



## KNOWLEDGE AND PRACTICE REGARDING IMMUNIZATION IN A RURAL AREA OF UTTAR PRADESH

**Neha Kariwala<sup>1</sup>, Abhilasha Saraswat<sup>2</sup>, Dr.Kailash Mittal<sup>3</sup>**

<sup>1</sup>Diploma in Nutrition and Health Education (IGNOU).

<sup>2</sup>Assistant Professor, Sahu Ram Swaroop Girls Degree College, Bareilly (UP).

<sup>3</sup>Additional professor, Uttar Pradesh University of medical sciences, Saifai, Etawah (UP).

### ABSTRACT

Immunization is key to child survival. It is One of the most cost-effective way to protect the life and future of children. Missing Routine Immunization (RI) may prove life-threatening for infants and children. More than half of the world's most vulnerable children still miss out on the essential vaccines they need to survive and live healthy lives. Globally, an estimated 1.5 million deaths could be avoided if children are vaccinated.

Despite so much efforts by Government and other organizations, Only 65 per cent of children in India receive full immunization during the first year of their life, putting them and their communities at risk of disease and deadly outbreaks.

So keeping this in mind, the present study was conducted with the objective of evaluation of immunization status in rural areas which are still far behind the urban areas in immunization coverage. The study also find out the factors associated with the poor coverage to highlight them and to make suggestions to improve overall immunization status.

In study it was found that immunization status for vaccines included in national immunization programme ranges from 73.3% to even less than 4%, maximum being just after birth as in BCG and OPV zero dose, becoming lesser as the age of the child increases (OPV 1,2,3, and DPT 1,2,3,) and least for OPV booster, DPT booster, Measles vaccine.



**KEYWORDS:** Immunization, vaccines, knowledge, practice, rural area, BCG, OPV, DPT, Measles

### INTRODUCTION

The Universal Immunization Programme (UIP) was introduced in India in 1985-86 with the objective to cover at least 85 percent of all infants against the six vaccine preventable diseases by 1990 and to achieve self-sufficiency in vaccine production and the manufacturing of cold-chain equipments for storage purpose. Presently this scheme has been introduced in every district of the country and the target now is to achieve 100 % immunization coverage.

Immunization forms the major focus of child survival programmes throughout the world. Estimated 1.5 million children die each year of Vaccine Preventable Diseases (VPDs) with a disproportionate number of these children residing in developing countries <sup>(1)</sup>. In India, vaccination campaigns have increased full immunization coverage among 12-23-month-old children from an estimated 62% in 2015-2016 to 76% in 2019-2020 <sup>(2)</sup>. The number of children missing out on any vaccination – so-called zero-dose children – improved from 18.1 million in 2021 to 14.3 million in 2022, nearly back to pre-pandemic 2019 level with 12.9 million.<sup>(3)</sup>.

It is important to know what are the factors that cause hinderances to vaccination at a local level. Some factors in low- and middle-income countries include social status, household income, parental education, religious and cultural beliefs. Supply-side factors include distance of immunization session site from beneficiary’s house, poor quality of services. (4-8)

**OBJECTIVES:**

1. To study the immunization status of children in age group of 12-23 months in rural area
2. Find out preferred place of immunization
3. To find out reason for non immunization of the child
4. Suggestions to improve immunization status, based on the study

**MATERIAL AND METHODS**

**Study area-** ARural Health Training Centre (RHTC), attached to the department of Community Medicine of a Medical College in Uttar Pradesh covers a population of more than 20,000 of nearby 24 villages. Study was conducted in these villages covered by rural health training centre.

**Study unit-** Unit of the study was **children in the age group of 12-23 months**. They were selected from the records of RHTC in nearby villages to cover 30 children. Consent was obtained from each parent regarding study. Immunization status of each child was recorded on pre-design and pre-tested Performa. Immunization card was seen to ascertain the immunization status. This Performa also included the open-ended questions for the reasons of non-immunization of the child, wherever applicable. Response from either mother or father of the child was relied upon.

After complete data collection, all data were entered on Microsoft excel sheet and they were analysed for final results. Results of the study are expressed in numbers and percentages.

**Observations and Results**

Following are the results of the study after analysis-

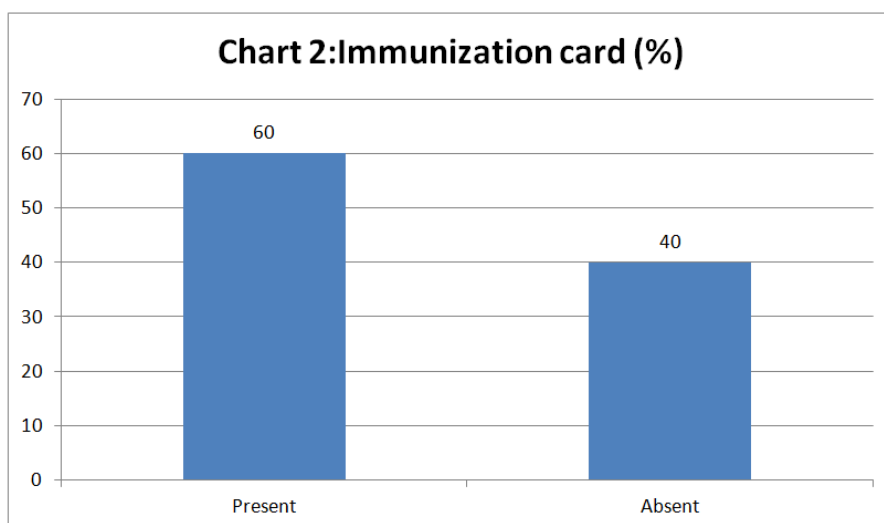
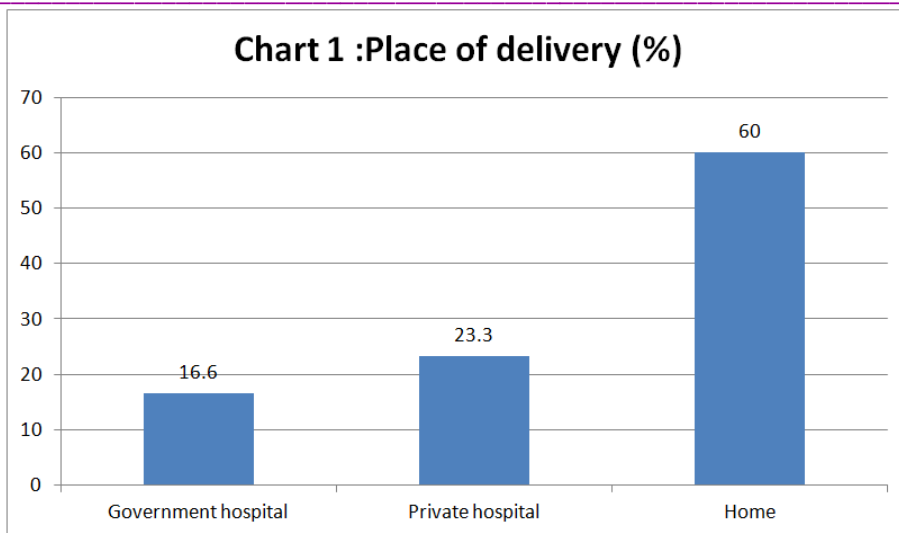
**Table 1: General information of participants**

General information		Response, n* (%) N**=30
Gender	Male	14 (46.6)
	Female	16 (53.3)
Place of delivery	Government hospital	5 (16.6)
	Private hospital	7 (23.3)
	Home	18 (60%)
Immunization card	Present	18 (60.0%)
	Not present	12 (40.0%)

\* n= response

\*\*N= sample size

Table 1 shows the general information of the sample population. Out of total 30 children included in the study, 46.6% were males and 53.3 were females. Most of the children were delivered at home (60%) followed by private hospitals (23.3) and government hospitals (16.6), (Chart-1). For confirmation of the vaccination status, immunization card was seen. Out of total, 60.0% were having immunization card while 40.0% were not having it (chart 2).



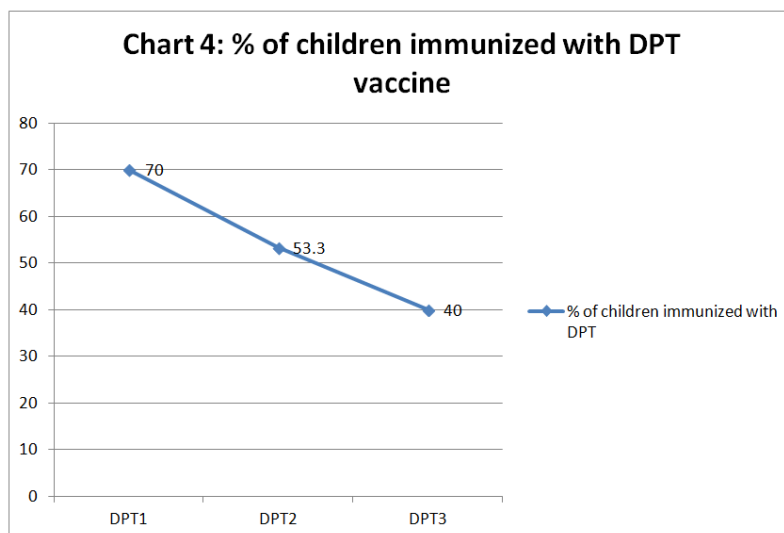
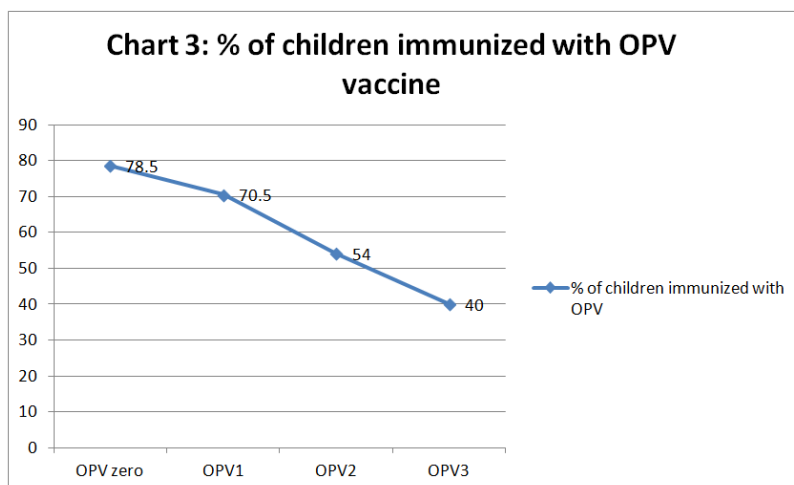
**Table 2: Vaccine wise immunization status**

Age	Vaccine	Response, n (%) N=30		
		Vaccinated	Not vaccinated	Not applicable*
Birth	BCG	22(73.3)	08(26.6)	0(0)
	OPV zero (Oral Polio Vaccine)	22(73.3)	08(26.6)	0(0)
6 weeks	OPV1	21 (70.0)	9(30.0)	0(0)
	DPT1 (Diphtheria, Pertussis, Tetanus)	21 (70.0)	9(30.0)	0(0)
10 weeks	OPV2	16(53.3)	14(46.6)	0(0)
	DPT2	16(53.3)	14(46.6)	0(0)
14 weeks	OPV3	12(40.0)	18(60.0)	0(0)
	DPT3	12(40.0)	18(60.0)	0(0)
9 months	Measles	10(33.3)	20(66.6)	0(0)
	Vit.-A I dose	9(30.0)	21(70.0)	0(0)

16-24 months	OPV booster	2(6.66)	22(73.3)	6(20.0)
	DPT booster	2(6.66)	22(73.3)	6(20.0)
	Vit-A II dose	1(3.3)	14(46.6)	15(50.0)
	Vit-A III dose	0(0.0)	9(30.0)	21(70.0)

\*Children who have not completed the age for particular vaccine

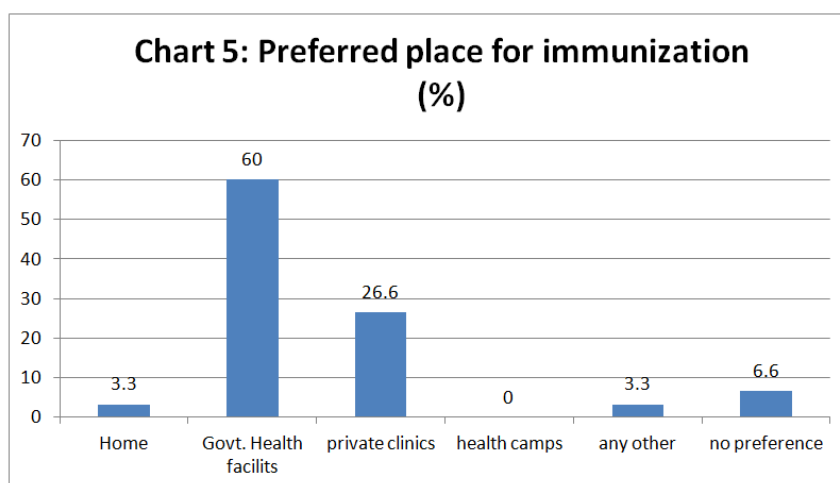
Table 2 depicts that BCG and OPV zero dose vaccine were given to 73.3 children. Coverage of OPV1 as well as DPT1 was less (70.0%). Coverage of OPV2 and DPT2 was still lesser than first dose (53.3% each vaccine) and for OPV3 and DPT 3 it was much less (40% each) (see chart 3 and 4). Measles vaccine was given to only 33.3% children. Coverage of OPV booster and DPT booster was much less than their third dose (6.66%). In case of vitamin A, first dose was given to 30.0% children and after that coverage of its 2<sup>nd</sup> and 3<sup>rd</sup> dose was very poor.



**Table 3: Preferred place for immunization**

Preferred place	Response, n (%) N=30
Home	1(3.3)
Government health facilities (Sub centre/ PHC/ CHC/ District hospital etc.)	18(60.0)
Private clinics	8(26.6)
Health camps	0(0.0)
Any other	1(3.3)
No preference	2(6.6)

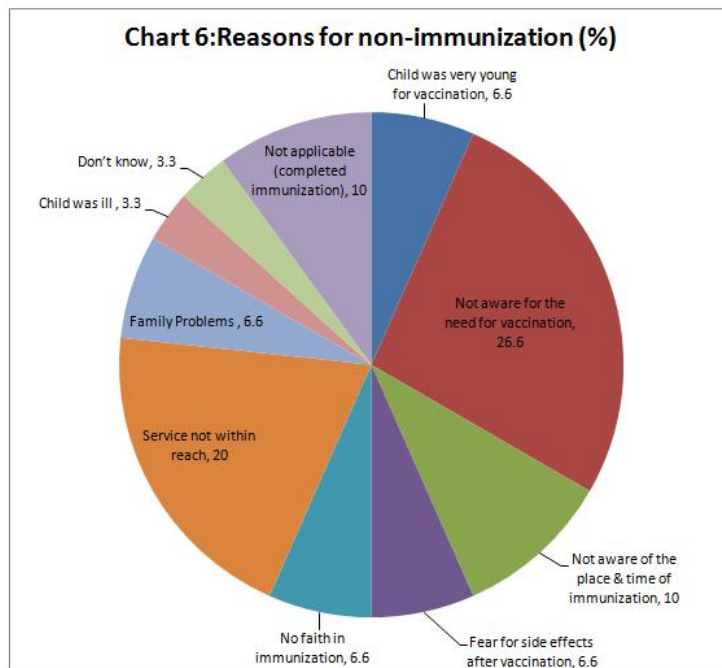
As seen in table 3, government health facilities surpass other places of immunization with approximately 3/5<sup>th</sup> (60.0%) of children being immunized there. It was then followed by private clinics (26.6%) and home (3.3%). (Chart 5)



**Table 4: Reasons for non immunization**

Reasons for non-immunization	Response, n (%) N=30
Not aware for the need for vaccination	8(26.6)
Child was very young for vaccination	2(6.6)
Not aware of the place & time of vaccination	3(10.0)
Fear for side effects after vaccination	2(6.6)
No faith in immunization	2(6.6)
Vaccination services not within reach	6 (20.0)
Family Problems	2(6.6)
Child was sick	1(3.3)
Don't know	1(3.3)
Not applicable (completed immunization)	3 (10.0)

Out of various reasons, as told by the respondents for the non immunization of their children, most common was unawareness for need of immunization (26.6%) as confirmed in table 4. Second most common reason was vaccination services were not within reach (20.0%) followed by unawareness about place and time of immunization (10.0%). Other reasons were Family problems (6.6%), no faith in immunization (6.6%), fear of side effects (6.6%) considering child too young for immunization (6.6%) and ill child (3.3%) (Chart 6)



**CONCLUSIONS**

In the present study it is evident that immunization status for vaccines included in national immunization programme ranges from 73.3% to even less than 4%, maximum being just after birth as in BCG and OPV zero dose, becoming lesser as the age of the child increases (OPV 1,2,3, and DPT 1,2,3,) and least for OPV booster, DPT booster, Measles. Coverage status of Vitamin-A doses also decreases from 1<sup>st</sup> to 2<sup>nd</sup> to 3<sup>rd</sup> dose.

The most common site of immunization being government health facilities (60.0%) followed by private clinics (26.6%) and other places.

Most common reason for non-immunization being unaware for the need of immunization(26.6%) followed by services not within reach (20.0%), family problems (6.6%), not exactly knowing the place ant time of immunization (10%), no faith on immunization (6.6%), fear of side effects (6.6%).

**RECOMMENDATION**

Immunization is vital for infant and children’s life. Since parents take care most for immunization just after birth but as the child grows they care less for the immunization and consequently coverage decreases. It is vital to emphasize the importance of immunization to general population and especially parents whose children are less than five years of age. ASHA (Accredited Social Health Activist) workers under National Health Mission, Anganwadi workers, ANM (Auxillary Nurse Midwife), print and electronic media should play vital role in parents education regarding importance of immunization. They should also try their best to eliminate any misconceptions associated with immunization.

**REFERENCES**

1. <https://www.unicef.org/india/what-we-do/immunization> (Assessed on 27 July 2023)
2. Summan A, Nandi A, Schueller E, Laxminarayan R. Public health facility quality and child immunization outcomes in rural India: A decomposition analysis. *Vaccine*. 2022 Apr 6;40(16):2388-2398. doi: 10.1016/j.vaccine.2022.03.017. Epub 2022 Mar 16. PMID: 35305825; PMCID: PMC8996686.

3. <https://www.who.int/news-room/fact-sheets/detail/immunization-coverage>(Assessed on 27 July 2023)
4. Awasthi A, Pandey CM, Singh U, Kumar S, Singh TB. Maternal determinants of immunization status of children aged 12–23 months in urban slums of Varanasi India. *Clin Epidemiol Global Health* 2015;3(3):110–6. <https://doi.org/10.1016/j.cegh.2014.07.004>.
5. Rainey JJ, Watkins M, Ryman TK, Sandhu P, Bo A, Banerjee K. Reasons related to non-vaccination and under-vaccination of children in low and middle income countries: Findings from a systematic review of the published literature, 1999–2009. *Vaccine* 2011;29(46):8215–21. <https://doi.org/10.1016/j.vaccine.2011.08.096>.
6. Favin M, Steinglass R, Fields R, Banerjee K, Sawhney M. Why children are not vaccinated: a review of the grey literature. *International Health* 2012;4 (4):229–38. <https://doi.org/10.1016/j.inhe.2012.07.004>.
7. International Institute for Population Sciences. National Family Health Survey (NFHS-5) 2019-2020 2021. [http://rchiips.org/nfhs/factsheet\\_NFHS-5.shtml](http://rchiips.org/nfhs/factsheet_NFHS-5.shtml).
8. Summan A, Nandi A, Deo S, Laxminarayan R. Improving Vaccination Coverage and Timeliness Through Periodic Intensification of Routine Immunization: Evidence from Mission Indradhanush. *Ann. N.Y. Acad. Sci.* 2021;1502 (1):110–20.