	...	...	...	3.7	...	...	0.06	0.2	4.0	9.5	34
...	...	...	...	...	...	4	109	7.0	0.4	...	12.1	0.6	1.0	...	0.8	21.9	13.5	35

Annual Form No. VI.—Deaths registered from different causes in the

1	2	3	4				5	6	7	8	9	10
			Births.									
No.	Districts and Towns.	Population according to Census of 1921.	Male.	Female.	Total.	Birth rate.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.
TOWNS—concl'd.												
SANTAL PARGANAS DISTRICT.												
36	Sahibganj ...	11,880	121	85	206	17.3	5	1	...	45	4	4
37	Deoghar ...	12,355	18	19	37	2.9	2	2	...	23	3	3
38	Dumka ...	7,396	41	34	75	10.1	...	4	...	39	...	...
39	Madhupur ...	7,053	25	22	47	6.6	1	...	...	22	2	...
CUTTACK DISTRICT.												
40	Cuttack ...	51,007	475	411	886	17.3	4	1	...	119	31	26
41	Koudrapara ...	14,614	193	178	371	25.4	26	...	...	202	34	14
42	Jajpur ...	11,015	134	126	260	23.6	3	2	...	160	26	9
BALASORE DISTRICT.												
43	Balasore ...	17,037	199	168	367	21.5	39	2	...	141	17	18
PURI DISTRICT.												
44	Puri ...	38,694	322	274	596	15.4	40	2	...	393	205	122
SAMBALPUR DISTRICT.												
45	Sambalpur ...	13,594	249	221	470	34.5	22	38	...	121	54	33
HAZARIBAGH DISTRICT.												
46	Hazaribagh ...	17,660	213	178	391	22.2	...	1	...	143	...	2
47	Chatra ...	8,225	153	142	295	35.8	37	...	...	87	1	...
48	Giridih ...	18,874	133	143	276	14.6	...	1	...	92	3	3
RANCHI DISTRICT.												
49	Ranchi ...	35,097	320	258	578	16.4	...	...	...	119	8	7
50	Lohardaga ...	7,152	111	104	215	30.0	...	...	...	59	3	2
PALAMAU DISTRICT.												
51	Daltonganj ...	9,817	94	77	171	17.4	...	3	...	50	2	...
MANBHAM DISTRICT.												
52	Puralia ...	22,161	217	204	421	18.9	...	1	...	180	2	...
53	Rajnagarh ...	6,493	108	84	192	29.5	6	5	...	110	1	4
54	Jhalka ...	5,737	99	88	187	32.6	...	...	...	51	...	2
55	Dhanbad ...	11,973	22	18	40	3.3	...	...	...	14	1	1
SINGBHAM DISTRICT.												
56	Chaibassa ...	9,178	145	152	297	32.3	...	...	...	96	2	2
57	Chakradharpur ...	7,944	42	37	79	9.9	4	4	...	33	4	3
58	Jugsalai ...	3,503	51	50	101	28.8	6	...	...	19	4	...
Total for all Towns ...		1,175,039	13,881	13,503	26,384	22.4	2,227	503	37	9,230	1,109	774
Total for the whole Province.		34,904,546	626,847	604,468	1,231,315	35.2	155,215	7,455	4,105	648,518	16,511	6,279

DIX I—contd.

districts and towns of the Bihar and Orissa Province, during the year 1930—concl'd.

11						12	13	14										15
Injuries.						All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.										No.
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
Male.	Female.															For the year.	Mean of previous five years.	
...	...	2	2	1	5	22	86	0.4	0.08	...	3.8	0.3	0.3	0.4	1.0	7.2	29.1	36
...	...	...	...	...	...	6	29	0.1	0.1	...	1.8	0.3	0.2	...	0.4	3.1	12.8	37
...	...	...	...	...	...	4	47	...	0.5	...	5.2	...	...	...	0.5	6.3	13.5	38
...	...	...	...	...	...	8	83	0.1	...	...	3.1	0.2	...	...	1.1	4.6	15.3	39
2	3	3	2	1	11	276	468	0.08	0.02	...	2.3	0.6	0.5	0.2	5.4	9.1	14.7	40
...	...	2	2	1	5	146	427	1.8	...	...	13.8	2.3	0.9	0.3	10.0	29.2	30.8	41
1	2	1	1	...	5	36	261	0.3	0.2	...	14.5	2.3	0.8	0.4	5.0	23.7	21.2	42
...	1	1	...	...	2	114	324	1.7	0.1	...	8.2	0.9	1.0	0.1	6.6	19.0	22.1	43
2	2	6	1	...	11	348	1,119	1.0	0.05	...	10.2	5.3	3.1	0.3	8.9	28.9	37.6	44
1	1	8	...	...	10	113	391	1.6	2.7	...	8.9	3.9	2.4	0.7	8.3	28.7	27.3	45
...	...	1	...	...	1	24	171	...	0.05	...	8.3	...	0.1	0.05	1.4	9.9	12.3	46
...	...	5	1	...	6	23	159	4.5	...	...	10.5	0.1	...	0.7	3.4	19.3	27.2	47
...	...	...	...	...	...	17	116	...	0.05	...	4.8	0.2	0.2	...	0.9	6.1	10.8	48
1	1	5	...	...	7	37	178	...	...	...	3.4	0.2	0.2	0.2	1.0	5.0	9.4	49
...	...	...	...	...	...	16	80	...	...	...	8.2	0.4	0.2	...	2.2	11.2	15.8	50
...	2	3	1	...	6	12	73	...	0.3	...	5.1	0.2	...	0.6	1.2	7.4	11.7	51
...	1	...	1	...	2	15	200	...	0.04	...	8.1	0.09	...	0.09	0.7	9.0	10.5	52
...	...	...	...	...	...	6	131	0.9	0.7	...	16.9	0.1	0.6	...	0.9	20.3	15.1	53
...	1	...	...	...	1	14	68	...	...	...	8.9	...	0.3	0.1	2.4	11.8	16.0	54
...	...	18	...	...	18	5	39	...	...	...	1.1	0.08	0.08	1.5	0.4	3.2	5.7	55
...	1	...	...	...	1	31	132	...	...	...	10.4	0.2	0.2	0.1	3.3	14.4	17.7	56
...	1	2	...	...	3	11	59	0.5	0.5	...	4.1	0.5	0.4	...	1.4	7.4	9.7	57
48	40	297	51	11	447	6,354	20,081	1.9	0.4	0.03	7.8	0.9	0.6	0.4	5.4	17.6	21.8	...
836	1,245	4,335	5,111	216	11,783	161,540	1,006,386	4.6	0.2	0.1	18.9	0.5	0.2	0.3	4.7	29.6	25.4	...

Annual Form No. VII.—Deaths registered from Cholera in the

1	2	3		4		5						
No.	District.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.							
PATNA DIVISION.												
1	Patna	19	19	2,349	1,160	2	11	57	1,349	1,315	966	754
2	Gaya	16	16	6,195	1,147	...	26	74	497	864	963	1,613
3	Shahabad	17	15	4,688	403	1	12	18	182	831	513	391
	Total	52	50	13,232	2,710	3	49	149	2,028	2,510	2,442	2,758
TIRHUT DIVISION.												
4	Saran	13	13	4,324	497	4	...	19	465	1,947	1,586	740
5	Champanan	11	11	2,653	734	4	6	49	861	4,726	4,453	3,309
6	Muzaffarpur	14	14	4,224	2,407	20	26	187	5,119	19,235	9,513	3,003
7	Darbhanga	14	14	3,151	1,354	109	193	303	10,252	18,825	13,081	1,997
	Total	52	52	14,352	4,992	137	225	558	16,697	44,733	28,633	9,049
BHAGALPUR DIVISION.												
8	Monghyr	13	13	2,533	1,661	18	5	186	2,837	6,399	2,950	570
9	Bhagalpur	14	13	3,540	832	129	8	37	1,418	3,193	1,032	375
10	Purnea	17	16	4,051	429	159	116	95	1,348	2,302	1,107	244
11	Santal Parganas	10	9	9,590	278	25	15	31	23	37	137	129
	Total	54	51	19,714	2,800	331	144	349	5,526	11,991	5,236	1,318
ORISSA DIVISION.												
12	Cuttack	13	13	5,642	398	253	317	349	131	124	118	45
13	Balasore	10	10	3,567	408	370	457	594	261	64	70	84
14	Angul	2	...	1,469	...	...	...	...	...	...	...	...
15	Puri	6	6	3,079	86	113	43	20	21	39	60	54
16	Sambalpur	23	12	1,917	32	...	3	...	9	16	...	14
	Total	54	41	15,674	924	736	820	954	422	243	248	197
CHOTA NAGPUR DIVISION.												
17	Hazaribagh	21	17	6,403	219	64	13	54	23	77	120	237
18	Ranchi	32	...	3,926	...	...	...	...	...	...	...	...
19	Palamau	10	6	3,105	370	...	...	5	...	7	141	214
20	Manbhum	35	31	5,985	128	13	61	27	16	21	19	36
21	Singbhum	14	8	3,354	31	10	...	2	1	...	1	3
	Total	112	62	24,773	748	87	74	88	40	105	281	490
	Total for the Province	324	256	87,745	12,174	1,294	1,312	2,098	24,713	59,582	36,890	13,812

DIX I—contd.

districts of Bihar and Orissa Provinces, during each month of the year 1930.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
524	116	103	37	4	2,689	2,532	5,241	3.3	3.3	3.3	1.9	1
2,331	905	330	175	21	4,032	3,817	7,849	3.7	3.5	3.6	2.3	2
610	239	248	102	2	1,331	1,338	2,669	1.4	1.4	1.4	2.3	3
3,465	1,280	734	314	27	8,032	7,707	15,739	2.9	2.8	2.9	2.2	
391	103	14	6	...	2,638	2,614	5,277	2.3	2.1	2.2	1.2	4
927	406	168	332	77	7,888	7,430	15,318	5.1	7.6	7.8	1.4	5
253	72	348	231	10	19,028	18,989	38,017	14.3	13.2	13.7	2.0	6
692	429	104	88	15	23,406	22,622	46,088	16.5	15.1	15.8	1.6	7
2,263	1,612	34	657	102	33,045	31,655	104,700	10.9	10.1	10.5	1.6	
468	223	129	97	29	6,938	6,934	13,902	6.9	6.8	6.8	2.0	8
340	177	117	142	44	3,739	3,273	7,012	3.6	3.2	3.4	2.3	9
83	26	26	10	73	2,911	2,698	5,609	2.8	2.7	2.8	2.3	10
112	39	14	2	9	289	293	573	0.3	0.3	0.3	0.6	11
1,003	463	277	251	155	13,898	13,198	27,096	3.5	3.4	3.4	1.8	
20	88	71	25	32	729	835	1,564	0.7	0.7	0.7	2.0	12
40	49	56	4	7	1,056	991	2,047	2.2	1.9	2.0	2.0	13
...	...	...	...	...	...	...	...	...	...	...	0.01	14
19	2	...	...	...	171	200	371	0.3	0.4	0.4	2.3	15
103	24	9	...	1	84	101	184	0.2	0.2	0.2	0.6	16
187	154	136	29	40	2,040	2,126	4,166	0.9	0.8	0.8	1.7	
509	683	216	136	131	1,148	1,117	2,265	1.8	1.7	1.7	0.9	17
...	...	...	...	...	...	...	...	...	...	...	0.2	18
121	119	95	34	...	421	315	736	1.1	0.8	1.0	1.7	19
78	35	78	5	1	216	174	390	0.2	0.2	0.2	0.5	20
18	44	24	...	...	55	48	103	0.1	0.1	0.1	0.09	21
726	883	413	175	132	1,840	1,654	3,494	0.6	0.6	0.6	0.6	
7,644	3,794	2,194	1,426	456	78,875	76,340	155,215	4.7	4.4	4.6	1.6	

Annual Form No. VIII.—Deaths registered from small-pox in the

1	2	3		4		5					
		Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.
		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.						
No.	District.										
PATNA DIVISION.											
1	Patna	19	15	2,349	175	16	27	47	101	53	63
2	Gaya	16	15	6,195	473	43	84	96	180	223	227
3	Shahabad	17	16	4,688	220	25	33	23	61	85	87
	Total	52	47	13,232	868	94	144	166	342	361	379
TIBHUT DIVISION.											
4	Saran	13	12	4,324	126	12	11	101	71	73	45
5	Champaram	11	10	2,653	62	3	3	4	7	27	53
6	Muzaffarpur	14	13	4,224	352	19	7	30	22	49	53
7	Darbhangha	14	11	3,151	152	13	17	85	109	96	124
	Total	52	46	14,352	692	47	38	220	209	236	275
BHAGALPUR DIVISION.											
8	Monghyr	13	13	2,533	424	39	54	129	230	214	166
9	Bhagalpur	14	13	3,540	78	25	14	20	51	45	26
10	Furnee	17	13	4,051	190	7	14	11	14	38	38
11	Santal Parganas	10	9	2,590	176	26	17	33	32	88	45
	Total	54	48	19,714	868	97	99	193	327	385	275
ORISSA DIVISION.											
12	Cuttack	13	12	5,642	359	16	33	54	80	66	64
13	Balasore	10	10	3,567	130	6	9	30	47	26	31
14	Angul	2	...	1,469	...	...	...	...	...	...	...
15	Puri	6	6	3,079	23	2	3	1	...	5	3
16	Sambalpa	23	22	1,917	101	13	3	11	25	44	52
	Total	54	50	15,674	613	37	48	96	152	141	150
CHOTA NAGPUR DIVISION.											
17	Hazaribagh	21	13	8,403	64	17	...	12	31	39	17
18	Ranchi	32	16	3,926	68	12	5	5	14	8	9
19	Palamau	10	10	3,105	195	20	27	42	37	49	55
20	Manbhum	35	11	5,985	105	2	4	6	39	29	29
21	Singhbhum	14	10	3,354	71	12	8	16	27	52	24
	Total	112	50	24,773	503	63	44	81	148	177	134
	Total for the Province	324	241	87,745	3,544	338	378	756	1,178	1,390	1,213

DIX I—contd.

districts of Bihar and Orissa Province, during each month of the year 1930.

						6	7	8	9	10					
July.	August.	September.	October.	November.	December.	Total.			Number of deaths among children:		Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
						Male.	Female.	Total.	Under 1-year.	One year and under 10 years.	Male.	Female.	Total.		
24	24	23	26	5	24	242	203	445	62	84	0.3	0.2	0.2	0.8	1
122	67	50	19	23	45	604	575	1,179	73	163	0.5	0.5	0.5	0.8	2
56	54	24	10	12	28	256	242	498	...	...	0.2	0.2	0.2	0.6	3
202	145	97	55	40	97	1,102	1,020	2,122	135	247	0.4	0.4	0.4	0.8	
40	19	16	1	5	19	217	196	413	3	26	0.2	0.1	0.2	0.4	4
19	1	1	...	2	2	66	56	122	4	31	0.06	0.05	0.06	0.4	5
21	8	1	4	5	...	118	92	210	16	35	0.08	0.06	0.07	0.3	6
143	5	...	2	3	7	290	314	604	78	28	0.2	0.2	0.2	0.2	7
223	33	18	7	15	28	691	658	1,349	101	120	0.1	0.1	0.1	0.3	
46	27	18	8	9	20	489	471	960	35	84	0.5	0.4	0.5	0.5	8
10	3	6	2	...	...	105	97	202	...	...	0.1	0.09	0.1	0.5	9
27	4	3	2	12	5	83	92	175	...	1	0.08	0.09	0.08	0.5	10
34	52	24	22	44	62	280	199	479	25	11	0.3	0.2	0.2	0.5	11
117	86	51	34	65	87	957	859	1,816	80	96	0.2	0.2	0.2	0.5	
43	38	39	58	38	77	317	289	606	45	145	0.3	0.2	0.3	1.4	12
22	18	14	11	8	15	133	104	237	6	17	0.2	0.2	0.2	1.2	13
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.03	14
...	7	...	...	...	4	12	13	25	...	1	0.02	0.02	0.02	2.4	15
63	32	14	19	34	36	186	160	346	7	23	0.4	0.3	0.4	0.4	16
128	95	67	88	80	132	648	566	1,214	58	186	0.3	0.2	0.2	1.3	
16	13	17	2	6	14	102	82	184	19	36	0.1	0.1	0.1	0.5	17
4	1	4	3	4	2	49	22	71	17	17	0.07	0.03	0.05	0.4	18
33	49	14	...	6	11	176	167	343	12	9	0.5	0.4	0.4	0.7	19
22	15	10	4	2	3	98	67	165	29	28	0.1	0.06	0.1	0.2	20
25	8	13	3	1	2	111	80	191	1	15	0.3	0.2	0.2	0.2	21
100	86	58	12	19	32	536	418	954	78	105	0.2	0.1	0.2	0.4	
770	445	291	196	319	376	3,934	3,521	7,455	452	754	0.2	0.2	0.2	0.6	

Annual Form No. 1A.—Deaths registered from Fevers in the district

1 No.	2 District.	3 Circles of Registration.		4 Villages.		5						
		Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.	July.
PATNA DIVISION.												
1	Patna	19	19	2,349	2,349	1,981	1,073	1,559	2,317	2,066	2,282	2,047
2	Gaya	16	16	6,195	6,195	2,749	2,124	2,327	3,537	4,466	4,910	3,762
3	Shahabad	17	17	4,688	4,688	2,138	1,698	2,688	2,219	2,833	3,709	2,436
	Total	52	52	13,232	13,232	6,168	4,895	5,974	8,574	9,365	10,901	8,245
TIRHUT DIVISION.												
4	Saran	13	13	4,324	4,227	2,342	1,802	2,097	3,101	3,323	3,444	3,06
5	Champaran	11	11	2,653	2,653	3,116	2,438	2,507	2,605	3,972	3,444	3,496
6	Muzaffarpur	14	14	4,224	4,224	5,056	4,256	4,870	5,651	6,963	6,977	5,150
7	Darbhanga	14	14	3,151	1,933	6,304	4,832	5,033	5,769	5,257	6,727	5,623
	Total	52	52	14,352	13,037	17,618	13,328	14,107	17,126	19,515	19,692	17,32
BHAGALPUR DIVISION.												
8	Monghyr	13	13	2,533	2,533	3,869	2,431	3,283	4,734	5,017	4,309	2,908
9	Bhagalpur	14	14	3,549	3,549	4,776	3,047	3,256	4,162	4,370	3,303	2,651
10	Paros	17	17	4,051	4,051	5,140	3,739	3,281	3,577	3,748	2,814	2,734
11	Santal Parganas	10	10	9,590	8,001	2,496	2,610	2,277	3,318	3,835	3,214	2,407
	Total	54	54	19,714	18,135	16,281	11,247	12,097	15,791	16,970	13,440	10,760
ORISSA DIVISION.												
12	Cuttack	13	13	5,642	5,642	2,472	2,234	2,579	2,415	1,597	1,675	1,665
13	Balasore	10	10	3,567	3,567	1,221	1,172	1,185	1,028	663	749	836
14	Angul	2	2	1,459	1,210	388	319	464	540	617	416	321
15	Puri	6	6	3,079	3,079	895	761	931	766	585	596	578
16	Sambalpur	23	23	1,917	1,723	768	558	837	873	1,201	831	769
	Total	54	54	15,674	13,921	5,744	5,034	5,966	5,632	4,613	4,257	4,169
CHOTA NAGPUR DIVISION.												
17	Hazaribagh	21	21	8,403	8,403	1,692	1,310	1,680	3,175	2,911	2,545	1,823
18	Ranchi	32	32	3,926	3,926	1,634	1,508	1,815	2,477	2,294	1,992	1,639
19	Palaman	10	10	3,105	3,105	1,255	929	930	2,211	1,483	1,634	1,403
20	Manbhum	35	35	5,985	5,739	1,742	1,468	1,685	2,619	2,407	2,191	1,663
21	Singbhum	14	14	3,354	2,721	931	723	949	1,155	926	814	891
	Total	112	112	24,773	23,894	7,304	5,913	7,13	11,637	10,023	9,266	7,561
	Total for the Province	324	324	87,745	83,519	52,115	40,427	45,257	58,550	60,426	57,536	47,930

DIX I—contd.

of Bihar and Orissa Province, during each month of the year 1930.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
2,012	2,669	1,789	1,947	1,868	11,327	11,583	22,910	14.1	15.1	14.5	13.8	1
5,719	5,500	4,869	4,167	3,670	24,391	23,640	48,031	22.7	21.9	22.3	19.1	2
3,750	3,665	3,515	3,172	2,737	17,125	16,836	33,961	19.0	18.2	18.6	18.9	3
11,481	11,834	10,164	9,286	8,375	52,843	52,059	104,902	19.0	18.8	18.9	17.5	
3,221	3,044	2,517	2,566	2,345	18,377	14,486	32,863	16.2	11.9	14.0	12.4	4
3,072	2,890	2,327	4,030	3,844	20,878	17,963	38,841	21.5	18.4	20.0	17.1	5
4,868	4,631	4,985	6,797	6,274	34,303	31,675	65,978	25.9	22.1	23.9	19.1	6
4,414	3,968	4,964	5,947	5,929	34,680	29,989	64,669	24.4	20.0	22.2	17.5	7
15,575	14,533	15,793	19,340	18,392	108,238	94,113	202,351	27.3	18.4	20.3	16.7	
3,305	3,447	3,703	4,630	3,611	23,165	21,372	44,537	23.0	20.6	21.9	18.2	8
2,501	2,978	3,569	4,113	3,930	22,726	19,830	42,556	22.4	19.4	20.9	18.0	9
2,360	2,306	3,137	3,775	4,102	21,696	19,017	40,713	20.7	19.4	20.1	20.3	10
3,489	2,926	2,655	2,786	2,960	18,048	16,325	34,373	20.1	18.0	19.1	15.9	11
11,655	11,657	13,064	14,704	14,593	85,635	76,544	162,179	21.6	19.5	20.5	18.2	
1,553	2,342	2,350	2,923	4,788	13,210	14,872	28,082	13.8	13.4	13.6	14.3	12
863	1,211	1,210	1,488	2,186	6,555	7,226	13,781	14.0	14.0	14.0	18.2	13
365	419	333	270	321	2,378	2,401	4,779	26.8	25.6	26.2	24.2	14
536	686	553	680	1,101	4,047	4,541	8,588	8.9	9.1	9.0	9.2	15
885	1,162	698	638	675	4,880	5,015	9,895	12.5	12.4	12.5	12.3	16
4,150	5,820	5,150	5,999	8,571	31,970	34,955	66,925	13.2	13.0	13.1	14.4	
2,882	2,343	2,554	2,149	2,392	14,234	13,229	27,463	22.9	20.2	21.5	19.1	17
2,392	3,300	2,298	2,217	2,468	13,808	12,216	26,024	20.9	18.0	19.5	17.1	18
1,539	1,655	1,893	1,845	1,532	9,645	8,904	18,549	26.2	24.3	25.3	21.9	19
2,704	2,541	2,352	1,947	2,090	13,848	11,564	25,412	17.3	15.4	16.4	14.2	20
978	1,051	951	984	1,084	6,304	5,269	11,573	16.6	13.7	15.1	13.3	21
10,495	10,990	10,048	9,142	9,586	57,939	51,122	109,061	20.4	18.1	19.3	16.9	
53,356	54,744	54,219	58,471	59,417	335,623	307,893	643,516	20.0	17.8	18.9	16.9	

Annual Form No. X.—Deaths registered from Dysentery and Diarrhœa in the

1 No.	2 District.	3 Circles of Registration.		4 Villages.		5							
		Number in each district.	Number from which deaths from Dysentery and Diarrhœa were reported.	Number in each district.	Number from which deaths from Dysentery and Diarrhœa were reported.	January.	February.	March.	April.	May.	June.	July.	August.
PATNA DIVISION.													
1	Patna	19	19	2,349	658	67	117	64	116	106	110	83	133
2	Gaya	16	15	6,193	94	6	3	7	6	23	40	9	33
3	Shahabad	17	14	4,688	13	5	5	2	2	4	15	9	10
	Total	52	48	13,230	765	78	125	73	124	135	165	101	176
TIRHUT DIVISION.													
4	Saran	13	13	4,324	732	50	52	40	65	87	80	72	102
5	Champanan	11	7	2,653	9			2	5	1	7	1	
6	Mozaffarpur	14	13	4,274	73	13	26	23	264	52	17	9	18
7	Darbhanga	14	12	3,151	36	42	10	21	16	60	29	24	29
	Total	52	45	14,352	849	105	88	86	450	170	133	106	149
BHAGALPUR DIVISION.													
8	Monghyr	13	10	2,533	198	26	4	8	14	8	14	21	27
9	Bhagalpur	14	10	3,540	34	16	5	4	9	7	3	16	6
10	Parua	17	12	4,051	44	6	1		12	1	2	10	3
11	Santal Parganas	10	8	9,599	192	51	17	38	42	10	18	25	19
	Total	54	40	19,724	295	99	27	50	77	26	37	72	55
ORISSA DIVISION.													
12	Cuttack	13	13	5,642	2,636	600	564	687	536	429	464	599	551
13	Balasore	10	10	3,567	362	45	43	51	47	23	22	28	28
14	Angul	2	2	1,469	45	2	4	3	6	4	2	4	3
15	Puri	6	6	3,079	1,758	347	331	311	182	256	304	385	282
16	Sambalpur	23	23	1,917	680	106	72	111	116	159	140	160	207
	Total	54	54	15,674	5,481	1,100	1,014	1,163	987	871	932	1,126	1,071
CHOTA NAGPUR DIVISION.													
17	Hazaribagh	21	17	8,403	20	3	3	9	4	4	2	9	4
18	Ranchi	32	27	3,926	371	23	16	38	48	23	28	30	56
19	Palamu	10	7	3,105	10			2	2			2	1
20	Manbhum	35	26	5,985	106	4	4	27	9	7	8	6	9
21	Singbhum	14	10	3,354	15	3	1		2	6	5	3	6
	Total	112	81	24,773	522	38	24	77	65	40	43	50	76
Total for the Province		324	268	87,745	7,912	1,420	1,278	1,440	1,715	1,242	1,310	1,455	1,597

DIX I—contd.

Districts of Bihar and Orissa Provinces, during each month of the year 1930.

				6			7			8	1
September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
				Male.	Female.	Total.	Male.	Female.	Total.		
119	91	78	81	582	595	1,177	0.7	0.7	0.7	0.8	1
24	10	10	21	117	77	194	0.1	0.07	0.09	0.1	2
2	8	8	4	48	26	74	0.05	0.02	0.04	0.03	3
145	109	96	106	747	698	1,445	0.3	0.2	0.3	0.3	
53	32	39	60	405	327	732	0.3	0.3	0.3	0.4	4
...	2	...	...	15	3	18	0.01	0.003	0.009	0.01	5
7	6	6	9	163	252	415	0.2	0.1	0.1	0.06	6
9	4	12	6	159	103	262	0.1	0.06	0.08	0.05	7
69	44	57	75	847	685	1,532	0.2	0.1	0.1	0.1	
19	21	16	20	112	86	198	0.1	0.08	0.09	0.07	8
12	1	10	10	59	40	99	0.05	0.04	0.04	0.05	9
3	17	1	3	43	16	59	0.04	0.01	0.03	0.05	10
6	9	24	13	139	113	252	0.1	0.1	0.1	0.08	11
40	43	51	46	373	255	628	0.09	0.06	0.08	0.05	
587	493	518	781	3,799	3,049	6,848	3.9	2.7	3.3	4.8	12
40	32	38	47	233	211	444	0.4	0.4	0.4	0.6	13
3	9	3	1	28	18	46	0.3	0.2	0.2	0.4	14
273	206	191	283	1,738	1,643	3,381	3.8	3.3	3.5	4.8	15
191	136	66	93	866	631	1,497	2.2	1.7	1.9	2.4	16
1,093	876	816	1,305	6,645	5,612	12,257	2.8	2.1	2.5	3.4	
11	8	2	...	41	18	59	0.06	0.02	0.04	0.1	17
59	43	25	20	262	153	415	0.4	0.2	0.3	0.5	18
2	1	9	1	15	6	21	0.04	0.01	0.03	0.07	19
14	10	6	2	66	40	106	0.08	0.05	0.06	0.07	20
10	6	6	...	28	20	48	0.07	0.05	0.06	0.04	21
96	68	49	23	412	237	649	0.1	0.08	0.1	0.2	
1,449	1,145	1,069	1,455	9,024	7,487	16,511	0.5	0.4	0.5	0.6	

Annual Form No. XI.—Deaths registered from Respiratory diseases in the

1 No.	2 District.	3 Circles of Registration.		4 Villages.		5						
		Number in each district.	Number from which deaths from Respiratory diseases were reported.	Number in each district.	Number from which deaths from Respiratory diseases were reported.	January.	February.	March.	April.	May.	June.	July.
PATNA DIVISION.												
1	Patna	19	19	2,349	432	24	90	129	118	83	81	40
2	Gaya	16	14	6,195	79	10	9	8	14	16	12	7
3	Shalabad	17	12	4,688	6	3	2	5	8	4	3	1
	Total	52	45	13,232	517	37	101	142	140	103	97	57
TIBHUT DIVISION.												
4	Saran	13	13	4,324	264	67	68	59	73	43	80	32
5	Champanan	11	7	2,653	5	...	1	...	1	1	1	2
6	Munaffarpur	14	10	4,224	71	11	17	11	26	17	15	5
7	Darbhanga	14	8	3,151	11	2	3	4	11	3	5	...
	Total	52	38	14,352	351	75	89	74	111	64	101	37
BHAGALPUR DIVISION.												
8	Monghyr	13	10	2,533	64	9	4	6	3	7	1	4
9	Bhagalpur	14	8	3,540	14	13	5	11	8	4	2	2
10	Purnea	17	6	4,051	9	15	2	...	1	4	...	...
11	Santal Parganas	10	8	2,590	120	83	25	17	19	21	17	23
	Total	54	32	19,714	207	120	36	34	31	36	20	29
ORISSA DIVISION.												
12	Cuttack	13	13	5,642	979	124	108	122	121	58	71	79
13	Balasore	10	10	3,567	26	15	13	7	6	1	5	10
14	Angul	2	2	1,469	9	2	1	7	3	3	1	1
15	Puri	6	6	3,079	647	126	124	123	104	70	86	95
16	Sambalpur	23	23	1,917	553	85	71	112	77	100	98	85
	Total	54	54	15,274	2,214	352	317	371	311	232	261	270
CHOTA NAGPUR DIVISION.												
17	Hasaribagh	21	10	8,403	13	5	1	8	5	2	1	...
18	Banohi	32	18	3,926	7	7	8	1	4	9	6	8
19	Palamanu	10	3	3,105	3	1	...	...	4	...	...	...
20	Manbhum	35	19	5,985	111	10	7	21	15	11	6	5
21	Singhbhum	14	6	3,354	1	...	2	...	...	1	...	2
	Total	112	56	24,773	134	23	18	30	28	23	13	15
	Total for the Province	324	225	87,745	3,423	707	561	651	621	458	492	408

DIX I—contd.

districts of Bihar and Orissa Province, during each month of the year 1930.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No
					Male.	Female.	Total.	Male.	Female.	Total.		
70	93	53	92	111	352	542	1,094	0.7	0.7	0.6	0.7	1
11	11	8	4	8	77	41	118	0.07	0.03	0.05	0.06	2
3	1	2	1	4	19	18	37	0.02	0.02	0.02	0.02	3
84	105	63	97	123	648	601	1,249	0.2	0.2	0.2	0.2	
43	44	44	60	65	379	294	673	0.3	0.2	0.3	0.3	4
1	2	1	1	1	7	5	12	0.007	0.005	0.006	0.009	5
10	18	12	7	3	95	55	150	0.07	0.03	0.05	0.04	6
4	1	2	1	2	22	16	38	0.01	0.01	0.01	0.02	7
58	65	59	69	71	503	370	873	0.1	0.07	0.09	0.08	
4	4	12	4	6	33	31	64	0.03	0.03	0.03	0.03	8
1	1	...	5	7	25	24	59	0.03	0.02	0.02	0.03	9
1	1	2	2	1	14	15	29	0.01	0.01	0.01	0.01	10
35	11	19	17	25	217	86	303	0.2	0.04	0.1	0.08	11
4	17	24	28	39	299	156	455	0.07	0.04	0.06	0.01	
71	94	85	99	88	635	485	1,120	0.6	0.4	0.5	0.7	12
3	5	3	3	4	47	28	75	0.1	0.05	0.07	0.06	13
4	2	...	...	...	18	6	24	0.2	0.05	0.1	0.08	14
65	99	71	84	154	645	536	1,291	1.4	1.1	1.2	1.5	15
65	107	78	84	79	668	373	1,041	1.7	0.9	1.3	1.2	16
208	307	237	270	325	2,013	1,448	3,461	0.8	0.5	0.7	0.8	
10	1	...	2	...	24	11	35	0.04	0.01	0.02	0.03	17
8	7	7	9	6	55	25	80	0.08	0.03	0.06	0.06	18
...	...	...	...	...	1	4	5	0.002	0.01	0.006	0.009	19
13	4	5	6	8	76	35	111	0.09	0.04	0.07	0.06	20
...	1	2	2	...	6	4	10	0.01	0.01	0.01	0.03	21
31	13	14	19	14	162	79	241	0.06	0.03	0.04	0.04	
422	507	397	483	572	3,625	2,654	6,279	0.2	0.1	0.2	0.2	

Annual Form No. XII.—Deaths registered from Plague in the

1 No.	2 District.	3 Circles of Registration.		4 Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from Plague were reported.	Number in each district.	Number from which deaths from Plague were reported.							
PATNA DIVISION.												
1	Patna	19	...	2,349	...	...	...	...	...	...	...	...
2	Gaya	16	1	6,195	1	...	...	2	...	...	...	...
3	Shahabad	17	3	4,688	2	...	11	5	3	...	1	...
	Total	52	4	13,232	3	...	11	7	3	...	1	...
TIRHUT DIVISION.												
4	Saran	13	6	4,324	98	225	172	344	149	10	...	...
5	Champaran	11	...	2,653	...	...	...	...	...	...	...	...
6	Muzaffarpur	14	10	4,224	216	157	256	485	367	77	2	2
7	Darbhanga	14	6	3,151	188	86	131	246	336	104	12	3
	Total	52	22	14,352	502	468	559	1,075	852	191	14	5
BHAGALPUR DIVISION.												
8	Monghyr	13	5	2,533	35	114	92	147	105	...	...	2
9	Bhagalpur	14	...	3,540	...	...	...	...	...	...	...	...
10	Furnea	17	...	4,051	...	...	...	...	...	...	...	...
11	Santal Parganas	10	...	9,590	...	...	...	...	...	...	...	...
	Total	54	5	19,714	33	114	92	147	105	...	...	2
ORISSA DIVISION.												
12	Cuttack	13	...	5,642	...	...	...	...	...	...	...	...
13	Balasore	10	...	3,567	...	...	...	...	...	...	...	...
14	Angul	2	...	1,469	...	...	...	...	...	...	...	...
15	Puri	6	...	3,079	...	...	...	...	...	...	...	...
16	Sambalpur	23	...	1,917	...	...	...	...	...	...	...	...
	Total	54	...	15,674	...	...	...	...	...	...	...	...
CHOTA NAGPUR DIVISION.												
17	Hazaribagh	21	...	8,403	...	...	...	...	...	...	...	...
18	Ranchi	32	...	3,926	...	...	...	...	...	...	...	...
19	Palamanu	10	...	3,105	...	...	...	...	...	...	...	...
20	Manbhum	35	...	5,985	...	...	...	...	...	...	...	...
21	Singbhum	13	...	3,354	...	...	...	...	...	...	...	...
	Total	112	...	24,773	...	...	...	...	...	...	...	...
	Total for the Province	324	51	87,745	541	582	662	1,229	960	191	15	7

DIX I—concl'd.

II ZIGMPPA

districts of Bihar and Orissa Province, during each month of the year 1930.

					6			7			8	9
					Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
..	0.06	1
..	2	..	2	0.002	..	0.0009	0.1	2
..	4	..	17	24	0.007	0.01	0.01	0.1	3
..	4	9	17	26	0.003	0.006	0.005	0.1	
6	22	18	26	59	417	614	1,031	0.3	0.5	0.4	0.5	4
..	0.06	5
8	2	2	15	66	560	879	1,439	0.4	0.6	0.5	0.8	6
..	..	10	..	63	413	578	991	0.2	0.3	0.3	0.9	7
14	24	30	41	188	1,390	2,071	3,461	0.3	0.4	0.3	0.6	
..	..	3	20	135	288	330	618	0.3	0.3	0.3	0.3	8
..	9
..	10
..	11
..	..	3	20	135	288	330	618	0.07	0.08	0.08	0.07	
..	12
..	13
..	14
..	15
..	16
..	
..	17
..	18
..	0.001	19
..	20
..	21
..	0.002	
14	24	33	61	327	1,687	2,418	4,105	0.1	0.1	0.1	0.2	

APPENDIX II.
PROVINCIAL.

Statement showing details of registration in areas in which it is compulsory.

Compulsory registration area.	Population according to Census of 1921.	Probable number of births at the rate of 200 per 1,000 married women between the ages of 15 and 40.	Actual number of births registered during the year.	Probable birth-rate per mille (columns 2 and 3).	Registered birth-rate per mille during the year.	Number of deaths registered during the year.		Death-rate per mille.		Number of persons prosecuted under Act IV (B. C.) of 1923.	Number of persons convicted.
						Including deaths in dispensary.	Excluding deaths in dispensary.	Including deaths in dispensary.	Excluding deaths in dispensary.		
1	2	3	4	5	6	7	8	9	10	11	12
1. Patna City ...	119,976		2,102		17.6	1,371	833	11.4	7.3		
2. Bihar ...	36,720		839		22.8	405	447	13.4	12.2		
3. Dinapore Nizamat ...	50,877		601		22.3	554	543	17.9	17.6		
4. Barb ...	8,464		252		30.0	187	163	22.0	19.3		
5. Khagole ...	7,196		99		13.7	103	101	14.3	14.0		
6. Gaya ...	67,603		1,773		26.2	2,532	2,375	37.8	33.7		
7. Tikari ...	4,827		253		52.1	154	154	31.9	31.9		
8. Daudnagar ...	8,511		381		44.7	198	194	23.3	22.8		
9. Arrah ...	40,769		575		14.1	327	245	8.0	6.1		
10. Buxar ...	10,098		280		28.3	142	132	14.0	12.1		
11. Damraon ...	14,133		123		8.4	25	25	1.7	1.7		
12. Jagdispur ...	8,554		237		27.6	84	81	9.8	9.4		
13. Sasaram ...	22,308		614		27.5	233	223	10.4	9.0	8	8
14. Bhabua ...	5,435		182		33.4	76	68	13.9	12.5		
15. Chapra ...	47,415		1,183		27.6	1,028	908	24.2	21.4	31	30
16. Revelganj ...	8,186		404		49.3	199	199	24.3	24.3	29	29
17. Siwan ...	11,682		516		43.5	180	157	15.1	13.3	80	78
18. Bettiah ...	24,291		483		19.8	227	150	9.3	6.2	20	19
19. Motihari ...	13,828		391		28.2	195	100	14.1	7.3	9	3
20. Muzaffarpur ...	32,755		992		30.2	1,001	879	30.5	26.8	6	
21. Sitamarhi ...	16,832		259		24.5	316	278	30.0	26.4		
22. Hajipur ...	16,760		561		33.4	511	497	30.4	29.6		
23. Lalganj ...	7,148		333		46.5	238	218	36.0	36.0		
24. Darbhanga ...	53,700	Not available.	1,570	Not available.	29.3	1,682	1,501	31.3	27.9		
25. Roserah ...	8,187		178		21.7	185	184	22.6	22.5		
26. Samastipur ...	8,017		175		21.8	179	154	22.3	19.2		
27. Madhubani ...	16,982		411		24.8	4.0	381	24.1	23.0		
28. Monghyr ...	46,825		1,278		27.3	957	881	20.4	18.8		
29. Jamalpur ...	24,827		876		35.3	675	643	27.3	25.9		
30. Bhagalpur ...	68,878		1,101		15.9	1,004	864	14.5	12.5		
31. Colgong ...	5,413		152		28.0	127	127	23.4	23.4		
32. Purnea ...	14,162		179		12.6	171	68	12.1	6.3		
33. Kishanganj ...	7,034		86		10.8	83	47	10.4	5.4		
34. Katihar ...	14,533		130		8.9	58	48	4.0	3.3		
35. Forbesganj ...	4,908		135		27.2	169	100	21.9	21.9		
36. Sahibganj ...	11,880		266		17.3	68	74	7.2	6.2		
37. Deoghar ...	12,335		37		2.9	29	8	3.1	0.6		
38. Dumka ...	7,396		75		10.1	47		6.3			
39. Madhupur ...	7,053		47		6.6	33	30	4.6	4.2		
40. Cattaek ...	51,007		186		17.3	408	334	9.1	6.5	1	
41. Kendrapara ...	14,614		371		25.4	427	420	29.2	28.7	11	
42. Jajpur ...	11,015		260		23.6	251	246	23.7	22.5		
43. Balasore ...	17,037		307		21.5	324	281	19.0	16.5		
44. Puri ...	38,694		596		15.4	1,119	963	28.9	24.9		
45. Sambalpur ...	13,594		470		34.5	361	351	28.7	25.8		
46. Hazaribagh ...	17,060		391		22.9	171	49	9.9	5.2		
47. Chatra ...	8,225		236		28.8	159	147	19.3	17.9		
48. Giridih ...	18,674		276		14.8	116	100	6.1	5.3		
49. Ranchi ...	35,097		578		16.4	178	62	5.0	1.8		
50. Lohardaga ...	7,152		215		30.0	80	76	11.2	10.6	4	
51. Daltonganj ...	9,517		171		17.4	73	12	7.4	1.3	8	
52. Purulia ...	25,361		421		18.9	200	121	9.0	5.5		
53. Raghunathpur ...	6,493		192		29.5	132	132	20.3	20.3		
54. Jhadiab ...	5,737		187		32.6	68	66	11.8	11.5		
55. Dhanbad ...	11,073		40		3.3	39		3.2			
56. Chaibasa ...	9,178		297		32.3	132	117	14.4	12.7		
57. Chakradharpur ...	7,944		79		9.9	29	10	7.4	7.4		
58. Jugsalai ...	2,592		101		29.8	33	33	9.4	9.4		
Total	1,176,039		26,384		22.4	20,681	17,673	17.6	15.0	207	167

APPENDIX III.
 JHARIA MINING AREA.
 STATISTICS OF EPIDEMIC DISEASES.
 1930.

Month.	Total births.	Total deaths.	Influenza.		Cholera.		Small-pox.		Plague.		
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
			1	2	3	4	5	6	7	8	9	10	11
January ...	82	78	22	2	1	...	21	1	...	...	...
February ...	69	20	242	6	2	2	39	1	...	...	...
March ...	94	174	649	17	13	1	75	4	...	...	...
April ...	112	124	290	8	12	8	126	9	...	...	...
May ...	100	104	109	1	7	1	64	2	...	...	...
June ...	99	83	70	2	10	4	42	2	...	...	...
July ...	149	94	263	5	22	6	7	1	...	...	...
August ...	185	144	627	6	18	7	2	1	...	...	...
September ...	177	185	723	5	22	12	...	...	...	...	...
October ...	198	103	272	4	7	4	...	...	...	...	...
November ...	175	76	94	1	2	...	5	...	...	...	...
December ...	145	89	71	2	...	...	5	1	...	...	...
Total ...	1,566	1,314	3,440	87	118	42	281	21	...	...	...
Ratio per Mille ...	19.6	10.4	27.3	0.4	0.9	0.3	2.0	0.3	...	...	...

N. B.—The figures relate to the labour population only and the ratios are calculated accordingly.

STATEMENT NO. I.—Showing particulars of Vaccination in the

Number.	District.	Population of district according to the census of 1921.	Average population per square mile.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary Total.
					Male.	Female.	Total.		
1	2	3	4	5	6			7	8
<i>Patna Division.</i>									
1	Patna	1,574,287	701	15	7,105	4,695	11,800	787	7,705
	By licensed Vaccinators				14,956	14,956	30,904	441	30,515
2	Gaya	2,152,030	457	13	4,552	3,814	8,367	697	7,800
	By licensed Vaccinators				39,339	27,070	66,409	604	66,485
3	Shahabad	1,819,178	415	7	2,350	1,836	4,076	583	3,503
	By licensed Vaccinators				20,096	18,787	38,883	420	39,006
Total of Patna Division		5,545,595	497	34	13,007	10,385	24,343	713	18,595
					65,871	61,425	127,396	517	126,306
<i>Tirhut Division.</i>									
4	Saran	3,339,953	672	11	8,700	4,691	13,391	1,308	5,106
	By licensed Vaccinators				36,004	33,875	69,879	826	69,378
5	Champan	1,940,641	549	6	2,312	1,240	3,552	593	1,890
	By licensed Vaccinators				19,797	18,539	38,336	572	37,510
6	Muzaffarpur	2,754,945	907	11	2,342	1,644	3,986	302	2,317
	By licensed Vaccinators				47,435	45,303	92,738	1,174	91,524
7	Darbhanga	3,913,529	870	8	1,799	1,377	3,176	398	2,190
	By licensed Vaccinators				50,844	47,543	98,386	1,119	97,459
Total of Tirhut Division		9,940,268	789	36	15,153	8,952	24,005	697	10,679
					153,053	144,959	298,039	940	298,169
<i>Bhagalpur Division.</i>									
8	Monghyr	2,029,965	518	6	2,402	1,441	3,843	489	1,897
	By licensed Vaccinators				31,061	28,923	60,983	983	59,144
9	Bhagalpur	2,033,770	481	13	5,366	3,619	7,985	614	2,609
	By licensed Vaccinators				32,553	30,371	62,923	988	61,624
10	Furnes	2,024,008	405	12	5,965	3,689	9,654	719	2,553
	By licensed Vaccinators				30,174	18,175	48,349	673	47,630
11	Santal Parganas	1,798,639	339	11	9,443	6,363	15,735	1,429	6,137
	By licensed Vaccinators				36,536	24,583	61,119	929	60,685
Total of Bhagalpur Division		7,885,933	433	44	23,196	12,981	36,177	922	13,498
					110,323	102,061	212,374	960	207,366
<i>Orissa Division.</i>									
12	Cuttack	2,064,678	665	10	1,870	1,339	3,109	311	1,509
	By licensed Vaccinators				30,845	18,068	49,013	534	47,998
13	Balasore	990,504	470	4	3,701	1,930	5,631	143	716
	By licensed Vaccinators				22,234	17,316	39,450	1,066	38,443
14	Angul	182,574	112	11	4,615	46,96	9,111	626	7,546
	By licensed Vaccinators				35,239	30,052	45,311	1,563	42,268
15	Puri	951,651	890	29	3,480	949	4,429	557	474
	By licensed Vaccinators				11,456	10,292	21,848	643	19,485
Total of Orissa Division		4,968,673	361	47	38,340	24,190	62,530	1,394	44,958
					59,369	50,072	109,422	705	93,464

STATEMENT NO. I.—Showing particulars of Vaccination in the

Number.	District.	Population of district according to the census of 1921.	Average population per square mile.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary							
					Male.	Female.	Total.		Total.							
1	2	3	4	5	6			7	8							
<i>Chota Nagpur Division.</i>																
17	Hazaribagh ...	By paid Vaccinators ...	1,376,946	181	36	26,148	21,766	46,913	1,334	43,601						
18	Ranehi ...	By paid Vaccinators ...	1,334,473	187	4	1,784	879	2,663	665	1,636						
		By licensed Vaccinators ...									87	46,303	38,039	76,021	1,349	47,634
19	Palamu ...	By paid Vaccinators ...	732,394	149	4	2,614	1,135	3,739	935	1,473						
		By licensed Vaccinators ...									36	12,123	11,054	23,626	263	23,376
20	Manbhum ...	By paid Vaccinators ...	1,646,777	373	34	14,610	13,066	26,976	793	16,978						
		By licensed Vaccinators ...									41	20,087	10,155	40,043	976	39,283
21	Singhbhum ...	By paid Vaccinators ...	759,438	196	5	1,767	733	2,430	496	907						
		By licensed Vaccinators ...									36	17,460	10,636	28,096	1,020	18,066
Total of Chota Nagpur Division.		By paid Vaccinators ...	5,458,028	909	85	66,168	56,886	123,721	973	64,644						
		By licensed Vaccinators ...									149	86,021	69,964	166,885	1,135	127,363
Total of Vaccine Department.		By paid Vaccinators ...	24,004,646	409	346	131,759	92,917	224,676	913	153,576						
		By licensed Vaccinators ...									1,103	467,545	428,471	916,016	820	946,588
		Total ...									1,349	619,304	521,388	1,140,692	845	1,002,173
Total Collieries		...	...	...	...	1,617	767	2,324	...	864		
Dispensaries and Leper Asylum		...	...	...	...	149	53	201	...	19		
Total Cooly Department		...	...	...	...	5,889	1,017	6,976	...	31		
Total Jails and Cantonments		...	...	...	...	30,364	596	20,869	...	866		
Grand Total		...	...	...	1,349	647,393	523,789	1,171,128	845	1,002,173			

districts of Bihar and Orissa during the year 1930-31—concl'd.

Vaccination.				Revaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.	
Successful.				Total.	Successful.	Unknown.	Primary.	Revaccination.		Primary.	Revaccination.	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.
Under one year.	One year and under six years.	Total of all ages.	Unknown.												
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
19,193	24,154	43,515	52	3,312	1,780	680	99.02	67.03	30.81	0.12	20.53	44,381	34.75	649	0.51
1,171	447	1,638	...	1,027	546	127	100.30	69.60	55.24	...	12.26	54,708	41.04	556	0.43
35,754	8,713	47,618	6	29,197	23,275	2,489	100.00	85.83	33.58	0.01	8.49	21,713	29.60	541	0.74
327	633	1,041	398	2,267	38	2,106	96.92	23.60	33.58	27.04	92.80	62,431	40.31	315	0.70
13,319	9,273	23,321	43	463	184	223	99.94	77.63	38.93	0.18	48.56	22,613	29.77	161	0.21
3,944	11,505	15,515	376	9,928	4,967	1,866	93.45	61.68	35.02	2.21	18.66	...	...	...	...
14,406	23,339	38,103	...	1,787	1,298	25	99.99	73.68	...	...	1.29	...	...	...	...
398	508	949	5	1,473	702	83	99.08	50.80	35.02	0.52	6.03	...	...	...	...
11,732	6,047	18,065	25	9,988	7,274	1,134	99.90	82.15	...	0.13	11.25	...	...	...	...
24,733	37,247	62,656	831	18,077	8,033	4,802	98.18	60.78	40.68	1.28	20.89	205,905	26.42	1,221	0.29
78,181	47,372	127,247	73	41,532	32,031	3,671	99.97	85.05	...	0.08	9.33	...	...	...	...
51,774	91,903	148,780	1,860	72,101	34,083	16,944	98.71	61.79	31.71	1.23	23.50	1,137,777	33.46	20,631	0.60
287,095	545,880	847,949	579	66,418	47,621	7,638	99.87	81.01	...	0.07	11.50	...	...	...	...
338,860	637,783	996,739	2,439	138,519	81,704	24,582	99.70	71.71	...	0.24	17.75	...	...	...	...
349	461	834	...	1,660	603	51	96.53	37.47	...	...	3.07	...	...	...	...
1	...	19	...	182	82	24	100.00	51.90	...	...	13.18	...	...	...	...
...	...	...	31	6,845	...	6,845	...	...	...	100.00	100.00	...	...	...	...
106	167	561	3	20,295	9,213	2,313	99.64	51.24	...	0.53	11.29	...	...	...	...
339,413	638,401	998,143	2,473	167,490	91,602	33,815	99.70	68.53	...	0.24	29.19	...	...	...	...

SUMMARY.

1	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which the results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		12	13	14			
	2	3	4	5	6	7	8	9	10	11						
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under 6 years.	Ratio of successful vaccinations per 1,000 of population.	Total cost of Department.	Average cost of each successful case.			
BY SPECIAL STAFF.																
Statement (I) ...	1,002,173	138,519	1,002,173	138,519	99.70	71.71	1,349	845	338,809	637,763	31.71	1,71,878 13 3	0 1 6			
BY OTHER AGENCIES.																
Collieries, Dispensaries and Leper Asylum, Cooly Depot, Jails and Cantonments.	1,480	28,960	1,480	28,960	97.79	50.12	...	...	546	618				
Total ...	1,003,653	167,479	1,003,653	167,479	99.70	68.52	1,349	845	339,355	638,401	31.71	1,71,878 13 3	0 2 6			

STATEMENT NO. II.—Showing the cost of vaccination in the

No.	Circle and district.	Native supervising officer.	Expen								
			Pay.	Fed. vaccinators.	Pay.	Licensed vaccinators.	Pay.	Clerks.	Pay.	Fees, etc.	Pay.
1	2	3	4	5	6	7	8	9	10	11	12
PATNA DIVISION.											
1	Patna	5	2,459 6 10	15	2,699 4 9	70	...	...	...	1	7 6 9
2	Gaya	5	2,369 13 0	12	2,413 1 0	82	...	...	...	2	216 0 0
3	Shahabad	5	2,450 0 0	7	827 14 0	94	...	...	...	...	...
	Total of Patna Division	15	7,289 3 10	34	5,921 3 9	246	...	...	...	3	223 6 9
TIRHUT DIVISION.											
4	Saran	4	2,185 0 0	11	1,265 12 0	83	...	...	...	...	...
5	Champanan	3	1,705 13 0	6	691 2 0	67	...	...	...	...	...
6	Muzaffarpur	4	1,500 0 0	11	1,223 5 0	79	...	...	...	...	...
7	Darbhanga	4	2,100 0 0	8	690 8 9	88	...	...	...	...	...
	Total of Tirhut Division	15	7,590 13 0	36	4,160 11 9	317	...	...	...	...	...
BHAGALPUR DIVISION.											
8	Monghyr	4	1,980 0 0	8	626 0 0	61	...	...	...	1	96 0 0
9	Bhagalpur	5	3,331 9 0	13	1,469 13 0	63	...	...	...	...	...
10	Purnea	4	2,460 10 0	12	1,007 4 0	57	...	...	...	...	...
11	Santal Parganas	7	3,300 0 0	11	2,309 6 0	55	...	...	...	...	...
	Total of Bhagalpur Division	20	11,072 3 0	44	6,312 7 0	236	...	...	...	1	96 0 0
ORISSA DIVISION.											
12	Cuttack	4	2,071 7 0	10	1,542 6 6	73	...	...	...	...	...
13	Balasore	3	1,436 12 0	4	328 0 0	37	...	...	...	...	...
14	Angul	3	2,303 6 0	...	...	11	...	...	...	...	...
15	Parl	3	1,560 0 0	29	3,770 8 0	...	...	...	...	...	...
16	Sambalpur	3	1,537 12 0	4	659 6 0	34	...	...	...	...	...
	Total of Orissa Division	16	8,906 5 0	47	6,300 4 6	153	...	...	...	...	...
CHOTA NAGPUR DIVISION.											
17	Hazaribagh	4	2,031 1 0	38	5,068 8 0	...	...	...	...	...	...
18	Ranchi	5	2,450 0 0	4	813 4 0	57	...	...	...	...	...
19	Palamu	3	1,510 0 0	4	966 3 10	23	...	...	...	...	...
20	Manbhum	16	2,380 0 0	34	4,134 3 0	41	...	...	...	...	...
21	Singhbhum	3	1,470 0 0	5	1,639 0 0	26	...	...	...	...	...
	Total of Chota Nagpur Division	20	9,751 1 0	85	12,611 2 10	149	...	...	...	...	...
	Total of Vaccine Circle	26	44,860 11 10	246	34,706 13 10	1,163	...	...	...	4	319 6 9
ESTABLISHMENT OF THE ASSISTANT DIRECTORS OF PUBLIC HEALTH, NORTH BHAR CIRCLE.											
	DITTO, SOUTH BHAR CIRCLE	1	5,700 0 0	...	...	...	...	2	1,175 15 0	2	240 0 0
	DITTO, SOUTH BHAR CIRCLE	1	14,003 14 10	...	...	...	...	2	1,260 0 0	2	240 0 0
	DITTO, ORISSA CIRCLE	1	7,170 0 0	...	...	...	...	2	1,078 8 0	2	217 2 0
	CHOTA NAGPUR CIRCLE	1	14,092 13 0	...	...	...	...	2	1,293 1 0	2	240 0 0
	Total	4	41,925 11 10	...	...	...	...	8	4,907 8 0	8	937 2 0
	Total of Province ... ..	...	86,796 7 8	...	34,706 13 10	...	...	8	4,907 8 0	12	1,286 8 9

Province of Bihar and Orissa during the year 1930-31.

diture.		Paid from—										Number of all successful vaccinations and revaccinations.	Average cost of each successful case.
Total pay of establishments.	Travelling allowances.	Contingencies.		Total cost.	Imperial Fund.	Provincial Fund.	Local Fund.	Municipalities.	Native States.	Total.			
13	14	15	16	17	18	19	20	21	22	23	24	25	
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
5,147 2 4	1,262 5 0	...	...	6,409 7 4	...	3,721 11 10	761 6 6	1,906 5 0	...	6,409 7 4	40,707	0 2 6
4,998 14 0	1,498 5 0	...	267 9 0	6,704 11 0	...	4,038 2 0	1,907 7 0	750 2 0	...	6,704 11 0	66,309	0 1 7	
5,287 14 0	1,099 11 0	...	346 8 6	5,134 1 6	...	4,219 10 6	...	914 7 0	...	5,134 1 6	43,017	0 1 20	
13,453 14 4	4,760 2 0	...	614 0 6	18,308 3 10	...	11,979 8 4	2,748 13 6	2,579 14 0	...	18,308 3 10	150,023	0 1 11	
3,450 12 0	1,354 7 0	...	270 1 0	5,075 4 0	...	3,533 6 0	558 12 0	883 2 0	...	5,075 4 0	78,804	0 1 6	
2,397 1 0	1,000 14 0	...	98 9 0	3,586 8 0	...	2,805 6 0	24 3 0	312 0 0	...	3,586 8 0	40,723	6 1 5	
3,083 5 0	1,488 7 0	...	382 13 3	4,965 9 3	...	3,468 7 0	395 6 0	1,111 13 3	...	4,965 9 3	95,421	0 0 16	
3,080 8 9	1,240 12 0	...	110 0 0	4,431 4 9	...	3,450 12 0	241 8 0	739 0 9	...	4,431 4 9	100,631	0 0 8	
12,011 10 9	5,174 8 0	...	802 7 3	18,048 10 0	...	12,327 15 0	1,641 11 0	3,076 0 0	...	18,048 10 0	215,679	0 0 11	
2,702 0 0	1,268 0 0	...	2 3 2 0	4,333 11 0	...	3,338 9 0	...	905 2 0	...	4,333 11 0	61,621	0 1 1	
4,801 6 0	460 10 0	...	356 8 9	5,518 8 9	...	3,887 3 0	886 1 0	760 4 9	...	5,518 8 9	70,223	0 1 3	
4,367 14 0	2,006 10 0	...	465 4 0	6,842 12 0	...	4,352 4 0	1,307 10 0	1,182 14 0	...	6,842 12 0	43,304	0 2 6	
5,000 6 0	2,738 15 0	...	135 12 6	8,484 1 6	...	6,158 15 0	1,430 6 0	888 12 6	...	8,484 1 6	51,043	0 2 2	
17,480 10 0	6,464 12 0	...	1,133 11 3	25,079 1 3	...	17,721 15 0	3,630 1 0	3,727 1 3	...	25,079 1 3	236,811	0 1 8	
3,613 13 6	1,027 3 0	...	130 0 0	4,791 0 6	...	3,248 10 0	811 4 0	721 2 6	...	4,791 0 6	43,407	0 1 10	
1,864 12 0	831 4 0	...	70 0 0	2,766 0 0	...	2,458 0 0	76 0 0	252 0 0	...	2,766 0 0	39,240	0 1 1	
2,200 6 0	1,218 1 0	...	80 10 0	3,499 1 0	...	3,499 1 0	...	...	...	3,499 1 0	4,837	0 6 7
5,330 8 0	1,981 0 0	...	170 0 0	6,586 8 0	...	2,816 0 0	3,558 8 0	212 0 0	...	6,586 8 0	43,078	0 2 4	
2,197 2 0	950 13 6	...	108 3 0	3,256 2 6	...	2,588 9 6	428 6 0	239 3 0	...	3,256 2 6	23,186	0 2 2	
15,306 9 6	5,125 5 6	...	563 13 0	20,808 12 0	...	14,590 4 6	4,874 2 0	1,434 5 6	...	20,808 12 0	154,650	0 2 2	
7,089 9 0	1,471 8 0	...	247 0 0	8,818 1 0	...	3,552 9 0	4,697 0 0	868 8 0	...	8,818 1 0	47,006	0 2 0	
3,273 4 0	1,709 15 0	...	109 0 0	5,092 3 0	...	4,430 3 0	...	662 0 0	...	5,092 3 0	73,712	0 1 0	
2,406 3 18	817 15 6	...	35 13 0	3,330 0 4	...	2,914 7 0	762 14 4	252 11 0	...	3,330 0 4	34,627	0 2 2	
6,414 2 0	405 12 0	...	148 0 3	6,967 15 3	...	3,287 10 3	4,109 12 0	460 9 0	...	6,967 15 3	6,283	6-1 16	
2,600 0 0	541 15 0	...	107 9 4	3,158 8 6	...	2,092 4 0	147 8 0	918 12 6	...	3,158 8 6	27,653	0 1 10	
21,765 2 10	4,947 1 6	...	647 6 9	27,366 12 1	...	14,687 1 3	9,707 2 4	1,962 8 6	...	27,366 12 1	332,662	0 1 20	
79,895 0 5	26,075 0 0	...	3,721 6 9	1,09,091 7 2	...	72,306 12 1	32,604 13 10	14,770 13 3	...	1,09,091 7 2	1,080,748	0 1 7	
7,115 15 0	2,164 11 0	...	954 13 2	10,235 7 3	...	10,735 7 3	...	...	...	10,235 7 3	...	...
16,482 14 10	2,350 7 0	...	887 7 6	19,600 3 4	...	19,100 13 4	...	...	...	19,600 3 4	...	...
8,168 10 0	3,960 13 0	...	1,989 8 3	13,815 15 3	...	13,815 15 3	...	...	...	13,815 15 3	...	...
15,735 14 0	2,470 0 0	...	338 11 2	18,535 2 2	...	18,535 2 2	...	...	...	18,535 2 2	...	...
47,770 5 10	10,846 8 0	...	3,570 8 3	62,187 6 1	...	62,187 6 1	...	...	...	62,187 6 1	...	...
1,37,665 6 3	36,921 8 0	...	7,791 15 0	1,71,878 13 3	...	1,34,694 2 2	22,604 13 10	14,979 12 8	...	1,71,878 13 3	...	0 2 6	

Comparative statement no. III—Showing the percentage of persons primarily vaccinated to the total number of vaccinations performed in the Province of Bihar and Orissa in each of the undermentioned official years.

Establishments.	Years.									
	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
1	2	3	4	5	6	7	8	9	10	11
Government staff	---	---	---	---	---	14.17	25.46	14.13	7.36	---
Dispensaries	---	---	0.39	---	---	---	29.76	---	14.75	9.45
Municipal	91.47	83.77	83.90	72.06	43.40	40.70	62.34	73.47	71.71	64.03
District Board	87.33	84.54	76.06	80.32	60.53	45.95	52.10	60.14	67.13	70.70
Licensed vaccinators	98.82	90.50	99.40	98.62	92.11	92.03	96.21	97.50	97.59	92.75
Rails and cooleries	24.08	---	68.97	94.28	38.13	31.91	39.82	34.22	35.25	34.23
Jails	5.16	4.07	8.03	4.36	3.88	1.75	1.00	1.49	1.34	1.11
Cooly Depot	4.23	24.01	5.70	3.22	3.81	3.69	1.26	2.31	0.51	0.46
Cantonment	93.03	94.15	94.60	92.73	84.47	51.71	36.49	---	93.08	89.21

STATEMENT NO. IV.—Showing particulars of vaccination

District.	Total number of persons vaccinated.		Total number inspected—								Percentage of	
			By Assistant Directors of Public Health or Civil Surgeons.				By Native Superintendents or other Inspecting Officers.				By Assistant Directors or Civil	
			Assistant Directors of Public Health.		Civil Surgeons.		District Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.	
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
1	2	3	4	5	6	7	8	9	10	11	12	13
Patna	28,519	5,735	1,851	...	...	...	1,638	...	11,836	95	479	...
Gaya	63,995	3,857	3,038	...	59	...	8,560	...	13,108	...	474	...
Bhababad	42,500	2,444	3,398	...	790	...	7,991	25	16,043	113	790	...
Baran	73,519	8,078	...	...	8,913	...	10,763	...	21,162	...	...	...
Champanan	38,873	4,191	1,278	...	589	1,077	6,549	368	10,215	371	339	...
Muzaffarpur	94,195	3,843	7,823	...	940	1,085	11,880	33	32,520	46	830	...
Darbhanga	99,655	3,383	2,084	...	633	...	7,073	...	31,384	...	299	...
Monghyr	61,041	2,755	5,774	...	1,364	...	14,004	...	30,375	...	946	...
Bhagalpur	64,533	9,523	444	...	40	...	3,653	...	14,970	...	909	...
Purnea	40,483	7,547	803	...	714	...	3,109	8	4,675	8	198	...
Santal Parganas	55,019	18,227	10,949	...	3,813	919	3,180	...	18,786	376	1990	...
Cuttack	39,597	3,183	1,947	...	98	404	3,317	...	8,413	...	498	...
Balasore	29,159	15,972	1,855	...	378	...	4,694	3,801	8,339	1,881	639	...
Angul	7,558	2,903	2,595	...	994	250	1,554	...	4,182	483	3435	...
Puri	43,368	3,761	2,727	...	1,168	708	13,905	803	19,628	1,317	645	...
Sambalpur	19,952	6,048	1,300	...	876	565	4,894	119	9,046	850	631	...
Hazaribagh	44,392	8,313	6,904	...	377	...	1,871	...	9,595	15	1536	...
Ranchi	49,364	21,276	3,347	...	...	...	9,105	840	21,337	8,069	679	...
Palamu	26,870	4,497	556	...	2,750	101	4,929	343	5,300	145	323	...
Manbhum	55,338	12,850	4,052	...	1,355	956	4,532	...	4,833	88	733	...
Singhbhum	19,974	11,535	2,823	...	1,834	135	4,131	685	5,130	758	3004	...
Total	1,009,653	167,499	67,439	...	30,516	6,193	127,298	6,514	289,798	14,713	671	...

verified by Inspecting Officers during the year 1930-31.

Inspection to total number vaccinated.						Percentage of cases found successful to total number inspected.								Percentage of successful cases reported by vaccinators.	
By Assistant Directors of Public Health or Civil Surgeons.		By Native Superintendents or other Inspecting Officers.				By Assistant Directors of Public Health or Civil Surgeons.				By Native Superintendents or other Inspecting Officers.					
Civil Surgeons.		District Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.		Civil Surgeons.		District Inspectors.		Sub-Inspectors.			
Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.		
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
...	...	4'23	...	30'63	1'06	98'91	...	...	...	99'57	...	98'21	17'89	98'91	69'00
0'08	...	8'69	...	10'48	...	98'94	...	98'30	...	99'38	...	96'05	...	90'74	72'83
1'85	...	18'79	1'08	35'41	4'58	97'43	...	100'00	...	98'63	100'00	92'13	100'00	90'83	40'67
12'12	...	14'64	...	28'77	...	...	...	90'04	...	90'15	...	98'49	...	90'88	71'73
1'51	25'69	16'74	6'39	25'27	6'46	97'05	...	100'00	62'02	99'60	65'39	99'70	64'20	90'92	58'22
4'18	27'75	12'03	9'00	34'60	1'20	98'91	...	99'05	40'80	99'60	56'62	99'63	65'22	90'59	42'17
0'63	...	7'69	...	31'49	...	98'65	...	100'00	...	98'95	...	99'91	...	90'91	31'39
2'07	...	22'93	...	33'37	...	99'80	...	100'00	...	100'00	...	100'00	...	99'94	33'49
0'06	...	5'63	...	23'19	...	...	...	100'00	...	90'63	...	90'49	...	90'96	59'39
1'76	...	7'67	6'10	11'55	0'10	90'27	...	90'64	...	96'83	12'5	96'83	12'5	90'41	45'05
5'11	5'04	5'79	...	34'14	3'16	94'64	...	99'29	90'19	98'68	...	90'51	93'92	90'55	37'79
0'24	12'60	8'30	...	21'34	...	89'53	...	100'00	40'34	99'76	...	98'94	...	90'62	36'13
0'86	...	16'10	23'79	28'59	12'40	93'62	...	100'00	...	97'63	93'21	97'84	77'43	90'65	64'38
13'18	8'61	22'02	...	55'23	16'40	97'80	...	96'78	72'00	100'00	...	92'50	80'63	98'47	65'66
2'76	18'82	39'30	21'32	46'45	32'36	91'12	...	99'40	26'29	99'27	48'00	99'03	47'66	96'12	42'86
4'39	9'36	24'52	1'97	48'32	14'05	92'46	...	98'97	65'02	78'73	82'55	65'63	100'00	90'35	51'48
1'98	...	4'22	...	20'99	0'29	99'26	...	100'00	...	100'00	...	98'37	26'65	99'85	64'08
...	...	18'48	1'73	44'31	25'89	99'46	...	...	...	100'00	100'00	100'00	100'00	99'68	78'79
15'07	2'24	19'81	5'40	21'31	3'22	98'94	...	97'07	74'25	99'21	47'73	97'96	65'45	97'96	18'68
2'83	7'51	8'20	...	7'03	0'63	95'93	...	100'00	22'46	98'89	...	99'97	0'54	90'99	40'69
8'04	1'17	21'65	5'94	20'89	0'57	99'24	...	100'00	100'00	90'68	71'38	98'94	83'64	99'73	69'61
3'05	3'09	12'68	3'89	28'87	8'78	97'08	...	99'31	51'63	91'03	79'75	97'41	89'20	99'60	42'65

STATEMENT NO. V.—Showing side by side the ratios per mille of population

District.	1921-22.		1922-23.		1923-24.		1924-25.	
	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
1	2	3	4	5	6	7	8	9
Patna ...	0.46	40.20	0.05	39.70	0.06	39.12	0.13	41.63
Gaya ...	0.24	19.81	0.04	21.67	0.04	23.75	0.04	25.34
Shahabad ...	0.22	38.03	0.04	32.35	0.02	32.85	0.10	22.24
Saran ...	0.13	16.09	0.02	28.57	0.05	30.96	0.44	32.84
Champaran ...	0.08	19.02	0.06	22.02	0.09	23.23	0.38	29.19
Muzaffarpur ...	0.04	28.80	0.04	31.26	0.12	33.42	0.21	33.22
Darbhanga ...	0.03	30.34	0.06	30.26	0.05	32.14	0.15	31.11
Monghyr ...	0.14	26.70	0.11	31.03	0.09	34.89	0.12	30.21
Bhagalpur ...	0.13	30.54	0.09	31.12	0.48	32.18	0.46	32.57
Purnea ...	0.29	17.99	0.24	19.25	0.06	17.39	0.04	21.67
Santal Parganas ...	0.05	27.90	0.01	30.62	0.03	31.16	0.06	33.82
Cuttack ...	0.04	29.75	0.15	29.90	0.28	22.29	0.77	21.96
Balasore ...	0.09	26.90	0.17	24.01	0.37	30.79	0.34	25.88
Angul ...	...	27.21	0.05	30.18	...	33.73	...	33.78
Puri ...	0.06	36.66	0.13	36.99	0.25	38.33	1.21	38.76
Sambalpur ...	0.03	26.38	0.06	24.08	0.01	30.09	0.12	27.21
Hazaribagh ...	0.02	23.12	0.02	25.04	0.03	28.02	0.05	28.38
Ranchi ...	0.21	29.22	0.05	31.33	0.01	33.58	0.02	36.98
Palamau ...	0.56	23.04	0.09	21.25	0.04	22.45	0.01	26.92
Manbhum ...	0.02	28.07	0.02	33.85	0.01	37.46	0.02	32.73
Singhbhum ...	0.32	21.86	0.18	22.38	0.14	21.14	0.26	29.64
Total ...	0.14	26.97	0.07	28.80	0.11	29.91	0.24	29.72

of deaths from small-pox and the ratios of successful vaccinations per mille of population during the ten years ending 1930-31.

1925-26.		1926-27.		1927-28.		1928-29.		1929-30.		1930-31.	
Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
10	11	12	13	14	15	16	17	18	19	20	21
0.49	45.73	1.69	60.52	1.07	45.78	0.49	33.32	0.40	28.34	0.23	25.86
0.46	29.72	2.21	31.69	1.21	25.92	0.30	27.20	0.27	30.24	0.56	30.79
0.16	31.15	0.99	40.83	1.60	31.64	0.37	24.90	0.16	23.68	0.32	23.65
0.50	34.76	0.50	32.75	0.75	36.49	0.19	36.99	0.19	41.23	0.17	33.68
0.65	26.24	0.98	29.89	0.34	23.24	0.07	23.84	0.10	24.51	0.06	20.98
0.24	35.23	0.36	36.37	0.56	37.26	0.18	35.52	0.25	36.18	0.06	34.63
0.12	34.67	0.27	35.85	0.34	39.22	0.16	36.36	0.12	37.63	0.18	35.54
0.11	35.18	0.62	37.92	0.93	36.65	0.53	38.29	0.45	35.86	0.42	30.35
0.13	36.64	0.65	38.90	1.13	40.63	0.45	38.32	0.16	35.17	0.08	34.53
0.17	34.06	0.69	25.45	0.95	25.03	0.65	23.77	0.18	22.20	0.08	21.38
0.17	34.66	0.90	37.47	1.06	35.28	0.46	34.28	0.20	31.32	0.36	34.28
2.50	30.39	2.92	21.99	0.95	26.65	0.18	20.00	0.09	23.20	0.50	19.61
1.71	36.12	2.34	43.48	1.42	28.22	0.43	36.65	0.09	44.98	0.29	40.12
...	109.19	0.06	95.66	0.08	90.45	0.03	61.65	...	49.20	...	46.76
7.21	64.43	3.54	48.92	0.47	48.59	0.08	39.80	0.02	44.86	0.06	45.27
0.60	27.71	0.68	26.31	0.27	25.21	0.22	26.66	0.17	24.82	0.76	29.57
0.24	34.75	1.00	35.97	0.73	38.77	0.30	38.74	0.15	35.92	0.13	36.81
0.34	43.01	1.02	45.63	0.39	43.34	0.24	40.73	0.08	40.80	0.04	55.24
0.06	28.92	0.28	30.84	1.01	30.57	1.35	30.66	0.95	30.67	0.43	33.58
0.32	46.18	0.42	48.32	0.17	45.66	0.06	38.51	0.05	35.79	0.13	38.93
0.52	33.75	0.16	29.44	0.13	28.59	0.12	27.58	0.11	29.46	0.27	35.62
0.67	35.33	1.05	36.71	0.79	35.10	0.31	32.72	0.19	32.81	0.24	32.05

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1930-31.

District.	Towns.	Number of births during the year ending 31st March 1931.	Number of deaths amongst infants under one year during the year ending 31st March 1931.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1931.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Patna	Patna	2,278	223	1,164	1st October 1884.
	Bihar	734	114	251	1st April 1887.
	Dinapur	751	111	560	28th January 1891.
	Barh	275	42	44	1st April 1887.
	Khagole	94	21	23	12th July 1910.
	Total	4,132	511	2,042	
Gaya	Gaya	1,824	448	1,055	1st January 1883.
	Tikari	255	34	56	3rd January 1891.
	Daudnagar	396	48	203	Ditto.
	Total	2,475	530	1,314	
Shahabad	Arrah	600	50	841	20th July 1885.
	Buxar	293	61	438	1st April 1887.
	Dumraon	122	6	39	Ditto.
	Jagadispur	263	27	224	20th December 1890.
	Sassaram	652	55	606	1st April 1887.
	Bhabhua	176	22	127	Ditto.
	Total	2,106	221	2,275	
Total of Patna Division.		8,713	1,262	5,631	
Saran	Chapra	1,178	178	1,242	1st April 1887.
	Revelganj	390	67	396	12th December 1890.
	Siwan	494	40	313	1st April 1887.
	Total	2,062	285	1,951	
Champanan	Motihari	330	50	202	1st April 1887.
	Bettiah	448	45	235	Ditto.
	Total	778	95	437	

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1930-31—contd.

District.	Towns.	Number of births during the year ending 31st March 1931.	Number of deaths amongst infants under one year during the year ending 31st March 1931.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1931.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Muzaffarpur	Muzaffarpur	945	171	169	1st January 1886.
	Sitamarhi	269	52	76	1st April 1887.
	Hajipur	560	92	92	1st May 1890.
	Lalganj	311	42	33	1st April 1887.
	Total	2,085	357	370	
Darbhanga	Darbhanga	1,463	228	367	24th May 1884.
	Roserha	168	11	54	3rd January 1891.
	Samastipur	176	23	33	25th July 1910.
	Madhubani	442	60	154	1st April 1887.
	Total	2,249	322	608	
Total of Tirhut Division.		7,174	1,059	3,366	
Monghyr	Monghyr	1,267	140	499	15th November 1882.
	Jamalpur	868	148	187	Ditto.
	Total	2,135	338	686	
Bhagalpur	Bhagalpur	1,058	123	829	15th February 1884, withdrawn on 16th October 1895; re-extended on 18th August 1898.
	Colgong	142	15	77	Ditto, re-extended on 19th December 1901.
	Total	1,200	138	906	
Purnea	Purnea	218	29	107	1st July 1887.
	Kishanganj	86	8	94	12th November 1892.
	Katihar	140	11	50	8th August 1910.
	Forbesganj	148	20	12	9th August 1912.
	Total	592	68	263	

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1930-31—contd.

District.	Towns.	Number of births during the year ending 31st March 1931.	Number of deaths amongst infants under one year during the year ending 31st March 1931.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1931.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Santal Parganas	Sahibganj ...	187	15	119	1st May 1884.
	Deoghar ...	35	5	64	Ditto.
	Madhupur ...	41	8	83	22nd August 1910.
	Dumka ...	83	17	215	Notifications, dated the 9th April 1884, and 23rd August 1910.
	Total ...	346	45	481	
Total of Bhagalpur Division.		4,293	589	2,336	
Cuttack	Cuttack ...	904	97	284	1st September 1884.
	Kendrapara ...	373	123	58	7th February 1888.
	Jajpur ...	273	45	22	Ditto.
	Total ...	1,550	265	364	
Balasore	Balasore ...	387	84	151	7th February 1888.
Puri	Puri ...	597	215	159	Ditto
Sambalpur	Sambalpur ...	493	102	136	7th March 1895.
Total of Orissa Division.		3,027	666	810	
Hazaribagh	Hazaribagh ...	405	23	280	1st January 1885.
	Chatra ...	331	28	141	1st August 1885.
	Giridih ...	282	2	224	8th September 1910.
	Total ...	1,018	63	645	
Ranchi	Ranchi ...	627	20	896	1st April 1887.
	Lohardaga ...	211	22	175	25th June 1882.
Total		838	42	1,071	

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1930-31—concl'd.

District.	Towns.	Number of births during the year ending 31st March 1931.	Number of deaths amongst infants under one year during the year ending 31st March 1931.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1931.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Palamau ...	Daltonganj ...	177	13	56	9th October 1890.
Manbhum ...	Purulia ...	467	22	304	1st January 1887.
	Raghunathpur ...	194	19	117	9th February 1894.
	Jhalda ...	203	18	75	9th July 1892.
	Dhanbad ...	329	30	14	5th December 1918.
	Total ...	1,193	89	510	
Singhbhum ...	Chaibassa ...	307	25	177	20th June 1892.
	Chakradharpur ...	86	6	62	13th January 1919.
	Jugsalai ...	114	11	133	1st April 1924.
	Total ...	507	42	372	
	Total of Chota Nagpur Division.	3,733	249	2,654	
	Total for the Province	26,940	3,825	14,797	

Provincial Statement showing the different kinds of lymph

District.	Primary vaccination											
	Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm	
	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.
Patna	38,649	38,247	296	116	98.06	...	...
Gaya	63,995	63,824	105	66	99.73	...	...
Shahabad	42,509	42,435	47	27	99.82	...	...
Saran	73,519	73,119	390	91	99.45	...	...
Champanan	38,873	38,820	29	24	99.86	...	...
Muzaffarpur	94,195	93,811	362	22	99.30	...	...
Darbhanga	99,655	99,569	83	3	99.91	...	...
Monghyr	61,041	61,002	36	3	99.94	...	...
Bhagalpur	64,583	64,510	19	4	99.96	...	...
Purnea	40,483	40,246	164	73	99.41	...	...
Santal Parganas	55,019	54,775	73	171	99.55	...	...
Cuttack	39,807	39,357	64	86	99.62	...	...
Balasore	29,159	29,059	19	90	99.65	...	...
Angul	7,558	7,480	61	17	99.97	...	...
Puri	42,758	41,466	148	644	98.12	...	...
Sambalpur	19,932	19,832	20	110	99.35	...	...
Hazaribagh	44,292	44,175	65	52	99.72	...	...
Ranchi	49,264	49,258	...	6	99.98	...	...
Palamau	24,870	24,362	46	462	97.92	...	...
Manbhum	55,238	53,773	1,089	376	97.35	...	...
Singbhum	19,074	19,023	21	30	99.93	...	...
TOTAL	1,003,653	9,98,143	3,657	2,473	99.45	...	...

II.

used and their rates of success during the year 1930-31.

vaccination.			Re-vaccination.														
			Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm vaccination.				
Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
...	5,725	2,460	2,738	537	42-89	...	...	...	...	...
...	3,857	2,475	1,030	352	64-16	...	...	...	...	...
...	2,444	582	1,671	191	23-61	...	...	...	...	...
...	8,078	5,685	2,240	753	65-51	...	...	...	...	...
...	4,191	1,903	1,360	928	45-40	...	...	...	...	...
...	3,842	1,610	1,552	680	41-91	...	...	...	...	...
...	3,383	1,062	2,008	313	31-39	...	...	...	...	...
...	2,785	619	1,286	880	22-23	...	...	...	...	...
...	9,523	5,713	2,388	1,422	59-99	...	...	...	...	...
...	7,387	3,058	2,918	1,611	40-30	...	...	...	...	...
...	18,227	6,888	4,086	7,253	37-79	...	...	...	...	...
...	3,183	1,150	732	1,301	36-12	...	...	...	...	...
...	15,972	10,281	3,433	2,258	61-36	...	...	...	...	...
...	2,903	1,057	462	1,384	36-41	...	...	...	...	...
...	3,761	1,612	1,044	1,105	42-88	...	...	...	...	...
...	6,048	3,356	690	2,062	55-49	...	...	...	...	...
...	5,213	2,831	1,591	791	54-30	...	...	...	...	...
...	31,276	24,455	4,129	2,692	78-12	...	...	...	...	...
...	4,497	265	256	3,976	5-89	...	...	...	...	...
...	12,859	6,510	4,180	2,169	50-63	...	...	...	...	...
...	11,535	8,030	2,288	1,417	69-61	...	...	...	...	...
...	167,499	91,602	42,082	33,815	54-69	...	...	...	...	...

GOVERNMENT OF BIHAR AND ORISSA.

(MINISTRY OF LOCAL SELF-GOVERNMENT.)

RESOLUTION.

The 8th October 1931.

READ—

The Public Health Report for the year 1930 and the Vaccination Report for the year 1930-31.

1. *General Health Statistics.*—There was a slight increase in the birth rate from 35.6 to 36.2. The death rate also increased from 26.9 to 29.6 the rise being due primarily to the prevalence of cholera in severe epidemic form in some parts of the province.

2. *Vital Statistics.*—How to ensure greater accuracy in vital statistics is a difficult problem to solve in the present state of education of the general mass of people. Introduction of compulsory registration of births and deaths in rural areas presents many difficulties. An important experiment of transferring the duty of such registration from police to municipalities was however carried on during the year under report and it is under consideration of Government whether the experiment should be extended to some other municipalities.

3. *Infant mortality.*—The rate of total infant mortality increased from 133.1 a thousand in 1928 to 135 a thousand in 1929 on the actual births recorded. It further rose to 137.8 a thousand in 1930. Government view with concern this gradual increase in the incidence of infant mortality and as the extension of maternity and child-welfare work is one of the most effective ways of dealing with the problem, Government would again urge on the municipalities in the province to take greater interest in maternity work and to make a beginning by appointing a midwife in each municipality.

4. *Cholera.*—The provincial death rate for cholera rose from 3.0 in the previous year to 4.6 in 1930. The epidemic of 1929 in North Bihar persisted through the winter months and so the reappearance of the epidemic in 1930 was rather a recrudescence than a fresh infection. The epidemic reached its maximum in the latter part of March, continued up to the end of August and then gradually subsided. Twenty-five extra epidemic doctors and an increased number of epidemic vaccinators were employed by Government to assist local bodies in combating the epidemic. Twenty-nine epidemic doctors were also employed by Government for preventive measures during the Kumbh mela at Allahabad which was held in January 1930. Approximately 731,000 doses of cholera vaccine were supplied during the year to the local bodies free of charge, against 656,000 in the previous year. The steadily increasing demand for this vaccine shows the success achieved by the department in popularising voluntary inoculation. Encouraging results were also obtained by an experiment with bacteriophage during the Rathjatra festival at Puri and the big cattle fair at Sonapur, and it is believed that the administration of a potent appropriate bacteriophage has both preventive and curative powers. Government are watching with interest further developments in this connection.

5. *Small-pox.*—The death rate for 1930 was the same as for the year 1929, viz. 0.2. The state of vaccination in the province is by no means satisfactory and the question of introduction of compulsory vaccination in those districts which have an approved public health organisation scheme under a qualified

health officer is under consideration. The Patna district board scheme which entails no extra expenditure has been recommended by Government to other boards for adoption. The Muzaffarpur district board has proposed to introduce a similar workable scheme. Some of the other district boards have also expressed willingness to take up compulsory vaccination and details are being worked out.

6. *Other diseases.*—The death rate from fevers increased from 17.7 to 18.9 and that from plague decreased from 0.2 to 0.1. The sale of quinine during the year amounted to 501 pounds against 584 pounds in the previous year, but the free issue of quinine tablets to school boys increased (in thousands) from 83 to 98. A certain quantity of cinchona febrifuge and cinchona tablets were also issued for free distribution in the Chota Nagpur Division.

7. *General Public Health Measures.*—In eleven out of twenty-one districts approved public health organisation schemes were working under qualified health officers but two district boards have been constrained on account of financial difficulty to dispense with the services of their health officers. Five of the districts received a contribution from Government towards the expenses of their health organisations. Services of Government health officers from the Public Health cadre were also lent, free of cost, to four district boards on an experimental basis. The medical inspection of school boys has also made steady progress. Such inspection was hitherto confined to high schools but it has now been extended to middle English schools.

8. *Public Health Laboratory.*—Government regret to find that the local bodies have not yet fully realised the importance of utilising the Public Health Laboratory for checking adulteration of food-stuff and hope that they would avail themselves of the opportunity afforded by the laboratory to a greater extent in future.

9. The office of the Director of Public Health was held by Lieutenant-Colonel J. A. S. Phillips, I.M.S., up to the 8th October 1930 and by Major S. L. Mitra, I.M.S., for the remaining period of the year. Thanks of Government are due to both of them for the efficient manner in which they discharged their duties and also for the cordial relations that were maintained between the department and local bodies. Government have noted the names of subordinate officers commended in the report.

M. N. SRN,

Secretary to Government.

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