



Comparative study of Immunization among various states of India

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ABSTRACT

Immunization has been one of the most significant, cost-effective and stimulatory public health interventions. India, along with the whole world, stands committed to the welfare of children, as reflected in the theme of 'World Immunization week, 2017,' viz. 'Vaccines work'. The early twentieth century witnessed the challenges in expansion of different diseases i.e. Polio, DPT etc. in all of the Indian states. Despite a lot of reduction in disease burden of vaccine preventable diseases through childhood immunisation, considerable progress needs to be made in terms of ensuring efficiency and equity of vaccination coverage. In India according to National Family Health Survey (NFHS-4) factsheets at least 6 out of 10 children have received full immunisation in 12 out of 15 states/union territories which can be considered quite high from the findings of complete immunisation in NFHS-3 i.e. 44% only.

Keywords: Immunisation, NFHS-4, Vaccination, Infant mortality, Disease burden.

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INTRODUCTION

Vaccination is one of the most cost-effective child survival interventions and helps individuals to keep their children free from vaccine preventable diseases. India has various immunisation programmes for to delivering selected vaccines to the targeted beneficiaries, especially focusing on infants who are at higher risk of diseases preventable by vaccines. India is among the major buyers and makers of vaccines, locally as well as globally, and has traditionally aimed at self-reliance in vaccine technologies and production^[1]. In India child of age between 12-23 months is considered to be completely immunized if he/she has received 1 dose of BCG and Measles each, 3 doses of Polio and 3 doses of DPT^[2]. According to National Family Health Survey (NFHS-4) factsheets at least 6 out of 10 children have received full immunisation in 12 out of 15 states/union territories which can be considered quite high from the findings of complete immunisation in NFHS-3 i.e. 44% only^[3]. This paper will emphasize the comparison between complete immunisation among various states of India based on the data available from NFHS-3 and NFHS-4 survey.

MATERIALS AND METHOD

The analysis has been done on the published data of NFHS-3^[4] and NFHS-4^[5]. Comparisons have been made between the figures of complete immunisation on the data available from NFHS-3 and NFHS-4. Comparisons is carried out on the basis of Urban and Rural population.

Table 1: Comparison of NFHS-3 and NFHS-4 for various states of India

S.No	States	NFHS-3			NFHS-4		
		Urban	Rural	Total	Urban	Rural	Total
1.	Andhra Pradesh	51.2	42.9	46.0	60.4	67.2	65.3
2.	Arunachal Pradesh	51.2	21.1	28.4	44.2	36.4	38.2
3.	Assam	29.3	31.7	31.4	70.9	44.4	47.1
4.	Bihar	45.6	31.1	32.8	59.7	61.9	61.7
5.	Chhattisgarh	74.7	43.1	48.7	84.9	74.3	76.4
6.	Goa	83.5	73.0	78.6	87.7	90.1	88.4
7.	Gujarat	54.7	40.1	45.2	50.4	50.4	50.4
8.	Haryana	82.2	60.3	65.3	57.0	65.1	62.2
9.	Himanchal Pradesh	80.0	73.6	74.2	64.8	69.9	69.5
10.	Jammu& Kashmir	73.0	64.9	66.7	81.6	72.9	75.1
11.	Jharkhand	51.0	29.5	34.2	67.0	60.7	61.9
12.	Karnataka	59.6	52.2	55.0	59.8	64.8	62.9
13.	Kerala	87.5	69.4	75.3	82.2	82.0	82.1
14.	Madhya Pradesh	68.7	31.5	40.3	63.0	50.2	53.6
15.	Maharashtra	68.0	49.8	58.8	55.8	56.7	56.3
16.	Manipur	59.6	42.8	46.8	74.3	61.7	65.9
17.	Meghalaya	33.8	32.6	32.9	81.4	58.5	61.5
18.	Mizoram	57.1	36.6	46.5	49.8	51.3	50.5

19.	Nagaland	36.0	17.1	21.0	41.6	33.4	35.7
20.	Orissa	52.7	51.6	51.8	75.0	79.2	78.6
21.	Punjab	64.4	58.1	60.1	88.7	89.3	89.1
22.	Rajasthan	44.3	22.1	26.5	60.9	53.1	54.8
23.	Sikkim	85.4	66.7	69.6	81.4	83.7	83
24.	Tamil Nadu	77.8	83.7	80.9	73.3	66.8	69.7
25.	Telangana	N.A	N.A	N.A	67.8	68.3	68.1
26.	Tripura	N.A	47.9	49.7	64.2	51.2	54.5
27.	Uttar Pradesh	33.0	20.5	23.0	53.6	50.4	51.5
28.	Uttaranchal	67.2	57.4	60.0	56.5	58.2	57.7
29.	West Bengal	70.3	62.8	64.3	77.7	87.1	84.4

RESULTS AND DISCUSSION

As the above table 1.0 illustrates the data of completely immunized children of age between 12 and 23 (in months) from the two National Family Health Survey (NFHS) i.e. NFHS-3 and NFHS-4. Five of the 29 states including Haryana, Himanchal Pradesh, Maharashtra, Tamil Nadu and Uttaranchal have shown decline in the immunisation rate. The maximum decline was seen in Tamil Nadu state which dropped from 80.9% to 69.7%.

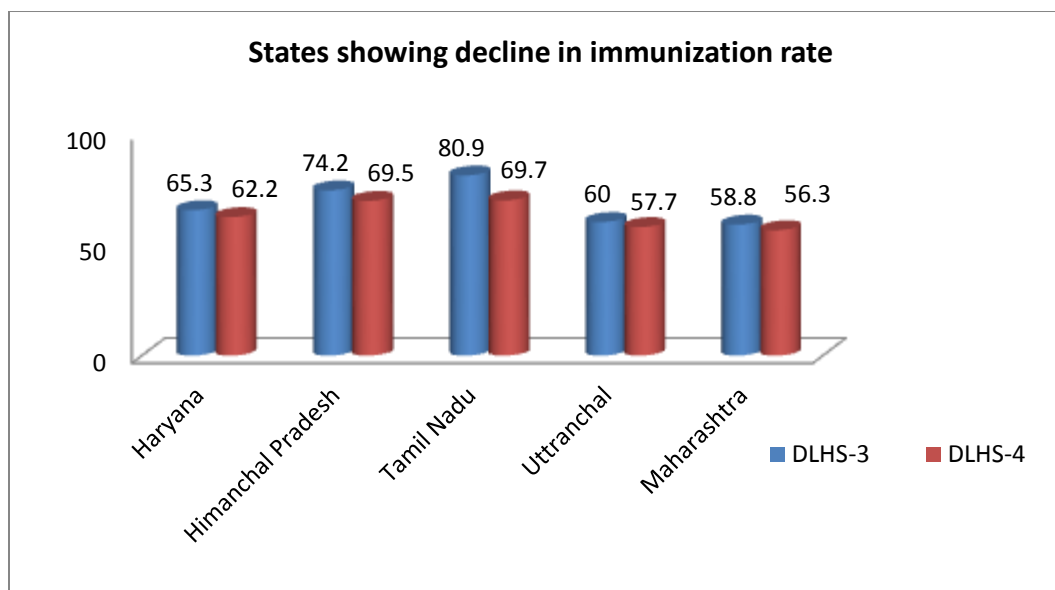


Figure 1: Decline in immunization rate for various states of India according to DLHS-3 and DLHS-4

Most of the states have shown rise in their immunisation rate including major states of country like Uttar Pradesh, Rajasthan, in which the rate of immunisation has approximately doubled as compared to the previous survey. Chhattisgarh, Jharkhand and Andhra Pradesh have also shown a drastic increase in rates. Immunisation rate remained near to constant in some of the states like Gujarat, Karnataka, Kerala, Mizoram, and Tripura.

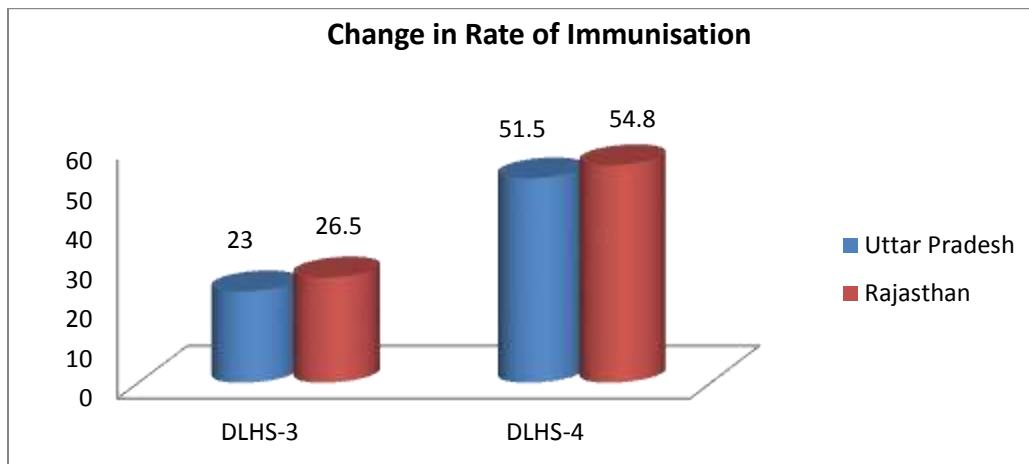


Figure 2: Change in rate of immunisation in Uttar Pradesh and Rajasthan

The highest immunisation rate was observed in Punjab whereas the lowest rate was seen in Nagaland and a new state i.e. Telangana which was covered in NFHS-4 which recorded an immunization rate of 68%.

Reasons for change in immunization coverage:

Government of India has launched various programs related to child immunisation which results in the increase of immunization rate throughout the country. Some of the programs are listed below-

1. Second phase of Mission Indradhanush continued in Jan 2016 in 352 districts. Phase III was implemented from April to July 2016 in 216 districts of the country. During all the three phases, (as on 1st August 2016, 2.08 crore children have been vaccinated of which 54.5 lakh children have been fully immunized. According to Integrated Child Health and Immunization Survey 2016, full immunization coverage has increased by about 5-7% after the launch of mission Indradhanush.
2. Introduction of new vaccines like Rota virus vaccines.
3. The National Deworming Day, a flagship initiative of the Ministry of Health & Family Welfare, was observed on 10 February 2016. It is the largest ever single-day public health campaign in the world targeting approximately 27 crore children aged 1-19 year throughout the country at risk of parasitic worm infection, through the platform of schools and anganwadi centres.
4. Due to the above given effective schemes we can conclude that overall immunisation rate is increased in India and needs more awareness about the immunisation programs so that a healthy generation would come up in future years.

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