



## Study of Maternal Knowledge Regarding Immunization at Tertiary Care Center in Maharashtra

### KEYWORDS

Universal Immunization Programme (UIP), Immunization, Vaccination coverage

### Nilesh Dayama

Associate Professor, Department of Pediatrics, GMC Akola

### Vinit Warthe

Associate Professor, Department of Pediatrics, GMC Akola.

### Paridhi Garg

Assistant Professor, Department of Pediatrics, GMC Akola.

### Ashutosh Padliwal

Assistant Professor, Department of Pediatrics, GMC Akola

### Sumit Aggarwal

Assistant Professor, Department of Community Medicine, GMC Akola

**ABSTRACT** Universal Immunization Programme (UIP) was started in 1978 in spite of the that vaccination coverage in India is far from complete. Maternal health education is a key to success of UIP and understanding of sociocultural behavior required for better vaccination programme and strategies. Poor maternal knowledge is likely to results in incomplete immunization coverage in children. Present study was done to assess maternal knowledge about immunization, vaccines used, vaccination centers and advantages of vaccine. Material and methods: Present hospital based cross sectional descriptive study was conducted at pediatric OPD of Government Medical College & hospital, Akola. Results- Majority of mothers had poor knowledge of vaccines used in UIP. BCG and OPV were comparatively known to many. Also the most of the mothers were not aware of advantages of immunization.

### Introduction

Vaccination coverage in India is far from complete in spite of the fact that Universal Immunization Programme (UIP) started in 1978<sup>[1]</sup>. National Family Health Survey 3 (NFHS-3) reported vaccination coverage of 43.5%<sup>[2]</sup>. The Unicef coverage Evaluation survey for year 2009 showed that the coverage had improved to 61%<sup>[3]</sup>. In between 2009-2013, there was 1% increase in coverage every year, not acceptable for target of full coverage by 2020. Mission Indradhanush was launched by Union Health Ministry in Dec 2014 to increase immunization in poorly performing districts across India through a catch up campaign to achieve a full coverage by 2020<sup>[4]</sup>. Such a needed action will add burden to existing health system. For success of UIP & better coverage to achieve FIC (Fully immunized child) rate above 90%, strengthening of health system providing immunization services needed<sup>[5]</sup>.

Low maternal literacy and knowledge regarding vaccines and immunization schedule are associated with low immunization coverage<sup>[6,7]</sup>. Mass campaigns were undertaken in recent years particularly for pulse polio immunization. Drawbacks of mass campaigns like beliefs in society that vaccination services will be delivered at home, reducing rate of immunization coverage<sup>[8]</sup> and reducing EPI activities. Maternal health education is a key to success of UIP and understanding of sociocultural behavior required for better vaccination programme and strategies.<sup>[9,10]</sup> Poor maternal knowledge likely to results in incomplete immunization coverage in children<sup>[11,12]</sup>. So the context of present study was done to assess maternal knowledge of immunization, vaccines used, vaccination centers and advantages of vaccine.

### Material and Methods

Present hospital based cross-sectional descriptive study

was conducted at pediatric OPD at GMC Akola. Data collection started from June 2015. With help of pre tested, semi structured, pre-tested questionnaire, mothers were interviewed. Mothers those were having infants and given verbal consent were included in study. Those who denied were excluded. Babies of HIV positive mothers and seriously sick infants were excluded. Health assistant was available for the help of mothers to answer questions in local language. Mothers were requested to reply as per their knowledge. For data analysis appropriate statistical methods were used.

### Results

**Table 1 – Sociodemographic data of mothers having infants**

Residential area	Numbers (%)
Urban	092 (46)
Rural	108 (54)
Religion	
Hindu	096 (48)
Muslim	054 (27)
Buddhist	048 (24)
Others (Sikh, Christian)	002 (01)
Socioeconomic status	
Above poverty line	062 (31)
Below poverty line	138 (69)
Literacy of mother	
Illiterate	034 (17)
SSC and below	124 (62)
Above SSC	042 (21)
Age of mothers	
Less than 25 yrs	104 (52)
25- 35 yrs	090 (45)
More than 35 yrs	006 (03)
Occupation of mothers	
Housewife	132 (66)
Working	068 (34)

Table 1 shows that 46% mothers were residing in urban and remaining 54% were from rural area. Majority of mothers belonged to Hindu religion (48%) followed by Muslims (27%). Most of the women 69% (138) attending OPD were belong to BPL socio-economic group. 62% females were studied up to or less than senior secondary educational level. Maximum numbers of women 52% (104) were belongs to age group below 25 years. Most of mothers were housewives (66%).

**Table 2-Source of knowledge**

Source of knowledge	Numbers (%)
School	62 (31)
Health personnel	60 (30)
Family	36 (18)
Media	04 (02)
No knowledge about vaccines	38 (19)

Table 2 shows that school education (31%) and health personnel (30%) were main source of knowledge for mothers. Out of 200 women 19% (38) were having no or very few knowledge about vaccination.

**Table 3- Awareness about vaccines included in UIP**

Vaccines	Number (%)
BCG	138 (69)
OPV	132 (66)
DPT	072 (36)
Hep B	042 (21)
Measles	046 (23)
No aware about any one	036 (18)

Table 3 shows about two third of them had knowledge of only two vaccine – BCG and OPV. DPT (36%), Hepatitis-B (21%) and measles (23%) was known to very few mothers. 18% of women could not name a single vaccine.

**Table 4- Awareness of vaccination centers**

Vaccination centre	Number (%)
Subcentre	13
Hospital (PHC, RH, GMC, Private hospital)	90
Anganwadi , Balwadi	42
School	27
Not aware	10

Table 4- 10% of mothers were not aware of a even a single vaccination center. Hospital, Anganwadi and balwadi were major centers known to mothers.

**Table 5- Awareness of advantage of vaccines**

Advantage	Number (%)
No disability (A)	112 (56)
Will not get disease (B)	014 (07)
Both A + B	020 (10)
No advantage	004 (02)
Not aware	050 (25)

Table 5- 25% of women could not tell even a single advantage of vaccination. "My child will not get disability" was the most common answer by mothers (56%).

## Discussion

According to NFHS 3, only 44% of children in 1 -2 year age group had received basic immunization which is much less than achieving 85% coverage [2]. School education (31%) and health personnel (30%) were major sources of knowledge for our mothers. **Singh et al (1994)** [12] also mentioned health worker as a major source of information in another study. ANM and paramedical workers were the major source of information according to **Bholanath**

**et al (2008)** [13] (48%-51%). **M.M.Angadi et al (2013)** [14] in a study at Bijapur Karnataka mentioned family members (42.8%) and health personnel (51.6%) as the major source of information [14].

Many of our mothers (about 2/3<sup>rd</sup>) were aware of only BCG and oral polio vaccine. Knowledge for other vaccines used in UIP was very poor. Similar observation was noted by **Manjunath et al (2003)** [15]. Knowledge of advantages, names of vaccine preventable diseases and schedule of vaccination was very poor in this study done at Pileri ,Rajasthan. **M.M.Angadi et al (2013)** [14] also mentioned similar finding in Bijapur study. 61.6% of the respondents at Bijapur could not even name one vaccine preventable disease.

25% of our mothers interviewed were not aware of a single advantage of any vaccine used in UIP. Out of 75% mothers who had told advantage of a vaccine , " my child will not get disability" was the main response (56%). **Manjunath et al (2003)** [15] in their study also noted "polio prevention" was the most often known benefit to mothers interviewed. May be pulse polio campaign involving media is responsible for this "knowledge".

In our study , Knowledge about centers where vaccination facilities were available was good. About 90% of our mothers aware of at least one centre where vaccines are given. Similar finding was noted by **Murthy G Vet al (1989)** [11] in their study.

## Conclusion

Awareness amongst mothers interviewed about vaccines used in universal immunization programme was poor. Majority of them were aware of only two vaccines – BCG and OPV. "My child will not get disability "was the main advantage known to mothers. May be a mass campaign of pulse polio immunization is responsible for this answer. Hospital, Anganwadi and Balwadi were known to mothers as vaccination centres. Health education is important for enhancing maternal perception and knowledge of immunization.

A superficial knowledge of the schedule and lack of motivation for completing the schedule of UIP had led to a large number of the children being partially immunized. A complete programme of UIP should be focused involving local resources in a simple language needed for a better coverage. Health professionals and policy makers need to implement UIP in a better manner to plan and execute the "IEC" (Information , Education and Communication ) initiative. Complete programme of UIP should be incurred through health education of mothers for increasing fully immunized children in a community. Involvement of every possible source of information for mothers – school, health personnel ,media and family is important for better perception.

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