

Original article

REASONS BEHIND INCOMPLETE IMMUNIZATION: A CROSS SECTIONAL STUDY AT URBAN HEALTH CENTRE OF GOVERNMENT MEDICAL COLLEGE, AURANGABAD

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ABSTRACT

Background: Primary immunization in India is carried out to protect all children against six vaccine preventable diseases; still many children don't receive vaccination at proper age.

Objective: To find out reasons for incomplete primary immunization under 2 year children.

Material and Method: It was a cross sectional study conducted in field practice area Urban Health Training Centre Government Medical College Aurangabad Maharashtra during Nov to Dec 2011. A house to house survey carried out to find reasons behind incomplete immunization by a group of undergraduate doctors posted at field practice area of Urban Health Centre.

Results: 62.24% children received complete immunization till required for their age at proper time according to National immunization schedule while 37.76% children were incompletely immunized. Reasons behind incomplete immunisation were 60.30% children had obstacles 34.35% children lack of motivation & 5.35% children lack of information. Sub reasons behind lack of motivation were ignorance in 82.22% & false beliefs in 17.78%. Sub reasons behind Obstacles were ill health of children in 74.68%, mother and child were out of station in 17.72 % & non availability of the vaccine in 7.60 %.

Conclusion: Incomplete immunisation is a major problem of primary immunisation in children. Four out of ten children are incompletely immunised. Chief reasons behind irregularity are obstacles, lack of motivation and lack of information. Present study speak about current immunization status of children and the reasons behind incomplete immunization; It not only gives recommendation and suggestions but also sends a positive message for vaccination in the society.

Keywords: Incomplete immunization, Chief reasons, Sub reasons, UHTC, Aurangabad.

INTRODUCTION

Inadequate level of immunization against childhood diseases remains a significant public health problem in India. The reasons for incomplete vaccination and non-uptake of immunization services are still poorly understood and vary a

lot. The development of vaccines for prevention of infectious diseases has revolutionized the approach to public health.⁽¹⁾ Immunization is the most important public health advance of the 20th century and the most cost-effective and a life-saving intervention which prevents needless

suffering through sickness, disability and death. It benefits all people, not only through improvement in health and life expectancy but also through its social and economic impact at the global, national and community level (2,3). Roughly 3 million children die each year of Vaccine Preventable diseases (VPDs) with a disproportionate number of these children residing in developing countries (4). Primary immunization in India is carried out to protect all children against six vaccine preventable diseases, still many children don't receive vaccination at proper age. Recent estimate suggest that approximately 34 million children are not completely immunized with almost 98 % of them residing in developing countries (5). Vaccination coverage in India is also far from complete despite the long-standing commitment to universal coverage. Studies have been conducted to identify reasons of incomplete immunisation most of them are a part of coverage evaluation surveys so there is a chance of recall bias, these studies have not considered the factors related to health service delivery. The present study was specially conducted to find out various reasons underlying incomplete primary immunization in children.

MATERIAL AND METHOD

A Cross Sectional Study was planned at Urban Health Centre which is a field practice area of Government Medical College Aurangabad. Aurangabad is a historical city with a population around 15 lakh of which Urban Health Centre caters around 30000 population residing in the field practice area. Every Wednesday there is immunization clinic running at UHTC. A Cross sectional study identifying reasons behind incomplete immunization was carried out House to House by a Team of undergraduate doctors posted at Urban Health Centre, Government Medical College and Hospital, Aurangabad Maharashtra. During the period of 2 Nov 2011 to 2 Dec 2011. Sample size of 326 was estimated with the help of statistical software Open Epi Version 2.3.1 with a prevalence 31% (6) of incomplete immunisation under 2 yr children in maharashtra state from DLHS-3, National data with an absolute level of precision at 5%. The inclusion criteria used was mothers with children between 0 to 2 years of age, residing in the study area having the child routine immunization card. Team of doctors were trained before initiation of the actual study. By applying systematic random sampling method every 4th house surveyed until

the desired sample size achieved. About 170 houses surveyed randomly in different areas of the field practice area of UHTC. A total of 347 eligible children identified. Vaccination status classified into: completely immunized children who received all vaccines in national schedule according to their age, partially immunized children in whom some immunizations have been administered but immunisation is not complete, and Not immunized in whom not even a single dose of any vaccine has been administered(7). A predesigned pretested proforma used as a tool for interview. Proforma was tested by a pilot study before initiation of the study. The child's vaccination dates, number of doses and date of visits to the health facility were extracted from the child's routine immunization card. Information about child immunization history and the factors affecting compliance with routine immunization schedule were obtained through direct interview (oral interview) from the mothers. The immunisation record of the child was confirmed by seeing the child routine immunisation card, mother & child protection card or mamta card. Informed written consent sought from all the mothers of every child enrolled in the study. Children who found unimmunised or incompletely immunised were given the appropriate vaccination after the study at UHTC Aurangabad.

RESULTS

A total 347 eligible children were found. Out of them 216 (62.24%) children received complete immunization till required for their age at proper time according to National immunization schedule while 131 i.e. (37.76%) children were incompletely immunized (Table 1).

Table 1: Immunization Status of Children (n=347)

Immunization Status	Frequency (%)
Completely Immunized	216 (62.24)
Incompletely Immunized	131 (37.76)

Out of the 37.76% incompletely immunized children. The Chief reasons behind incomplete immunisation were 60.30% children faced obstacles , lack of motivation was seen in 34.35% children & lack of information like (not aware of need for immunization , not aware of need to return for next dose, not aware of time and place for immunization) seen in 5.35% children. (Table

2) The sub reasons behind lack of motivation in 82.22% children as ignorance (like ignoring importance of regular vaccination or even postponing vaccination for another time) while in 17.78% children were false beliefs (like belief in rumors about vaccination.) while sub reasons behind Obstacles in 74.68% children as ill health while in 17.72 % children didn't receive vaccination as mother and child was out of station & 7.60 % children didn't receive the vaccine as the dose of the vaccine was not available (due to either exhaustion of the available stock, shortage of supply, or inconvenient vaccination day etc). (Table 2)

Table 2: Reasons Behind Incomplete immunization (n = 131)

Chief reasons	Frequency (%)
Obstacles	79 (60.30)
Lack of Motivation	45 (34.35)
Lack of Information	07 (5.35)
Sub-reasons Behind Incomplete immunization	
Obstacles (n=79)	
Ill Health	59 (74.68)
Out of Station	14 (17.72)
Dose Not available	06 (7.60)
Lack of Motivation (n=45)	
Ignorance	37 (82.22)
False beliefs	08 (17.78)

Regarding the type of missed vaccine, we found that the majority of vaccinated children had missed measles (79.38%) and more than half missed six month vaccines (DPT3, OPV3, HBV3). (Table 3)

Table 3: Type of vaccines Missed (n=131)

Vaccine	Frequency (%)
1st week Vaccines (BCG, OPV0,HBV1)	4 (3.05)
2nd month vaccines (DPT1,OPV1, HBV2)	12 (15.72)
4th month vaccines (DPT2, OPV2)	57 (43.91)
6th month vaccines (DPT3, OPV3, HBV3)	79 (60.30)
9th month vaccine (Measles)	104 (79.38)
18th month vaccines (DPT, OPV)	44 (33.58)

Note: many children missed more than one vaccine

DISCUSSION

Present study speaks about current immunization status of children and the various reasons behind incomplete immunization. It not only gives recommendation and suggestions but also sends a positive message for vaccination in the society. Most of the studies carried out take into consideration immunization up to nine months or two years of age but present study takes into account Reasons behind incomplete immunization up to 2 years of age. In present study about 62.24% children were regularly immunized while 37.76% were incompletely immunized .This figure is lower than a study reported by Ram et al India⁽⁸⁾ where 54% children were regularly immunised and 46% were incompletely immunized. This could be attributed to the fact that our study conducted in field practice area of Urban Health Centre where the chance is highest to achieve the best health services and could be due to different age categories included. Chief reasons for incomplete immunisation were obstacles in 60.30% children; lack of motivation was seen in 34.35% children & lack of information in 5.35% children. Figures for obstacles and lack of motivation were found higher while lack of information were lower in our study than a study reported by Gupte et al Hyderabad⁽⁹⁾ where the Chief reasons Behind incomplete immunisation were Obstacles in 32% children , lack of motivation was seen in 20% children & lack of information in 48% children ,which could be attributed to the fact that every Wednesday there is immunisation day at UHTC people were counselled properly by attending doctors and date of next dose is given every time the child comes for immunisation, While reasons for obstacles and motivation were found higher because most of the people in study area are from lower socioeconomic class where people are still reluctant for vaccination, ignorance was a chief reason behind it .There are various false beliefs about vaccination in society. There is a maximum number of Muslim community residing in the study area Friday would prove to be more convenient for vaccination than Wednesday. Ill health was a major reason for incomplete immunisation. This can be attributed to the fact that poor sanitation in study area was a major problem accounting for increased number of child patients at UHTC. Illiteracy and poverty in the study area were the chief contributing factors for poor sanitation and ultimately increased number of childhood illnesses. Such studies should be carried out frequently in different areas to know various reasons and their status behind irregular immunisation so as to identify

the diversity and magnitude of the problem in the community so that proper measures can be taken to overcome the different barriers in vaccinating a child in order to achieve a complete level of immunisation in society.

CONCLUSION

Incomplete immunisation was a major problem of primary immunisation in children. Around four out of ten children are incompletely immunised up to 2 year of age. Chief reasons behind incomplete immunisation are obstacles, lack of motivation and lack of information. While the reasons underlying them are illnesses of the children, going out of station, unavailability of the vaccine, inconvenient vaccination days, various false beliefs regarding vaccination and the extreme ignorance about vaccinating children in our society.

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