

Annual statistical returns and short notes on vaccination in Bihar and Orissa.

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ANNUAL STATISTICAL RETURN

AND

SHORT NOTES ON VACCINATION

IN

BIHAR AND ORISSA

FOR THE YEAR

1924-25

BY

LT.-COL. W. C. ROSS, M.B., CH.B., D.P.H., I.M.S.,

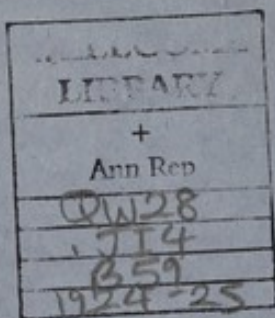
Director of Public Health, Bihar and Orissa.

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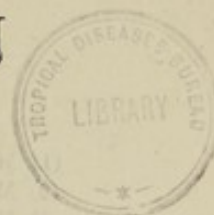


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ANNUAL
VACCINATION REPORT,
BIHAR AND ORISSA,
FOR THE YEAR
1924-25.

1. *Staff*.—Lieutenant-Colonel W. C. Ross, I.M.S., held charge of the department throughout the year and submits this report.

The three Assistant Directors of Public Health remained in charge of their respective circles during the year except that Dr. J. L. Das officiated for Dr. T. Sebastian for about three months whilst he was on leave. In October, a mutual transfer was arranged between Dr. T. Sebastian and Dr. S. N. Tiwary, Dr. Sebastian returning to Namkum as Assistant Director of Public Health, Chota Nagpur and Orissa Circle, and Dr. Tiwary assuming charge of the North Bihar Circle. Dr. B. P. Mazumdar remained in charge of the South Bihar Circle throughout the year.

The Inspecting staff consisted of 20 District Inspectors of Vaccination and 69 Sub-Inspectors of Vaccination (including three deputed for duty at the Vaccine Depot) 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 1,121 licensed and 222 paid, against 1,088 licensed and 228 paid in the previous year.

In municipalities and in the district of Puri, 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.

2. *Operations performed*.—The total number of operations performed during the year amounted to 1,044,282, as compared with 1,043,264 last year. There has again been an increase in the total number of operations which is very satisfactory, and indicates that the difficulties and the opposition experienced in recent years are gradually diminishing. Of the total number of operations in the province, 1,031,146 were performed by the staff of the Vaccination Department as compared with 1,031,904 last year. Nine hundred and ninety thousand, five hundred and seventy-one operations were primary and 40,575 were re-vaccinations as against 999,718 primary operations and 32,186 re-vaccinations last year.

There was a decrease of 9,147 in the number of primary operations and an increase of 8,389 in the number of re-vaccinations during the year. Of the total operations performed (1,031,146), 1,004,537 equal to 97.42 per cent. were successful, as compared with 1,010,911 equal to 97.96 last year.

The number of operations performed in municipalities increased by 2,910 as compared with last year's returns. The total number of operations performed was 42,847 and the number of successful operations was 35,316 of which 30,816 were primary and 4,500 were re-vaccinations as compared with 32,833 and 3,085, respectively, last year. The ratios of success in municipalities were 95.97 per cent. for primary operations and 41.91 per cent. for re-vaccinations as compared with 97.25 per cent. and 49.94 per cent., respectively, last year.

The number of operations performed in rural areas was 988,299 as compared with 991,967 last year and the ratios of successes were 99.33 per cent. for primary operations and 55.89 for re-vaccinations.

3. *Vaccination in districts.*—Of the three districts of the Patna division, Patna and Gaya reported an increase in the number of operations performed (4,679) and (2,969) whilst Shahabad reported a decrease of over 19,000.

The state of vaccination work in Shahabad has been most unsatisfactory for several years owing to an entire lack of discipline amongst vaccinators and to constant friction between them and the inspecting staff.

The districts of Saran and Champaran recorded increases of 3,879 and 281 respectively, whereas Darbhanga recorded a decrease of 2,810 and Muzaffarpur a small decrease of 29.

All the districts of the Bhagalpur division recorded increases except Monghyr in which a decrease of 9,248 was reported. Purnea district recorded the highest increase in this division, viz., 8,951.

With the exception of Cuttack and Puri, the three other districts of Orissa recorded decreases in the number of operations, the greatest decrease being in Balasore (5,448). The districts of Cuttack and Puri recorded small increases of 686 and 177, respectively.

With the exception of Manbhum, there was a general rise in the number of operations returned from the districts of Chota Nagpur, the greatest increase being in Singhbhum (7,415).

4. *Vaccination in towns and compulsory areas.*—Statement VII shows that during the year, 13,804 children under one year of age, out of an available number of 31,871 or 43.31 percent. were successfully vaccinated.

The towns of Muzaffarpur and Darbhanga shows the smallest proportion of work done, and the towns of Patna and Khagole also made unsatisfactory returns.

5. *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 recent years under the direction and encouragement of the Political Agent and Commissioner.

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

During the year under report 197,162 primary operations and 332,195 re-vaccinations were performed as compared with 195,641 and 340,805 respectively, in the previous year.

6. *Protection of infants.*—During the year under report the number of children under one year available for vaccination was 1,017,090 and the number of successful operations was 351,444 equal to 34.6 per thousand against 375,127 or 36.2 per thousand successful operations out of 1,034,163 children available during the previous year. The protection of infants in municipalities is separately shown in statement VII. It gives a ratio of 433 per thousand of the surviving infant population as compared with 504 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, and, in view of the strong popular prejudice which exists against the vaccination of infants at an early age, I consider that it is desirable that the Vaccination Act should be amended, so as to raise the age for compulsory vaccination to one year instead of six months.

7. *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 94,994.

During the first quinquennium, the number of deaths was 55,776 and during the second 39,218. In each of the last five years, the mortality was as follows :—19,374, 4,911, 2,695, 3,823 and 8,345.

During the last few months of the period now under report small-pox had been widely prevalent throughout Orissa and in several of the districts of Bihar and was still prevalent at the end of the year. In last year's report, I predicted the probability of an increase in the prevalence of small-pox this year and for the next two or three years. The prediction has so far been fulfilled. There has been an increase of about 4,500 deaths during the year under report and the disease has been very prevalent during April and May which months will be included in the next year's statistics. There is in my opinion little doubt but that the number of deaths from small-pox will show another large increase in 1925-26 and there is a serious risk that the disease may rage in epidemic form during the next two years unless strong action is taken to enforce the vaccination of the population in a much more thorough and comprehensive manner.

The provincial ratios of the mortality from small-pox per thousand of population during the last five years have been '56, '14, '07, '11 and '24.

8. *Prevention of small-pox.*—The constant and considerable mortality noted in the preceding paragraph is, in my opinion, a complete demonstration both of the insufficiency and of the inefficiency of the existing arrangements for vaccination.

It is well known, in fact it is an admitted axiom—that thorough vaccination can and does stamp out small-pox altogether, and in the light of that knowledge, and in face of the above facts, there is great necessity for a stronger vaccination policy.

I do not consider that small-pox can be effectively dealt with and stamped out unless vaccination is made compulsory throughout the province, and I would recommend that the Vaccination Act should be modified so as to extend the age within which vaccination is required, to one year, and should be generally enforced; that vaccination should be free; and that the supervision and control of vaccination should be delegated to district boards and municipalities and their Health Officers.

9. *Inspection of work.*—During the year under report the Assistant Directors of Public Health inspected 58,788 primary vaccinations as against 71,814 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 20 out of the 21 districts in the province.

The Civil Surgeons of the province inspected 22,638 primary and 3,510 re-vaccination operations against 40,985 primary and 4,686 re-vaccinations 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 vaccinators' registers and other records in the villages where they can be verified and checked.

10. *Supply of vaccine.*—The Vaccine Depot at Nankum 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. One million, six hundred and two thousand seven hundred and seventy-

three doses of vaccine were manufactured during the year as compared with 5,357,025 doses last year. The number of doses issued was 2,657,321 against 2,564,754 in 1923-24. The number of doses in stock at the end of the year was 2,924,131. The number of cattle used during the year was 280 as compared with 792 in the previous year, and the average yield of crude vaccine was over 52 grammes per animal as compared with 63 grammes in the previous year. The working cost of the depôt for the year amounted to Rs. 22,374 as compared with Rs. 25,545 in the previous year. The average cost of the vaccine per dose works out at 1.37 pies on the gross expenditure and to .37 pies on the net expenditure, when the receipts are taken into account.

11. *Vaccine depôt and cold storage.*—During the year under report, the vaccine depôt suffered less than usual from epidemic diseases although there was one slight epidemic of Foot and Mouth disease.

The three new isolation sheds with the dipping trough are now in use and have proved most valuable in the prevention of epidemics amongst cattle.

The cold storage plant has been duplicated during the year under report by the addition of a new oil engine and compressor and the insulation of the cold chamber has been repacked and is now working satisfactorily. During the two previous years there had been constant trouble with the cold storage and a large quantity of vaccine had been spoilt owing to the partial failure of the cold storage. We have now at last got an efficient cold storage plant with duplicate engines and compressors and with improved insulation and there is little fear of further trouble. The cold storage was working very satisfactorily when inspected just after the end of the year under report.

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

12. *Experimental work.*—During the year under report experimental work has been carried out with regard to the cause of loss of potency in the vaccine and it has been established that this is invariably associated with a development of an acid reaction in the vaccine. The use of adult animals has been abandoned. It was found that the quantity of pulp obtained was larger and that the vaccine was potent when fresh but developed an acid reaction more rapidly even in cold storage and became inert in a very short time when exposed to room temperature in warm weather. If there was ever a shortage of vaccine which it was necessary to meet by the immediate issue of freshly prepared vaccine, the use of adult animals might with advantage be adopted in an emergency, but otherwise, there is nothing in its favour.

Further experimental work is now in hand with a view to rejuvenating and improving the seed vaccine.

13. *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. 1,56,973 or Rs. 3,993 more than the previous year.

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

W. C. ROSS, LT.-COL., I.M.S.,

Director of Public Health.

[illegible]

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
Patna Division.									
1	Patna ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	1,574,367	761 { 18 63	6,363 26,500	5,325 26,503	11,588 55,463	644 530	10,398 55,469
2	Gaya ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	2,152,930	457 { 15 82	3,613 23,619	3,292 23,775	6,904 47,094	459 574	6,788 46,845
3	Shahabad ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	1,816,811	415 { 16 111	2,705 18,803	2,288 16,407	4,993 35,500	312 315	4,639 35,500
Total of Patna Division		{ By paid Vaccinators ... By Licensed Vaccinators ... }	5,544,038	497 { 49 256	12,579 71,582	10,896 66,275	23,475 137,657	480 538	21,825 137,656
Tirhut Division.									
4	Saran ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	2,339,953	872 { 5 83	921 30,338	911 30,109	1,832 70,497	366 909	1,759 75,054
5	Champanan ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	1,940,841	549 { 4 65	2,267 21,715	1,471 20,393	3,738 42,108	904 638	1,858 42,007
6	Muzaffarpur ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	2,754,945	907 { 11 79	2,095 45,445	1,474 43,497	3,569 88,802	324 1,125	2,612 88,904
7	Darbhanga ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	2,913,529	870 { 6 88	1,664 45,676	947 43,649	2,611 89,325	335 1,015	1,814 88,707
Total of Tirhut Division		{ By paid Vaccinators ... By Licensed Vaccinators ... }	9,949,268	789 { 26 316	6,347 152,364	4,803 143,558	11,150 295,822	429 936	7,094 294,432
Bhagalpur Division.									
8	Monghyr ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	2,029,905	518 { 6 59	1,178 30,786	1,069 29,167	2,247 59,453	374 1,067	2,084 59,230
9	Bhagalpur ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	2,033,770	481 { 16 63	5,619 30,089	3,138 29,048	8,157 59,117	510 938	5,169 58,766
10	Purnea ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	2,024,006	405 { 9 63	1,618 21,005	617 20,636	2,435 41,542	271 803	1,269 42,231
11	Santal Parganas ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	1,798,039	329 { 8 87	4,129 28,065	2,906 27,610	7,035 55,675	679 663	5,332 53,395
Total of Bhagalpur Division.		{ By paid Vaccinators ... By Licensed Vaccinators ... }	7,886,912	423 { 39 232	11,944 111,236	7,939 105,961	19,874 217,067	610 965	13,934 213,542
Orissa Division.									
12	Cuttack ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	2,064,678	465 { 10 60	4,062 22,227	2,855 18,507	7,517 40,734	753 658	2,168 39,884
13	Balasore ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	990,504	470 { 6 50	3,613 12,446	1,523 10,317	4,961 22,783	827 759	1,479 21,159
14	Angul ...	By Licensed Vaccinators ...	169,574	113 { 12	3,214	3,006	6,310	625	6,293
15	Puri ...	By paid Vaccinators ...	961,651	380 { 20	20,835	17,344	38,179	1,916	36,638
16	Sambalpur ...	{ By paid Vaccinators ... By Licensed Vaccinators ... }	769,468	206 { 4 34	289 10,817	433 9,661	1,042 20,778	260 611	546 20,728
Total of Orissa Division		{ By paid Vaccinators ... By Licensed Vaccinators ... }	4,968,873	361 { 49 136	29,519 48,764	23,180 41,961	51,699 90,635	1,055 665	40,801 89,064

istricts of Bihar and Orissa during the year 1924-25.

Vaccination.				Re-vaccination.			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.	Re-vaccination.		Primary.	Re-vaccination.	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										
2,286	6,651	8,937	108	1,100	594	57	99'35	52'42	41'03	1'03	4'70	65,436	41'00	1,355	'86										
17,818	35,410	53,228	93	3	3	...	99'31	100'0		'16	...		53,609	24'94		746	'34								
2,278	4,173	6,451	20	108	64	8	99'32	62'13		'20	2'83			58,453		32'17		309	'22						
8,508	26,934	35,442	38	249	142	1	99'38	97'53		'68	'43					177,648		32'04		2,501	'45				
2,350	1,003	3,353	5	354	135	7	99'38	28'90		'11	1'28							67,374		20'65		331	'14		
18,070	11,231	29,301	5	...	...	...	99'94	...	'01	...	47,380	24'41			260					'13					
6,914	12,817	20,915	133	1,650	793	67	99'41	50'00	'01	4'06		87,353	31'70		245		'08								
44,393	87,565	131,914	136	233	245	1	99'67	97'61	'00	'30			90,516	31'06	253				'06						
1,128	529	1,070	13	82	34	38	99'48	77'27	32'84	'74				40'34	67,374	20'65					331	'14			
16,297	54,981	71,483	275	443	391	17	99'60	91'78		'30				8'84		47,380		24'41			260		'13		
701	1,025	1,843	6	1,889	1,055	292	99'46	62'87		23'19	'32			10'74				87,353		31'70	245			'08	
8,852	32,594	41,948	20	101	72	6	99'20	75'73			'04	5'94		90,516			31'06			253	'06				
556	1,859	2,433	19	1,647	436	53	97'23	43'42			23'22	'39	5'02				287,622		28'00	1,039					'11
17,144	70,512	88,106	60	283	101	26	99'50	38'55	'06			9'02	30'47		'12				4'09	60,584		19'84			
380	1,405	1,900	...	107	50	...	99'23	25'38	31'11			...			...	61,858			30'16			489	'24		
11,975	70,520	88,039	5	355	151	15	99'86	37'60		'005		2'68			47,580			21'08	1,016			'50			
2,801	4,415	7,731	29	3,216	1,575	283	99'05	53'88		30'47		'36		9'11				50,577	19'00		3'2			'10	
54,268	234,687	289,176	360	1,399	715	64	99'03	63'02			'12	4'09		214,990			27'24		2,173		'27				
1,245	709	2,047	5	163	16	...	99'46	9'81			30'21	'23	...				60,584		19'84	307					'18
16,382	49,730	59,214	5	223	64	2	99'07	28'16	32'57			'02	'80			61,858			30'16	489			'24		
2,300	3,605	5,904	101	2,968	1,365	404	98'54	53'21				32'57	1'04		12'01				47,580	21'08		1,016			
24,768	33,093	58,691	8	371	260	32	99'91	78'46		21'62			'01		8'02			50,577		19'00		3'2		'10	
565	649	1,234	21	1,136	364	119	99'77	40'13					21'62	1'61	20'15					214,990	27'24	2,173			
17,917	33,083	43,102	9	311	160	17	99'71	54'42			33'62			'02	5'46		214,990				27'24	2,173			'27
2,006	2,341	5,292	7	1,703	629	455	99'38	50'49	33'62					'13	26'71	214,990					27'24	2,173	'27		
29,790	23,741	53,143	116	2,440	1,635	216	99'85	67'49				20'31		'21	8'18				214,990		27'24	2,173			
7,107	6,344	13,577	134	5,070	2,374	1,058	98'80	48'02		20'31				'08	18'22			214,990			27'24	2,173		'27	
87,377	126,047	213,160	136	3,545	2,116	267	99'88	61'85					21'06	'08	7'53					214,990	27'24	2,173			
590	1,347	2,105	30	5,349	2,759	1,116	98'45	65'17			21'06			1'38	20'80		57,000				27'00	722			'34
17,522	20,422	39,900	153	859	419	247	99'89	71'14	25'48					'38	29'05	25,570					20'48	429	'43		
282	748	1,609	8	2,482	1,051	674	99'86	69'48				39'78		'54	19'35				31,150		27'06	868			
4,355	15,642	20,999	67	1,624	915	244	99'55	66'30		27'21				'31	15'02			19,147			21'25	152		'19	
3,125	2,906	6,128	37	27	10	...	98'59	27'03					27'08	'59	...					143,554	28'80	2,132			
10,439	21,098	35,817	500	1,571	671	394	99'35	69'07			27'21			1'53	12'35		31,150				27'06	868			'93
300	176	510	19	495	184	151	99'77	58'41	27'21					'43	32'43	19,147					21'25	152	'19		
15,688	4,764	20,689	22	49	24	1	99'08	87'18				27'08		'15	2'50				143,554		28'80	2,132			
11,421	24,239	39,901	617	10,898	5,765	2,275	99'29	66'45		27'08				1'01	20'87			143,554			28'80	2,132		'44	
40,790	43,844	87,436	269	2,541	1,388	492	99'72	67'74					27'08	'32	19'36					143,554	28'80	2,132			

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	
Chota Nagpur Division.										
17	Hazaribagh ...	{ By paid Vaccinators ... By licensed Vaccinators ... }	1,276,946	161	{ 7 45	1,371 16,719	1,047 16,040	2,418 32,759	403 728	1,891 32,502
18	Ranchi ...	{ By paid Vaccinators ... By licensed Vaccinators ... }	1,334,473	187	{ 4 48	1,523 24,053	1,389 32,722	3,212 46,775	803 874	1,467 44,304
19	Palamu ...	{ By paid Vaccinators ... By licensed Vaccinators ... }	733,304	149	{ 4 25	721 8,878	553 9,544	1,274 16,522	318 741	1,303 18,502
20	Manbhum ...	{ By paid Vaccinators ... By licensed Vaccinators ... }	1,548,777	373	{ 32 40	11,414 16,666	9,688 16,240	21,132 32,896	600 822	17,630 52,813
21	Singbhum ...	{ By paid Vaccinators ... By licensed Vaccinators ... }	759,438	105	{ 4 23	746 12,524	573 10,346	1,319 22,870	339 604	724 19,243
Total of Chota Nagpur Division.		{ By paid Vaccinators ... By licensed Vaccinators ... }	5,653,028	208	{ 61 181	16,605 78,939	13,150 74,892	29,755 153,622	583 850	23,285 149,169
Total of Vaccine Department.		{ By paid Vaccinators ... By licensed Vaccinators ... Total ... }	34,002,189	499	{ 214 1,121 1,335	76,994 402,708 539,700	59,909 432,487 491,446	135,653 835,193 1,031,146	635 799 772	107,710 882,812 990,571
Total Dispensary Department		...	...	...	...	57	8	65	65	...
Total Railways		...	...	...	1	371	276	647	647	610
Total Cooly Department		...	...	...	...	1,008	300	1,308	1,206	45
Total Jails and Cantonments		...	...	...	7	10,580	445	11,025	1,075	785
Grand Total		...	...	1,343	...	551,714	493,568	1,044,282	777	993,011

Districts of Bihar and Orissa during the year 1924-25—concl.

Vaccination.				Re-vaccination.			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.	Re-vaccination.		Primary.	Re-vaccination.	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
767	940	1,873	11	927	620	70	99.62	72.34	28.38 {	.58	7.55	32,288	25.28	111	.08
15,013	16,387	32,495	2	257	245	8	99.93	99.07		.06	1.04				
1,260	621	1,881	2	1,355	442	803	99.94	78.64	26.96 {	.11	58.62	40,928	30.06	710	.63
36,405	9,531	46,294	5	471	341	22	99.95	75.94		.01	4.67				
423	769	1,185	5	71	19	10	98.91	31.13	26.92 {	.41	14.08	17,004	24.41	521	.71
12,508	5,820	18,683	21	15	8	7	99.96	106.0		.11	46.65				
4,745	10,558	15,618	425	3,502	1,472	406	99.93	61.66	32.73 {	2.41	13.31	51,009	32.93	190	.12
13,537	18,930	32,613	...	268	167	56	100.0	70.95		...	23.33				
213	409	714	1	593	311	3	98.75	52.33	29.64 {	.13	.50	17,456	22.95	346	.45
10,472	8,502	19,199	21	3,627	2,172	440	99.83	97.34		.10	12.37				
7,476	13,187	21,264	444	6,460	3,204	1,352	99.05	63.19	31.22 {	1.00	20.92	159,585	26.22	1,678	.13
88,834	80,260	149,075	49	4,653	2,803	549	99.97	71.46		.03	11.79				
35,779	61,352	100,408	1,367	28,194	13,771	5,075	97.18	59.56	29.64 {	1.26	18.00	283,300	28.01	9,673	.29
315,695	519,393	879,901	970	12,381	7,467	1,373	99.78	67.28		.11	11.09				
351,444	610,745	963,359	2,327	40,375	21,178	6,418	99.61	62.05	...	.23	15.89	...	...	...	...
...	...	...	...	65	8	...	...	12.51		...	...				
521	348	873	22	37	23	1	97.45	63.69	...	3.61	2.70	...	...	...	...
...	...	...	43	1,351	...	1,343	...	...	...	90.55	99.41	...	...	...	...
171	145	725	27	10,243	4,762	1,104	95.64	52.11	...	3.44	10.78	...	...	...	...
351,636	611,238	964,657	2,419	63,271	25,971	8,690	99.30	59.87	...	.24	17.01	...	...	...	...

Summary.

	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.		Ratio of successful vaccinations per 1,000 of population.	Total cost of Department.	Average cost of each successful case.			
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under 6 years.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14			
BY SPECIAL STAFF.																
Statement (I) ...	990,571	40,575	990,571	40,575	99.51	63.05	1,335	772	351,444	610,745	29.54	1,56,972 12 0	9 2			
BY DISPENSARY STAFF.																
Statement III ...	...	65	...	65	...	12.91	...	...	...	...						
BY OTHER AGENCIES.																
Railways, Cooly Depot, Jails and Cantonments,	1,440	11,631	1,440	11,631	90.00	52.11	2	180	202	493						
Total ...	992,011	52,271	992,011	52,271	99.40	59.57	1,343	777	351,836	611,338	29.54	1,56,972 12 0	9 2			

STATEMENT II.

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

No.	Circle and district.	European supervising officer.	Expen.										
			Pay.	Native supervising officer.	Pay.	Paid vaccinators.	Pay.	Licensed vaccinators.	Pay.	Cerks.	Pay.	Fees, etc.	Pay.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	PATNA DIVISION.				Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
1	Patna			5	2,501 15 0	19	2,251 4 0	63	...	...	...	3	270 0 0
2	Gaya			5	2,400 0 0	15	1,977 11 0	82	...	...	...	2	216 0 0
3	Shahabad			5	2,074 4 0	17	1,558 0 0	111	...	...	...	...	...
	Total of Patna Division			15	7,036 3 0	51	5,786 15 0	256	...	...	...	5	486 0 0
	TIRHUT DIVISION.												
4	Saran			4	1,065 0 0	6	648 12 0	63	...	...	...	...	...
5	Champaran			3	1,580 0 0	4	532 0 0	66	...	...	...	...	...
6	Muzaffarpur			4	2,842 11 0	12	1,634 0 0	79	...	...	...	...	...
7	Darbhanga			4	2,100 0 0	6	684 0 0	88	...	1	30 0 0	...	...
	Total of Tirhut Division			15	8,487 11 0	28	3,468 12 0	316	...	1	30 0 0	...	...
	BHAGALPUR DIVISION.												
8	Monghyr			4	2,329 7 0	6	510 0 0	29	...	...	...	2	144 0 0
9	Bhagalpur			5	3,367 7 0	16	1,605 1 0	63	...	...	...	...	...
10	Purnea			4	1,798 6 0	10	1,551 14 0	55	...	...	...	...	...
11	Santal Parganas			7	3,401 9 0	8	1,544 14 9	57	...	...	...	...	...
	Total of Bhagalpur Division			20	11,216 13 0	40	5,271 13 9	202	...	...	...	2	144 0 0
	ORISSA DIVISION.												
12	Cuttack			4	2,080 0 0	11	1,511 13 6	60	...	...	...	...	...
13	Balasore			3	1,695 0 0	6	849 15 0	20	...	...	...	...	...
14	Angal			3	2,940 0 0	...	...	12	...	...	...	...	...
15	Parl			3	1,680 0 0	29	3,093 13 0	...	...	...	...	...	...
16	Sambalpur			3	1,494 3 0	4	627 15 0	34	...	...	...	2	38 4 0
	Total of Orissa Division			16	9,789 3 0	50	6,083 8 6	136	...	...	...	2	38 4 0
	CHOTA NAGPUR DIVISION.												
17	Hazaribagh			4	2,625 13 0	9	1,304 13 6	45	...	...	...	...	...
18	Ranchi			5	2,199 8 0	4	732 4 0	48	...	...	...	...	...
19	Palamu			3	1,637 7 0	4	975 7 3	25	...	...	...	...	...
20	Manbhum			17	2,210 0 0	32	2,910 0 0	40	...	...	...	...	...
21	Singbhum			3	1,431 15 0	4	618 1 2	23	...	...	...	...	...
	Total of Chota Nagpur Division			32	10,104 11 0	53	6,489 9 11	181	...	...	...	...	...
	Total of Vaccine Circle			98	47,234 9 0	223	27,761 11 2	1,121	...	1	30 0 0	9	668 4 0
	ESTABLISHMENT OF THE ASSISTANT, DIRECTOR OF PUBLIC HEALTH, NORTH BENGAL CIRCLE.			1	12,837 6 0	...	...	...	...	2	1,189 7 0	2	236 13 0
	Ditto SOUTH BENGAL CIRCLE			1	11,300 0 0	...	...	...	...	2	1,300 0 0	2	216 0 9
	Ditto CHOTA NAGPUR AND ORISSA CIRCLE.			1	12,795 15 0	...	...	...	...	2	1,500 0 0	2	240 0 0
	Total			3	37,933 5 0	...	...	...	...	6	3,789 7 0	6	692 13 0
	Total of Province			101	85,067 14 0	222	27,761 11 2	1,121	...	7	3,739 7 0	15	1,531 1 6

Province of Bihar and Orissa during the year 1924-25.

Expenditure.					Paid from—						Number of all successful vaccinations and re-vaccinations.	Average cost of each successful case.
Total pay of establishment.	Travelling allowance.	Contingencies.		Total cost.	Imperial Fund.	Provincial Fund.	Local Fund.	Municipalities.	Native States.	Total.		
15	16	17	18	19	20	21	22	23	24	25	26	27
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.
5,023 3 0	1,798 3 0	...	154 4 3	6,975 10 3	...	4,900 2 0	1,004 0 0	1,571 8 3	...	6,975 10 3	65,553	0 1 6
4,653 11 0	1,365 4 0	...	267 5 9	6,287 4 9	...	3,986 4 0	1,490 6 6	801 10 3	...	6,287 4 9	54,569	0 1 10
4,312 4 0	1,703 13 0	...	336 14 0	6,372 15 0	...	4,578 6 0	820 0 0	479 9 0	...	6,372 15 0	40,418	0 2 5
12,909 2 0	4,568 4 0	...	728 8 0	18,535 14 0	...	12,909 12 0	3,323 6 6	3,352 11 0	...	18,535 14 0	163,549	0 1 12
2,613 12 0	1,291 2 0	...	313 8 0	4,218 6 0	...	3,306 2 0	...	822 4 0	...	4,128 6 0	76,858	0 6 11
2,102 0 0	1,248 11 0	...	114 15 0	3,465 10 0	...	2,928 11 0	180 0 0	356 15 0	...	3,465 10 0	45,011	0 1 2
4,476 11 0	439 14 0	...	121 1 0	5,037 10 0	...	3,392 8 0	540 0 0	1,105 2 0	...	5,037 10 0	91,519	0 0 11
2,814 0 0	1,671 4 0	...	234 0 0	4,609 4 0	...	3,761 4 0	...	848 0 0	...	4,609 4 0	90,640	0 0 9
12,005 7 0	4,559 15 0	...	773 8 0	17,330 14 0	...	12,478 9 0	720 0 0	3,132 5 0	...	17,330 14 0	204,028	0 0 12
2,983 7 0	1,204 6 0	...	238 7 6	4,516 4 6	...	3,713 13 0	30 0 0	772 7 6	...	4,516 4 6	61,341	0 1 2
5,202 9 0	645 6 0	...	162 12 0	6,070 10 0	...	4,332 13 0	1,006 0 0	641 13 0	...	6,070 10 0	65,255	0 1 5
3,350 4 0	1,428 4 0	...	593 10 6	5,372 2 6	...	3,703 8 0	603 14 0	1,064 12 0	...	5,372 2 6	43,877	0 1 11
5,056 7 2	2,575 8 0	...	170 12 3	7,762 12 0	...	6,167 1 0	924 4 6	691 6 6	...	7,762 12 0	60,838	0 2 0
16,632 10 9	5,943 8 0	...	1,165 10 3	23,741 13 0	...	17,617 3 0	2,654 2 6	3,170 7 6	...	23,741 13 0	232,311	0 1 8
3,551 13 6	1,340 4 0	...	100 6 0	5,032 1 6	...	3,530 4 0	792 0 0	719 13 6	...	5,032 1 6	45,292	0 1 9
2,444 15 0	1,245 1 0	...	65 9 0	3,755 9 0	...	2,905 10 0	565 15 0	281 0 0	...	3,756 0 0	23,370	0 2 4
2,940 0 0	559 12 0	...	60 0 0	3,559 12 0	...	3,559 12 0	...	...	...	3,559 12 0	6,168	0 9 3
5,373 13 0	1,009 6 0	...	110 0 0	6,583 3 0	...	2,889 6 0	3,499 5 0	195 8 0	...	6,583 3 0	36,277	0 2 10
2,100 6 0	1,179 8 0	...	109 2 0	3,449 0 0	...	2,773 11 0	462 3 0	213 2 0	...	3,449 0 0	21,487	0 2 7
16,519 15 6	5,423 15 0	...	444 11 0	22,379 9 6	...	15,648 11 0	5,318 7 0	1,412 7 6	...	22,379 9 6	135,190	0 2 8
3,030 10 6	504 11 0	...	107 15 6	4,633 5 0	...	3,320 8 0	758 0 0	554 13 0	...	4,633 5 0	36,343	0 2 0
2,031 12 0	1,427 5 0	...	149 2 3	4,508 3 3	...	3,775 15 3	...	732 4 0	...	4,508 3 3	49,958	0 1 5
2,607 14 3	1,035 11 0	...	75 11 6	3,719 4 9	...	2,732 13 0	602 4 3	384 3 6	...	3,719 4 9	19,747	0 3 0
5,120 0 0	490 0 0	...	163 0 0	5,759 0 0	...	2,116 0 0	3,317 0 0	296 0 0	...	5,759 0 0	50,700	0 1 9
2,045 0 2	613 3 0	...	67 4 0	2,725 7 2	...	2,105 2 0	75 0 0	545 5 2	...	2,725 7 2	22,511	0 1 11
16,435 4 11	4,156 14 0	...	553 1 3	21,345 4 2	...	16,660 6 3	4,782 4 3	2,512 9 5	...	21,345 4 2	178,669	0 1 11
76,804 8 2	24,043 8 0	...	3,695 6 6	1,04,533 6 8	...	74,054 9 3	16,798 4 3	13,480 9 2	...	1,04,533 6 8	10,10,628	0 1 8
15,253 10 0	3,321 12 0	...	874 15 10	19,150 5 10	...	19,150 5 10	...	...	...	19,150 5 10	...	...
12,676 0 0	2,404 3 0	...	565 10 6	15,645 13 6	...	15,645 13 6	...	...	...	15,645 13 6	...	...
14,206 15 0	3,210 15 0	...	336 4 0	17,843 2 0	...	17,843 2 0	...	...	...	17,843 2 0	...	...
43,225 9 0	8,936 14 0	...	1,476 14 4	52,631 5 4	...	52,631 5 4	...	...	...	52,631 5 4	...	...
1,17,920 1 2	33,880 6 0	...	5,172 4 10	1,56,972 12 0	...	1,56,972 14 7	16,798 4 3	13,480 9 2	...	1,56,972 12 0	...	0 2 6

B.—DISPENSARY VACCINATION.

STATEMENT NO. III.—Showing Dispensary Vaccination in the Province of Bihar and Orissa during the year 1924-25.

District.	Number of dispensaries in each district to which a vaccinator is attached.	Average number of vaccinators attached to dispensaries during the year.	Total number of persons vaccinated.	Average number of persons vaccinated by each vaccinator.	Primary vaccination.					Re-vaccination.			Percentage of successful cases in which the results were known.		Percentage of unknown cases to total cases.	
					Total.	Successful.			Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
						Under one year.	One and under six years.	Total of all ages.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Patna (i) ...	...	...	65	...	...	...	...	...	...	65	8	...	...	12.30	...	...
Gaya ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Shahabad ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Saran ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Champaran ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Muzaffarpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Darbhanga ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Monghyr ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bhagalpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Purnea ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Santal Parganas ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cuttack ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Balasore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Angul ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puri ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sambalpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Haridwar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Raechi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Palam ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Manbhum ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Singbhum ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	65	...	...	...	...	...	...	65	8	...	...	12.30	...	...

(a) Vaccinated by the Sub-Assistant Surgeon.

COMPARATIVE STATEMENT NO. IV.—Showing the number of persons primarily vaccinated, and the number of those per-

Establishment.	Persons prima							
	1915-16		1916-17		1917-18		1918-19	
	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
1	2	3	4	5	6	7	8	9
Government ...	10,277	10,046	3,903	3,441	6,984	6,050	6,037	5,941
Municipal ...	42,000	41,661	38,645	37,226	37,586	36,107	36,573	35,213
Local Fund ...	94,056	84,636	80,353	73,103	82,772	77,911	59,639	56,495
Dispensaries...	285	215	202	202	181	177	139	139
Licensed Vaccinators ...	1,065,023	1,059,266	922,991	913,264	931,549	926,281	816,006	811,506
Total ...	1,212,740	1,195,824	1,046,154	1,027,236	1,059,072	1,046,526	919,084	900,294

COMPARATIVE STATEMENT NO. IV.

sons who were successfully vaccinated in the Province of Bihar and Orissa in each of the undermentioned official years.

vaccinated.

1919-20		1920-21		1921-22		1922-23		1923-24		1924-25.	
Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
10	11	12	13	14	15	16	17	18	19	20	21
7,363	6,530	1,927	1,831	891	825	794	735	1,104	1,018	785	725
36,810	35,428	32,858	31,541	31,136	30,040	29,927	28,863	33,760	32,833	32,110	30,816
69,847	66,946	80,337	77,929	71,144	68,523	70,386	67,809	74,767	71,969	75,649	72,593
178	178	262	262	...	...	...	...	1	1	...	...
811,163	806,217	854,333	818,948	800,424	797,357	865,920	862,260	892,018	888,273	832,812	879,951
925,366	915,289	969,723	960,521	903,595	896,745	907,027	909,767	1,001,650	994,094	991,356	984,084

STATEMENT NO. V.—Showing particulars of vaccination

District.	Total number inspected—										Percentage of	
	Total number of persons vaccinated.		By Assistant Directors of Public Health or Civil Surgeons.				By Native Superintendents or other Inspecting Officers.				By Assistant Director or Civil	
			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.
1	2	3	4	5	6	7	8	9	10	11	12	13
Patna ...	60,215	1,263	6,514	...	110	...	9,724	...	14,125	...	9.83	...
Gaya ...	53,681	1,273	5,649	...	508	3	5,215	3	14,768	5	10.52	...
Shahabad ...	39,900	1,225	6,288	...	433	...	4,489	...	8,703	...	15.73	...
Saran ...	76,806	619	2,624	...	3,231	...	5,394	...	18,554	...	3.41	...
Champaran ...	43,180	2,200	4,164	...	49	...	15,845	40	19,147	12	9.43	...
Monasferpur ...	91,329	2,198	4,715	...	304	788	15,769	7	20,415	43	5.15	...
Darbhanga ...	60,561	765	769	...	3,283	...	19,014	83	34,300	...	7.64	...
Monghyr ...	61,314	386	1,127	...	1,371	...	6,804	...	18,562	10	1.84	...
Bhagalpur ...	67,993	6,042	2,373	...	243	...	12,083	...	22,637	...	3.55	...
Portea ...	41,631	1,531	1,218	...	61	...	5,461	...	8,956	...	2.90	...
Santal Parganas ...	58,667	4,687	1,743	...	2,391	327	7,819	202	22,410	1,013	3.05	...
Cuttack ...	42,082	6,776	1,458	...	...	577	3,242	...	7,661	...	3.46	...
Palasore ...	22,638	5,163	1,683	...	100	5	3,212	372	5,315	545	7.43	...
Angul ...	6,302	780	...	...	1,390	...	1,308	...	4,715	12	...	...
Puri ...	26,008	1,876	1,655	...	1,055	449	6,668	1,012	13,480	1,346	4.32	...
Sambalpur ...	21,214	790	1,765	...	2,159	217	4,680	44	5,604	47	8.01	...
Hazaribagh ...	35,928	2,575	5,968	...	611	861	5,703	...	11,693	...	17.93	...
Kanchi ...	48,170	2,636	2,654	...	...	...	11,612	...	21,583	32	5.51	...
Palaman ...	19,756	502	2,715	...	3,838	153	6,819	30	9,628	23	13.80	...
Manbhum ...	56,248	4,521	1,309	...	66	...	7,665	...	22,420	1,062	2.52	...
Singbhum ...	19,574	4,335	1,567	...	1,451	129	3,307	309	5,518	187	7.89	...
TOTAL ...	992,001	52,271	58,788	...	22,628	2,510	162,353	2,393	315,572	5,916	5.62	...

verified by Inspecting Officers during the year 1924-25.

Inspection to total number vaccinated.						Percentage of cases found successful to total number inspected.										Percentage of successful cases reported by vaccinators.	
By Public Health 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		
17	...	14'08	...	21'48	...	97'22	...	160'0	...	100'0	...	100'0	...	98'07	48'09		
24	23	9'09	23	27'29	39	98'81	...	99'26	100'0	98'65	65'96	98'61	100'0	...	...		
1'08	...	11'31	...	21'78	...	92'49	...	100'0	...	93'30	...	86'14	...	99'75	44'21		
4'21	...	7'02	...	24'15	...	94'20	...	95'01	...	97'11	...	98'16	...	90'16	...		
09	...	36'21	1'61	43'74	54	92'40	...	100'0	...	97'72	75'03	94'54	91'06	99'83	55'14		
23	35'85	17'26	30	28'91	1'95	89'01	...	100'0	70'45	98'73	18'50	90'04	18'60	99'25	31'81		
2'02	...	21'63	10'09	37'93	...	87'67	...	99'87	...	99'04	14'44	99'05	...	99'83	33'34		
2'23	...	11'19	...	30'27	2'09	85'45	...	98'90	...	99'34	...	19'21	30'00	99'01	20'72		
08	...	18'68	...	35'17	...	72'54	...	100'0	...	98'67	...	98'83	...	99'74	56'79		
11	...	12'54	...	20'37	...	73'36	...	100'0	...	99'56	...	98'43	...	98'35	36'59		
4'07	6'67	13'36	6'44	28'19	24'20	93'82	...	99'78	60'53	98'74	62'53	98'94	70'96	99'64	51'23		
...	8'51	7'70	...	17'74	...	89'85	...	...	51'91	97'22	...	99'67	...	90'39	51'46		
44	09	14'18	7'20	23'47	10'55	89'24	...	99'00	49'00	98'01	34'13	97'03	53'76	99'24	50'32		
11'05	...	21'07	...	74'81	1'52	...	...	98'93	...	98'64	...	96'39	10'06	98'01	17'03		
2'88	23'73	17'94	53'94	36'55	71'09	95'62	...	98'70	55'23	97'12	18'24	97'79	39'38	97'84	56'50		
10'14	27'46	22'03	5'67	20'75	5'95	87'67	...	90'71	32'25	94'47	34'09	95'17	23'40	99'60	36'45		
1'74	33'43	10'45	...	21'06	...	90'71	...	95'89	44'01	98'44	...	94'11	...	99'79	49'04		
...	...	25'60	...	44'59	1'62	90'60	...	...	...	99'72	...	99'03	100'0	99'97	49'26		
19'42	30'48	34'66	5'17	48'70	4'08	93'21	...	99'54	28'76	96'62	10'66	97'08	11'73	99'59	14'14		
13	...	25'79	...	41'65	43'17	95'59	...	100'0	...	98'22	...	92'33	74'23	99'96	41'51		
7'26	2'99	16'70	9'20	27'62	4'31	95'06	...	98'75	72'25	99'07	90'12	96'45	85'02	99'71	59'81		
2'78	6'71	16'25	4'38	31'81	11'12	91'16	...	96'82	2'67	98'23	49'25	97'48	62'41	99'34	43'09		

STATEMENT NO. VI.—Showing side by side the ratios, per 1,000 of population, of Deaths from

District.	1915-16		1916-17		1917-18		1918-19	
	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.
1	2	3	4	5	6	7	8	9
Patna ...	·71	68,438	·28	67,870	·15	68,529	·13	68,535
Gaya ...	·68	75,641	·37	56,139	·18	62,246	·21	56,114
Shahabad ...	·45	65,016	·26	51,176	·10	51,858	·02	41,625
Saran ...	·15	79,608	·27	74,895	·16	77,721	·07	66,443
Champaran ...	·14	68,255	·07	49,091	·11	51,755	·14	50,191
Muzaffarpur ...	·24	101,624	·20	88,702	·09	85,898	·02	86,664
Darbhanga ...	·41	95,237	·28	96,020	·07	93,206	·08	86,555
Monghyr ...	·42	87,999	·17	67,229	·10	68,861	·05	56,576
Bhagalpur ...	·38	74,532	·22	66,899	·22	68,166	·09	59,034
Purnea ...	·38	51,206	·33	53,018	·64	49,490	·52	54,209
Santal Parganas ...	·37	57,558	·43	46,826	·14	56,728	·06	46,659
Cuttack ...	·69	89,925	·46	73,415	·81	62,177	·89	51,815
Palasore ...	·90	38,609	·24	22,173	·03	25,800	·09	20,942
Angul ...	·01	9,686	·15	9,226	·01	6,956	·06	6,761
Puri ...	·30	37,595	·52	29,223	·26	34,639	·75	33,543
Sambalpur ...	·75	22,600	1·09	19,938	·24	23,343	·07	15,361
Hazaribagh ...	·49	46,709	·19	42,143	·07	39,761	·07	35,632
Ranchi ...	·12	52,111	·05	43,667	·03	47,094	·04	31,870
Palamanu ...	·17	31,808	·15	25,542	·06	26,893	·06	20,472
Manbhum ...	·63	54,056	·23	49,379	·02	52,289	·05	37,807
Singhbhum ...	·28	19,526	·12	17,429	·09	17,872	·10	15,542
Total ...	·42	1,230,745	·28	1,053,015	·19	1,070,784	·17	942,370

small-pox and the number of successful vaccinations during the ten years ending 1924-25.

1919-20		1920-21		1921-22		1922-23		1923-24		1924-25	
Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.
10	11	12	13	14	15	16	17	18	19	20	21
.85	68,573	2.79	71,340	.46	63,297	.05	62,673	.06	61,595	.13	65,553
.62	66,449	.77	60,938	.21	42,710	.01	47,263	.04	51,137	.04	54,569
.24	42,394	.55	62,418	.22	69,010	.01	58,782	.02	59,661	.10	40,418
.10	67,882	.39	68,000	.13	37,665	.02	66,871	.05	72,449	.44	76,858
.13	53,458	.29	56,914	.08	36,927	.06	44,499	.09	45,103	.38	45,011
.10	87,182	.13	89,230	.04	82,124	.04	86,141	.12	92,087	.21	91,519
.10	88,770	.17	93,463	.03	89,504	.06	88,188	.05	93,651	.15	90,640
.24	59,814	.28	55,104	.14	54,215	.11	62,958	.09	70,828	.12	61,341
.23	56,741	.22	58,176	.13	62,115	.09	64,294	.48	65,464	.46	66,235
.96	50,349	.98	51,960	.29	36,428	.24	38,977	.06	35,218	.04	43,877
.30	44,691	.37	45,864	.05	50,187	.01	55,085	.03	56,056	.03	60,838
.91	55,008	.30	60,775	.04	61,424	.15	61,752	.28	46,041	.77	45,252
.86	22,139	.54	27,597	.09	21,380	.17	23,541	.37	32,195	.31	25,376
1.11	5,732	...	4,000	...	4,968	.005	5,511	...	6,159	...	6,168
3.12	32,940	.77	41,235	.08	34,897	.13	35,208	.25	36,479	1.21	36,877
.68	13,835	.27	18,523	.03	20,829	.006	18,791	.01	23,757	.12	21,487
.24	35,026	.12	29,123	.02	29,524	.02	31,985	.03	35,784	.05	33,243
.90	40,559	1.38	38,450	.21	38,997	.05	41,821	.01	44,812	.02	49,353
1.26	21,226	1.76	19,346	.56	16,898	.09	15,585	.04	16,466	.01	19,747
.44	57,908	.11	43,192	.02	43,484	.02	52,438	.01	58,031	.02	50,700
1.24	19,595	.52	18,023	.32	16,605	.18	16,998	.14	16,058	.36	22,511
.53	989,278	.66	1,013,696	.14	917,188	.07	979,351	.11	1,017,031	.24	1,010,628

STATEMENT NO. VII.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1924-25.

District.	Towns.	Number of births during the year ending 31st March 1925.	Number of deaths amongst infants under one year during the year ending 31st March 1925.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1925.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Patna	Patna	3,854	654	654	1st October 1884.
	Bihar	1,634	260	315	1st April 1887.
	Dinapur	944	202	531	28th January 1891.
	Barh	310	66	113	1st April 1887.
	Khagole	260	30	3	12th July 1910.
	Total	7,002	1,212	1,616	
Gaya	Gaya	2,081	665	1,038	1st January 1883.
	Tikari	180	37	41	3rd January 1891.
	Daudnagar	340	62	123	Ditto.
	Total	2,601	764	1,202	
Shahabad	Arrah	1,489	238	846	20th July 1885.
	Buxar	405	90	166	1st April 1887.
	Dumraon	512	69	193	Ditto.
	Jagadispur	389	81	185	20th December 1890.
	Sassaram	998	158	322	1st April 1887.
	Bhabhua	216	46	100	Ditto.
	Total	4,009	682	1,812	
Total of Patna Division.		13,612	2,658	4,630	
Saran	Chapra	1,462	187	735	1st April 1887.
	Revelganj	370	68	302	12th December 1890.
	Siwan	380	52	335	1st April 1887.
	Total	2,212	307	1,372	
Campanan	Motihari	431	100	272	1st April 1887.
	Bettiah	843	158	283	Ditto.
	Total	1,274	258	555	

STATEMENT no. VII.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1924-25—contd.

District.	Towns.	Number of births during the year ending 31st March 1925.	Number of deaths amongst infants under one year during the year ending 31st March 1925.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1925.	Date of extension of Vaccination A.T. to town.
1	2	3	4	5	6
Muzaffarpur	Muzaffarpur	1,458	225	122	1st January 1886.
	Sitamarhi	346	47	65	1st April 1887.
	Hajipur	725	125	117	1st May 1890.
	Lalganj	239	64	116	1st April 1887.
	Total	2,768	461	420	
Darbhanga	Darbhanga	1,974	301	187	24th May 1884.
	Roserha	300	45	72	3rd January 1891.
	Samastipur	244	48	22	25th July 1910.
	Madhubani	672	71	105	1st April 1887.
	Total	3,190	465	386	
	Total of Tirhut Division.	9,444	1,491	2,733	
Monghyr	Monghyr	1,953	314	778	15th November 1882.
	Jamulpur	1,120	206	408	Ditto.
	Total	3,073	520	1,186	
Bhagalpur	Bhagalpur	1,999	335	895	15th February 1884, withdrawn on 16th October 1895; re-extended on 18th August 1898.
	Colgong	147	49	74	Ditto, re-extended on 19th December 1901.
	Total	2,146	384	969	
Purnea	Purnea	379	44	166	1st July 1887.
	Kishanganj	125	10	146	12th November 1892.
	Katihar	320	11	115	8th August 1910.
	Forbesganj	162	20	65	9th August 1912.
	Total	986	85	492	

STATEMENT NO. VII.—*Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1924-25—contd.*

District.	Towns.	Number of births during the year ending 31st March 1925.	Number of deaths amongst infants under one year during the year ending 31st March 1925.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1925.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Santal Parganas ...	Sahibganj ...	593	76	236	1st May 1884.
	Deoghar ...	311	36	95	Ditto.
	Madhupur ...	297	45	66	22nd August 1910.
	Dumka ...	333	55	121	Notifications, dated the 9th April 1884 and 23rd August 1910.
	Total ...	1,534	212	518	
Total of Bhagalpur Division.		7,739	1,201	3,165	
Cuttack ...	Cuttack ...	872	139	224	1st September 1884.
	Kendrapara ...	210	81	63	7th February 1888.
	Jajpur ...	252	67	45	Ditto.
	Total ...	1,334	287	332	
Balasore ...	Balasore ...	491	115	123	7th February 1888.
Puri ...	Puri ...	649	268	259	Ditto.
Sambalpur ...	Sambalpur ...	342	67	140	7th March 1895.
Total of Orissa Division.		2,816	737	854	
Hazaribagh ...	Hazaribagh ...	462	47	374	1st January 1885.
	Chatra ...	298	25	193	1st August 1885.
	Giridih ...	625	69	197	8th September 1910.
	Total ...	1,385	141	764	
Ranchi ...	Ranchi ...	1,336	113	1,072	1st April 1887.
	Lohardaga ...	188	9	102	25th June 1892.
	Total ...	1,524	122	1,174	

STATEMENT NO. VII.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1924-25—concl'd.

District.	Towns.	Number of births during the year ending 31st March 1925.	Number of deaths amongst infants under one year during the year ending 31st March 1925.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1925.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Palamau	Daltonganj	345	48	70	9th October 1890.
Manbhum	Purulia	474	52	143	1st January 1887.
	Raghunathpur	217	31	56	9th February 1894.
	Jhalda	237	28	38	9th July 1892.
	Dhanbad	280	23	18	5th December 1918.
	Total	1,553	182	325	
Singhbhum	Chaibassa	304	46	159	20th June 1892.
	Chakradharpur	91	19	...	13th January 1919.
	Total	395	65	159	
	Total of Chota Nagpur Division.	4,857	510	2,422	
Total for the Province		38,468	6,597	13,804	

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.
1	2	3	4	5	6	7	8	9	10	11	12	13
Patna	66,215	64,906	1,075	204	98.97	...	...	...	...	...	...	...
Gaya	53,686	53,525	102	59	99.70	...	...	...	...	...	...	...
Shahabad	39,960	39,872	78	10	99.77	...	...	...	...	...	...	...
Saran	76,806	76,161	357	288	99.16	...	...	...	...	...	...	...
Champaran	43,809	43,793	50	26	99.83	...	...	...	...	...	...	...
Muzaffarpur	91,329	90,742	507	80	99.35	...	...	...	...	...	...	...
Darbhanga	90,481	90,439	137	5	99.84	...	...	...	...	...	...	...
Monghyr	61,314	61,261	45	8	99.91	...	...	...	...	...	...	...
Bhagalpur	63,893	63,748	136	100	99.61	...	...	...	...	...	...	...
Purnea	43,531	43,337	164	30	99.35	...	...	...	...	...	...	...
Santal Parganas	58,667	58,435	109	113	99.64	...	...	...	...	...	...	...
Cuttack	42,052	41,795	74	153	99.37	...	...	...	...	...	...	...
Balasore	22,638	22,463	95	75	99.24	...	...	...	...	...	...	...
Angul	6,302	6,158	88	56	97.71	...	...	...	...	...	...	...
Puri	36,608	35,817	231	560	97.84	...	...	...	...	...	...	...
Fambalpur	21,284	21,199	34	51	99.00	...	...	...	...	...	...	...
Hazaribagh	35,028	34,957	36	35	99.79	...	...	...	...	...	...	...
Ranchi	48,170	48,156	6	8	99.97	...	...	...	...	...	...	...
Palamau	19,756	19,676	22	58	99.59	...	...	...	...	...	...	...
Manbham	50,248	48,294	1,557	427	96.05	...	...	...	...	...	...	...
Singbham	19,974	19,918	32	24	99.72	...	...	...	...	...	...	...
TOTAL	992,011	984,637	4,935	2,419	99.26	...	...	...	...	...	...	...

II.

used and their rates of success during the year 1924-25.

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
...	...	...	...	...	...	...	...	1,283	617	609	57	48.09	...	...	...	...	...
...	...	...	...	...	...	...	...	1,273	1,044	162	67	82.01	...	...	...	...	...
...	...	...	...	...	...	...	...	1,233	546	676	13	44.21	...	...	...	...	...
...	...	...	...	...	...	...	...	919	697	129	93	75.95	...	...	...	...	...
...	...	...	...	...	...	...	...	2,909	1,918	735	256	55.14	...	...	...	...	...
...	...	...	...	...	...	...	...	2,198	777	1,277	144	35.35	...	...	...	...	...
...	...	...	...	...	...	...	...	753	291	339	15	26.62	...	...	...	...	...
...	...	...	...	...	...	...	...	386	80	304	2	20.72	...	...	...	...	...
...	...	...	...	...	...	...	...	6,042	2,507	2,804	731	41.49	...	...	...	...	...
...	...	...	...	...	...	...	...	1,531	546	709	282	35.27	...	...	...	...	...
...	...	...	...	...	...	...	...	4,637	2,403	1,535	729	51.26	...	...	...	...	...
...	...	...	...	...	...	...	...	6,776	3,487	1,926	1,363	51.49	...	...	...	...	...
...	...	...	...	...	...	...	...	5,163	2,908	1,334	921	56.32	...	...	...	...	...
...	...	...	...	...	...	...	...	780	10	17	733	1.28	...	...	...	...	...
...	...	...	...	...	...	...	...	1,876	1,060	470	346	56.50	...	...	...	...	...
...	...	...	...	...	...	...	...	790	283	283	219	36.45	...	...	...	...	...
...	...	...	...	...	...	...	...	2,575	1,286	765	124	49.94	...	...	...	...	...
...	...	...	...	...	...	...	...	2,435	1,202	398	925	49.36	...	...	...	...	...
...	...	...	...	...	...	...	...	562	71	91	340	14.14	...	...	...	...	...
...	...	...	...	...	...	...	...	4,521	2,436	1,491	654	53.92	...	...	...	...	...
...	...	...	...	...	...	...	...	4,335	2,593	1,290	452	59.81	...	...	...	...	...
...	...	...	...	...	...	...	...	52,271	25,971	17,404	8,896	49.68	...	...	...	...	...

and high prices of sugar during the year 1881-82.

1881-82											
1880-81											
1879-80											
1878-79											
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