

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

Contributors

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ANNUAL STATISTICAL RETURNS



AND

SHORT NOTES ON VACCINATION

IN

BIHAR AND ORISSA

FOR THE YEAR

1914-15



BY

S. N. TIWARY.

Offg. Sanitary Commissioner, Bihar & Orissa.



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ANNUAL STATISTICAL RETURNS
AND
SHORT NOTES ON VACCINATION IN
BIHAR AND ORISSA,
for the year
1914-15.

1. INTRODUCTORY.

Lt.-Col. E. C. HARE, I.M.S., was in charge of the Department throughout the year.

The office of the Deputy Sanitary Commissioner, Bihar Circle, was held by Major Brown, I.M.S., from 1st April to 7th September 1914, Major W. C. Ross, from 8th September to 24th October 1914, and myself from 24th October to 31st March 1915.

The office of the Deputy Sanitary Commissioner, Chota Nagpur Circle, was held by Dr. Sebastian throughout the year. He was also in charge of the Orissa Circle till 14th March 1915 when Dr. B. P. Mazumdar was appointed temporarily as Deputy Sanitary Commissioner of the Orissa Circle.

2. VACCINATION STAFF.

One hundred and forty-two paid and 999 Licensed Vaccinators and 20 Inspectors and 63 Sub-Inspectors were employed throughout the year. In addition to this three Sub-Inspectors were employed as Loaders in the Vaccine Depot. Their services are transferrable with the district staff.

In Municipal towns and in the districts of Puri and Sambalpur vaccination was carried on by paid vaccinators. In other cases the work was done by licensed vaccinators as a rule except in a few cases where some paid vaccinators were employed by District Boards.

3. GENERAL OPERATIONS.

The total number of operations performed by all agencies amounted to 1,314,042 against 1,323,948 of the previous year. Of the total operations 1,295,179 were performed by the vaccination department as compared with 1,299,788 of the last year; 1,242,316 were primary and 52,863 revaccinations against 1,281,100 primary and 18,688 revaccinations of the last year. The primary vaccinations fell by 38,784 and revaccinations rose by 34,175. In primary vaccinations the most marked decrease was in the districts of the Santal Parganas (10,173), Cuttack (23,083), Balasore (21,813) and Puri (12,644). There was some decrease in Gaya, Saran, Bhagalpur, Purnea, Angul, and Manbhum districts also. In the Santal Parganas the Civil Surgeon attributes the decrease partly to scarcity of food-grains and prevalence of malaria and partly to inexperience of the subordinate inspecting staff. In Cuttack the Civil Surgeon attributes decrease to irregular supply of vaccine, the prevalence of cholera and unsatisfactory work of some vaccinators. In Balasore scarcity of food grain and inability to pay fees is reported to be the cause of the fall. The Civil Surgeon of Puri reports the decrease to be due to an irregular and insufficient supply of vaccine.

The increase in the revaccination was due to greater attention being paid to revaccination on account of outbreak of small-pox in several districts. In Manbhum generally and especially the Jherria Coal Field the people willingly accepted revaccination though they were strongly opposed to it during the previous years. The total number of revaccinations was 16,539 in this district.

Of the total operations (1,295,179) 1,270,949 or 98·12 per cent. proved successful as compared with 1,284,609 or 98·9 per cent. of the last year. The percentage of success in primary and revaccinations in which the results were known was 99·69 and 73·51 respectively against 99·67 and 75·41 of the previous year.

There was an increase of 7,048 over that of the last year in the operations performed in municipalities. The ratio of success in municipalities was 98·17 for primary and 53·90 for revaccination as compared with 99·48 for primary, 69·62 for revaccination in rural areas.

4. VACCINATION IN COMPULSORY AREAS.

In the towns in which the Vaccination Act is in force 82·41 per cent. of the total number of children under one year of age were successfully vaccinated as compared with 77·70 per cent. of the previous year.

In the towns of Arrah, Muzaffarpur, Cuttack, Ranchi, Lohardaga, Palamau, Purulia, Kishanganj, Rajmahal, and Jhalda the number of successful operations was in excess of that of the children available. It is reported that people from the adjoining villages bring their children to be vaccinated in the municipal area to avoid payment of fees.

5. MORTALITY FROM SMALL-POX.

The provincial rate of mortality from small-pox was ·22 against ·11 per 1,000 in the previous year. The following districts had a higher mortality than that prevailing in the province generally :—Balasore (·90), Patna (·48), Monghyr (·46), Bhagalpur (·35), Shahabad (·32), Purnea (·30), Manbhum (·43) and Singhbhum (·45).

6. PROTECTION AFFORDED TO INFANTS.

Out of 1,219,774, the estimated number of infants under one year available for vaccination, 629,670 *i.e.* 516·21 per thousand were successfully vaccinated against 461·88 in the previous year. The protection afforded was over 500 per mille in the following districts, which is satisfactory considering that vaccination is not compulsory in rural areas :—Darbhanga, Bhagalpur, Purnea, Santal Parganas, Cuttack, Balasore, Angul, Sambalpur Hazaribagh, Ranchi, Palamau, Manbhum, and Singhbhum.

The protection to infants in municipalities is shown in the appendix attached. It will be seen that the protection afforded was 824·18 per mille of the surviving infant population against 777·02 of the previous year. The protection afforded in the Municipalities given below was inadequate :—Tikari, Dumraon, Motihari, Darbhanga, Monghyr, Bhagalpur, Katihar, Sahibganj, Sambalpur, and Hazaribagh. The attention of the Civil Surgeons concerned has been drawn to their responsibility in the matter of infant protection in these towns.

A comparative diagram illustrating the death rate from small-pox in each district, with the population protected against small-pox by vaccination during the past seven years is also attached.

7. INSPECTION.

The Deputy Sanitary Commissioners inspected 8,781 or ·7 per cent. of primary cases of the total operations against 3·63 per cent. in the last year.

The Civil Surgeons inspected 78,646 primary and 7,162 revaccinations or 6·31 and 10·49 per cent. respectively against 7·27 and 14·71 of the previous year. The Civil Surgeons of Gaya, Saran, Champaran, Santal Parganas, and Ranchi inspected more than 5,000 operations.

The subordinate Inspecting Staff inspected 35.90 per cent. of the total operations as compared with 36.62 of the previous year. The District Inspectors of Patna, Saran, Champaran and Angul districts inspected more than 42 per cent. of the primary operations in their respective charges, while in 10 districts Sub-Inspectors of Vaccination inspected more than 50 per cent. of the total operations in primary cases.

The Health Officer of Muzaffarpur inspected 849 primary and 33 revaccination cases, respectively, and the Health Officer, Bhagalpur, 477 primary cases. Health Officers of municipalities have been made inspecting officers in the municipal areas.

The percentage of success reported by the vaccinators was 99.27 per cent. in the primary and 64.82 in revaccination cases, whereas that recorded by the Deputy Sanitary Commissioners and the Civil Surgeons was as given below:—

	Deputy Sanitary Commissioners.	Civil Surgeons.
Primary	98.89	99.34
Revaccination	—	65.26

8. SUPPLY OF VACCINE.

The Government Vaccine Depôt at Namkum was completed about the middle of the year and the work of manufacturing lymph was started about the middle of September. From September to 31st March 1915, 510 calves were supplied to the Depôt, of which 3 died before operation. The remaining 507 which were vaccinated yielded 94,180 grains of crude lymph or about 185 grains per calf. During the season 749,205 capillary tubes containing about half a grain of vaccine each were prepared and 541,522 were issued from the Vaccine Depôt. But as the local vaccine depôt could not supply the whole province, lymph had to be obtained from the Patwa Dangar Depôt also, to supply the districts in Patna, Tirhut and Bhagalpur Divisions with the exception of Santal Parganas which was supplied from Namkum Depôt.

The total cost of the Depôt excluding the cost of the building was Rs. 19,367-7-9. The cost per tube or dose of lymph amounts to 49 pies. As the institution was new, and the arrangements for the supply of calves were not satisfactory the total lymph required for the province could not be manufactured and the cost was necessarily high. But now in the light of experience subsequently gained it is hoped that the Depôt will turn out the full supply of lymph for the province at a considerably reduced cost. The results of the lymph issued from the Depôt have been reported to be good. Dr. Sebastian, Deputy Sanitary Commissioner, Chota Nagpur Circle, was the supervising officer and Assistant Surgeon Dharendra Nath Mitra, the officer in charge of the Depôt throughout the year.

9. COST OF THE DEPARTMENT.

The total cost of the Department during the year was Rs. 98,421 or Rs. 5,048 in excess of the last year. The cost per successful operation was Rs. 0-1-2 against Rs. 0-1-1 in the previous year.

10. FEMALE VACCINATION.

It was noted in last year's report that female vaccinators might with advantage be appointed by the municipal bodies of the province and the proposal was approved by Government. A reference on this subject has been made to all the Municipal bodies.

11. GENERAL.

As stated in paragraph 15 of the Sanitary Report a proposal for the extension of compulsory vaccination to the Patna and Phulwari thanas, including Digha, has been submitted to Government. The extension of the act to the area administered by the Mines Board of Health at Jherria, is also under the consideration of Government.

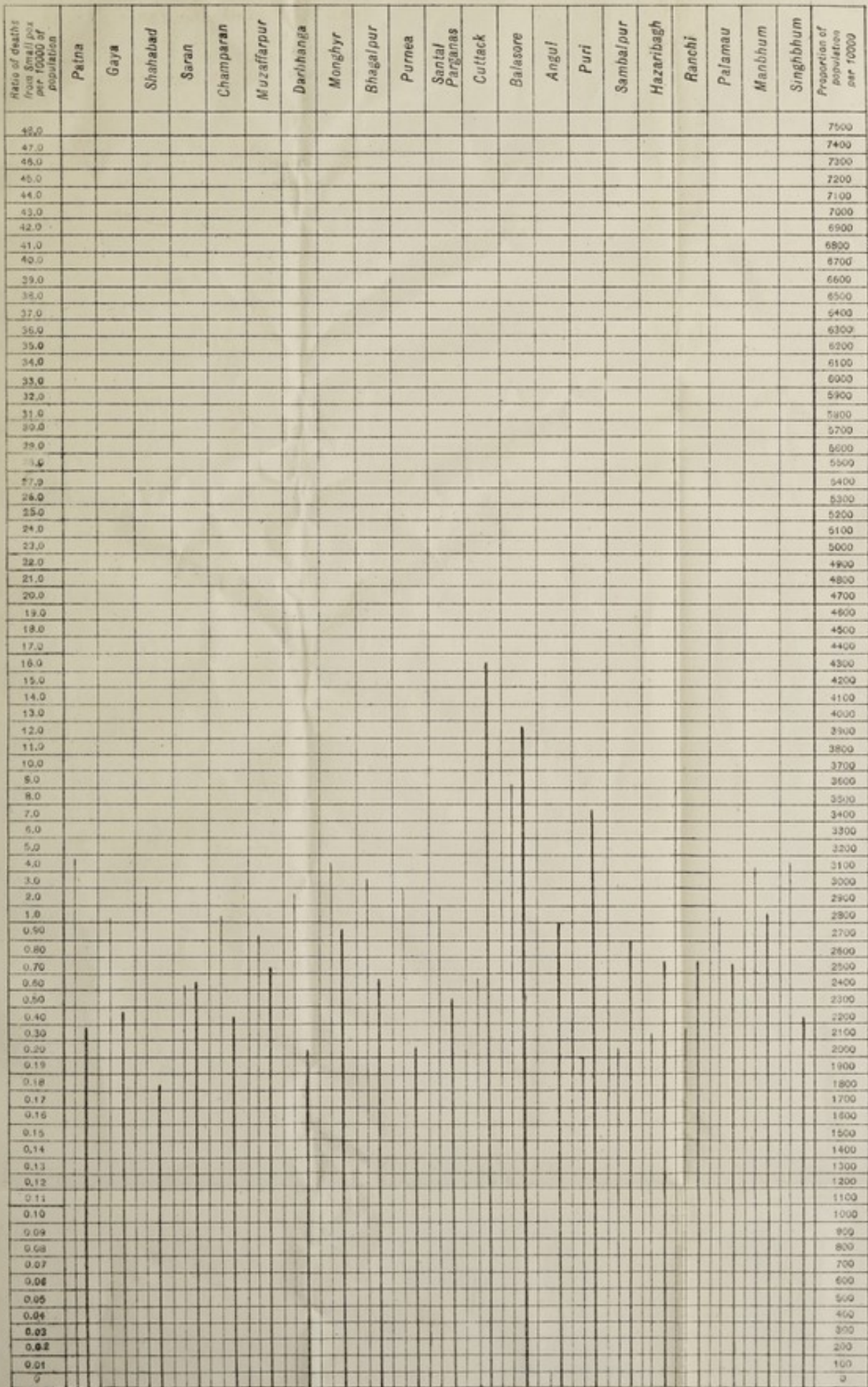
Act V of 1880 was extended to the Tata Iron Factory at Sakchi in the district of Singhbhum.

Owing to the redistribution of duties occasioned by the War, the services of no Deputy Sanitary Commissioner were available for the inspection of vaccination.

S. N. TIWARY,


Offg. Sanitary Commissioner, Bihar and Orissa.

Diagram illustrating death rates from Small pox and degree of protection afforded 1909-1915



Notes—Thin lines indicate the death rates from small pox

Thick lines indicate the proportion of population protected by vaccination



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Statement No. I.—Showing particulars of Vaccination in the

Number.	District.	Population of district according to the census of 1911.	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.	Total.
					Male.	Female.	Total.		
1	2	3	4	5	6			7	8
<i>Patna Division.</i>									
1	Patna ...	1609031	777	9	3974	3584	7558	844	7210
	... { By licensed Vaccinators ... }				68	25820	24103	40923	794	49889
2	Gaya ...	2162010	453	12	4169	4017	8186	681	7743
	... { By licensed Vaccinators ... }				74	20252	28634	57886	782	57492
3	Shahabad ...	1465669	426	9	2379	2080	4459	517	4433
	... { By licensed Vaccinators ... }				113	31629	26371	57991	613	57004
	Total of Patna Division	5036301	505	30	10712	9681	20393	679	19365
	... { By licensed Vaccinators ... }				255	86692	79108	168800	650	165325
<i>Tirhut Division.</i>									
4	Saran ...	2289778	803	5	1282	1285	2567	513	2546
	... { By licensed Vaccinators ... }				60	41381	37974	79355	1150	79316
5	Champan ...	908385	540	2	833	609	1442	721	1107
	... { By licensed Vaccinators ... }				50	22568	20352	62920	1258
6	Munaffarpur ...	2945514	597	6	1977	1871	3848	641	3718
	... { By licensed Vaccinators ... }				65	52232	48879	101111	1555	101015
7	Darbhanga ...	292298	875	7	2145	1630	3781	549	3187
	... { By licensed Vaccinators ... }				60	48462	45096	94458	1574	94175
	Total of Tirhut Division	9973359	791	20	6237	5491	11728	581	10648
	... { By licensed Vaccinators ... }				244	174643	163201	337844	1384	336951
<i>Bhagalpur Division.</i>									
8	Monghyr ...	213131	543	3	1802	1491	3293	1001	2903
	... { By licensed Vaccinators ... }				42	42099	43377	86876	2046	86871
9	Bhagalpur ...	2139318	596	11	3177	2753	5930	339	5155
	... { By licensed Vaccinators ... }				52	34709	34505	69004	1332	68430
10	Purnea ...	1080637	398	4	1044	654	1698	424	1217
	... { By licensed Vaccinators ... }				40	31648	28507	60195	1523	59994
11	Santal Parganas ...	1882973	344	4	708	617	1385	345	1117
	... { By licensed Vaccinators ... }				64	27808	25665	52833	826	50404
	Total of Bhagalpur Division	8143369	437	22	6591	6425	13016	541	10392
	... { By licensed Vaccinators ... }				207	187204	179394	369236	1369	361689
<i>Orissa Division.</i>									
12	Cuttack ...	2169139	577	10	9290	8073	17363	1736	11692
	... { By licensed Vaccinators ... }				63	53398	48371	131729	1614	90730
13	Balsore ...	1055568	596	5	2312	1485	3797	750	1194
	... { By licensed Vaccinators ... }				44	28339	24462	52092	1197	46872
14	Angul ...	199405	118	12	4237	2612	6849	670	7743
	... { By licensed Vaccinators ... }				29	18896	16627	34223	1180	34080
15	Puri ...	744193	194	12	14076	13666	27742	2311	26117
	... { By licensed Vaccinators ... }				54	44274	38851	83125	1484	73383
	Total of Orissa Division	5131707	373	110	86875	76675	163550	1305	143845

Districts of Bihar and Orissa during the year 1914-1915.

Primary 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.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
Under one year.	Over one and under six year.	Total of all ages.	Unknown.												
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
3817	3179	7002	100	348	275	..	99.32	79.02	35.42	1.39	..	48.637	30.21	617	.38
20278	27981	48259	106	54	38	..	99.78	51.85		.21	..				
3121	4370	7579	132	434	228	48	99.59	59.06	30.47	1.70	11.06	68.655	21.76	260	.65
10338	30791	57263	86	304	306	29	99.74	83.01		.14	7.36				
2996	1329	4,357	24	226	104	38	98.92	55.31	33.21	.54	16.81	59.140	26.87	186	.60
28466	24837	57403	35	27	23	..	99.24	85.18		.06	..				
9004	8887	18898	256	1098	607	85	99.31	65.83	32.71	1.22	8.33	167,432	29.70	906	.16
65282	92619	158419	227	475	357	29	99.58	80.04		.13	6.10				
1529	800	2355	78	21	8	7	95.49	67.14	35.15	3.01	33.31	81.083	33.45	155	.66
29711	46359	76130	661	39	19	7	99.33	59.37		.83	17.94				
583	581	1183	2	245	179	21	98.99	79.81	33.45	.16	8.57	60.401	31.63	109	.66
25688	35027	62106	92	545	330	35	99.71	76.47		.14	6.42				
2445	1004	3670	39	139	90	31	100	100	37.00	1.94	23.84	103.636	36.42	181	.67
47333	63183	100699	316	96	63	33	100	100		.31	34.57				
1347	1773	3154	22	594	305	274	99.62	64.06	33.36	.69	46.12	90.481	39.88	1359	.46
53041	40969	93899	49	183	151	..	99.54	82.31		.05	..				
6194	4168	10371	141	960	491	353	98.70	74.73	34.72	1.32	33.63	..	33.71	1894	.18
156963	176737	338624	1118	863	623	75	99.69	79.06		.3	8.69				
1330	1558	2888	15	160	48	62	100	100	42.67	.51	52	85,219	39.95	620	.24
22296	54572	80868	63	5	5	..	100	100		.97	..				
2318	2555	4873	77	775	453	34	98.91	61.13	35.44	1.52	4.38	76.904	35.08	797	.37
28578	29691	68398	62	884	664	17	99.93	79.59		.09	1.92				
623	547	1292	..	461	156	14	98.76	32.40	28.71	..	2.01	59.587	29.94	527	.26
34611	26942	54733	26	4291	1405	87	99.56	34.15		.84	2.07				
627	403	1110	..	268	181	8	99.37	69.61	28.23	..	2.98	61.649	31.70	431	.22
34682	15449	50318	10	2459	1496	206	99.84	66.49		.01	8.37				
4896	5063	10222	92	1624	838	168	99.24	53.27	33.86	.88	6.65	283,449	31.80	2375	.27
146137	120463	261167	161	7549	3579	310	99.86	49.31		.06	4.10				
5300	4748	11551	44	5671	1846	1,166	99.16	49.97	53.71	.37	29.56	139830	61.3	72	.63
49212	39187	96914	375	2109	688	382	99.59	34.74		.37	19.01				
367	762	1173	6	2603	1698	317	98.73	74.37	50.47	.50	12.17	59552	56.78	278	.26
16784	24403	46169	117	6320	4074	1,090	99.81	77.45		.25	16.77				
3729	3735	7455	151	366	225	24	98.10	79.78	38.51	1.56	7.84	7870	32.49	1	.035
12029	18649	33594	142	143	109	6	98.98	79.56		.41	4.19				
19042	7009	26172	167	1323	1090	78	99.70	87.49	37.03	.63	5.88	19141	39.15	29	.63
26738	31138	72490	359	9742	4743	1,567	99.26	58.61		.48	16.98				
69716	673.5	152638	643	8635	4967	1,466	99.64	69.56	42.76	.41	16.97	258820	56.28	439	.68

Number.	District.	Population of district according to the census of 1911.	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.	Total.
					Male.	Female.	Total.		
1	2	3	4	5	6			7	8
<i>Chota Nagpur Division.</i>									
17	Hazaribagh ...	1289600	183	3	694	654	1338	446	1229
	... { By licensed Vaccinators ... }				22059	21455	44114	1933	44259
18	Ranchi ...	1387073	196	4	1428	902	2330	582	1640
	... { By licensed Vaccinators ... }				24591	23897	48488	1202	49210
19	Palaman ...	687710	139	3	2541	1770	4311	1437	2347
	... { By licensed Vaccinators ... }				13425	10907	24386	1016	24347
20	Manbhum ...	16477576	373	3	967	741	1708	569	1445
	... { By licensed Vaccinators ... }				39259	33336	72625	1771	55642
21	Singbhum ...	694394	178	1	228	193	421	421	330
	... { By licensed Vaccinators ... }				13761	12067	25878	437	24064
	Political states of Singbhum. By licensed Vaccinators ...	14656	246	4	3484	3263	6747	1686	6745
	Total of Chota Nagpur Division. { By paid Vaccinators ... }	5754008	207	14	5848	4200	10108	722	7010
	... { By licensed Vaccinators ... }				117533	105005	222537	1278	203659
	Total of Vaccine Department. { By paid Vaccinators ... }	34628094	413	142	73662	63616	137260	666	120818
	... { By licensed Vaccinators ... }				601906	555993	1157899	1159	1121496
	... Total ... }				675568	619611	1295179	1135	1242316
	Total Dispensary Department ...	...	...	1	78	104	182	182	178
	Total Railways ...	...	...	...	1726	1167	2893	...	886
	Total cooly Department ...	...	...	...	2650	1877	5527	...	1094
	Total Jails and Cantonments ...	...	...	...	9647	614	10261	...	1250
	Grand Total ...	...	...	1142	690689	623373	1314062	1150	1240824

Primary 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 in 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.	Rate per 1,000.	Number.	Rate per 1,000.
Under one year.	Over one 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
599	618	1258	...	89	71	4	99.01	74.73	37.48	...	4.04	47441	26.82	127	.69
27447	10570	44238	8	264	100	...	99.98	65.95		.01	...				
1163	432	1020	2	600	454	1	98.99	65.69	35.71	.12	.14	50000	30.28	50	.63
38189	9000	48211	6	278	277	...	99.99	99.64		.01	...				
1158	960	2329	6	1964	1632	265	99.10	94.03	41.21	.25	12.47	23012	33.48	40	.65
16774	6.953	23071	153	138	122	...	99.40	88.40		.54	...				
912	468	1417	6	263	108	...	99.81	63.87	47.40	.41	...	60568	39.13	128	.68
22559	22136	55517	20	10083	15663	19	99.88	92.75		.03	.58				
285	71	750	15	82	15	29	98.76	54.88	37.31	4.42	47.55	22004	21.68	63	.12
16928	18090	24530	10	1314	82	22	99.90	68.26		.04	1.67				
5100	1581	6789	...	2	2	...	99.92	100	48.35	...	...	4952	29.31	...	...
4080	2697	6935	29	2098	2343	289	99.34	83.39	39.93	.41	9.32	208827	36.39	412	.47
36758	65223	203235	177	18879	17683	121	99.67	91.07		.08	.64				
61724	51843	1.9.16	877	15462	9.19	2363	99.22	64.03	35.09	.72	14.97	1288990	27.09	5,836	.16
557840	5.21367	111.0294	2320	36401	26629	2101	99.74	77.38		.20	5.49				
623470	573210	1235310	3203	52963	35639	4384	99.03	73.81	.25	8.23	...	...	...	...	...
118	48	176	1	4	...	...	99.43	...	...	.56	...	...	...	...	...
682	163	863	1	2307	1583	43	97.51	80.60	...	.11	2.14	...	...	...	...
...	...	...	1094	4433	...	4433	...	...	...	100	100	...	...	...	...
259	335	1212	43	6911	5244	883	92.73	65.94	...	3.18	9.94	...	...	...	...
630734	573736	1207561	4342	68218	42468	9746	99.68	72.03	...	.34	14.28	...	...	...	...

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.		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 1 year.	One and under 6 years.							
2	3	4	5	6	7	8	9	10	11	12	13	14					
BY SPECIAL STAFF.												Rs.	a.	p.	Rs.	a.	p.
Statement (I) ...	1242316	52863	1242316	52863	99.69	79.81	1,141	1,135	629670	672119	26.09						
BY DISPENSARY STAFF ...																	
Statement III ...	178	4	178	4	92.63	...	1	182	128	48	...						
BY OTHER AGENCIES ...																	
Hallways, Cooly Depot Jails and Cantonments.	3330	15351	3330	15,351	94.65	68.34	...	...	916	494	...				
Total ...	1245824	68218	1245824	68,218	99.68	72.43	1,142	1,159	630784	673753	26.09	98421	0 1 2				

ANNEXURE II.

Statement No. II.—Showing the cost of vaccination in the

No.	Circle and district.	European supervising officer.	Expenditure										
			Pay.	Native supervising officer.	Pay.	Paid vaccinators.	Pay.	Licensed vaccinators.	Pay.	Clerks.	Pay.	Fees, etc.	Pay.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
			Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
PATNA DIVISION.													
1	Patna ... ..	...	...	6	1,943 0 2	9	675 4 0	66	255 6 0	...	...	1	36 0 0
2	Gaya ... ..	...	...	5	1,740 0 0	12	1,179 12 0	...	...	...	...	...	...
3	Shahabad ... ..	...	...	5	2,154 2 0	9	679 0 0	24	421 12 0	...	...	...	...
	Total of Patna Division ... ..	...	...	16	5,837 2 2	30	2,525 0 0	92	677 2 0	...	...	1	36 0 0
TIRHUT DIVISION.													
4	Saran ... ..	...	...	4	2,026 9 0	5	660 0 0	69	43 0 0	...	...	...	...
5	Champaran ... ..	...	...	3	1,227 9 3	2	262 0 0	10	301 0 0	...	...	...	...
6	Muzaffarpur ... ..	...	...	4	2,070 2 4	6	702 8 6	10	85 8 0	...	...	...	...
7	Darbhanga ... ..	...	...	4	1,630 8 3	8	683 3 10	60	148 8 0	...	...	...	...
	Total of Tirhut Division ... ..	...	...	15	6,964 12 10	21	2,307 12 4	149	578 0 0	...	...	...	...
BHAGALPUR DIVISION.													
8	Monghyr ... ..	...	...	4	1,604 8 2	4	330 0 0	22	75 12 0	...	...	2	61 9 4
9	Bhagalpur ... ..	...	...	5	2,645 8 2	11	683 10 0	22	49 0 9	...	...	...	...
10	Purnea ... ..	...	...	4	1,542 1 7	4	424 12 6	49	26 12 0	...	...	...	...
11	Santal Parganas ... ..	...	...	7	2,317 6 8	4	265 3 10	64	88 12 8	...	...	...	...
	Total of Bhagalpur Division ... ..	...	...	20	8,109 8 7	23	1,943 10 4	167	230 4 0	...	...	2	61 9 4
ORISSA DIVISION.													
12	Cuttack ... ..	...	...	4	1,450 0 0	10	1,165 9 2	63	...	...	...	...	...
13	Balasore ... ..	...	...	3	1,211 3 5	5	176 8 10	...	...	...	...	...	...
14	Angul ... ..	...	...	3	2,430 0 0	...	...	...	...	...	...	...	...
15	Puri ... ..	...	...	3	1,274 15 10	29	3,755 11 7	...	...	...	...	...	...
16	Sambalpur ... ..	...	...	3	1,225 2 11	12	1,492 12 5	...	...	...	...	2	50 0 0
	Total of Orissa Division ... ..	...	...	16	7,591 6 2	56	6,590 10 0	63	...	...	...	2	50 0 0
CHOTA NAGPUR DIVISION.													
17	Haveribagh ... ..	...	...	5	1,327 10 0	3	277 6 0	43	...	...	...	...	...
18	Ranchi ... ..	...	...	4	1,380 0 0	4	664 0 0	41	...	...	...	...	...
19	Palamu ... ..	...	...	3	1,025 0 0	3	193 9 0	24	126 5 3	...	...	...	...
20	Manbhum ... ..	...	...	3	1,060 0 0	3	262 14 2	41	...	...	...	...	...
21	Singhbhum ... ..	...	...	3	1,194 15 11	1	103 0 0	22	170 1 11	...	...	...	...
	Total of Chota Nagpur Division ... ..	...	...	18	6,067 9 11	14	1,963 13 2	174	362 7 2	...	...	...	...
	Total of vaccine circles ... ..	...	...	65	31,592 7 8	144	14,730 13 10	665	1,767 13 2	...	...	5	147 9 4
ESTABLISHMENT OF THE DEPUTY SANITARY COMMISSIONER, BIHAR CIRCLE.													
	Ditto. ORISSA CIRCLE ... ..	...	...	1	10,321 5 3	...	...	...	...	2	900 0 0	2	309 0 0
	Ditto. CHOTA NAGPUR CIRCLE ... ..	...	...	1	5,542 12 0	...	...	...	...	2	900 0 0	2	183 13 0
	Ditto. CHOTA NAGPUR CIRCLE ... ..	...	...	1	5,542 12 0	...	...	...	...	2	490 0 0	2	210 0 0
	Total ... ..	...	...	2	16,765 1 3	...	...	...	...	6	2,690 0 0	7	702 12 0
	Total of province ... ..	...	...	87	51,327 8 11	144	14,730 13 10	665	1,767 13 2	6	2,690 0 0	12	850 8 4

Province of Bihar and Orissa during the year 1914-15.

Total pay of establishment,	Travelling allowance,	Contingencies,		Total cost,	Paid from						Number of all successful vaccinations and revaccinations,	Average cost of each successful case,
		Cost of lymph.	Other contingencies.		Imperial Fund,	Provincial Fund,	Local Fund,	Municipalities,	Native States,	Total.		
2,909 10 2	1,126 8 9	...	121 2 6	4,157 5 5	...	3,209 3 11	...	888 1 6	...	4,157 5 5	27665	0 1 1
2,919 12 0	1,117 3 8	...	169 0 0	4,225 15 8	...	3,012 3 8	640 0 0	573 12 0	...	4,225 15 8	65825	0 1 0
3,247 14 0	1,331 14 0	...	205 13 0	4,549 9 0	...	4,052 12 0	100 0 0	695 13 0	...	4,548 9 0	62079	0 1 2
9,077 4 2	3,578 10 5	...	575 15 6	13,231 14 1	...	10,334 3 7	740 0 0	2,167 10 6	...	13,231 14 1	185599	0 1 1
2,729 9 0	448 10 6	66 0 0	169 0 0	3,422 3 6	...	2,603 3 6	...	819 0 0	...	3,422 3 6	80729	0 0 8
1,790 9 3	770 3 9	...	67 8 9	2,628 5 9	...	2,358 13 0	...	269 8 9	...	2,628 5 9	64146	0 0 7
2,858 2 10	570 15 6	...	113 4 0	3,542 6 4	...	2,830 13 10	...	702 8 6	...	3,542 6 4	105292	0 0 6
2,462 4 1	878 1 7	...	94 12 0	3,435 1 8	...	2,737 4 10	...	697 12 10	...	3,435 1 8	97760	0 0 6
9,850 9 2	2,997 15 4	66 0 0	443 8 9	13,028 1 3	...	10,539 3 2	...	2,488 14 1	...	13,028 1 3	347927	0 0 7
2,102 13 6	1,091 13 6	...	237 11 0	3,432 6 0	...	2,836 8 8	...	595 13 4	...	3,432 6 0	89749	0 0 7
3,569 2 2	721 5 9	...	130 0 0	4,420 7 11	...	3,536 13 11	415 0 0	468 10 0	...	4,420 7 11	75831	0 0 12
2,003 10 1	1,098 6 6	...	69 0 0	3,162 0 7	...	2,171 12 1	...	990 4 6	...	3,162 0 7	58406	0 0 10
2,069 6 6	1,902 1 5	...	136 5 0	4,607 12 11	...	4,396 4 1	...	271 8 10	...	4,607 12 11	53182	9 1 4
10,345 0 3	4,713 11 2	...	564 0 0	15,622 11 5	...	12,881 6 9	415 0 0	2,326 4 8	...	15,622 11 5	277258	0 0 19
2,005 9 2	1,028 4 10	...	149 0 0	3,782 14 0	...	2,507 4 10	620 0 0	565 9 2	...	3,782 14 0	112297	0 0 6
1,347 12 3	391 0 9	...	75 0 0	1,856 13 0	...	1,580 4 2	36 6 10	140 2 0	...	1,856 13 0	52281	0 0 6
2,430 0 0	1,208 13 0	...	29 10 0	3,668 7 0	...	3,068 7 0	...	...	...	3,668 7 0	7680	0 7 7
5,090 11 5	1,269 12 11	...	115 0 0	6,415 8 4	...	3,659 12 9	3,591 5 7	164 6 0	...	6,415 8 4	33820	0 3 0
3,777 15 4	616 7 9	6 8 0	78 7 0	3,479 6 1	...	1,916 4 8	1,416 12 5	149 5 0	...	3,479 6 1	27561	0 2 0
14,232 0 2	4,517 7 3	6 8 0	447 1 0	19,203 9 5	...	17,522 1 5	5,694 8 10	1,016 6 2	...	19,203 9 5	235639	0 1 3
1,655 0 0	968 11 10	...	80 0 0	2,728 11 10	...	2,451 5 10	...	277 6 0	...	2,728 11 10	48299	0 0 10
1,944 0 0	920 3 4	...	74 14 0	2,939 1 4	...	2,375 1 4	...	564 0 0	...	2,939 1 4	50058	0 0 11
1,344 14 3	779 14 10	...	65 0 0	2,189 13 1	...	1,869 14 10	164 2 3	155 12 0	...	2,189 13 1	28327	0 1 3
1,308 14 2	437 9 9	...	169 15 6	1,914 7 5	...	1,687 9 3	...	226 14 2	...	1,914 7 5	73369	0 6 5
1,473 1 10	617 12 5	...	75 0 0	2,165 14 3	...	1,887 12 4	...	102 0 0	176 1 11	2,165 14 3	32651	0 1 0
7,723 14 3	3,749 4 2	...	464 13 6	11,937 15 11	...	10,271 11 7	164 2 3	1,326 0 2	176 1 11	11,937 15 11	239904	0 0 9
51,228 12 6	19,227 0 4	72 8 0	2,495 6 9	73,023 11 1	...	56,548 19 6	6,983 11 1	9,315 3 7	176 1 11	73,023 11 1	1290027	0 0 19
12,100 5 3	588 12 3	...	642 0 5	13,421 1 11	...	13,421 1 11	...	...	...	13,421 1 11	...	...
1,143 12 0	1,125 2 6	...	618 8 3	2,887 6 9	...	2,887 6 9	...	...	...	2,887 6 9	...	...
9,743 12 0	1,641 2 3	...	704 1 6	9,088 15 9	...	9,088 15 9	...	...	...	9,088 15 9	...	...
20,077 13 3	3,355 1 0	...	1,964 10 2	25,397 8 5	...	25,397 8 5	...	...	...	25,397 8 5	...	...
71,390 9 3	22,582 1 4	72 8 0	4,460 0 11	98,421 3 6	...	81,945 2 11	6,683 11 1	9,315 3 7	176 1 11	98,421 3 6	1290027	0 1 2

B.—DISPENSARY VACCINATION.

Statement No. III.—Showing Dispensary Vaccination in the Province of Bihar and Orissa during the year 1914-15.

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.	Over 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	7	...	3	1	2	3	...	4	...	...	100	...	...	...
Gaya
Shahabad
Saran
Champaran
Meerapur
Darbhanga ...	1	1	175	175	175	127	48	173	1	...	...	...	99.42	...	57	...
Monghyr
Bhagalpur
Purnea
Santal Parganas
Cuttack
Balasore
Angul
Puri
Sambalpur
Hazaribagh
Ranchi
Palamu
Manbhum
Singbhum
Total ...	1	1	182	182	178	128	48	176	1	4	...	...	99.43	...	56	...

Comparative Statement No. IV.—Showing the number of persons primarily vaccinated, and the number of those

Establishment.	Persons primarily vaccinated.								
	1905-06		1906-07		1907-08		1908-09		
	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
Dispensaries	...	1735	1565	1107	1088	961	806	689	54
Municipal	...	46522	44597	44127	42524	45895	43722	48330	4476
Local Fund	...	76969	73421	74590	72479	93848	91055	96959	9716
Licensed Vaccinators	...	1098347	1087343	1061164	1051091	1057110	1046540	1005512	994441
Native States	...	5676	5633	4920	4903	3885	3865	5581	537
Total	...	1229249	1212559	1185908	1172085	1201699	1185988	1157071	114227

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

vaccinated.

1900-10		1910-1911		1911-12		1912-13		1913-14		1914-15	
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
...	...	...	...	...	...	...	...	...	...	649	515
586	472	516	415	384	303	188	185	186	186	178	176
46047	43550	46553	44671	46769	44879	43379	42311	44167	42480	47235	45310
92291	91182	97068	95561	96381	95057	86551	85935	82592	81790	79264	75266
1053044	105210	118587	1109896	1135713	1128318	1133810	1126927	1149467	1143922	1114753	1109554
4269	4245	4970	4956	4964	4943	4641	4581	5587	5578	6745	6740
1196237	1191549	1267694	1253499	1284211	1273440	1268069	1259969	1281999	1273946	1245824	1237561

Statement No. V.—Showing particulars of vaccination

District	Total number of persons vaccinated.		Total number inspected.									
			By Deputy Sanitary Commissioner or Civil Surgeon.					By Native Superintendents or other Inspecting Officers.				
			Deputy Sanitary Commissioners.		Civil Surgeons.		District Inspectors.		Sub-Inspectors.		Deputy Sanitary Commissioners.	
	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 ...	57429	826	...	...	305	434	25849	...	29003	47	...	...
Gaya ...	45334	1584	...	...	7194	855	19028	201	38179	400	...	...
Shehabad ...	62416	662	...	...	2822	137	16817	...	30086	...	...	...
Saran ...	81879	514	...	...	6202	415	38515	8	53069	...	...	...
Champanan ...	63684	11196	...	...	7500	...	27257	51	25161	7	...	...
Muzaffarpur ...	164745	1206	...	...	3350	668	22495	...	53008	27	...	...
Darbhanga ...	97637	1169	...	...	3261	278	26118	89	47323	...	...	...
Monghyr ...	58774	105	...	...	2831	...	19042	...	42943	...	...	...
Bhagalpur ...	73687	4148	...	...	67	1261	2293	173	31812	1113	...	...
Parua ...	67211	4682	...	...	3426	...	11626	1295	18584	933	...	...
Santal Parganas ...	61521	2908	...	...	6157	288	11377	602	21578	127	...	...
Cuttack ...	112651	12183	...	...	4494	78	30268	105	62231	215	...	...
Balassore ...	47664	9144	...	...	4022	100	8880	665	15674	4286	...	...
Angul ...	7743	306	...	...	2045	33	3370	168	4628	42	...	...
Puri ...	34191	285	8309	...	973	107	10342	...	20455	85	2417	...
Sambalpur ...	26421	1735	...	...	2064	446	9477	203	7171	119	...	...
Hazaribagh ...	46368	2444	...	...	3423	19	5112	17	13769	50	...	...
Ranchi ...	50567	1205	...	...	5943	...	4203	...	20126	36	...	...
Palaman ...	26764	2286	...	...	4324	291	9359	...	14663	...	...	...
Manbhum ...	57150	17901	206	...	1908	1048	10026	2093	14866	5526	18	...
Singbhum ...	24903	1689	306	...	4659	224	8569	125	9768	619	122	...
Political States of Singbhum.	6745	2	...	...	1643	...	2178	...	4419	...	...	...
Total ...	1245834	68218	8781	...	79646	7162	11	4925	507126	11732	70	...

verified by Inspecting Officers during the year 1914-15.

Percentage of inspection to total number vaccinated.						Percentage of cases found successful to total number inspected.								Percentage of success reports by vaccinators.	
By Deputy Sanitary Commissioners or Civil Surgeons.		By Native Superintendents or other Inspecting Officers.				By Deputy Sanitary Commissioners or Civil Surgeons.				By Native Superintendents or other Inspecting Officers.					
Civil Surgeons.		District Inspectors.		Sub-Inspectors.		Deputy Sanitary Commissioners.		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
43	52.54	45.01	...	50.00	5.00	...	...	100	77.88	98.16	...	98.84	45.80	99.26	73.00
12.10	53.07	29.09	12.08	58.52	25.25	...	...	98.54	60.78	97.03	49.25	98.80	70.50	99.40	64.10
4.62	19.04	23.34	...	50.21	...	...	...	97.94	47.24	98.25	...	98.09	...	19.24	46.01
7.57	80.73	47.03	1.55	65.55	...	...	...	99.04	40.24	99.34	100	98.55	...	98.33	46.13
11.77	...	42.80	4.26	39.50	59	...	...	90.78	...	90.70	83.23	99.59	100	99.50	64.95
3.19	70.43	21.47	...	53.42	2.23	...	...	100	75.26	90.74	...	99.84	81.40	19.57	72.34
3.44	25.00	26.75	8.02	48.46	...	...	...	90.04	67.02	99.30	64.04	99.22	...	99.58	49.63
3.15	...	21.21	...	47.83	...	...	...	99.11	...	99.62	...	99.79	...	99.90	50.47
00	22.81	3.11	4.17	43.17	26.83	...	...	98.55	60.02	98.63	83.23	99.85	70.62	99.66	58.24
5.98	...	20.32	27.65	32.48	19.03	...	...	90.27	...	99.12	60.48	99.10	99.20	99.51	33.346
10.08	13.04	22.08	13.82	41.58	4.30	...	...	98.61	44.07	98.80	50.35	98.77	80.31	99.88	60.31
3.98	64	34.65	80	57.90	1.70	...	...	99.42	53.84	99.39	43.60	98.27	33.55	98.27	21.23
10.32	1.09	18.63	10.88	52.88	47.96	...	...	98.69	90.00	99.32	62.61	99.01	77.17	99.78	73.4
20.62	10.78	43.62	54.90	59.77	13.73	...	...	99.66	72.73	98.13	90.47	97.13	73.80	99.28	73.62
2.84	37.61	30.67	...	59.82	29.82	98.85	...	93.90	46.72	98.31	...	98.63	81.17	98.44	55.73
7.02	20.70	26.98	11.70	27.13	0.85	...	...	98.04	74.21	98.51	99.50	99.58	67.98	99.07	79.82
7.28	77	11.24	6.08	31.90	3.04	...	...	99.67	52.63	98.53	64.70	99.94	80.00	99.97	86.23
10.66	...	8.56	...	50.14	2.98	...	...	100	...	100	...	99.78	61.11	99.93	73.38
10.21	12.16	25.09	...	54.09	...	...	...	99.76	73.88	99.52	...	99.63	...	98.85	82.28
3.33	5.85	17.54	11.00	26.01	19.69	100	...	99.84	93.03	99.00	73.08	99.56	94.61	99.83	99.12
18.67	13.33	34.40	7.44	39.22	30.84	99.67	...	99.95	73.21	98.88	62.83	99.08	77.05	99.80	67.12
23.91	...	32.29	...	65.51	...	...	...	100	...	99.86	...	99.90	...	99.92	100
6.31	10.40	27.18	8.68	47.93	17.19	98.89	...	99.34	65.25	99.24	69.18	98.87	79.35	99.27	64.82

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

District.	1906-06.		1906-07.		1907-08.		1908-09.	
	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 ...	·32	46470	·58	50407	1·09	52260	2·94	52570
Gaya ...	·07	66671	·28	72730	1·93	73980	2·08	72395
Shahabad ...	·06	52679	·11	52483	·71	50039	1·76	53759
Saran ...	·06	78502	·11	74338	·29	65785	·96	74035
Champaran ...	·13	52610	·10	49019	·38	57722	·30	56148
Muzaffarpur ...	·13	95914	·05	99054	·09	101292	·23	101612
Darbhanga ...	·10	87559	·09	80126	·11	89884	·13	75823
Monghyr ...	·15	86390	·46	83081	1·00	80846	·61	78958
Bhagalpur ...	·35	78539	·93	79717	1·25	76312	·15	71328
Purnea ...	·18	60070	·55	59420	·41	52054	·08	50937
Santal Parganas ...	·19	68024	·51	63028	·06	58350	·71	65509
Cuttack ...	·04	93424	·14	77025	·29	95087	·28	107484
Falacrore ...	·36	31835	·80	37841	1·25	29806	·64	35911
Angul ...	...	10041	...	8886	...	8293	...	9022
Puri ...	2·84	43080	4·72	40682	2·24	55482	·83	53920
Sambalpur ...	·06	26000	·004	25024	·14	27441	·17	28265
Hazaribagh ...	·01	48825	·04	43816	·23	48899	1·27	42294
Ranchi ...	·0008	46295	·02	46315	·23	53933	1·48	44656
Palamau ...	·009	16713	·02	17615	·15	16241	1·10	27936
Manbhum ...	·007	51297	·08	54680	·31	63508	·46	62937
Singhbhum ...	·02	21041	·009	19007	·12	18527	·22	22721
Political State of Singhbhum ...	...	5633	...	4903	...	3987	...	5377
Total ...	·24	167608	·39	139207	·67	1174618	·83	1194561

small-pox and the number of successful vaccinations during the 10 years ending 1914-15.

1909-10.		1910-11.		1911-12.		1912-13.		1913-14.		1914-15.	
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
1·23	51589	·30	45665	·09	48687	·07	48768	·17	48480	·48	57665
·62	74725	·07	68104	·07	69923	·08	66965	·03	67817	·10	65855
·67	46311	·04	39890	·02	36809	·006	47086	·09	53312	·32	62079
·84	76930	·07	86741	·03	83221	·006	85339	·06	81699	·06	80729
·44	63172	·02	59887	·03	60354	·07	55486	·02	63100	·10	64146
·22	98808	·03	101395	·05	102535	·04	101405	·01	103052	·09	105292
·29	83005	·07	84025	·06	83343	·01	93546	·06	93735	·24	97760
·30	79069	·11	85497	·09	89123	·08	84475	·48	89024	·46	80749
·24	77682	·26	74438	·43	80294	·41	77274	·31	75244	·35	75831
·36	61698	·39	63167	·24	69409	·14	58956	·22	60587	·30	58496
·36	67015	·07	67446	·08	61909	·19	60236	·27	64815	·18	53182
·12	134160	·007	139487	·002	153747	·01	137175	·01	134227	·06	113197
·56	44340	·41	58052	·19	63287	·006	68271	·11	69059	·90	53281
...	7002	...	9353	...	8207	...	5906	...	7945	...	7680
·16	52438	·007	53738	·006	53619	·02	5642	·07	47269	·02	37820
·04	27124	·08	33399	...	33153	·04	25955	·05	25063	·02	27561
·42	142659	·01	56075	·006	46544	·02	46150	·02	51777	·03	48299
·81	46968	·07	57541	·02	48913	·004	51096	·01	49989	·03	50958
1·42	31133	·11	21059	·08	24782	...	23683	·07	21459	·19	28327
·21	58160	·01	60086	·0006	60420	·005	61191	·02	61316	·43	73369
·42	17409	·08	26593	·004	22841	·05	20254	·09	23496	·45	25009
...	4393	...	4956	...	4967	...	4581	...	5654	...	6742
·45	1246390	·10	1288594	·08	1293587	·06	1275440	·11	1298619	·22	1280027

Statement No. VII.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1914-15.

District.	Towns.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending 31st March 1915.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Patna	Patna ...	2860	593	1948	1st October 1884.
	Bihar ...	1283	238	954	1st April 1887.
	Dinapur ...	1079	174	636	28th January 1891.
	Barh ...	311	43	222	1st April 1887.
	Khagole ...	224	41	159	12th July 1910.
	Total ...	5757	1089	3919	
Gaya	Gaya ...	2242	664	1189	1st January 1883.
	Tikari ...	279	38	35	3rd „ 1891.
	Daudnagar ...	345	68	230	Do.
	Total ...	2866	770	1454	
Shahabad	Arrah ...	991	133	1229	20th July 1885.
	Buxar ...	471	84	336	1st April 1887.
	Dumraon ...	656	104	234	Do.
	Jagadespur ...	325	60	295	20th December 1890.
	Sassaram ...	929	142	640	1st April 1887.
	Bhabhua ...	238	63	232	Do.
	Total ...	3610	586	2966	
Total of Patna Division.		12233	2445	8339	
Saran	Chapra ...	1556	357	955	1st April 1887.
	Revelganj ...	349	62	263	12th December 1890.
	Siwan ...	539	62	311	1st April 1887.
	Total ...	2444	481	1529	
Champanan	Motihari ...	426	94	152	1st April 1887.
	Bettiah ...	583	106	430	Do.
	Total ...	1009	200	582	

Statement No. VII.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1914-15.

District.	Towns.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending 31st March 1915.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Muzaffarpur	Muzaffarpur	1350	258	1452	1st January 1886.
	Sitamarhi	395	98	238	1st April 1887.
	Hajipur	842	155	670	1st May 1890.
	Lalganj	360	78	286	1st April 1887.
	Total	2947	584	2646	
Darbhanga	Darbhanga	2,250	393	759	24th May 1884.
	Roserha	330	72	141	3rd January 1891.
	Samastipur	328	48	130	25th July 1910.
	Madhubani	536	79	317	1st April 1887.
	Total	3444	592	1347	
Total of Tirhut Division.		9844	1857	6104	
Monghyr	Monghyr	16	329	698	15th November 1882.
	Jamalpur	1111	229	632	Ditto.
	Total	2737	558	1330	
Bhagalpur	Bhagalpur	1540	244	848	15th February 1884 withdrawn on 16th October 1895; re-extended on 18th August 1898.
	Colgong	161	50	43	Ditto re-extended on 19th December 1901.
	Total	1701	294	891	
Purnea	Purnea	410	45	251	1st July 1887.
	Kishanganj	191	26	169	12th November 1892.
	Katihar	443	36	186	8th August 1910.
	Forbesganj	122	13	153	9th August 1912.
	Total	1166	120	759	

Statement No. VII.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1914-1915—contd.

District.	Towns.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending 31st March 1915.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Santal Parganas	Sahibganj	537	99	167	1st May 1884.
	Deoghar	231	43	169	Ditto.
	Madhupur	320	41	133	22nd August 1910.
	Dumka	261	58	158	Notification dated the 9th April 1884 and 23rd August 1910.
	Total	1349	241	627	
	Total of Bhagalpur Division.	6953	1213	3607	
Cuttack	Cuttack	1483	261	1,958	1st September 1884.
	Kendrapara	547	96	320	7th February 1888.
	Jajpur	406	81	186	Ditto.
	Total	2436	438	2459	
Balasore	Balasore	440	97	264	7th February 1888.
Puri	Puri	773	279	261	7th February 1888.
Sambalpur	Sambalpur	400	86	182	7th March 1895.
	Total of Orissa Division	4049	900	3166	
Hazaribagh	Hazaribagh	671	111	275	1st January 1885.
	Chatra	341	59	214	1st August 1885.
	Giridih	236	31	110	8th September 1910.
	Total	1248	201	599	
Ranchi	Ranchi	1029	136	911	1st April 1887.
	Lohardaga	217	46	255	25th June 1892.
	Total	1246	182	1166	

Statement No. VII.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1914-1915—concl'd.

District.	Towns.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccination on children under one year during the year ending 31st March 1915.	Date of Vaccination Act to town.
1	2	3	4	5	6
Palamau	Daltonganj	195	35	199	9th October 1890.
Manbhum	Purulia	466	68	843	1st January 1887.
	Raghunathpur	201	34	201	9th February 1894.
	Jhalda	206	48	180	9th July 1892.
	Total	873	150	1224	
Singhbhum	Chaibassa	305	56	245	20th June 1892.
	Total of Chota Nagpur Division.	3867	624	3433	
	Total for the Province.	36946	7039	24649	

1880-1881

Year	...	...	...	...
1880	...	...	...	...
1881	...	...	...	...
1882	...	...	...	...
1883	...	...	...	...
1884	...	...	...	...
1885	...	...	...	...
1886	...	...	...	...
1887	...	...	...	...
1888	...	...	...	...

STATEMENT II.

to show that the sum of the squares of the first n natural numbers is equal to n(n+1)(2n+1)/6

n	1	2	3	4	5	6	7	8	9	10
1	1									
2	1	4								
3	1	4	9							
4	1	4	9	16						
5	1	4	9	16	25					
6	1	4	9	16	25	36				
7	1	4	9	16	25	36	49			
8	1	4	9	16	25	36	49	64		
9	1	4	9	16	25	36	49	64	81	
10	1	4	9	16	25	36	49	64	81	100

STATEMENT II.

n	1	2	3	4	5	6	7	8	9	10
1	1									
2	1	4								
3	1	4	9							
4	1	4	9	16						
5	1	4	9	16	25					
6	1	4	9	16	25	36				
7	1	4	9	16	25	36	49			
8	1	4	9	16	25	36	49	64		
9	1	4	9	16	25	36	49	64	81	
10	1	4	9	16	25	36	49	64	81	100

ANNEXURE II.

Provincial Statement.—Showing the different kinds of lymph used and their rates of success during the year 1914-15.

District.	Primary vaccination.												
	Direct from the calf.					With lanoline or glycerine lymph.							
	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	25356	25179	92	85	99.30	32073	31883	
Gaya	63234	64841	175	218	99.39	...	...
Shahabad	54698	54229	399	60	99.16	7718	7621	
Saran	81979	80502	638	739	99.44	...	...
Champanan	63684	63369	299	115	99.50	...	...
Muzaffarpur	18293	18158	121	14	99.26	86452	86232	
Darbhanga	94379	93981	326	72	99.57	3258	3235	
Monghyr	89774	89696	68	10	99.91	...	...
Bhagalpur	51486	51321	57	108	99.67	22201	22094	
Purnea	57211	56935	250	26	99.51	...	...
Santal Parganas	51521	51428	83	10	99.81	...	...
Cuttack	112651	110711	424	1,516	98.27	...	...
Balasore	47664	47436	108	125	99.52	...	...
Angul	7743	7455	137	151	98.28	...	...
Puri	34191	33661	385	145	98.44	...	...
Sambalpur	...	25486	25254	65	167	99.08	935	922	13	98.60	...	...
Hazaribagh	46828	46300	29	9	99.91	...	...
Ranchi	50107	50074	25	8	99.93	...	...
Palaman	25410	25204	113	93	99.96	1254	1	
Manbhum	57150	57056	68	26	99.83	...	...
Singbhum	24903	24850	28	25	99.78	...	...
Political States of Singbhum	6745	6740	5	...	99.92	...	...
TOTAL	...	25486	25254	65	167	99.08	1067382	1090088	3739	3555	99.31	1,52,956	1,52,219

Revaccination.																	
Arm-to-arm 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
64	125	99.40	...	...	...	...	...	826	603	210	13	73	...	...	...	...	...
...	...	...	...	...	...	...	...	1584	1014	387	183	4.01	...	...	...	...	...
97	...	98.74	...	...	...	...	...	662	219	399	44	25.40	...	...	...	...	...
...	...	...	...	...	...	...	...	514	227	220	67	44.16	...	...	...	...	...
...	...	...	...	...	...	...	...	1198	777	304	115	64.90	...	...	...	...	...
200	20	99.40	...	...	...	...	...	1129	848	254	27	6.94	77	54	23	...	70.13
23	...	99.29	...	...	...	...	...	1109	544	257	328	49.05	...	...	...	...	...
...	...	...	...	...	...	...	...	105	53	52	...	50.47	...	...	...	...	...
67	40	99.51	...	...	...	...	...	4148	2416	1514	218	38.24	...	...	...	...	...
...	...	...	...	...	...	...	...	4682	1561	3020	101	33.34	...	...	...	...	...
...	...	...	...	...	...	...	...	2908	1754	932	222	6.31	...	...	...	...	...
...	...	...	...	...	...	...	...	12183	2586	2613	5984	21.22	...	...	...	...	...
...	...	...	...	...	...	...	...	9144	5845	1900	1399	63.92	...	...	...	...	...
...	...	...	...	...	...	...	...	306	225	57	24	73.52	...	...	...	...	...
...	...	...	...	...	...	...	...	285	159	85	41	55.78	...	...	...	...	...
...	...	...	1197	998	121	78	83.37	538	587	120	31	7.193	...	...	...	...	...
...	...	...	...	...	...	...	...	2444	1969	431	44	80.56	...	...	...	...	...
...	...	...	...	...	...	...	...	1205	884	320	1	73.36	...	...	...	...	...
54	46	92.02	...	...	...	...	...	2393	1969	158	206	87.28	...	...	...	...	...
...	...	...	...	...	...	...	...	17901	16313	1487	101	91.12	...	...	...	...	...
...	...	...	...	...	...	...	...	1680	1059	497	124	63.03	...	...	...	...	...
...	...	...	...	...	...	...	...	2	2	...	...	100	...	...	...	...	...
505	232	99.51	1197	998	121	78	83.37	66944	41414	16197	9335	61.86	77	54	23	...	70.13

