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

#### **Contributors**

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# ANNUAL STATISTICAL RETURN

AND

# SHORT NOTES ON VACCINATION

IN

## BIHAR AND ORISSA

FOR THE YEAR

1923-24



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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PRINTED BY SUPERINTENDENT, GOVERNMENT PRINTING, BIHAR AND ORISSA.
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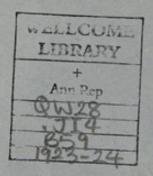
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# SHORT NOTES ON VACCINATION

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FOR THE YEAR

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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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## ANNUAL

## VACCINATION REPORT

#### BIHAR AND ORISSA

#### FOR THE YEAR

#### 1923-24.

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 that Dr. J. L. Das officiated for Dr. B. P. Mazumdar for two months whilst he was on leave. Otherwise Dr. T. Sebastian remained in charge of the North Bihar Circle, Dr. S. N. Tiwari of the Chota Nagpur and Orissa Circle and Dr. B. P. Mazumdar of the South Bihar Circle throughout the year.

The Inspecting Staff consisted of 20 District Inspectors of vaccination and 69 Sub-Inspectors of Vaccination (including three deputed for duty at the Vaccine 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 1,088 licensed and 228 paid, against 1,089 licensed and 222 paid in the previous year.

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

2. Operations performed.—The total number of operations performed during the year amounted to 1,043,264 as compared with 1,002,889 last year. There has again been an increase in the total number of operations which is very satisfactory, and indicates that the difficulties and the opposition experienced in 1920 and 1921 are gradually diminishing. Of the total number of operations in the province 1,031,904 were performed by the staff of the Vaccination Department as compared with 988,601 last year. Nine hundred and ninety-nine thousand, seven hundred and eighteen operations were primary and 32,186 were re-vaccinations as against 965,666 primary operations and 22,935 re-vaccinations last year.

There was an increase of 34,052 in the number of primary operations and of 9,251 in the number of re-vaccinations during the year. Of the total operations performed (1,031,904), 1,010,911 equal to 97.96 per cent. were successful, as compared with 972,003 equal to 98.32 last year.

The number of operations performed in municipalities increased by 4,213 as compared with last year's returns. The total number of operations performed was 39,937 and the number of successful operations was 35,918 of which 32,833 were primary and 3,085 were re-vaccinations as compared with 28,963 and 3,502 respectively last year. The ratios of success in municipalities were 97.25 per cent. for primary operations and 49.94 per cent. for re-vaccinations as compared with 96.77 per cent. and 60.41 per cent., respectively, last year.

The number of operations performed in rural areas was 991,967 as compared with 952,877 last year and the ratios of successes were 99.33 per cent. for primary operations and 59.44 for re-vaccinations.

3. Vaccination in Districts.—Of the three districts of the Patna Divisions, Gaya and Shahabad reported an increase in the number of operations performed (4,270) and (663) whilst Patna reported a decrease of over 1,000.

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

Tirhut Division.

The districts of the Bhagalpur Division recorded small increases except

Purnea in which a decrease of 4,058 was reported. Monghyr District recorded the highest increase in this division, viz., 7,519.

With the exception of Cuttack all the districts of Orissa recorded increases in the number of operations, the greatest increase being in Balasore (8,104).

With the exception of Singhbhum there was a general rise in the number of operations returned from the districts of Chota Nagpur Division.

Chota Nagpur Division.

Chota Nagpur, the greatest increase being in Manbhum (5,304).

4. Vaccination in Towns and Compulsory areas.—Statement VII shows that during the year 15,278 children under one year of age, out of an available number of 30,292 or 50.43 per cent. were successfully vaccinated.

The towns of Monghyr, Bhagalpur, and Darbhanga, show the smallest proportion of work done, and the towns of Chapra and Cuttack also made unsatisfactory returns.

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

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

During the year under report 195,641 primary operations and 340,805 re-vaccinations were performed as compared with 145,836 and 283,289 respectively, in the previous year.

6. Protection of infants.—During the year under report the number of children under one year available for vaccination was 1,034,163 and the number of successful operations was 375,127 equal to 362 per thousand against 358,558 or 331 per thousand successful operations out of 1,081,900 children available during the previous year. The protection of infants in municipalities is separately shown in statement VII. It gives a ratio of 504 per thousand of the surviving infant population as compared with 452 in the previous year.

These figures are unsatisfactory in as much as they show that far more than half of the total number of operations is performed on children over one year of age. Civil Surgeons and Assistant Directors of Public Health are unanimous in attributing the opposition to vaccination to be concerned more with the age of the child, than with the operation itself, and, in view of the strong popular prejudice which exists against the vaccination of infants at an early age, I consider that it is desirable that the Vaccination Act should be amended, so as to raise the age for compulsory vaccination to one year instead of six months.

7. Incidence and mortality of small-pox.—During the last ten years the total number of deaths from small-pox in the districts of this province has been 95,628.

During the first quinquennium the number of deaths was 43,241 and during the second 49,387. In each of the last five years the mortality was as follows:—18,514, 19,374, 4,911, 2,695 and 3,893. The graphs published in the Annual Public Health Report indicate that there is a definite, though

slightly irregular periodic variation in the epidemic prevalence of small-pox and it is probable that we have just passed through the period of least prevalence, and are entering upon a period of increasing epidemic prevalence. I consider it likely that the prevalence of small-pox will increase materially during the next two or three years and that there is likely to be a severe epidemic of small-pox in the province in 1926 or 1927.

The provincial ratios of the mortality from small-pox per thousand of population during the last five years have been .53, .56, .14, .07 and .11.

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 wellknown 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 71,814 primary vaccinations as against 70,006 in the previous year.

The inspecting work done by the Assistant Directors of Public Health has been comprehensive and they have submitted valuable reports on the efficiency of the staff and work in 20 out of the 21 districts in the Province.

The Civil Surgeons of the Province inspected 40,985 primary and 4,686 re-vaccination operations against 29,181 primary and 9,303 re-vaccinations last year.

It should be noted that the methods of inspection of Civil Surgeons and Assistant Directors of Public Health are different. Civil Surgeons inspect the new work which has just been done and the numbers returned by them are therefore smaller, whereas Assistant Directors of Public Health inspect all the children under ten years of age, and look at old work as well as new work, and also look for unvaccinated children and children who are marked with smallpox, 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. Five millions, three hundred and fifty-seven thousand and twenty-five doses of vaccine were manufactured during the year as compared with 1,426,146 doses last year. The number of doses issued was 2,564,754 against 2,576,743 in 1922-23. The number of doses in stock at the end of the year was 5,590,353. The number of cattle used during the year was 792 as compared with 246 in the previous year, and the average yield of crude vaccine was over 63 grammes per animal as compared with 59 grammes in the previous year. The working cost of the depôt for the year amounted to Rs. 25,545 as compared with Rs. 33,206 in the previous year. The average cost of the vaccine per dose works out at 91 pies on the gross expenditure and to 34 pies on the nett expenditure, when the receipts are taken into account.
- 11. Vaccine Depôt and Cold Storage.—During the year under report the vaccine depôt suffered less than usual from epidemic diseases although there was one slight epidemic of Foot and Mouth disease. Owing to the difficulty in getting a sufficient supply of calves at reasonable rates Dr. Tiwari has tried using adult animals with results which have so far been satisfactory. The adult animals are cheaper and more robust, and they gave a large quantity of

vaccine. Three new isolation sheds and a dipping trough have been constructed during the year and the grazing ground of the vaccine depôt has been fenced with wire-fencing and sub-divided into paddocks so as to allow of the effective segregation of different batches of cattle and of sick animals.

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 broke down in October. In November a new compressor was started, but the old oil engine is now giving trouble and it is necessary that a new duplicate engine should be installed.

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

12. Experimental Work.—During the year under report experimental work has been carried out with regard to the use of adult animals instead of calves with very satisfactory results so far.

Experiments were also made in the use of '05 per cent. of iodine to purify the vaccine. The vaccine was kept in cold storage for twelve months after the iodine solution had been added and then tested. It gives satisfactory results in the vaccination of both children and rabbits, and plate cultures made from this vaccine show no contaminating colonies.

13. Cost of the Department.—The total cost of the Vaccination Department (excluding the Vaccine Depôt) during the year, as detailed in Statement II, was Rs. 1,52,980 or Rs. 1,509 less than the previous year.

The cost per successful operation was 2 annas 4 pies against 2 annas 6 pies in the previous year.

14. Personal.—In conclusion, I desire to bring to the notice of Government the work of the three Assistant Directors of Public Health. Doctor T. Sebastian and Doctor B. P. Mazumdar have carried out their inspecting duties satisfactorily. Doctor C. N. Banarji has also worked satisfactorily as Superintendent of the Vaccine Depôt.

edult autmals with results which have so for been satisfactory. To satisfact she chapter and more robust, and they gave a large quantity of

W. C. ROSS,

Lieut.-Col., 1.M.S.,

Director of Public Health.

STATEMENT I.

	District.		Population of district according to the centus of 1821.	Average population per square mile.	a the second sec	Average number of vaccinators targety as second-		r of persons va		Average number of persons vaccinated by each vaccinator.	Primary
Number.			Populati 1021.	Average		Arerage out the	Male.	Female.	Total.	Average	Total.
1			3			8		6		7	ä
	Patsa Division.  (By paid Vaccinators	,				18	4,631	4,198	8,629	490	6,630
1	Patna By licensed Vaccinators	}	1,674,287	761	1	63	27,397 2,903	26,145	53,543 5,730	849	53,542 5,701
1	Gasa mil	3	2,152,630	457	1	81	23,314	21,973	45,289	550	45,187
		2	1.010.001	415	5	25	3,625	3,058	6,653	267	6,680
3	Shahabad By licensed Vaccinators	3	1,816,821	410	1	113	28,710	24,216	52,926	608	52,926
	Watel of Dates Division	- }	8,514,039	407	{	59 257	11,159 79,421	10,083 72,337	21,243 151,758	360 590	21,011 151,656
	Tirint Division.		The second	* 3						Control	
						100	1,302	1,185		312	2,418
4		}	2,339,953	872	3	8	36,693	34,271	2,497 70,963	808	70,933
	CBy Reensed Vaccinators	5				79	2,228	1,300	3,528	883	2,262
1	Champaran	}	1,940,841	540	1	60	21,106	20,871	42,087	637	41,963
		5			1	12	1,771	1,388	8,159	263	2,782
6	Mazaffarpur (Bylicensed Vaccinators	3	2,754,945	907	1	79	45,827	43,504	89,331	1,131	69,324
	(By paid Vaccinators	>			6	7	1,206	1,239	2,445	849	2,381
. 7	Darbhanga	3	2,913,529	870	1	88	46,855	44,846	91,701	1,043	90,534
		-			-						
		- 3	9,940,268	789	5	31	6,537	5,112	11,619	375	9,843
	Total of Tirint Division (By licensed Vaccinators	)			1	312	150,540	143,492	294,032	943	292,743
	Bhagalpur Division.										
,	Mongher By paid Vaccinators	3	2,020,065	518	5	7	1,143	1,055	2,199	314	2,092
	Mongbyr Ey licensed Vaccinators	)			1	30	34,350 4,376	2,490	68,750	2,292	68,734 4,365
	Bhagalpur (By paid Vaccinators	13	2,033,770	481	18	12	20,027	28,018	6,766	929	58,416
	(By pid Vaccinators				1	63	1,219	651	1,870	170	1,181
10	Purnea (By past vaccinators (By licensed Vaccinators	}	2,024,609	405	3	53	17,649	16,567	34,150	C44	33,902
	(By paid Vaccinators				1	8	3,005	2,605	6,291	786	4,410
11	Santal Parganas By licensed Vaccinators	3	1,798,639	329	1	87	26,036	25,051	51,087	696	60,086
	Total of Bhagalpur By licensed Vaccinators	- 3	7,580,962	423	{	38 203	10,304 107,062	6,831 104,576	17,125 212,538	451 1,047	12,137 211,138
	Orista Division.			1			The state of the s				
12	Cuttack SBy paid Vaccinators	- 3	2,004,678	565	5	10	2,941	2,513	5,484	548	2,837 41,399
	( By licensed Vaccinators			1	1	60	21,083 3,350	1,645	42,081	701 832	992
33	Balasore By paid Vaccinators  (By licensed Vaccinators	3	990,504	470	1	6 33	15,898	12,299	28,197	881	17,418
74	Angul By licensed Vaccinators		182,574	112	1	13	3,230	3,127	6,357	530	6,320
				350		29	20,958	17,046	38,002	1,310	35,883
15	Puri By paid Vaccinators (By paid Vaccinators	-	951,651	900	1	5	146	100	246	45	239
16	Sambalpur By Heenred Vaccinators	}	710,406	206	13	34	12,071	11,510	23,581	603	23,574
					1	60	27,393	21,334	68,727	974	39,950
	Total of Orissa Division { By paid Vaccinators   By licensed Vaccinators	- 3	4,968,573	361	1	138	63,181	47,035	100,216	726	98,701
	The state of the s	200			1		College Control	The state of the s		1	

Winin.	Vaccin	ation.		Re-v	sectmation		ful cases	of success-	-ndod po	Percentage e		Average and ber of person fully vac-	-Sissome at	Average numbe deaths	r of
	Sueces	ssful,	a tooley		No. of Lot			alts were own,	per 1,000	eases to to	tal cases.	during p five ye	revious.	emall- during pr five yes	pox evious
Under one year.	One year and under six years.	Total of all ages.	Unknown.	Total,	Seconseful.	Unknown,	Primary.	Re-vaccination.	Persons successfully vaccinated per 1,000 of lation.	Primary.	He-raceleation.	Namber.	Eatic per 1,000 of population.	Number,	Ratio per 1,000 of population.
9	10	11	13	. 13	14	15	16	17	19	10	20	21	23	23	26
2,333 16,720 2,623 17,475 3,600 29,708	5,727 33,175 2,003 - 26,206 2,000 10,243	8,310 62,798 5,607 45,071 6,650 51,842	50 143 7 26 7	109 1 29 102 3	111 1 16 23 1	25	90°85 98°87 90°52 90°65 90°65	56-42 100° 85-17 29-87 32-33	} 20-12 { } 23-75 { } 32-65 {	*57 *20 *12 *05 *10	2150	} 05,883 } 54,605 } 54,843	43-43 25-40 30-18	1,375	*67 *28
8,355 62,663	11,399 78,717	20,627	64 183	231	129 24	9 25	99°47 99°49	87-65 30-76	} 30.03{	·30	5°80 24°27	} 176,424	31-63	2,509	-40
1,527 17,706 625	671 49,557 1,229	2,226 69,920 2,158	34 368 31	69 30 1,266	37 29 761	3 3 216	93-37 19108 90:72	55-22 21-42 22-47	} 20:06{	1-40 -51 1:37	5-89 6-08 17-06	61,172	20'14	977	*35
11,118 932 16,874	3),472 1,761 71,663	41,906 2,713 68,977	16 3 28	75 377 7	57 284 5	18	90°00 97°62 90°04	78-08 79-10 71-42	} 33.45 {	-03 -10 -03	2·86 4·77	} 60,208 } 60,208	24-93	196	*01
583 12,982	1,772 77,374	2,360 90,415	7	04 1,177	34 842	4	99'88	50.66	32:14	1007	6-25	} 80,007	30-58	273	*00
8,670 68,680	5,433 229,066	9,457	63 419	1,776 1,259	1,116 924	240	90-74 90-63	. 72-65 71-90	30-42	-69 -14	13:51	5 284.935	25-63	1,554	-14
907	1,050	2,060 68,733	4	106	23	5	98*64	27-72 43-75	34.80 {		4-71	3 17,733	28-44	253	71
1,643 24,461 554	2,515 83,673 563	4,301 56,374 1,187	10 19	2,601 129 689	1,523 92 278	9 143	90°42 90°96 90°98	76-65 50-91	32.18	1°60	6:97 20:75	5 60,072	29:53	1,108	-16
15,034 2,120 28,441	15,650 2,281 21,294	33,759 4,445 49,887	10 21 100	1,792 1,008	845 657	362 50	99°40 99°28 99°80	21-26 69-93 68-94	} 31-18	-02 -45 -19	31·31 4·98	3 48,497	26:93	311	.11
6,314 85,917	6,409 124,039	11,934 210,783	83 129	4,988	2,674 810	640 59	99 00 99 87	61:49	} 28'67	108	12:83 4:20	\$ 910.001	26.05	2,104	-2
809 16,500 284	1,723 22,791 602	2,787 41,313 907	36 65 12	2,647 692 4,003	1,311 195 1,951	350 114 932	50°57 59°57 98°67	87-07 23-91 03-52	} 22:20{ } 30:79{	1°26 '15 1°20 '51	13-22 16-47 23-62 51-70	3 24,120	29:16	1	-4
2,657	3,244	6,133	141	779	267	3	97-09	76-47	33-73	-36	8-10	The state of	29:60	47	-2
11,109	21,263	25,184	514	2,120 7	1,048	315	99°47 99°16	58'06	38-23	1.43	15-95 85-71 87-14	3 17,268	27-23		3
18,242 12,443 43,974	23,642 40,740	23,444 39,175 97,660	03 502 344	8,777 1,515	4,310 512	1,603	99°85 99°45 99°51	100- 60-07 41-63	30-65 {	140	18-22	3 140.517	28-27	1,976	

Number.		Dist	rict.		Population of district according to the census of 1921.	Average population per square mile.	Average number of vaccinators employed through- out the season,	Total num	ber of persons	vaccinated,	Average number of persons vaccinated by each vaccinator.	Primary
1	4	11 311	9 9		3	4	5	4 4	6	-	7	8
	:	Chota Nagpur					900		- 620			2000
17	Hamridagh	(8)	paid Vaccinators licensed Vaccinators paid Vaccinators		1,278,946	181	{ 43	1,119 16,836 1,279	15,721 740	1,941 32,547 2,019	757	22,547
18	Eanchi	(10)	licensed Vaccinators	-	1,334,473	187	{ 43	21,947	20,673	42,630 1,585	673 892 396	- 1,543 42,343 919
19	Palaman	- (B)	licensed Vaccinators	-	5 733,394	149	25	7,818 15,965	7,639 12,448	15,457 29,413	618 887	15,454 20,004
20	Manbhum Singhbhum	(B)	licensed Vaccinators		1,548,777	195	5 8	17,193 1,344	-15,598 495	83,001 1,839	787 613	\$2,993 650
	Stagardan	(B)	vicensed Vaccinators	-	5		20	7,044	7,201	14,935	747	14,440
	Total of Che Division.	da Nagpur <	paid Vaccinators		} 5,653,028	208	{ 47 178	20,707 71,428	15,090 67,423	35,7 <i>1</i> 7 138,850	762 780	24,759 137,783
	Total of V partment.	sceine De-	y paid Vaccinators y licensed Vaccinators otal		34,002,189	409	225 1,089 1,313	76,070 462,532 538,602	59,440 434,862 493,302	134,510 897,394 1,031,994	608 625 786	107,700 692,018 999,718
			ensary Department	-			1	203	40	342	342	1
	1941		Total Railways (b)		-		-	640	335	775		767
		Total C	ooly Department		-			779	273	1,062		60
	In a se	Total Jai	lls and Cantonments		-		2	8,614	677	9,191	(a)357	1,104
	120		Grand Total				1,316	648,728	494,538	1,043,264	700	1,001,000

<sup>(</sup>a) Cantonments only.
(b) Vaccinated by Medical Officer.

## districts of Bihar and Orisig during the year 1923-24-concld.

accination	Succes	sful.		Re-T	secination.			of success- in which lts were wn.	ndod jo 000'1	Percentage of cases to to	f unknown tal cases.	Average an ber of perso fully va- during p five y	on success-	Average numb deaths small- during	from pox
Under one year.	One year and under six years.	Total of all ages.	Unknown,	Total,	Specessful.	Unknown.	Primary.	Re-raccination.	Perona successfully vaccinated per 1,000 lation.	Primary	Re-raceination.	Number.	Batto per 1,000 of population.	Number.	Ratio per 1,999 of population.
,	10	11	13	13	14	15	10	17	18	19	20	21	22	23	24
506 15,110 1,250 33,300 367 11,909 4,991 16,617 308 9,254 7,212 86,179	1,011 17,243 262 9,017 471 3,667 13,367 16,343 301 5,123	1,641 32,545 1,543 42,340 863 15,436 18,227 32,991 627 14,409 22,900 137,711	1 45 25 531 3 3 577 29 1,354	228 476 477 606 3 8,409 98 1,189 489	184 2 334 110 3 6,429 50 505 340 7,820 727	1 474 98 512 659 41 9 1,687 105	99°57° 99°99 100° 99°99 98°40 99°98 93°90 96°90 90°76	61'95	} 25:02 { } 23:55 { } 22:45 { } 27:46 { } 21:14 { } 20:83 {		763 763 1528 990 1558	} 32,258 } 38,339 } 18,605 } 40,965 } 17,353 } 153,611	25°26 28°72 25°49 30°32 22°64	117 721 522 201 342	10
317,633 375,127	532,653 594,838	888,273 992,366	1,104	5,376	2,997 18,545	561	99-70 99-50	62°24 67°58	2973	123	10-63 16-72	968,168	28'47	10,196	
		1		341	49		100*	14:37							
293	315	709	1	8	5		92:53	63.2	100	-13					
			60	992	288	704	100	100		100-	70°96	-	-	=	
413	199	1,018	41	8,067	4,050	1,122	95.76	58'14		5:71	15-87				
375,928	595,352	904,094	2,500	41,614	22,937	6,566	99'49	45-44		*35	13:77		100		***

#### Summary. I could see all several gold less sales to about its

Description of the last of the	Total m	amber of	Total nu operati	ons	Percent successfe in which the were ks	d cases be results	Average no persons va by each tor.	ecinated vaccina-	childre	mber of su success- sceinated.		Jetmont	
1-1	Primary.	Re-raccination.	Primary.	Re-raceination.	Prissary.	Re-racelnation.	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 each successful case.
THE REAL PROPERTY.			1.1		6	7	8	9		1		A 1 19	
1	2	3		5			·	12	10	11	12	13	14
BY SPECIAL STAFF.								1				Ве. а. р.	Bs. s. p.
Statement (I)	909,718	32,186	909,718	32,186	99-50	67'58	1,313	780	375,127	5' 4,838		1 100	WEST STORY
Statement III BT OTHER AGENCIES.	1	341	1	341	100*	14-27	es = 1	342	-		99:73	1,63,979 14 0	0 2 4
Hallways, Cooly Deptt, Jails and Cantroments.	1,931	9,067	1,981	9,097	9412	29:81	2(a)	357	501	514		- 100 At A	100,11
Total	1,001,650	41,614	1,001,650	41,614	99-49	65:14	1,316	793	375,928	695,352	2973	1.53,979 14 0	

(a) Cantonments only.

STATEMENT II.

-					-							-	_
		feer.		2.1						-			Expen-
No.	Circle and district.	European supervising officer.	Pay.	Native supervising officer.	Pay.	Paid vaccinators.	Pay.	Licensed vaccinators.	Pay.	Certs.	Pay.	Pecas, etc.	Pay.
1	3	3	4	5	6	7	8	9	10	11	13	13	14
1			7 1 1	1	Rs. a. p.		Rs. a. p.	1	Rs. a. p.		Es. s. p.		Rs. a. p.
	PATNA DIVISION.												
1 2	Patna			5	2,540 0 0 3,275 10 0	16	2,031 0 0 2,057 5 0	63	336 0 0			2 2	216 0 0
2	Shahabad			5	2,622 4 0	25	2,378 0 0	113			***		
		-											
	Total of Patna Division			15	8,457 14 0	61	6,456 5 0	257	335 0 0			•	286 0 0
	TIRHUT DIVISION.												
4	Saran			4	2,011 10 0	8	578 13 P	79				-	77
5	Champaran Motaffarpar	***		3 4	1,500 0 0	12	1,674 3 0	79			-		
7	Darbhanga		_	1	3,062 14 0 2,088 5 3	7	864 0 0	88		1	60 0 0		***
		-				-		_					
	Total of Tirbut Division	***	-	15	8,663 13 3	31	4,638 15 0	319		1	60 0 0	***	-
	BHAGALPUR DIVISION.												
8	Monghyr	***	-	4	1,920 0 0	7	831 4 3	30				2	111 0 0
,	Bhagalpur	***		5	3,580 6 0	12	1,068 7 0	63	-			***	
10	Santal Parganas			4	2,400 14 0	11 8	1,527 0 0	87			-		-
**	Santal Parganas			7	3,572 0 0	-	1,259 14 6	-			-		
	Total of Bhagalpur Division		-	20	11,473 4 0	28	4,666 9 9	200	-			2	111 0 0
	ORISSA DIVISION.	-		-				-				-	-
31	Cattack		1000	4	1,900 0 0	10	1,546 6 0	60					=
13	Balasore			3	1,500 0 0	6	867 9 0	33	450 0 0	***	***	-	
14	Angul			3	2,886 0 0			12	180 0 0				
18	Pari			3	1,680 0 0	29	3,776 3 6			- 100			
16	Sambalpur	200		3	1,500 0 0		570 7 0	34		***	***	-	45 12 0
	Total of Orissa Division			. 16	9,000 0 0	50	6,751 8 6	128	630 0 0			2	45 12 0
	CHOTA NAGPUE DIVISION.	-		-							The state of	100	-
37	Hataribagh			4	2,560 8 0	5	1,605 0 0	43	200			***	- 2
_ 18	Ranchi	-		4	2,400 3 0	4	747 13 9	48	-				
20	Palamen	-		3	1,573 15 0	4	911 15 0	25			-		
90	Manbham	100	-	19	2,592 0 0	32	3,134 0 C	43				App.	
21	Singhbhum		***	3	1,440 0 0	3	291 0 0	20		-			
	Total of Chota Nagpur Division	-	-	33	10,566 10 0	48	6,189 11 9	178					***
	Total of Vaccine Circle		-	90	48,780 9 3	228	28,123 2 0	1,088	966 0 0	1	60 0 0	8	423 12 0
	ESTABLISHMENT ON THE ASSISTANTS DIRECTOR OF PUBLIC HEALTH, NORTH BIRAR CIRCLE.			1	12,180 9 0				-	2	1,300 2 0	2	215 6 0
	DITTO SOUTH BIHAR CIRCLE		-	1	11,300 0 0	***	-	-		2	1,200 0 0	2	200 13 9
	DITTO CHOTA NAGPUR AND ORISEA CIRCLE.	-		1	10,674 12 0			-	-	3	1,305 2 6	2	213 5 0
	TMal		-	3	33,455 5 0	-		-		6	3,865 4 6	6	638 8 9
	Total of Province	-		102	82,215 14 3	128	28,123 9 0	1,088	900 0 0	7	3,925 4 6	14	1,061 6 9
-		_	'	1		1			1	-	-	-	

Province of Bihar and Orissa during the year 1923 -24.

ture.	M. Service	and the	1 163	to mine	120	13 13 - 13	Paid fr	om-	guliup 1%	337 08	vacei- lons.	cessfu
estabilsh-	1000	Conting	encies.		-	.45-10					Number of all successful nations and re-racelnat	cost of each successful
- to	Travelling allows:	ė I	ė		Fund.	Fund.	antitio	1	5		II so	to to
	4 Mg	Cost of lymph.	P. Ponti	coet.	2	3	Local Fund.	Manielpalities	Native States.		a and a	000 0
10	relli	10	900	100	Imperial	Provincial	21.5	nlet	9 1	વ	Tion	Average case.
Total pay ment,	4	Cost	Other contin- gencies.	Total	III	Pro	Loe	×	Na	Total.	×a	Are
13	14	15	16	17	18	19	20	21	22	23	24	25
Re. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. s. p.		Rs. a.p.	Rs. a., p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a.
167 0 0	1,429 5 11	- 1	100 0 0	6,490 5 11	100	4,080 5 11	841 0 0	1,567 0 0		6,496 5 11	61,595	0 1
548 15 0	684 10 3		222 1 0	6,455 10 3	-	4,079 14 3	1,507 13 9	777 14 3	- 31	6,455 10 3	51,137	0 2
000 4 0	1,009 1 0		263 8 9	6,172 13 9	T	4,001 5 0	1,508 0 0	903 8 9		6,972 13 9	50,681	0 1
16 3 0	8,723 1 2	-	685 9 9	19,924 13 11	40	12,670 9 2	3,915 13 9	3,308 7 0		19,024 13 11	179,893	0 1
-				Ot I								19
290 6 0	1,127 3 0		200 6 0	4,407 15 0	1	3,263 13 0	201 4 0	852 14 0	1	4,417 15 0	72,440	0 0
023 0 0	941 6 0		134 15 0	5,009 5 0	100	2,541 3 0	183 0 0	354 2 0	110	3,008 5 0	45,103	0 1
737 1 0	487 6 0		224 12 0	5,319 3 0	-	3,675 0 0	499 0 0	1,175 3 0		5,319 3 0	92,087	0 0
013 5 3	1,302 6 4	· · ·	140 0 0	4,544 11 7	-	3,570 11 7	-	974 0 0	-	4,544 11 7	93,611	0 0
761 12 3	3,919 5 4	-	600 1 0	17,400 2 7		13,070 11 7	973 4 0	3,356 3 0		17,400 2 7	303,290	0 0
		-	7		-							
sef 4 3	1,550 0 0		219 9 6	4,641 13 9	1	3,570 0 0	446 0 0	625 13 9		4,611 13 9	70,525	0
648 13 0	609 7 0		221 4 0	5,509 8 0	1	4,319 13 3	702 13 0	493 13 9		5,509 8 0	65,464	0
927 14 0	1,288 11 0		228 8 3	5,445 1 3		3,709 9 0	ES1 0 0	1,094 8 3		5,415 1 3	35,218	0 :
831 14 6	2,639 0 0	-	110 10 0	7,581 8 6		6,311 0 0	771 1 0	400 7 6		7,581 8 6	56,656	0
,270 13 9	6,187 2 0		779 15 9	13,237 15 6	-	18,020 6 0	2,500 16 3	2,716 10 15	-	23,237 15 0	227,546	0
			1								· male	all .
,466 6 0	1,329 8 0		198 7 6	4,994 5 6		3,389 8 0	846 11 0	758" 1 6		4,994 8 6	46,041	0
,877 6 0	775 0 3		70 0 0	3,722 9 3		2,808 5 0	628 4 3	286 0 0	-	3,723 9 3	30,195	0
L000 0 0	669 0 0	11'	70 0 0	3,799 0 0	-	3,799 0 0		-		3,799 0 0	6,159	0
5,447 2 6	1,039 14 0		80 0 0	6,563 0 6	-	2,798 14 0	3,572 6 6	194 13 0	-	6,566 0 6	36,479	0
1,176 3 0	942 4 0	-	128 8 6	3,346 15 (	-	2,623 4 0	491 3 (	200 8		3,246 15 6	23,757	0
7,027 4 6	4,784 10 3	-	547 0 0	22,328 14		15,417 15	5,471 9	1,439 6		22,328 14 9	142,631	0
		-										
3,505 8 0	566 11 (		104 2 3	4,236 5	3	3,327 2 6	470 0	539 2		4,236 5 3	35,784	0
3,147 15 1	1,259 0		105 0 0	4,511 15	9	3,764 3 0		747 13	9	4,5:1 15 9	64,812	0
2,455 14 (	864 1		113 12 0		3	2,504 14 "	573 9	9 385 3	3	3,463 11 0	225.30	0
5,826 0 0 1,731 0 0			120 0 G							6,460 0 0 2,407 2 0		0
10,756 5	-		403 2	3 21,079 2				0 2,197 6		21,079 2 0	171,151	0
	-				-		-	-			-	-
78,332 7	3 22,442 13	9	3,195 12	9 1,03,971 0	9	73,217 11	3 17,735 8	6 13,018 2	0	1,00,971 0	9 1,017,031	0
13,696 1	0 2,905 1	0	999 15	e 17,501 1	0	17,501 1	0	-		17,501 1		-
2,669 13	9 2,877 11	9	1,148 13	3 16,696 6	0	10,000 6	9		-	18,696 6	9	
11,593 3	6 2,940 15	100	277 3	0 14,811 5	6	14,811 5	6	-		14,811 5		
17,9 59 2	3 8,683 11	9	2,425 15	3 49,008 13	3	49,008 13	3	-	-	49,008 13		-
					- -	-						
,16,391 9	6 31,066 8	6	5,621 12	0 1,52,979 1	40 .	1,22,226 8	6 17,7 5 3	6 13,018 2	0	1,53,979 14	0 1,017,031	1

#### B .- DISPENSARY VACCINATION.

STATEMENT No III.—Showing Dispensary Vaccination in the Province of Bihar and Orissa during the year 1923-24.

		listrict to	attached to	Pi-	vaccinated by		Primar	y vaccina	dion.		Re-	raccinati	on.	Percen successf in whi results know	al cases ch the s were	Percent unknow to total	III CANOS
		in each district attached.	vaccinators at g the year.	raceinsted.	persons vace		S	secessful						- 1			
Districs.		Number of dispensaries i which a vaccinator is a	Average number of vacci dispensaries during the	Total number of persons	Average number of perseach vaccinator.	Total.	Under one year.	One and under six years.	Total of all ages.	Unknown,	Total.	Successful,	Usknown.	Primary.	Re-vaceination.	Primary.	Re-raceination.
1		2	3	4	5	6	7	8	9	10	u	19	13	16	15	16	17
Pates	-	1	. 1	342	342	1		***	1		341	49		100	14:37	-	-
Gays	-				-			- ain				-		1	111		
Shahabad	- 111	100	340			200			***			***		-			
Saran			H				1000	2		-	***						-
Champagan	1	An		-	100			14	***	-	San F			-			-
Muzaffarpur				-	100	***	-			-	***				-		1
Darbhanga						No.			-		9		400	***	-		
Monghyr	***		***		200	***	440					***		-	200		
Bhagalpur			***			***		-	***				-				1
Purnea	95	-													***		
Santal Parganas	-			***	in in	2.	-					***	***				
Cuttack	-	-			-		134	-		-	1 124	***			1 4	***	-
Balasore	-						111	-			100		-			***	-
Angul	***									-					-	-	
Pari	100	- 110			or week	· 2	10.0	0 200					-	-		THE SAME	
sambalpur	***		-									***			-		-
Inzaribagh	190									-		***					
ianchi	***	a.			100	Q. 10	014	-	10 m	- 23	1000		Sec.	-		-	
alaman		T. an	***			in.	-				44.0	00	-		-		100
maddaal			-					0 20		12	W.		***			141	
inghbhum	800						100	0 42 0			124	9	***				141
		100			E on S	9.9	P	-		- 1	1			_		13/1	-
Total		1	1	342	342	1	1000	-	,		341	40		100-	14'37	1	1

0.400	- 100				
		12%			
		1			
			10000 1000		The Landson Leading of the Control o

COMPARATIVE STATEMENT No. IV.

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

		1							Pe	rsons primarily
Estab	lishment.		1914	-15	1914	i-16	191	16-17		1917-18
			Total number.	Number successfully vaccinated,	Total number,	Number sucressfully vaccinated,	Total number.	Number successfully vaccinated.	Total number.	Number sneressfully vaccin.ted.
1		-	2	3	4	6	6	7	8	
Government			649	515	10,277	10,046	3,963	3,441	6,984	6,050
Municipal			47,235	45,310	42,099	41,661	38,645	37,226	37,586	36,107
Local Fund			76,264	75,265	94,056	84,616	80,353	73,103	82,772	77,911
Dispensaries			178	176	285	215	202	202	181	177
Licensed Vaccinators			1,114,753	1,109,554	1,065,023	1,059,266	922,091	913,264	931,549	926,281
	Total		1,239,079	1,230,821	1,212,740	1,195,824	1.046,154	1,027,236	1,059,072	1,046,526

WI OF THE MATERIAL BALLANSHOO

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

191	8-19	1919	-30	* 195	10-21	192	1-33	199	12-23	1923	1-24.
Total	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 successfull vacciuated,
10	u	12	13	14	15	16	17	18	19	20	31
6,637	5,941	7,363	6,520	1,927	1,831	891	825	794	735	1,104	1,018
36,573	35,213	36,810	35,428	32,858	31,541	31,136	30,040	29,927	28,963	33,760	32,833
59,639	56,495	69,847	66,946	80,337	77,939	71,144	68,523	70,386	67,809	74,767	71,969
139	139	178	178	262	262					1	:
816,096	811,506	811,168	806,217	854,339	848,948	800,424	797,357	865,920	862,260	8,92,018	8,88,273
919,084	900,294	925,366	915,289	969,728	960,521	903,595	896,745	967,027	9,59,767	10,01,650	9,94,094

#### STATEMENT No. V -Showing particulars of vecination

							- 1	Total numb	er inspected	-			Perc	centage of
			Total numb	er of per-	By Assis	cant Director Civil	tors of Publ Surgeons.	ic Health	By Nati	e ve Superin Inspectin	tendents or	other	By Assista	or Civil
	District.		named control		Assistant of Fuelle	Pircetors Health.	Civil Sur	goons.	Distr Inspec		Sub-Insp	ectors.	Assistant of Public	Directors c Health,
			-		1		100		10			18.7	111	-
			Primary.	Re-raceination.	Primary.	Revaccination	Prinary.	Re-raccination,	Primary.	Re-raceination	Primary.	Re-raceination	Primary.	Se-vaceination.
00.77	THE SAY			TO SECUL	-		~	- 10	TOTAL CONT.	PA	P4	PA	1 0000	14
	. *			3		5	6	7		9	10	31	12	13
1,68,57	810,0	8.91	002,000	0017111	100	NT I	2708	80	100,000	VIS		III I	100,13	P
Patna		***	12,514	553	9,756	***	650	341	14,379		15,975		15:50	
Gaya			50,923	819	10,319	-	311	-758	6,919	100	18,606		20:23	
Shahaba	sd		59,779	20	2,658		2,515	-	6,683	144	16,893		4'44	-
Saran	3758,00	0.5	79,351	615	1,85)		3,310	1000	2,774	-	19,280	0.000	2-52	0 70
Champs		-	44,230	1,655	3,740	404	400	-	15,054	200	22,195	26	6.19	
Muraffa		***	92,124	765	5,297		8,129	381	15,085	211	29,270	3	5'74	900
Darbhai		410	92,905 70,828	1,241	4,508	100	1,816	77	19,788	73	23,634	17	4.85	***
Monghy		-	62,175	4,901	2,971		3,047	577	10,358	70	24,666		6/19	
Bheçalp	idir		35,013	943	1,747	***	441	17.0	7,354		11,650	-		***
Purnea dontal I	Parganas		5a,583	3,171	5,763	184	3,543	394	6,297	418	19,569	528	10:12	***
Juttack			44,200	,(8)	3,214	-		745	6,935	248	8,693	767	7-26	
Balason			38,410	4,782	876		1,202	44	3,643	203	7,716	500	3-(8	
Angul	100		6,335	409			584		1,613		5,280	31		
Pari			35,883	2,45	347		467	410	6,455	648	12,068	806	198	
Sambaly	par	Pen.	23,815	133	980	2	1,510	108	5,907	***	6,976	***	4'14	-
Hazarib			34,964	1,273	7,525		1,785	603	5,865		10,463	15	21.25	
Ranchi	-		44,168	1,494	1,064	***	1,650		8,315	538	13,178		2740	100
Palama	a		16,461	1,191	1,423		2,975	170	5,345	50	3,761	0	8'64	
Manbh	100	100	53,010	9,014	3,024		1,192		10,010		23,261	7,151	0'83	-
Singhid	bum		16,403	1,781	1,481	-	843	166	3,504	812	2,335	39	IF83	
Tot	·		1,001,650	43,616	71,8:4		40,985	4,683	174,801	3,130	323,478	9,968	7-16	

verified by Inspecting Officers during the year 1927-22.

nspection	te total nu	mber vacc	inated.	- Tarin		Pe	ercentage o	f cases four	d successf	al to total	number in	spected.				
ors of Pub urgeons,	die Health	By Na	ative Superi Inspecti	ntentents ng Officers.	or other	By Assist	ant Direct	ors of Publi	e Health	By Nati	re Superint aspecting	endents:	or other	Percentage of successful cases reported by vaccinators.		
Civil S	urgeons.		trict ectors.	Sub-In	spectors.	Assistant of Public	Directors Health.	Civil Se	ergoons.		triet ectors.	Sab-Ia	spectors.			
Primary.	Re-raccination.	Primary.	Re-vaceination.	Primary.	Re-raccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-raceluation.	Prinary.	Be-raceination.	Primary.	Ne-vaceination.	
14	15	16	17	18	19	200	21	22	23	24	2.5	26	27	28	29	
1'03 '61 4'25 4'66 '92 9'4 4'24 2'66 4'83 1'25	61-6s 84-00 	22:98 13:55 11:17 3:78 35:90 16:37 20:86 19:25 16:48 20:90	17'00	25:25 30:63 28:27 18:10 50:18 31:77 33:09 33:25 30:45	197 29	96 10 95 79 89 76 65 740 95 78 95 70 70 743 89 708 85 74 83 719		109 93-89 97-83 98-95 100- 99-97 99-84 99-73 10-27 100-	23-88	100° 98°33 75°85 98°30 90°64 90°19 90°19 99°92 98°25 97°13	54:24	90°-08 98°-43 90°-08 97°-56 91°-52 95°-02 90°-07 19°-71 97°-90 98°-97	65°45 100°	98 23 90-69 9, 77 98-38 99-63 99-54 90-65 99-95 99-95 99-83	29-83 46-67 87-00 49-17 69-13 49-67 73-59 23-18 60-83 35-20	
6'49  4'22 8'90 1'30 6'37 5'10 4'18	18°24 92 	11:53 15:6- 12:51 25:40 17:98 24:60 16:77 18:59	13-79 6-67 6-08 26-38	23-85 29-19 27-15 83-45 30-19 20-28 29-93 20-72	16-44 18-74 10-68 7-57 36-23 1-17	91 09 92 09 78 19 95 10 92 90 98 14 91 16	78.1 78.1 78.1 78.1 78.1 78.1 78.1 78.1	99°41 98°58 91°22 97°78 90°83	67-46 58-25 68-18  60-13 63-74 67-27	96°03 90°38 98'87 90°90 98°91 97°37 98°63	45-61 68-54 34-67  55-00	98'50 85'55 17 71 96'12 99'37 95'64 97'26 98'41	73:97 7:20 91:30 45:16 47:24  80-	99-71 98-60 97-04 98-05 99-64 90'68 99-69	47°52 47°80 70°27 52°08 55°63 44°09 43°57	
18108 2143 5168	10'44	32.83 38.85 32.80	45.50	35-01 43-88 15-46	*75 79:33 2:18	97:11 94:31 94:81	1000 1000 1000 1000 1000 1000 1000 100	300° 86°75 98°93	20°59  56°98	98-91	40°00 	99°23 94°28 98°67	21-23 83-03 84-61	99°09 99°00 31	13-93 64-90 57-38	
4109	11:26	17-45	8100	31-29	23-95	93-44	7	98'66	51:78	98-85	63-83	97-31	73'55	99-27	50-89	

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

			.914-15.	1	916-16		1916-17	11	117-18
District.		Ratio of deaths from small-pox.	Number of successful vaccina-	Ratio of deaths from small-pox.	Number of successful vaccina-	Ratio of deaths from small-pox.	Number of successful vaccina- tions.	Ratio of deaths from small-pox.	Number of successful vaccina-
i		2		4	5	6	7	8	9
Patns		-48	57,665	.71	68,438	-28	67,870	.15	68,529
Gaya		·10	65,855	.68	75,641	-37	56,139	.18	62,246
Shahabad	***	.32	62,079	45	65,016	.26	51,176	.10	51,858
Saran	-	*06	80,739	.15	79,608	-27	74,895	-16	77,721
Champaran		.10	64,146	14	68,255	-07	49,091	-11	51,755
Muzaffarpur	-	-09	105,292	-24	104,624	.20	88,702	-09	85,898
Darbhanga		-24	97,760	-41	95,237	-28	96,020	.07	93,206
Monghyr		-46	89,749	-42	87,999	-17	67,229	.10	68,361
Bhagalpur		-35	75,831	•38	74,532	-22	66,899	-22	68,166
Purnes		-30	58,496	.38	51,206	-33	53,018	-64	49,490
Santal Parganas		-18	53,182	.37	57,558	.43	46,826	-14	56,728
Cuttack		-06	113,297	-69	89,925	-46	73,415	·81	62,177
Balasore		-90	53,281	-90	38,609	-24	22,178	.03	25,800
Angul			7,680	*01	9,686	-15	9,226	.01	6,956
Puri		-02	33,820	.30	37,595	:52	29,228	-26	34,639
Sambalpur		-02	27,561	.75	22,606	1.09	19,938	-24	23,345
Hazaribagh		-03	48,299	-49	46,709	-19	42,148	-07	39,761
Ranchi		-03	50,958	-12	52,111	-05	48,667	-03	47,094
Palamau		.10	28,327	-17	31,808	-15	25,542	-06	26,893
Manbhum		-43	73,369	-63	54,056	-23	49,379	-02	52,289
Singhbhum		*45	25,909	.28	19,526	·12	17,429	-09	17,872
Total		-22	1,273,285	-42	1,280,745	-28	1,053,015	-19	1,070,784

. 17

Small-pox and the number of successful vaccinations during the ten years ending 1923-24.

1	1918-19		1919-20		1920-21		1921-23	,	922-23.	1938-34.		
Eate of deaths from small-port.	Number of successful traceina- tions,	Ratto of deaths from small-pex.	Number of successful Tactina-	Ratio of deaths from small-pox.	Number of successful raccina-	Ratio of deaths from small-pos.	Number of successful vaccina-	Ratio of deaths from small-pox.	Number of successful vaccina-	Ratio of deaths from small-pox.	Number of successful vaccina-	
10	11	12	13	14	15	16	17	18	19	20	21	
-13 -21 -02 -07 -14 -02 -08 -05 -09 -52 -06 -89 -06 -75 -07 -07 -04 -06	69,535 56,114 41,625 66,443 50,191 86,664 36,555 56,576 59,034 54,209 46,659 51,845 20,943 6,751 33,543 15,361 35,632 31,870 20,472 37,807	-85 -62 -24 -10 -13 -10 -10 -24 -23 -96 -86 -91 -86 -111 -3-12 -68 -24 -90 -126	68,573 66,449 4',394 66,583 53,458 87,182 88,770 59,814 56,741 50,349 44,691 55,008 22,139 5,739 32,940 13,835 35,026 40,559 21,226 57,908	2·79 -77 -55 -39 -29 -13 -17 -28 -22 -98 -37 -30 -5477 -27 -13 1·38 1·76 -11	71,340 60,938 62,418 68,000 56,914 89,230 93,468 55,104 58,176 51,930 45,864 60,775 27,597 4,060 41,225 18,523 29,123 38,450 19,346 43,192	·46 ·24 ·22 ·13 ·68 ·04 ·03 ·14 ·13 ·29 ·05 ·04 ·09 ··· ·08 ·03 ·02 ·21 ·56 ·02	63,297 42,710 69,010 37,665 36,927 82,124 88,504 54,215 62,115 36,428 50,187 61,424 26,380 4,968 34,897 20,829 29,524 38,997 16,898 43,484	-05 -04 -04 -06 -04 -06 -01 -09 -24 -01 -15 -17 -005 -13 -006 -02 -05 -09 -09 -09 -09 -09 -09 -09 -09	62,673 47,263 58,782 66,871 44,499 86,141 88,184 62,958 64,294 38,977 55,085 61,752 23,541 5,511 35,208 18,791 31,985 41,821 15,585 52,438	· 06 · 04 · 02 · 05 · 09 · 12 · 05 · 09 · 48 · 06 · 03 · 28 · 37 · · 25 · 01 · 03 · 01 · 04 · 01	61,595 51,137 59,661 72,449 45,103 92,087 93,651 70,828 65,464 35,218 56,056 46,041 30,195 6,159 36,479 23,757 35,784 44,812 16,466 58,031	
10	15,542	1-24	19,595	-52	18,023	-32	16,605	.18	16,998	-14	16,058	
1-17	942,370	.53	989,278	-56	1,013,696	-14	917,188	-07	979,351	-11	1,017,031	

STATEMENT No. VII -- Showing the protection afforded to intants in each town in the Province of Bihar and Orissa during the year 1923-24.

District.	and in	Towns	H-roo	Number of births dur- ing the year ending flat March 1921,	Number of deaths amongst infants under one year during the year ending 31st March 1924.	Number of successful vaccinations amongst inian a under one year during the year ending 31st March 1929.	Date of extension of Vacci- nation Act to town.
1		2		3	4	5	6
	1	Patna Bihar	i	3,951 883	702	919	1st October 1884. 1st April 1887.
Patna	}	Dinapur	ш	1,181	237	556	28th January 1891.
402.10	60- 10	Barh	\$25000	300	80	149	lst April 1887.
	j e	Khagole	0170	287	64	15	12th July 1910.
100,03		Total		0.000	1,221	1,996	11.50
ent.		Total		6,602	1,521	1,8.0	11-
	(	Gaya		1,865	731	1,106	1st January 1883.
Gaya	}	Tikari		213	29	37	3rd January 1891.
	100	Daudnagar	61 M	319	66	231	Ditto:
		Total		2,897	829	1,374	012.00 pt
	(	Arrah	10	1,855	229	877	20th July 1885.
		Buxar		374	85	263	1st April 1887.
	1	Dumraon	1103	761	104	299	Ditto.
Shahabad	{	Jagadispur		328	51	258	20th December 1890.
	TE N	Sassaram	WINE .	887	161	319	1st April 1887.
	1	Bhabhua	100,000	THE SELECT	34	82	Ditto.
		Diaonua		167	04	20	11502 1 10
		Total	F6.5	3,872	66+	2,098	10.30
1000		COLI LES		10 10		draft de la	
		Total of Pat	na Divi-	12,871	2,714	5,468	
		Change		1 550		906	lst April 1887.
Saran		Chapra Revelganj		1,556 362	77	264	12th December 1890.
	-	Siwan		414	52	338	1st April 1887.
		Total		2,862	129	1,50%	
Ci.	(	Motihari		422	6.1	312	1st April 1887.
Champaran	{	Bettiah		865	148	257	Ditto.
		Total		1,287	212	569	

STATEMENT No. VII - Showing the protection afforded to infants in each town in the Province of Bihar and Orizza during the year 1923-24 - conid.

District.	Tow		Number of births dur- ing the year ending 31st March 1924,	Number of deaths amongst infants under one year during the year ending 31st March 1934.	Number of successful vaccinations a rought infants under one year during the year e ding 31st March 2014.	Date of extension of Vacci- nation A.t to town.
1	2		3	4	5	
at a mark not	Muzaffarpu	r	1,361	268	435	1st January 1386.
Management of the same	Sitamarhi	54	301	30	171	1st April 1887.
Muzaffarpur	Hajipur	40	686	146	183	lst May 1890.
South amount days	Lalganj		306	38	122	1st April 1887.
	Total		2,654	482	911	
	Darbhanga		1,947	265	376	24th May 1884.
Darbhanga	Roserha		505	61	60	3rd January 1891.
Daronanga	Samastipur	001,1	342	49	25	25th July 1910.
	Madhubani		455	36	125	1st April 1887.
April reducing a self-	Total	081	3,249	411	586	
	The same					- 'sloutte'
	Total of Divisi		9,552	1,234	3,574	
Monghyr	Monghyr	188	1,833	333	338	15th November 1882
	Jamalpur		1,037	191	515	Ditto.
	Total		2,870	524	Ozelalan .	Balance
Tale Month Acra		946	1000	334	853	Puri matriana
	Bhagalpur		1,760	326	924	15th February 1884 withdrawn on 16t
Bhagalpur	160		+10,	Dring m.	Divis	O tober 1895; re extended on 18t August 1898.
	Colgong		128	36	44	Ditto, re-extended o 19th December 1901
Self supply fail	D. m.					dysferrall
	Total		1,858	362	968	
	Purnea		294	36	168	1st July 1887.
Purnea	Kishangan		132	16	120	12th November 1892
. arnes	Katihar		284	16	130	8th August 1910.
fat April 1987.	Forbesganj	1	127	13	102	9th August 1912.
	Total		837	81	520	
	10000	1001	1			

STATEMENT No. VII - Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1923-24—contd.

District.	Towns.		Number of births during the year ending 31st March 1924.	Number of deaths amongst infants under one year during the year ending 31st March 1924,	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1934.	Date of extension of Vaccination Act to town.
1	,		3	•	6	6
Alexander of the state of the s	Sahibganj	***	522	82	238	1st May 1884.
Santal Parganas	Deoghar	·	279	42	71	Ditto.
Santai rarganas	Madhupur	BET	216	54	76	22nd August 1910.
Traction of	Dumks	88 Fe	197	45	160	Notifications, dated the 9th April 1884, and 23rd August 1910.
State of the state	Total		1,214	223	545	
Son girt as a	Total of B Division	hagalpur	6,809	1,190	2,886	agodickie
	Cuttack		996	180	199	1st September 1884.
Cuttack	Kendrapara		328	109	38	7th February 1888.
	Jajpur	189,1	294	78	73	Ditto.
	Total		1,618	362	310	To age of the control
Balasore	Balasore		330	76	155	7th February 1888.
Puri	Puri	458	714	275	273	Ditto.
Sambalpur	Sambalpur	003 "	352	78	182	7th March #895.
	Total of Divisi	Orissa	3,014	786	920	milegaliti
Disconsisted on C.	Hazaribagh	90	475	42	187	1st January 1885.
Hazaribagh {	Chatra	588	32+	7	141	1st August 18°5.
	Giridih		547	42	152	8th September 1910.
	Total	4	1,846	91	480	Police
Ranchi {	Ranchi	B1	1,295	114	1,167	1st April 1887.
Nangui {	Lohardaga		207	24	113	25th June 1892.
	Total		1,502	138	1,280	

STATEMENT No. VII—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1923-24—concld.

Distr	iet.		Towns.	Number of births during the year ending 3ist March 1924,	Number of deaths amongst infants under one year during the year ending 31st March 1924.		Number of successful vaccinations amongst infants under one year during the year ending 31st March 1924.	Date of extension of Vaccination Act to town.
1	1			3			6	6
Palamau		.	Daltonganj	231	9	49	118	9th October 1890.
		1	Purulia	496		68	220	1st January 1887.
H. T.		1	Raghunathpur	163		22	51	9th February 1894.
Manbhum		1	Jhalda	196		13	81	9th July 1892.
		11	Dhanbad	220		25	8	5th December 1918.
			Tota!	1,075	1	123	310	
1			100 000,00	(11,0)				
Singhbhum		5	Chaibassa	260		38	120	20th June 1892.
Singhonum	4049	1	Chakradharpur	106		!1	122	13th January 1919.
			171 80034	12/0				
		1	Total	366		49	242	
			Total of Chota	0.000				
		1	Nagpur Division.	4,520		450	2,430	
		1	EDI USELU		-			
			Total for the Province	36,766		6,374	15,278	

B. & O. G. P. (D. P. H.) No. 23-500-23-7-10 (-12 P. H.

ANNEXURE

# Provincial Statement showing the different kinds of lymph

-			1	Control of the last		10000	TOUR DEPT.	K 19 75 1411							
				of patient and	AL INC.	12 (E)	a section of	Acre policy	Primas	y vaccin	ation.		The same of		
				Direct fr	om the	calf.		1	Withlanoline	or glyce	rine lymph.	-	-	Arm-to-arm	
Di	ineliot.		Q0    a0	811			successful cases.	183		jougo	Purch	successful cases.	unn	nin'i	
8		Pobro	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful	Total.	Sucocasful.	Unencoesful.	<b>Такно</b> та.	Percentage of successful	Total.	Successful.	
	1		2	3	1 4	5	6	7	8	9	10	11	12	13	
Patna		100		1		1		62,514	61,430	887	197	98-26		1:	
Gaya	18021	nont.		-		F		50,923	50,763	122	38	99.68	***		
Shahabad	dir symm	mal.	11000	1			10.0	59,779	59,645	113	21	99-77	mudde	1016	
Saran		144	100	-	-		-	73,351	72,146	803	402	98 35		-	
Champaran		200			1		344	44,230	44,068	114	48	99-63			
Musaffarpur				5	1		***	92,124	91,707	386.	31	99-54			
Darbhanga		***						92,905	92,775	123	7	99-86	***		
Monghyr	***		***	1	1	1		70,826	70,793	29	4	99-95		-	
Bhagalpur		101	***	0 1 5	1	-		62,975	62,865	48	62	99-83			
Purnea	***				1			35,083	34,886	168	29	99-43			
Santal Pargan	88		-	-	1			54,583	54,383	129	151	99-54	-		
Cuttack	***		***	15,878	1	50.0	***	44,226	10 144,190	25	101	99-71			
Balasore	***			-				28,410	27,957	300	153	98:40			
Angul				-	1			6,335	6,133	145	57	96-81	-	-	
Furi	***	***	***	***				35,882	35,184	184	514	98'05		***	
Sambalpur			147					23,815	23,683	36	96	99-44	***	***	
Hazaribagh								34,964	34,900	61	3	99-81	***	-	
Banchi	0.00							44,168	44,161	3	4	99-98			
Palamau	***		***					- 16,451	16,300	18	133	99'08			
Manbhum								53,010	51,229	1,248	533	96'64		***	
Singhbhum	***							15,096	15,036	54	6	99-60			
т	OTAL			-				10,91,650	9,94,094	4,996	2,560	99-24			

B. & O. G. P. (D. P. H.) No. 22-500-28-7-192 - E. P. R.

II.
used and their rates of success during the year 1923-24.

									R	e-vaccinati	on.						
vaccin	ation.		1	Direct	from th	he calf.			With lanoli	ne or glyce	rine lymph			Arm-te	-arm	vaccination	1.
Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful. Unsuccessful. Unknown. Percentage of successful cases.		Total.	Successful.	Unsuocessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	<b>Сак</b> во <b>м</b> в.	Percentage of endocasful chass.		
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	81
						***		\$53	165	379	9	29-83	]				
								819	374	345	100	45-66				100	***
								20	16	4	***	80-00					
				***				615	303	193	119	49-26					
			***					1,655	1,035	349	271	62:53					
		Care .			-	***	***	765	390	274	111	49-67					
								1,241	876	361	4	70.58				***	
	***	44.0	***	***	411	100		122	35	82	5	28.68		***			
				***		***		4,991	2,599	1,983	409	52.07	1-1	-	***		
				***	***			943	332	468	143	35-20					
in								3,271	1,723	1,047	501	52-67	-5				100
		***						4,084	1,941	1,679	464	47.52	***		***		
				***				4,782	2,238	1,365	1,179	46'80	***			***	
					***		-	409	26	8	375	6-35					-
						***		2,458	1,295	771	392	52-68		***			
		***						133	74	38	21	55.63					
		***						1,273	884	312	77	69:44	****				
								1,494	651	193	650	43:57					
								1,191	166	100	925	13.83	***				
***			***					9,014	6,802	1,460	752	75-46					
		***						1,781	1,022	700	59	57:38	1=1		-	-	****
								41,614	22,937	12,111	6,566	55:11					

sed and their veres of anacers during the year 1923-24

		-			mails and			D mov				
Taken on the last of the last										area interest in systems?		
	1				tat P				1		-	
												1
	- 3						100					
					000.0							
						Contract Con						
						Part 1						
				11121	10033	11113						
	-											

