

STATUS OF ROUTINE IMMUNIZATION IN AN URBAN AREA OF MEERUT

H. Chopra*, A. K. Singh**, J. V. Singh*, M. Bhatnagar*, S. K. Garg*, S. K. Bajpai

Professor*, Resident**

Deptt. Of Community Medicine, LLRM Medical College, Meerut

ABSTRACT:

Background : Where "Pulse Polio Immunization" has gained significant success in mass immunization and reducing Poliomyelitis cases in India, "Routine Immunization" has failed to draw even half of the parents to such camps.

Objective : To assess the immunization coverage of children of 1-5 years age in the community for BCG, three doses of DPT, OPV and Measles, and to find out the reasons for utilization / non-utilization of immunization services at the Urban Health Centre (UHC) - Field Practice area of Lala Lajpat Rai Memorial Medical College (LLRM Medical College), Meerut.

Method : 400 mothers of children aged 1-5 years were selected using systemic random sampling and interviewed with a pre-tested questionnaire with multiple response options.

Results : 93.25% of children in community were found to be completely immunized 5.25% partially immunized and only 1.5% non-immunized.

Key Words : Immunization, Urban Health Centre, Coverage.

Introduction :

Infant mortality rate is considered to be the best indicator of health for the developing countries. In India, infant mortality has declined slowly from 204 during 1911-15 to 67 in year 2005.¹ Vaccine preventable diseases are again one of the important causes of infant mortality. Routine immunization services have received a set back after the advent of "Intensive Pulse Polio Immunization" activity. The vaccination of children against six serious diseases but preventable diseases has been a cornerstone of child health care system in India. Coverage levels have been variable from 11% in Bihar & 14-17% in Nagaland, Meghalaya, Assam & Rajasthan to 80% in Tamil Nadu, Himanchal Pradesh, Goa & Kerala.^{2,3} We are presenting a success story of routine immunization in an urban area of Meerut which can act as a model

for health care delivery system in urban setup.

Material :

The present study was carried out in the Urban Field practice area of LLRM Medical College, Meerut with a total population of 9816 having 814 (8.29%) children in the 1-5 years age group.

Objectives :

The objectives of the study were to find out the present status of immunization in children of 1-5 years, to evaluate the services provided at UHC and to assess the factors for utilization of immunization services.

Methods :

A total of 384 children to be studied was estimated by finding out the sample size at estimated immunization coverage of 50% at a

relative precision of 10% at 95% confidence interval, but because of non-response and non-cooperative attitude of respondents, 400 children were studied. Out of 814 children, every second child was assessed by systemic random sampling. The factors which affect the immunization status like education of parents, faith of parents in the immunization system and reasons for non-coverage were studied by oral questionnaire method.

Results :

The study revealed complete immunization coverage of 373 children (93.25%), partial immunization coverage of 21 children (5.25%), and no immunization of 6 children (1.5%).

The study also revealed reasons / faith in the immunization services at the UHC, Field Practice area of LLRM Medical College, Meerut as well as relation with the education status of parents which can be seen in Tables 1 and 2.

Discussion :

In a country which claims 75% male literacy and 51% female literacy while only 42% children of 12-23 months of age are fully immunized, 44% are partially immunized for one or the other vaccine and 12% continue to be at the threat of perishing just because they were unable to spare few minutes of their lives for vaccination sittings.

A complete immunization of 93.25% was attained in the studied community, while Singh and Yadav had reported that in BIMARU states only 48% children were fully immunized.⁵ The 5.25% children who were partially immunized were cases of negligence on parent's part. The reasons for the 1.5%

children being non-immunized was enquired into and found that they were all migrants to the area from the eastern states and were unaware of need of immunization. Ughade et.al. have reported negligence (57%) and unawareness (22.7%) of parents as the major causes for improper utilization of immunization services.⁶ Similar views have been expressed by Ray et.al. (2004).⁷

The study shows significant association of immunization status of children with the father's education (Fisher's exact p value < 0.05) and mother's education (Fisher's exact p value < 0.01). Ughade et.al. also reported significant association of delayed vaccination with paternal and maternal education.⁶

The provision of merely free vaccines will not help in increasing the vaccination coverage as only 45.92% of mothers felt this was one of the reasons to draw them to the centre for vaccination.

Any mother will not like her child to be laid in the hands of a health worker who has not been properly trained. While 80.4% of the mothers believed that they felt their children safe in the hands of trained doctors i.e. residents, 80.9% felt the need of a MOIC at the vaccination centres, and 82.7% believed that they felt free from the fear of any side effect at the centre.

The need for organizing these sessions very punctually at fixed places needs to be stressed upon as 83.0% mothers believed that they heavily relied in the fact that the vaccine and the vaccinators would be available at the specified time on the centre. Records reveal that during the past five years only 11% of the regular sessions on Wednesdays were missed due to public / gazetted holidays. Suresh and

Saxena have expressed their concern on falling vaccination coverage and suggested a similar way to improve this. They have called for organizing fixed immunization sessions at the community where low proportion of sessions is held.⁸

In the study, 79.1% mothers believed that they preferred the centre because they could get information regarding proper care of their children through the centre. In the past three years, more than 30 community meetings of the pregnant and lactating mothers have been held teaching them the importance of breast feeding, vaccination, growth monitoring, weaning, nutritional supplementation and family planning. This knowledge is imparted to the beneficiaries door to door by the interns as a part of their field work. All the children coming for vaccination are monitored for their growth statistics and a record is maintained which is used to tell the mother whether the child is growing normally, and if not, they are suggested ways to improve the growth. This helps in not only reducing the percentage of malnourished children from the community, but also a building up of faith in the health system leading to better utilization of the immunization services.

82.6% mothers believed that the less distance of the centre was one of the causes for coming to the centre. Ughade et.al. found significant association between proximity of the vaccination centre and delayed vaccination.⁶

Conclusion - Regular and timely immunization sessions, as well as properly trained workers having good knowledge regarding child rearing practices and organization of community meetings, and safe vaccination practices will go a long distance in improvement of

immunization in urban areas / slums.

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Table - 1
Reasons for faith in the UHC for vaccination

	YES (%)**
Free of Cost?	180 (49.92%)
Regular immunization sessions?	329 (83.93%)
Expert Hands of residents?	315 (80.36%)
Expert Guidance of MOIC?	317 (80.87%)
Organization of Community Meetings?	310 (70.08%)
Good Physical Infrastructure?	259 (66.07%)
Minimum side-effects?	324 (82.65%)
Less distance?	324 (82.65%)

BASE

n

392

**-Multiple response.

Table - 2
Parents' education and the immunization status of children

	Completely immunized		Partially/Non-Immunized		Total No.
	Number	%	Number	%	
Illiterate father	12	3.0	4	1.0	16
Literate father	361	90.25	23	5.75	384
Illiterate mother	4	1.0	8	2.0	12
Literate mother	369	92.25	19	4.25	388
N					400

Father's education - p value <0.05.

Mother's education - p value <0.01.

Table - 3
Socio-economic classification of the studied community
(According to Modified Kuppaswamy Classification)

Social Class	Percentage
Upper	14%
Upper Middle	40%
Lower Middle	38%
Upper Lower	14%
Lower	3%
BASE	100%

