

Knowledge and Practice of Immunization amongst the care-givers of 12-23 months children in a rural area of West Bengal.

Dr. Sagar Karmakar ¹, Dr. Tanushree Mondal ²

¹(RMO cum Clinical Tutor, Department of Ophthalmology, Midnapore Medical College, Paschim Midnapore, India)

²(Assistant Director of Medical Education and Assistant Professor, Department of Community Medicine, IPGME & R, Kolkata, India)

Abstract: Despite the fact that childhood immunization has been an important part of maternal and child health services since 1940 current level of coverage of 'fully-immunized' children under the national immunization programme is quite low. This is a cross sectional observational study done in 30 clusters selected from 82 villages to identify the practice of routine immunization among 12-23 months old children and assess its knowledge among their care givers. Care givers were enquired about different aspects of routine immunization of their children by using a pre-tested semi-structured schedule, immunization card checked, scar of BCG seen. Knowledge of care-givers regarding the various aspects of routine immunization was very poor. Only 36% of care-givers exactly knew that under five children were the candidates for Routine Immunization. Knowledge about correct age and dose of BCG was 15% and 27% which was quite unimpressive, that for OPV was 4.5% and 5%, for DPT was 5.68% and 8% and for measles 18% and 33%. 44% people had no knowledge about contraindication of vaccines. Reasons for non-immunization /partial immunization were mostly obstacles (31.8%); others were misconception (11.2%). Knowledge regarding correct day of Routine Immunization was much better (65%). Poor knowledge regarding routine immunization reflects need of emphasised health education and also improvement of literacy status. In spite of such dearth of knowledge, the practice was satisfactory. This was probably because of blind faith on health workers.

Keywords: - Routine immunization (RI), knowledge, practice.

I. Introduction

Immunization is one of the best indicators to evaluate the health outcomes and services distributed across social and economic groups¹. It is also one of the most cost- effective interventions to prevent a series of major illnesses, particularly in environments where children are undernourished and die from preventable diseases¹. Given the extensive social benefits of immunization, any inequities in the knowledge that leave out large section of the most deprived populations are a cause of serious policy concern. There is evidence of inequities in immunization in India, despite the fact that childhood immunization has been an important part of maternal and child health services since the 1940s¹. The current level of coverage of 'fully-immunized' children under the national immunization programme is quite low as pointed out by several studies²⁻⁷. The main reasons identified for poor coverage include the inadequacy of information, education and communication (IEC) activities⁸. The importance of knowledge/awareness about routine immunization as a factor for its success is brought out by previous studies and "not aware of the needs of vaccination" is the main reason for children not being fully immunized^{1,8,9}. Inadequacy of community participation was also an important factor for poor coverage. In our state this type of studies conducted are few in number. Our study was conducted to identify the practice of immunization among 12 to 23 months old children and assess the knowledge of routine immunization among their care givers.

II. Material And Methods

A cross sectional observational community based study was carried out between July 2013 to March 2014. The present study was conducted in a rural area using WHO 30 cluster sampling method by which a total of 30 clusters was selected out of 82 villages. From each cluster 7 children and their care givers were selected. Thus the total number of children and their care givers surveyed were 210. According to WHO module any house having two children both of them was included. In every house the Immunization schedule was filled. The data on one dose each of BCG and measles; three doses of DPT/ OPV were collected. Accuracy on immunization data was improved by checking the immunization cards, and when cards were unavailable, mothers reporting of having given a vaccine or not was recorded. Further, scar of BCG vaccine was checked for each child included in the study. The care-givers were asked, which day of the week routine immunization for children is carried out in govt. facilities. Universally Wednesday is designated as the day of Routine Immunization. So credit was given if a care-provider answered Wednesday. Under five children were the

candidates for vaccination in our routine immunization programme. A question was put to the care-givers to name the diseases which can be prevented by the vaccines under routine immunization programme. Single administration of B.C.G. and Measles and three times administration of O.P.V. and D.P.T. were considered as correct dose of those vaccines.

III. Results

The analysis of the data regarding the background characteristics revealed that of all the studied household, most (62.9%) belonged to Hindus while 37.1% belonged to Muslims. 55.2% of the household belonged to people of general caste while schedule caste and tribe constituted 37.7% and 7.1% respectively. 64.6% had a joint family. It was noticed that about 14.8% of care-givers interviewed were illiterate while 45.6% were primary school passed. Care-givers literate up to middle class level were 28.3% and only 11.3% with above middle class education. Among children 58.6 % were male and 41.4 % were female. In our study institutional delivery was the most common practice i.e. 67.1%. 75.4% of home deliveries were conducted by trained birth attendant. 68.1% of children belonged to first order of birth, 29.5% and 2.4% belonged to second and third orders respectively. 83.8% and 11.9% children were completely and partially immunized while only 4.3% were unimmunized. 83.7% of male and 83.9% of female were completely immunized.

Knowledge of care-givers regarding the various aspects of routine immunization was very poor. 36% of care-givers exactly knew that under five children were the candidates for R.I. Among the 6 vaccine preventable diseases only 61.9% named polio, 61% measles, 52.5% T.B., very few named diphtheria, whooping cough and tetanus and none identified all the six vaccine preventable diseases. Knowledge about correct age and dose of BCG was 15% and 27% that for OPV was 4.5% and 5%, for DPT was 5.68% and 8% and for measles 18% and 33%. Less than half of the care-givers knew correct age of DPT and measles. 44% people had no knowledge about any contraindication while 37.5% and 35.2% knew about fever and cough and cold respectively. Regarding adverse effects of vaccines 54% people knew about fever and 24.8% knew about diarrhoea. Reasons for non-immunization/partial immunization were mostly obstacles (31.8%); others were misconception (11.2%) and sick baby on day of R.I. (20.4%)

The coverage for BCG and OPV 1 were almost equal, coverage for OPV 2 and DPT 2 are slightly more in our study, but as we progressed to DPT 3 and OPV 3 the coverage became much more than NFHS 3, which showed that dropout rates for our study was much less. Coverage for measles was much more in our study. 83.7% of male children in our study were completely immunized which was much more (>20%) than that of NFHS 3. in our study, 4.1% of males were unimmunized in comparison to 7.2% in NFHS 3. 83.9% of female children in our study were completely immunized which is much more (>15%) than that of NFHS 3. The unimmunized portion is almost same. There had been a marked development in immunization status of children with increase in literacy status of care-givers. Both our study and NFHS 3 indicated this correlation. The Hindus were more completely immunized than Muslims in both our study and NFHS 3. In addition it can be seen in our study that Muslims were more immunized than the Muslims in NFHS 3 study.

IV. Figures And Tables

Table 1: Table showing the Comparison of data of our study and NFHS 3, W.B. regarding individual vaccine coverage (%) (n=210).

Vaccines	Present Study (%)	NFHS 3 (%)
BCG	187 (89.1)	89.2
OPV1	193 (91.9)	92
OPV2	191 (90.9)	87.4
OPV3	187 (89)	79.8
DPT1	193 (91.9)	88.6
DPT2	190 (90.3)	82.2
DPT3	186 (88.7)	70.8
Measles	181 (86.1)	74
Unimmunized	9 (4.3)	5.8

Table 2: Table showing the Comparison of data of our study and NFHS 3, W.B. regarding immunization status among males and females (%) (n=210).

Immunization status	Males		Females	
	Present Study	NFHS 3	Present Study	NFHS 3
Complete	83.7	61.4	83.9	66.9
Partial	12.2	31.4	11.5	28.4
Unimmunized	4.1	7.2	4.6	4.7

Table 3: Table showing the Comparison of data of our study and NFHS 3, W.B. regarding immunization status of children with literacy status of care-givers (%) (n=210).

Immunization status	Illiterate		Literate	
	Present Study	NFHS 3	Present Study	NFHS 3
Complete	12.9	53.7	96.1	72.4
Partial	61.29	37.4	3.35	23.8
Unimmunized	25.8	8.9	0.55	3.8

Table 4: Table showing the Comparison of data of our study and NFHS 3, W.B. regarding immunization status of children with Religion (%) (n=210).

Immunization status	Hindu		Muslim	
	Present Study	NFHS 3	Present Study	NFHS 3
Complete	88.5	67.9	61.1	58.1
Partial	10.34	27.9	19.4	33.3
Unimmunized	1.15	4.2	19.4	8.6

V. Conclusion

Knowledge regarding correct age and dose of vaccines in our study was much less compared to the other two studies. The difference could be because of different bio-social characteristics of the care-givers and different implementation strategies. The IEC activities focused on immunization need to be implemented with more sincere efforts with special attention on the partial and unimmunized group of children. In our study we had found that the knowledge regarding age and dose of BCG and measles vaccines were comparatively better than others. This was probably due to the fact that these vaccines are given in a single dose. On the other hand DPT and OPV are given in multiple dose schedule which makes it difficult for people to remember. In our study care-givers received the information regarding vaccination mainly from ANM workers. This was because majority of the care-givers had availed the services at primary and secondary health care level and these health functionaries seem to be most readily available and accessible to the people. Community leaders played insignificant role.

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