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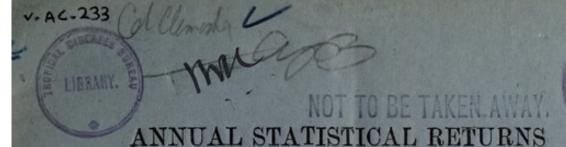
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SHORT NOTES ON VACCINATION

IN

BIHAR AND ORISSA

FOR THE YEAR

1921-22

BY

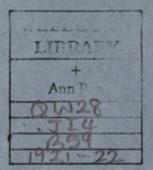
LT.-Col. W. C. ROSS, M.B., Ch.B., D.P.H., I.M.S., Director of Public Health, Bihar and Orissa.



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BY

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ANNUAL

VACCINATION REPORT

BIHAR AND ORISSA

FOR THE YEAR

1921-1922.

1. Staff.—Lt.-Col. 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 for short absences on privilege leave, viz., Dr. S. N. Tiwari in the South Bihar Circle, Dr. B. P. Mazumdar in the North Bihar Circle and Dr. T. Sebastian in the Chota Nagpur and Orissa Circle.

The Inspecting Staff consisted of 20 District Inspectors of Vaccination and 69 Sub-Inspectors of Vaccination (including three deputed for duty at the Vaccine Depôt), in addition to the one Sub-Assistant Surgeon combining vaccination inspection with other duties in Angul. The total number of vaccinators employed in the Province during the year was 1,073 licensed and 233 paid, against 1,088 licensed and 227 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 939,851, as compared with 1,060,485 last year. The decrease was 120,634 and was due to political unrest and active interference with the work of the staff. Many reports were received both in writing and verbally of the increasing difficulty in carrying on the work in face of opposition stirred up by agitators and of the unwillingness of the people either to permit the operation on their children or to pay for it. These difficulties are likely to cause a further falling off next year as the vaccinators are now unwilling to work in many places and their numbers are likely to decrease as they cannot realise their fees fully. Of the total number of operations in the Province 925,134 were performed by the staff of the Vaccination Department as compared with 1,041,451 last year. Nine lakhs two thousand two hundred and eighty-six operations were primary and 22,848 were re-vaccinations as against 965,334 primary and 75,147 re-vaccinations last year.

There was a decrease of 64,048 in the primary operations and 52,299 in re-vaccinations during the year. Of the total operations performed (925,134), 909,007 equal to 98.26 per cent. were successful, as compared with 1,002,983 equal to 96.29 last year. The number of operations performed in municipalities fell by 10,000 as compared with last year's returns. The total number of operations performed was 33,903 and the number of successful operations was 31,036 of which 30,040 were primary and 996 were re-vaccinations as compared with 31,541 and 5,329 respectively last year. The ratios of success in municipalities were 96.47 per cent. for primary operations and 36.00 per cent. for re-vaccinations as compared with 95.09 per cent. and 48.98 per cent. respectively last year. The number of operations performed in rural areas was 891,231 as compared with 997,578 last year and the ratios of successes were 99.33 per cent. for primary operations and 61.93 for re-vaccinations.

3. Vaccination in Districts.—Of the three districts of the Patna Division,

Shahabad reported an increase in the number of operations performed (6,599) whilst Patna and Gaya reported a decrease of over 8,000.

There was a general decrease in the number of operations reported from all light Division. the districts of the Tirhut Division.

The districts of the Bhagalpur Division recorded small increases except
Purnea and Monghyr in both of which
large decreases were reported.

With the exception of Angul and Sambalpur all the districts of Orissa recorded decreases in the number of operations, the greatest decrease being in Puri (7,305).

With the exception of Ranchi there was a general fall in the number of operations returned from the districts of Chota Nagpur, the greatest decrease being in Palamau (4,177).

4. Vaccination in Towns and Compulsory Areas.—Statement VII shows that during the year 15,645 children under one year of age out of an available number of 26,347 or 59 38 per cent. were successfully vaccinated.

The towns of Monghyr, Bhagalpur and Darbhanga again show the smallest proportion of work done, and the towns of Chapra, and Cuttack have also given 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 191,822 primary operations and 389,925 re-vaccinations were performed as compared with 201,433 and 348,149 respectively in the previous year. As the total population of the Feudatory States is under four millions, these figures are rather extraordinary when compared with the provincial figures, which show a total of roughly nine lakhs operations performed amongst the population of 34,002,189.

The ratio of primary vaccinations reported by the Orissa States is 48:42 per thousand against 26:57 in the Province and of re-vaccinations 98:43 per thousand against a provincial ratio of 1:06. The number of children born each year in the Feudatory States may be estimated roughly at two lakhs, and of these a considerable number, certainly over 60,000, die in infancy.

6. Protection of infants.—During the year under report the number of children under one year available for vaccination was 934,229 and the number of successful operations was 370,510 equal to 396 per thousand against 377,981 or 386 per thousand successful operations out of 978,806 children available during the previous year. The protection of infants in municipalities is separately shown in statement VII. It gives a ratio of 593 per thousand of the surviving infant population as compared with 594 in the previous year.

These figures are unsatisfactory inasmuch as they show that for more than half of the total number operations are 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 district of this Province has been 96,128.

During the first quinquennium the number of deaths were 40,437 and during the second 55,691. In each of the last five years the mortality was as follows:— 6,687, 6,205, 18,514, 19,374, and 4,911.

The provincial ratios of the mortality from small-pox per thousand of population during the last five years have been '19, '17, '53, '56 and '14.

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 more definite 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 61,401 primary vaccination as against 145.627 in the previous year. The decrease is due to the inspections being made in greater detail in the villages and to the inclusion of the spleen census amongst village children in the cold weather vaccination inspection tours.

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 17 out of the 21 districts in the Province.

The Civil Surgeons of the Province inspected 31,207 primary and 8,600 re-vaccination operations against 53,177 primary and 9,047 re-vaccination 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 Depôt at Namkum supplied the province with vaccine throughout the year. A large supply of vaccine is held in reserve and the necessary stores and supplies for manufacture are in ample stock. Fifty-five lakhs eighty-nine thousand nine hundred and thirty doses of vaccine were manufactured during the year as compared with 1,869,903 doses last year. The number of doses issued was 2,679,298 against 2,628,545 in 1920-21. The number of doses in stock at the end of the year was 4,100, 366. The number of calves used during the year was 957 as compared with 362 in the previous year, and the average yield of crude vaccine was over 58 grammes per calf as compared with 55 grammes in the previous year. The working cost of the Depôt for the year amounted to Rs. 28,879 as compared with Rs. 24,923 in the previous year. The average cost of the vaccine per dose works out at '99 pies on the gross expenditure and to '29 pies on the net expenditure when the receipts are taken into account.

11. Vaccine Depôt and Cold Storage.—The Vaccine Depôt was again closed for manufacture twice during the working season on account of outbreaks of foot-and-mouth disease but in spite of these interruptions a record quantity of vaccine was produced and a large reserve stock was again accumulated. As these epidemics amongst the calves occur every year the Director, Civil Veterinary Department, was again consulted and advised fencing the premises, the erection of isolation sheds and comprehensive disinfection of the operating room, calf sheds, and environment. Plans are being prepared accordingly for administrative approval.

The cold storage, which is essential for the preservation and ripening of the large stocks of vaccine, had been working badly for some time and was accordingly closed for repairs in April. The vaccine was taken to Calcutta in ice and kept in cold storage there until the entire cold storage plant had been taken down, and re-erected after necessary repairs to the machinery and renewal of the insulation in the cold chamber. It is now working satisfactorily once more.

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

12. Experimental Work—Further experimental work was carried out at the Depôt during the year with some interesting results. It was established that the more viscid and aseptic vaccine manufactured with the addition of 5 per cent, starch and 2 per cent, boric acid in 93 per cent, water (after boiling to form a jelly) was potent for a shorter time and did not store so well as plain glycerine vaccine. No change can therefore be made in the product issued for use until a better mixture can be made.

It was also found that crude pulp when stored as such in the cold storage did not preserve its potency as well as pulp mixed with glycerine.

Variations in the technique of operation were carried out with a view to increasing the output per calf and the production of crude pulp per calf has now been raised from 12:38 grammes in 1914 to 58:36 grammes. This is probably as near the maximum as we can go with advantage and may be taken as an approximately final figure on which to base our estimates of manufacture.

Further work was also done to improve the seed vaccine and a better quality of seed was produced by vaccinating a calf direct from the vesicles of a calf vaccinated from a child. The quantity was less but the quality was better.

13. Cost of the Department.—The total cost of the Vaccine Department (excluding the Vaccine Depôt) during the year, as detailed in Statement II, was Rs. 1,56,873 or Rs. 39 less than the previous year.

The cost per successful operation was 2 annas 8 pies against 2 annas 5 pies in the previous year.

14. General.—As I have already indicated in paragraph 2 above, the work of vaccination was considerably interfered with during the year—in some districts more especially—by political agitation and the passive and in soms cases active hostility of the people, and by discontent amongst the vaccinators caused by the difficulty in realising their fees.

The result of the year's working is not therefore very satisfactory and the state of vaccination especially in the rural areas is likely to go from bad to worse. It has become a matter for serious consideration as to how long the present arrangements can continue to work at all. The vaccinators are underpaid and discontented and find great difficulty in realising their fees in many cases. Some have left their work and many more are likely to do so and a good many of them are adversely influenced by political propaganda to the detriment and neglect of their proper work. It is therefore no matter for wonder that the amount of vaccination work done has decreased considerably in the year under report.

In my opinion a change in system is now called for to meet the changed conditions and I very strongly recommend a change of policy from the licensing system to a system of free and compulsory vaccination and a change of control with decentralisation from the Vaccination Department to the District Boards.

I have for many years advised the introduction of free and compulsory vaccination and I am convinced that it is more necessary now than ever before if the Province is to be saved from lapsing into a partially unvaccinated condition which will surely end in a great epidemic of small-pox.

In conclusion I desire to bring to the notice of Government the work of the three Assistant Directors of Public Health and especially of Dr. T. Sebastian whose work has been characterised by reliability and sound judgment. Dr. C. N. Banerji has carried out his duties as Superintendent of the Vaccine Derôt with efficiency and in a very satisfactory manner.

W. C. ROSS,

LT.-COL. I.M.S.,

Director of Public Health, Bihar and Orissa.

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	District.		Population of district according to the course of light.	Average population per square mile.	Average number of vaccinators employed through- out the season.	Total numl	er of persons v	accinated,	er of persons vaccinated by each	Fri mar
Number,			Population of	Average popula	Average numbered the season	Male.	Female.	Total.	Average number of vaccinator.	Total,
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	Pares Division.	1								
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	(By licensed Vaccinators)			£ 60	26,712	25,556	52,268	871	\$2,230
,	Gaya By paid Vaccinators	- 3	7,152,930	457	{ 20	3,497	3,723	6,816	349	6,714
	(By licensed Vaccinators		-		(70	18,331	17,149	85,480	467	35,464
3	Shahabad By paid Vaccinators By licensed Vaccinators	}	1,816,821	415	{ 24 100	4,234	3,391	7,615	317	7,510
	Cay increased varieties	-			- 100	33,497	28,378	61,475	564	61,475
	(By taid Vaccinators	7		***	(62	13,800	12,160	25,960	417	25,451
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	Tiekst Division.									2001
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	Champaran By licensed Vaccinators	- 5	L TVIII	112	5 60	17,538	16,628	34,166	534	34,069
	Muzafferpor By paid Vaccinators]	2,754,945	907	§ 12	1,771	1,550	3,321	277	3,081
	(By licensed Vaccinators	- 3			1 75	40,266	39,041	79,307	1,068	79,275
1	Darbhangs By paid Vaccinators	- 3	2,913,529	870	{ 8	1,841	1,343	2,583	324	2,183
	Darbhangs By licensed Vaccinators	1			6 88	44,024	43,683	86,066	977	88,068
	(By paid Vaccinators				C 32	5,923	4,961	30,584	214	0.000
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	Blagalpur Division.									
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	(By pold Vaccinators	- 1			(11	2,093	1,635	3,727	339	2,924
	Bhagalpur By licensed Vaccinators	3	2,033,770	461	1 63	24,813	27,903	67,619	914	57,588
-	(By pold Vaccinators	- 1	9.001.000	405	5 0	2,210	1.953	4,163	462	1,140
39	Purnea Usy licensel Vaccinators	3	2,024,606	4/0	£ 48	17,823	16,580	34,402	712	33,694
11	Santal Perganas Sp paid Vaccinators	- 3	1,708,639	329		3,391	2,730	6,121	763	4,830
	Usy licensed Vaccinators)			6 67	22,529	21,990	44,519	783	44,167
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16	Puri Py yaid Vaccinators		961,651	380	29	19,701	16,143	35,884	1,227	35,419
16	Sambalpur By puld Vaccinators	1	7:0,466	206	5 0	152	124	206	42	230
20	Sambalpar " (Dy Hernsed Vaccinators	- 2	100,100	190	31	10,353	9,568	20,311	597	20,087
	(By paid Vaccinators	7	-	100	(50	23,038	18,422	41,530	865	39,320
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13,11	-	3 28,229	783	2,210	925	446	1 2	1000	29'60	1-98	10-	> 143,407	28-8	3,338	
51,32	4 53,53	107,327	353	1,063	607	274	99'53	76-9	3)	33	20 11			A Committee	

100	1000	dans les	AND ALCOHOLD	and the same	in and	jo susu	-	hough-	A 100	ar dec		by each	Primary
Nauber.	1		Distric	at.		Population of district according to the census of	Average population per equare mile.	Average humber of vaccinators employed through-	Total num	Female.	vaccinated.	Average number of persons vaccinated to	Total,
1	tt	12	,	1 7	11	3	1	5	11	6	4	7	8
		Ci	ola Naggur l	Division.									
17	Harar	bagh	\{By p	ald Vaccinat	028 am	} 1,276,04	181	5 4	-	41	857	214	
tie	000	10.22	(By I	icensed Vacci aid Vaccinat		,		C 3	0.000	13,368	27,938 1,762	634 583	26,8
18	Ranch	i	4	licensed Vacc		} 1,334,47	3 187	2 0	1	18,736	28,509	819	33,8
19	Palam	94	2	paid Vaccinationsed Vacc		} 733,30	4 140	{ g		1,225 6,519	3,187	308 565	13,6
20	Went	bum	(By p	said Vaccinate		} 1,548,77	7 373	5 30	7,408	6,008	14,196	473	13.80
	Juliano.	100		icensed Vacci paid Vaccinat		2		(41	- 1-10	14,940	31,101	741 225	30,5
21	Singh	bhum	2	icensed Vacc		} 750,43	8 195	23		7,435	15,772	065	15,1
		2010						200	1	No. of Lot	- mail	The same	THE P.
			(By)	pald Vaccina	tors	2	8 208	5 40	11,475	9,429	20,904	426	10,71
	Divi	of Chota N	agpur (By)	Scensed Vacci	nators	8,653,02		181	66,606	60,898	127,504	704	120,2
177	1	40:00	(By I	paid Vaccina	tors	2		C 228	£2,961	52,166	115,127	804	101,80
		of Vaccin		licensed Vacc	insters	84,000,18	600	1		2000	810,007	754	800,4
	1		(Total	M		-	_	1,301	401,771	443,363	925,134	711	902,25
10	-		Total Disper	neary Departs	ment	-			-	***		400	
				Total Rail	ways			1	1,087	315	1,402	1,403	3
	1		Total Coo	dy Departmen	it		-	,	1,114	548	1,662	631	1
	1			and Cantonn	ents			2	11,099	554	11,653	(a) 251	8
	10					9 12						-	-3 6
	100		est.ts	Grand 1	Total		- "	1,506	495,071	414,780	939,851	719	903,11
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to. 100, 1501 \$0,01 | 0754 | 071

istricts of Bihar and Orissa during the year 1921-22-concld.

coination			1	Re-v	accination.	Sen.	Percentage ful cases	in which	ed bone	Percentage o	f unknown	ber of perso	onual num- ons success- ceinated	deaths	e annual ber of from
	Success	sful.	19.00		a direct	1901000	the resu	its were		cases to to	tal cases.	during five	previous years.	small during five	-pox previous years.
Under one year,	One year and under six yours.	Total of all ages.	Unknown.	Total, my dispit g I feer	Successful,	Unknown,	Primary.	Revacelization.	Persons successfully vaccinated per 1,000 latton.	Primary.	Ro-vaccination.	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.
	10	11	12	13	14	15	16	17	18	19	20	21	23	23	24
416 14,353 1,045 26,433 318 10,114 33,681 16,225 508 10,337 5,655 77,462	393 12,245 235 7,387 439 3,208 7,633 14,131 270 4,511	811 26,863 1,283 33,887 932 13,679 11,475 30,578 785 15,177	8 20 101 525 18 7	46 1,046 479 4,614 2,209 428 1,334 582 82 577 4,150 7,247	13 896 267 8,113 1,830 249 679 414 12 421 2,831 5,005	15 57 38 3:2 163 156 183 88 1 34 400 647	100* 99*89 100 100* 97*28 99*82 99*90 97*88 90*92	41-93 90-79 60-54 72-30 88-44 91-54 58-99 88-90 11-91 77-53	} 23-12 { } 29-22 { } 21-04 { } 25-07 { } 21-95 {		32-60 6-14 7-93 6-76 7-37 36-41 13-71 15-12 1-21 5-59	} 56,238 } 40,028 } 22,695 } 48,115 } 17,692 } 165,769	28°45 30°06 *30°94 31°06 23°29 29°32	174 675 454 267 294	14 -50 -61 -10 -10 -10 -10 -10 -10 -10 -10 -10 -1
39,467 331,023 370,510	\$3,237 451,000 505,137	98,717 797,307 805,874	1,718 963 2,681	17,965 9,583 22,848	7,019 6,414 13,633	1,662 1,162 2,824	96°07 99°73 99°55	76°17 67°08	} 20:73 {	176§ -12 -29	12-52 12-12 12-36	1,013,828	29-81	12,104	-35
=						-111									
330	13	344	-	1,056	500	14	99-43	67-98			1-32				111
1	1		53	1,590	- 305	1,255	10'82	100*		78:71	80°61			-	
284	151	925	25	10,762	6,205	1,024	25:26	63:24	-	2-70	9-57				
371,125	505,302	890,745	2,750	36,256	20,443	5,147	09:54	65:71		-30	14'19		-	***	

Summary. It Is I may all gritals a sind has to his to abstract

Total Colored Annual Colored C	Total number of persons vaccinate	Total number of operations d. performed.	Percent successfu in which the	d cases	Average no persons vac by each v tor.	betanion	childre	ober of n success- ecinated,		Ja venia?	antinates.
and her type of deferrings.	Primary. Re-vacelmation.	Primary. Re-raceination.	Primary.	Re-raceination.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under 6 years.	Ratio of success- ful vaccina tions per 1,000 of popula- tion,	Total cost of Department,	Average cost of tach sue-cessful case,
AL 12 12	2 3	4 (2) 8	6	7	1.	9	10	11	12	13	16
BY DISPENSARY STAFF Bishement III BY OTHER AGENCIES. Rishways, Cooly Depos, Ja. and Cantonments.		1,300 13,4	95°12 56 90°54	67-08 63-23	1,901 5(a)	510	370,510 615	365	26-73	1,50,503 1 1	100 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1 mg/1
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				o s cur		T MANUEL						Tolloyer smert to teler
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												WOUNTED MAARTERING
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No.	Circle and district.	European supervising officer,	Pay.	Native supervising officer,	Pay.	Paid vaccinators.	Pay.	Licensed vaccinators.	Pay.	Cerks.	Pay,	Peens, etc.	Pay.
1	,	3		5		7	8	9	10	11	12	13	14
1	PATNA DIVISION.	-		5	Rs. a. p.	19	Rs. a. p.	60	Re. a. p.	-	Rs. a. p.		Rs. a. p.
2	Gaya		***	5	3,706 4 6	20	1,716 13 7	76	336 0 0			2	192 0 0
3	Shahabad	***		5	2,567 10 8	24	2,324 0 0	109	2,006 5 0				
	Total of Patna Division		-	16	8,617 6 7	63	5,904 13 7	246	2,342 5 0		-	2	192 0 0
-	TERRUT DIVISION.	1								-		-	
Δ	Saran			4	2,821 9 9	8	915 13 4	74	-	***			=
B	Champaran		-	3	1,502 8 0	4	532 0 0	64	15 0 0				-
2	Muzaffarpur i Darbbanga i			4	2,763 14 4	12 8	734 8 0 792 0 0	75	54 0 0	-			-
				_		-				1	60 0 0	1	48 0 0
			-	15	p,248 0 1	32	2,074 0 4	301	076 0 0	1	00 0 0	1	48 0 0
8	BHAGALPUR DIVISION.	-	-	-	-	-	No les						
9	Bhagalpur	***		5	2,145 0 0 3,438 15 11	7	844 7 6 1,160 12 9	63	***			2	120 0 0
20	Purnea			4	1,953 13 11	9	1,304 6 102	48					
21	Santal Parganas	-		7	3,587 0 0	8	1,248 8 9	67			-		
	Total of Bhagalpur Division			20	11,089 18 10	35	4,556 3 10	198	-		-	2	120 0 0
	ORISSA DIVISION.			1	,								
12	Cuttack			4	2,041 10 8	10	1,481 0 5	70					
13	Balasore	-120-	-	3	2,039 14 1	mosk.	45 9 7	32	345 0 0	-		-	-
15	Puri			3	2,630 0 6 1,751 2 0	29	3,787 14 1	12	165 0 0				
16	Sambalpur			3	1,595 0 0	6	609 3 1	34	-	-	-	2	48 14 8
	Total of Orissa Division			16	10,000 11 3	51	0,396 11 7	148	510 0 0	-		2	48 14 8
	CHOTA NAGPUR DIVISION.										10000		19.00
17	Hazaribagh			4	1,688 5 11	5	1,103 8 9	44		-			
18	Banchi		-	5	3,301 8 0	4	750 0 0	47					
19	Palamau	-	-	3	1,600 12 2	9	1,200 10 7	25					
20	Manbhum			19	2,702 5 4 1,410 12 0	30	2,942 15 6 395 14 6	43 23	450 0 0				
				-				-		-			
	Total of Chota Nagpur Division		-	34	11,002 11 5	53	6,402 1 4	181	450 0 0				-
	Total of Vaccine Circle			101	50,027 11 2	233	26,123 14 8	1,073	3,678 5 0	1	60 0 0	7	408 14 8
	ESTABLISHMENT OF THE ASSISTANT DIRECTOR OF PUBLIC HEALTH, NORTH BIHAR CIRCLE.			1	11,936 11 0		-	***		2	1,219 0 0	2	274 0 0
	DITTO SOUTH BIRAR CINCLE	***		1	10,675 2 9	1000		-	***	2	1,338 11 2	2	202 5 9
	DITTO CHOTA NAGPUR AND ORISEA CIRCLE.	-		1	10,075 0 0	-		-		2	1,181 4 0	2	235 4 6
	lesteT		-	3	32,716 13 9		***		-	6	3,738 15 2	6	711 10 8
	Total of Province	[-	-	114	80,764 8 11	:31	26,133 14 5	1,073	3,878 1 0	7	2,708 15 2	15	1,110 8 11
-	Total of Province -	_	-	114	80,704 8 11	-31	26,133 14 5	1,673	3,678 1 0	7	2,708 15 2	15	

rovince of Eikar and Orissa during the year 1921-22.

ture.					ma	Green To	Paid fr	om			vacei-	njes so
Total pay of establishment,	Travelling allowance.	Cost of lymph.	Other contin- gencies.	Total cost.	Imperial Fund.	Provincial Fund.	Local Fund.	Manicipalities.	Natire States,	Total.	Number of all successful vacci- nations and re-vaccinations.	Average cost of each secressful
	14	3	10	17	18	19	30	91	23 N	23	24	. 25
13 Bs. a. p.	Rs. a. p.	Bs. a. p.	Rs. a. p.	Rs. s. p.		Rs. s. p.	Bs. a. p.	Bs. a. p.	Be. s. p.	Rs. s. p.	2000	Rs. s. p.
			363 10 0	6,327 11 6		5,983 7 6	840 0 0	1,514 4 0		6,937 11 6	63,297	. 0 1 7
5,614 2 1	1,520 10 1	***	386 5 6	6,507 11 1	-	4,791 10 0	1,976 8 4	799 13 9	100	6,567 11 1	42,710	0 3 6
5,897 15 8	2,006 3 11	-	232 14 9	9,137 2 4	-	6,743 1 10	1,540 0 0	854 0 6	101	9,137 9 4	69,010	0 2 1
6,955 9 2	4,004 1 6		981 14 3	22,032 8 11	-	15,088 3 4	3,756 3 4	3,183 2 3	***	22,033 8 11	175,017	0 2 0
			E	1111	1	0 10	1	.0.		E	4	,
3.737 7 1	867 8 6	100	227 16 0	4,532 10 7		3,488 15 3	182 6 0	831 5 4	144	4,832 10 7	87,665	0 1 11
2,049 8 0	1,080 5 6	100	97 1 0	3,796 14 6	1000	2,694 14 0	190 0 0	353 0 0 734 3 0	***	3,226 14 6 4,688 2 4	36,927 82,124	0 1 4
4,005 1 4 3,114 0 0	548 1 0 1,376 10 1		135 0 9	4,688 2 4 4,696 10 1		3,628 10 1	56 0 0	1,015 0 0		4,090 10 1	88,004	0 0 10
12,906 0 5	3,572 6 1		665 15 0	:7,144 8 6	-	13,257 7 2	923 6 0	2,963 8 4		17,144 5 6	245,220	0 1 1
			233 5 11	4,861 6 11		3,759 9 3	416 3 9	ess 9 11	- 101	4,801 0 11	84,215	0 1 5
3,109 7 6 4,564 13 8	1,519 0 6 697 13 6	-	283 4 0	5,545 14 2	100	4,105 9 5	006 1 9	774 3 0	-	5,545 14 9	60,115	0 1 5
3,258 4 9	1,223 0 2		190 1 3	4,690 6 2		3,246 14 1	533 4 10	897 3 3		4,080 5 3	36,428	0 2 0
4,833 8 9	2,988 0 0	-A-	114 10 3	7,936 3 6	-	6,670 0 0	714 0 0	553 3 0		7,930 3 0	80,187	0 2 6
15,768 1 8	6,428 7 2		829 5 5	12,023 14 3		17,813 0 9	2.272 10 4	2,509 3 2		23,023 14 8	202 945	0 1 9
			-							235		
3,525 11 1	1,161 5 1	140	1:4 3 8	4,801 3 10	2	3,300 15 9	955 10 2	643 9 11		4,801 8 10	61,434	0 1 8
2,857 14 6	1,013 4 0	-	60 0 0	3,515 8	0 1000	3,151 2 1	199 0 0	374 0 5		3,031 3 6	\$6,580 4,955	0 11 3
2,840 10 1 5,839 0 1	625 13 11 1,556 14 5		90 0 0			2,598 0 5	3,593 2 1	194 12 0		7, 85 14 0	84,807	0 8 3
2,253 1 9	845 9 0		e9 G d			2,492 3 6	359 1 9	317 6 0	100	å,167 11 . S	20,823	0 3 4
17,025 5 6	F,202 14 5	-	373 4 1	22,001 S	1	16,164 13 9	8,000 14 0	1,439 13 4	191	92,661 8 1	148,408	0 8 1
			0,11								1007	
2,991 14 8	1,556 15 6		110 15	4,008 13	5	3,505 4 8	710 0 0	387 B S	4	6,009 13 5	\$0,884	0 2 1
4,051 8 0	427 3 0	***	80 0		200	8,608 11 0	1 300	750 0		4,558 11 0	10,198	1000000
2,009 6 9	1,238 13 8	110	71 13			3,910 6 4	1	3/9 0 (7,019 9 5	49,181	72.535
8,005 4 10 1,906 10 6	1,354 4 7 833 14 0		50 6		2 4000	9,203 10 6		1 2 3 4 9		9,600 15 0	10,605	0 9 1
17,854 12 9	5,411 3 3		802 1	9 23,658 1	9	16,543 10 5	5,019 1 7	2,105 5		\$5,068 1 0	115,509	
80,508 13 6	24,709 0 5	101	3,241 8	7 1,09,480 6	0	78.605 3 5	10,909 3 3	12,5% 15 1	o	1,09,460 0 0	917,168	
19,459 11 0	3,273 6 9		610 1 1	1 17,392 3	6	17,548 8 6				17,562 3 8	-	144
				10.000.10		17 400 10		1		18,013 19 3		-
12,216 3 8	The state of the s			1 15,689 12				100	-	15,807 11 6	1 2000	-
37,167 Y 2	9,517 10 3	-	1,727 10	0 69,419 11	5	49, 612 11				49,419 11 5	7	
	-					-	-					0 2

B .- DISPENSARY VACCINATION.

STATEMENT No III.—Showing Dispensary Vaccination in the Province of Bihar and Orissa during the year 1921-22.

		district to	attachtd to	+	vaccinated by		Primar	y vaccina	tion.		Re-	vaceinsți	on.	Percent successf in white results know	ul cases ch the s were	Percent unknow to total	n cases
		s in each di	vaccinators of g the year.	persons vaccinated	persons vace		S	occessful.						- 4		IL I	1
District.	0.00	Number of dispensaries I which a vaccinator is a	Average number of vacel dispensaries during the	Total number of persons	Average number of pers- cach vaccinator.	Total.	Under one year.	One and under six years.	Total of all ages.	Unknown.	Total.	Specessful,	Unknown.	Primary.	Re-racelnation	Primary.	Re-racelnation.
1		,	3	4	5		7		9	10	11	12	13	14	15	16	17
														1	200	1.209-	1 700
Patna	***	***	***	111	441	201	***	444	110	101	***	***	***	***	***		
Gaya	***					***		***	***	-	100	***	***	***	-		
Shahabad			***	***		***	***	181	-		316	***	***	***	***		(and)
Saran	***		07	200	300	***	***	- "	444	***	***	***	***			***	
Champaran			7	***	***		***								-		-
Muraffarpur Darbhanga	***	***		***	-	***					***		***		-		***
Monghyr			***	***		444									-	-	7
Bhagalpur	***	-						- 3			-		-	201	1.2		
Purnea			-	-				1				-		-		-	
Santal Parganas					-											-	
Cuttack							***									-	
Balasore	-				-			-	***					100.		-	Tank .
Angel					200			100			***		-	-			***
Pui			300						444						101		
Sambalpur			-					-			-	-				740	Card II
Hazarlbagh		***		-0	100		***	1				***				-	Seal 1
Ranchi								-	***			-		***			/ mar 11
Palamau	***			***				2.9			14.5	***					
Manbhum				***		-			-	-	-	-		***		-	14 11
Singhbhum	***						-										
		1				1 6 19							10	-	100	173	0.11
									-	RE			1			-	7
Total	•		***	-	-		-	7		-	-	-	-	-	-		-

COMPARATIVE STATEMENT No. IV.

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

									Persons primar
Retablishment.			1912-13	191	3-14	191	4-15	19	15-10
Astachasarea.		Total number.	Number successfully vaccinated.	Total number.	Number'successfully raccinated.	Total number.	Number successfully vaccinated,	Total number.	Number successfully vaccinated,
. 1		2	3		5	6	7	8	0
Government					***	649	515	10,277	10,04
Municipal	***	43,379	42,311	44,167	42,480	47,235	45,310	43,099	41,66
Local Fund		86,551	85,965	82,592	81,790	76,264	75,263	94,056	81,63
Dispensaries		188	185	186	186	178	176	285	21
Licensed Vaccinators		1,133,310	1,126,927	1,149,467	1,143,922	1,114,753	1,109,554	1,065,023	1,059,26
Total		1,263,428	1,255,388	1,276,412	1,268,368	1,239,079	1,230,821	1,212,740	1,195,82

COMPARATIVE STATEMENT NO. IV.

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

. 1	916-17		1917-18	19	18-19	1906	1-20	190	20-21	190	21-23
Total number,	Number successfully vace.nated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated	Total number.	Number successfully vsccimated	Total number.	Number successfully vaccinated.	Total Number,	Number successfull vaccipated
10	n	12	13	14	15	16	17	18	19	20	21
3,963	3,441	6,984	6,050	6,637	5,941	7,363	6,520	1,927	1,831	891	. 825
38,645	87,226	37,586	36,107	36,573	35,913	36,810	35,428	32,858	11,541	31, 36	30,010
80,353	73,103	82,772	77,911	59,639	56,495	69,847	66,946	80,337	77, 39	71,144	69,523
202	202	181	177	129	139	178	178	262	262		***
922,091	913,264	931,519	926,281	816,096	811,506	811,168	8(6,217	854,333	8:8,948	800,424	797,357
	lest.		nei l	- QVa				43	30		-
046,154	1,027,236	1,059,072	1,046,526	919,084	900,224	925,366	915,289	969,723	960,521	903,595	898,745

STATEMENT No. F .- Showing particulars of vaccination

		- 400			10.4		Total numbe	er inspected		a-me		Perc	centage of
id.		Total numb		By Assir	stant Director o: Civil 8	ctor of Publi surgeons.	e Health	By Nati	re Superin Inspecting	tendents or o	other	Py Assistan	t Directo Civi
District,		-		Assistant of Public	f-ircetor Health.	Civil Sur	geons.	Distr Inspec		Sub-Insy	ectors.	Assistant of Public	Director c Hearth.
		Primary.	Re-racelnation.	Primary.	Revisedingtion.	Primary.	Re-racelnation.	Primary.	Re-vaccination.	Primary.	Revraceization.	Primary.	Re-raceination.
767 (L. 10)		2	3	4	6	6	7	8	9	10	11	12	13
Patra Gaya		69,873 42,178	722 1,640	6,004 3,483	-	315	1,528	13,019 8,907	-	15,490 14,345	-	10°80 8°25	-
Shahabad 'Saran Champaran		27,881 25,919	320 2,301	9,070		1,000 404 2,625	164	6,609 2,153 41,733	24	13,3c5 9,890 20,648	10	25-25	
Muzaffarput Darbhanga Monghyr	1 1 1	82,305 88,639 54,306	304 116	10,259 . 6,723 998		2,089 3,921 1,738	122 102 36	14,902 20,040 6,936	7. 79	27,832 24,187 11,145	7 41	12°45 7 59 1°84	
Ehagalpur Purnea	**	60,512 34,834 49,024	2,977 3,730	1,485 741		2,062 2,141	2,143	11,894 5,890 6,047	 254 82	27,553 9,288 18,363	148 144	2·45 2·13	
Santal Parganas Cuttack Ealasore		60,882 25,619	2,561 1,563 1,774	2,086 1,736	-	274 432	601 505	4,051 5,921	64 203	7,779 8,753	13 157	3°45 6°77	-
Angul Puri Sambalpur	***	5,208 35,442 20,344	859	4,384 2,188 1,131		1,908 113 2,086	230 536	2,039 7,953 4,574	53 	4,017 15,820 7,761	179	6·17 6·55	
Hazaribogh Ranchi Valamau		28,012 36,325 14,746	2,190 5,651 4,120	485 2,422		2,253 1,560 1,020		3,753 10,637 4,373	83 609 94	9,907 17,998 5,690	129	1'37	-
Manb'rem Bioghbhum		43,007 30,041	2,515 1,041	1,816	-	2,100	642 345	3,684 4,441	64 251	18,680 7,490	829 244	6-75 9-18	-
Total	-	\$69,596	36,256	61,431		31,207	. 8,600	162,550	1,072	2/6,772	2,023	6.63	

verified by Inspecting Officers during the year 1921-22.

nspection	to total nu	mber vacci	nated.	E (400)	H	P	ercentage (of cases form	nd successf	ul to total	number is	spected.			
of Public Sargeons,	Health or	By Nat	live Superin	ntendents o	or other	By Assis	fant Direct or Civil S	tor of Pub: Surgeons.	ic Health	By Nati	re Supering	tendents Officers.	or other	successf	tage of 'ul cases orted inators.
Civil So	argeons.	Dist Inspe	riet ctors.	Sub-Ins	pectors.	Assistant Public	Director of Health.	Civil S	argeons.	Dist	rict eters.	Sub-In	spectors		
Primary.	Re-vaccination.	Primary.	Re-vaceination,	Primary.	Re-vaccination.	Primary.	Be-racelnation,	Primary.	Re-raccination.	Primary.	Re-raceination.	Primary.	Re-raceination.	Primary.	He-raccination,
14	15	16	17	18	19	20	21	22	23	24	25	20	27	28	29
75 1-45 1-06 7-28 2-63 4-42 3-20 1-02 5-91	63-17 51-25 66-14 30-95 87-93 18-27 71-98	20°38 21°11 9°56 5°77 41°01 18°09 22°63 12°88 19°51 16°91 12°33	194	24°36 34°01 19°35 90°12 57°40 33°29 27°28 20°56 43°02 27°06		73-81 98-73 84-90 97-30 98-95 90-58 95-10 90-73		91-00 97-70 90-25 90-73 100:00 99-63 90-48 100- 99-17 99-39	4976 	93'48 90'07 97'95 95'19 99'84 98'08 96'09 90'55	33 33 33 41 22 40 15 58 53 18 25	90-96 99-21 90-99 98-94 99-62 99-67 19-06 17-01 99-27 90-30	90°00 87°14 24°39 45°94 91°25	98'64 99'44 99'12 99'67 99'67 99'63 99'70 99'93 99'27 	91-21 46-05 70-65 30-53 45-80 55-17 22-33 57-23 45-47
1-76 27:33 -31 10:10 8:04 4:41 6:91 0:83 12:78	32-25 12-81 33-00 61-00 2-77 37-17 33-23	6-70 23-11 39-18 22-45 22-48 13-39 30-11 29-65 11-00 27-60	3-43 18-08 61-11 11-40 3-50 12-38 2-28 3-89 24-11	12:77 34:17 77:2) 43:25 28:15 35:36 50:96 38:58 43:91 46:05	12:44 63:68 38:49 4:04 3:37 32:96 23:43	76 22 72 09 70 17 90 17 64 52 81 74 87 65 87 76 81 75		90°03 96°23 97°00 97°34 95°67 99°78 98°87 98°83 98°83 98°83	70:21 90:61 90:56 59:81 100:	90'28 98'54 90'53 99'25 93'82 97'76 97'34 80'84 98'94	1875 63705 64704 47-17 81-33 85-69 37-23 81:37 82-47	99°47 18 73 93°52 99°11 96°18 98°64 96°44 87°34 95°30 98°83	60°23 63°05 47°83 40°26 80°83 63°83 72°44	90°68 * 09°71 94°79 97°40 99°81 99°97 98°43 96°5 90°00	61:99 69:07 100- 53:05 60:88 99:39 65:07 57:61 55:19 58:08
3'49	24-21	18-22	5-35	32-73	5-57	87-73	-	99-03	59:50	98-35	6876	98-01	63-07	99-14	56 26

STATEMENT No. FI .-- Showing side by side the ratios, per 1,000 of population, of Deaths from

1914-15 1915-16 19114 1912-13 Ratio of deaths from small-pox. small-pox. small-pox. small-pox. ssful District. safal from from from of succe deaths deaths deaths 3 Number tions. Ratio of Number tions. Ratio of 7 8 9 5 6 2 3 .71 68,438 -17 48,480 .48 57,665 48,768 .07 Patna 75,641 *008 66,935 .03 67,817 .10 65,855 168 Gaya 65,016 62,079 45 53,812 -32 .006 47,086 :09 Shahabad 80,739 :15 79,603 81,699 -006 85,339 106 -06 Saran ... 68,255 55,486 63,100 -10 64,146 14 -02 .07 Champaran ... 105,292 .24 104,624 103,052 101,405 .09 .04 .01 Muzaffarpar 95,237 97,760 -41 93,735 .24 Darbhanga '01 93,546 .03 87,999 89.749 .42 84,475 .48 80,024 .46 Monghyr .08 ... 74,532 75,214 .35 75,831 :38 77,274 .31 .41 Bhagalpur38 51,206 58,496 60,587 .30 .14 56,916 -22 Purnea 57,558 .18 53,182 .37 64,815 60,236 .27 .19 Sintal Parganas 89,925 .69 137,175 .01 134,227 -06 113,297 .01 Cuttack ... 38,609 69,059 -90 53,281 .90 003 68,271 -11 Balasore .01 9,686 7,680 7,945 5,908 Angul ... 225 37,595 55,642 :07 47,269 .02 33,820 :30 .02 Puri :75 22,606 27,561 25,955 .05 25,063 .03 -04 Sambalpur .03 48,299 49. 46,709 51,777 :02 46,150 .03 Hazaribagh .12 52,111 49,989 -03 50,958 51,096 .01 Ranchi .004 .17 31,808 .10 28,327 13,683 .07 21,459 Palamau ... *** 54,056 73,369 .63 61,316 .43 -005 61,191 :02 Manbhum 25,909 -28 19,526 23,496 .45 09 20,254 Singhbhum *05 1,273,285 42 1,230,745 -22 .11 1,292,965 1,270,859 Total .06

mall-pox and the number of successful vaccinations during the ten years ending 1921-22.

	1916-17	19	17-18	1	918-19	10	19-20	,	1920-21	1921-22		
Zatio of deaths from small-pox.	Number of successful vaccina- tions.	Ratio of deaths from small-pox.	Number of successful vaccina- tions,	Ratio of deaths from small-pox.	Number of successful vaccina- tions.	Ratio of deaths from small-pex.	Number of successful vaccina-	Ratio of deaths from small-pox.	Number of successful vaccina-	Ratio of deaths from small-por.	Number of processful raccina-	
10	n i	13	13	14	15	16	u	18	19	20	41	
-28	.67,870	.15	68,529	-13	68,535	-85	68,573	2.79	71,340	-46	63,29	
-37	.56,139	.18	62,246	21	56,114	-62	66,449	-77	60,938	.21	42,71	
-26	. 51,176	·10	51,858	-02	41,625	-24	42,394	-55	62,418	-22	69,01	
.27	74,895	.16	77,721	-07	66,443	-10	66,882	-39	86,000	.13	37,66	
-07	49,091	-11	\$51,755	-14	50,191	-13	53,458	-29	56,914	-68	36,92	
.20	88,702	-09	85,898	-02	86,664	-10	87,182	-13	89,230	-01	82,12	
28	96,020	.07	93,206	-08	86,555	-10	88,770	.17	93,463	.03	88,50	
-17	67,229	-10	68,361	-05	56,576	-24	59,814	-28	55,104	.14	54,21	
22	66,899	-22	68,166	-09	59,034	.23	£6,741	-22	58,176	.13	62,11	
.33	53,018	-64	49,400	·52	54,209	-96	50,349	-93	51,920	-29	36,42	
-43	46,826	•14	56,728	-06	46,659	;30	44,691	-37	45,864	.05	50,18	
-46	73,415	-81	62,177	-89	61,815	-91	55,008	•30	60,775	*04	61,45	
-24	22,178	-03	25,800	-09	20,942	-86	22,139	*54	27,597	-09	23,38	
.15	9,226	-01	6,956	-06	6,751	1.11	5,739		4,060		4,96	
-52	29,228	-26	34,639	.75	33,543	3-12	32,940	:77	41,225	-08	34,89	
1.09	19,938	-24	23,345	-07	15,361	-68	13,835	-27	18,523	-03	20,85	
.19	42,148	-07	39,751	-07	35,632	-24	35,026	-13	29,123	.02	29,55	
-05	43,667	-03	47,094	-04	31,870	-50	40,559	1.38	38,450	-21	38,99	
-15	25,542	106	26,893	-06	20,472	1.26	21,226	1.76	19,346	-56	16,8	
.23	49,379	:02	52,289	-05	37,807	-44	57,908	-11	43,192	-02	43,4	
.12	17,429	-09	17,872	•10	15,542	1.21	19,595	-52	18,028	-32	16,6	
:28	1,053,015	-19	1,070,784	.2-17	942,370	-53	989,278	-56	1,013,696	14	917,1	

April

12th December 1870,

STATEMENT No. VII. -- Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1921-22.

is during the few years cading 1011-21.

			Louis	054	111	64-	THE .		o-group-	VO1125
	District.		Towns	and the	Number of births dur- ing the year ending 31st March 1922,	asson	er of deaths ogst infants er one year g the year ding 31st rch 1922,	infants year of year or	of successful ons amongst under one laring the ading 31st ch 1922.	Date of extension of Vacci- nation Act to town,
				1	3	N. W.		20,000	5	
		1	Patna	-	3,483	1	615	1 is	1,858	1st October 1884.
	10	1	Bihar		678	1	91	11.	519	Ist April 1887.
Patna	TOLER	{	Dinapur	110.87-	758		152	27.5	581	28th January 1891.
		149	Barh	0434	319	100	61	12,51	142	1st April 1887.
			Khagole	100.5	263	in	45	811	26	12th July 1910.
			1	4.0	DP RIL	200	100-11	455	100	6 4 4 40
			Total	************************	5,501	0.0	164	7,102	3,126	100.63
		-	Gaya	950, 8	1,582		682	0.50	820	1st January 1883.
Gaya		1 }	Tikari	49.00	187	37	31	(2,3)	46	3rd January 1891.
			Daudnagar		257	0.0	59	100	170	Ditto.
	TENO 2		m		2100			0,00	3.000	10,03
			Total	ma.sa	2,026	-	772	1,010	1,036	
		1	Arrah		1,230		. 281	100	897	20th July 1885.
			Buxar		314	-	61	A CONTRACTOR	299	1st April 1887.
	MARKET .	19	Dumraon	0.00	429	P	112	16	219	Ditto.
Shahal	bad	3	Jagadispur		248	1	43	,20	222	20th December 1890t.
		1- 0	Sassaram		718		154	No.	512	1st April 1887.
		00 14	Bhabhua	8 A.C.	187	1	45	,32	135	Titte.
		00 00	40 110 1		F. 1-518.	1	sor len	100	open of	in a
		20 12	Total	W	3,126	- 1	696	17	2,314	DAL SE
			-					-		A STATE OF THE PARTY OF THE PAR
	Tale.	10 13	Total of Pat	na Divi-	10,653		2,432	979.8	6,476	
		1	Chapra		1,300		245		617	1st April 1887.
Saran		}	Revelganj		311	-	66		191	12th December 1896;
			Siwan		312		49		253	1st April 1887.
			Total		1,923	-	360		1,061	1
		(Motihari		417		64		278	lst April 1887.
Champ	paran	{	Bettiah		810		166		381	Ditto.
			Total		1,227	-	230	-	654	

STATEMENT No. VII.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1921-22—contd.

District.	Towns	Standard vo an observa suggest to suggest to suggest to suggest to suggest to	Number of births dur- ing the year ending 31st March 1922.	duri	ber of deaths ongst infants fer one year ug the year ug the year sign 31st larch 1922,	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1922.	Date of extension of Vacci- nation Act to town.
1	1		3		•	6 6	•
THE MAY 1816.	Muzaffarpur	es	1,196		222	824	1st January 1886.
Ditto	Sitamarhi	88	425		61	214	1st April 1587.
Muzaffarpur	Hajipur	OR	678		192	165	1st May 1890.
Motifications, defail	Lalganj	72	2932		61	252	Ist April 1887.
eler .	Total		2,592		536	1,525	
	Darbhanga	801	2,088		312	401	24th May 1894.
D. Hanne	Roserha	·····	343		65	84	3rd January 1891.
Darbhanga	Samastipur	/43	230		14	28	25th July 1910.
	Madhubani		528		84	81	1st April 1887.
Lat Sophanibon 1898,	Total	110	3,189	-	475	594	
Till Politicary 1858	1 Count	22	9,200		40		Hall S
Sauce	Total of T	Cirhut	8,931		1,601	3,834	
	Monghyr	E101.	1,564		213	148	15th November 1882.
Monghyr	Jamalpur	18	964		122	497	Ditto.
Ditto.	1 Total	162	2,528		855	645	hut
File March 1800.	Bhagalpur	05	1,908		305	632	15th February 1884, withdrawn on 16th
Bhagalpur	0	1703	800,5		in one	Total Did	October 1895 ; re- extended on 18th August 1898.
Let Jamey 1965)	Colgong	er	131		28	51	Ditto, re-extended on 19th December 1901,
The August 1-65.	Total	10	2,039		838	683	dystricall.
	Purnea		356	1	41	187	lst July 1887.
	Kishangan	ji)	. 126		10	93	12th November 1892,
Parnex	Katibar		. 253	4	26	5 52	8th August 1910.
	Forbesganj	ir	. 107		7	Internation 91	9th August 1912.
A SELL Food Late.	10		100	-	111	Townson !	appendix.
	Total		849	2	8-	1 42:	5

STATEMENT No. VII.—Showing the protection afforded to infants in each town in the Province of Bihar and Orssea during the year 1921-22—contd.

District.	Towns,	AND DE LEGISLA	Number of births during the year ending 31st March 1922,	Number of deaths amongst infants under one year during the year ending 31st March 1922.	Number of successful vaccinations amongst infants under one year during the year ending Slat March 1992,	Date of extension of Vaccination Act to Jown.
1	,	-	3	•		.6
)141 January 1896.	Sahibganj	222	487	58	230	1st May 1884,
Santal Parganas	Deoghar	10	283	38	51	Ditto,
Sautai Larganas	Madhupur	101	254	36	70	22nd August 1910,
de Applitant.	Dumka	In	218	26	95	Notifications, dated the 9th April 1884,
	OS.L		100		- Febr	and 23rd August 1910.
He topic dist	Total	118	1,242	158	414	
District day	Total of pur Di	Bhagal- vision.	6,651	930	2,197	e description
1	Cuttack		826	159	410	1st September 1884.
Cuttack	Kendrapara	***	391	72	41	7th February 1888,
	Jajpur	193,2	253	81	18	Ditto.
16th Novamber 1512.	Total	i.,	1,470	312	469	To applicate a
Balasore	Balasore		232	86	103	7th February 1883,
Puri	Pari		696	288	223	Ditto.
Sambalpur	Sambalpur	200	300	69	161	7th March 1895.
de 1 (201 m/ch O	Total of Division	Oriesa	2,698	705	956	T. Salestan
Take minima and	Hazaribagh	,,,	298	16	206	1st January 1885,
Hazaribagh {	Chatra	711	211	16	90	1st August 1885.
The same of the sa	Giridih		278	63	89	8th September 1910.
STELL MANUAL COLOR	Total	1	787	95	385	Pares
Sen Auguston	Ranchi		1,048	74	978	1st April 1887.
Ranchi	Lohardaga		151	26	67	25th June 1892,
	Total		1,199	100	1,045	

STATEMENT No. VII.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1921-22—concld.

	D	District.		Towns.		Number of births during the year ending 3ist March 1922,	Number of deaths amongst infants under one year during the year ending 31st March 1:22.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1922.	Date of extension of Vaccination Act to town.
-04-00	Polaman		-	1	1	3		5	8
	Palamau	18		Daltonganj		269	38	80	9th October 1890.
			1	Purulia		432	40	284	1st January 1887.
		-		Raghunathpur		133	9	70	9th February 1894.
6	Manbhum		}	Jhalda		129	13	47	9th July 1892.
200		1.3		Dhanbad		159	6	29	5th December 1918.
11	11		1 01	Total		853	68	480	1 1 1 1
***			1000	Chaibassa	278	210	46	187	20th June 1892.
	Singhbhu		}	401 1010.19		12	14	55	13th January 1919.
***			- 501	Chakradharpur		125	14	00	To dedu
***			35	10 1000		2			processes and a second
191			- 100	Total		335	60	242	- a smaker
				200 (00.44		1			
-100	***			20000 00	nota	4	The state of	2352	
Acc.			83	Nagpur Divis	ion.	3,284	355	2,153	and sugleged
101		2000		1001 100 110		3			
				Total for the Prov	ince	32,373	6,029	15,645	

ANNEXURE

Provincial Statement showing the different kinds of lymph

		1							Primar	y vaccina	tion.		4	
		-		Direct from	the e	alf.		v	With lanoline	or glycer	ine lymph.		-	Arm-to-
District.		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Total,	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unemoocseful	Unknown.	Percentage of successful cases.	Total.	Successful.
	1	-	2	3	4	5	6	7	8	0	10	11	12	13
atna iaya hahabad aran 'hamparan luzaffarpur barbhanga donghyr Shagalpur 'uruea Santal Pargane 'uttack	1 H A							63,873 42,178 69,080 37,831 35,919 8°, 65 88,639 54,2)6 60,512 34,834 49,924 60,882	62,931 41,940 8,626 37,548 35,804 81,909 88,420 54,171 60,411 34,620 48,812 60,393	599 150 381 177 6) 436 202 29 63 176 98 193	293 88 73 156 46 20 17 6 38 38 111	98:60 99:44 99:34 99:12 99:67 99:43 99:77 99:93 99:53 99:56 99:56		
Salasore angul uri ambalpur fazaribagh tanchi alamau fazbhum	-		-				-	25,619 5,203 35,4.2 50,244 28,012 35,325 14,716 43,467	25,471 4,932 34,522 20,305 27,962 35,317 14,514 42,075	74 191 2(9 3 30 	74 80 651 35 8 174 527	99-71 94-79 97-40 99-81 99-89 99-97 98-42		
i. ghbhum								16,044	15,991	865 28	25	93:79		
T	OTAL							903,595	896,745	4,001	2,759	99 24		

II.
used and their rates of success during the year 1921-22.

300	199			3	West,				Re	-vaccinatio	on.						
vacciu	ation.			Direct i	from th	ne calf.		V	Vith lanoli	ne or glyce	rine lymph		1	Arm-to	-arm	raccination	
Unsuccessful.	Unknown.	Percentage of successful cases.1	Total	Successful.	Unsuccessful,	Unknown.	Percentage of successful cases.	Total.	Successful	Unsuccessful	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccess ul.	Unknown.	Percentage of snocessful cases.
14	15	16	17	18	19	20	21	22	23	21	25	26	27	28	29	30	31
-			***					723	316	346	60-	43:76				nd'	
		***					***	1,640	770	866	4	46-93	***			144	
					***			543	384	135	23	70:45	444		***		
***				1944				329	117	198	8	30'56	***	***			
***								2,301	1,123	699	479	48-80	and:			***	
								394	213	154	27	54-58	***	***		***	
***		***	***					116	64	38	14	55-17	-			***	
								197	44	1501	3	22-33	***				
			0.0					2,977	1,704	1,017	256	57:24	***			***	***
		""						3,780	1,808	1,564	358	42:76	***	1			***
***	***							2,561	1,375	851	332	53'08	***				***
	***			***		100		1,803	1,031	632	200	55-30	***				
		***			-			1.774	9)9	407	418	69-07-					
			***					86	36			100	***		***		
***			***					695	375	164	156	53:95			***		160
							***	859	523	249	87	60.88	***		***		
-								2,199	1,564	385	249	79*07			-		***
-					1	***		5,651	3,689	1,449	522	65.13	***	1			****
					-			4,120	2,384	265	1,471	57:88	***				
								2,515	1,409	740	366	56 02					
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