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Assessment of immunization services at immunization sessions under Ghatnandur PHC area in Beed district

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ABSTRACT

Background: It was realized that just providing vaccine to achieve targets without giving attention to quality of services doesn't guarantee a reduction in disease morbidity & mortality. Operational challenges such as logistic supply and microplanning have to be taken into consideration There is also increasing need to ensure that providers stick to service delivery protocols to achieve better health outcomes. Therefore the Study was aimed to assess the immunization sessions. The objective of the study was to evaluate the immunization sessions for logistics and availability of health workers, in the study area.

Methods: The study was carried in 21 Grampanchayats covered by Ghatnadur PHC. semi structured preformed questionnaire was used for evaluation. Immunization sessions were also studied for information provided regarding side effects of vaccines.

Results: Availability of human resources and logistics for vaccination sessions was more than 80% at all vaccination sessions. Information about side effects was the loophole in vaccine delivery services. Message regarding side effects of vaccines was not conveyed to most of the population.

Conclusions: Vaccine delivery services were good in study area. Information about side effects should be conveyed 100% to of the population. The study should be extended to larger area for generalization of results.

Keywords: Human resources at the immunization sessions, Logistics at the time of immunization, Vaccine delivery services, Information delivered about side effects of vaccines

INTRODUCTION

Jenner (1749-1823) is often called "the father of immunology," and his work is said to have "saved more lives than the work of any other human." Vaccination has been most effective medical strategy to control infectious diseases, over last century. Most viral and bacterial diseases traditionally affecting children worldwide are now preventable by vaccines. Vaccination is estimated to save at least 2-3 million lives. The

Government of India launched its EPI in 1978 with the objective of reducing the mortality and morbidity resulting from vaccine – preventable diseases of childhood and to achieve self- sufficiency in the production of vaccines. Universal immunization programme started in 1985 with aim to achieve 100% coverage of pregnant women with 2 doses of tetanus toxoid and at least 85% coverage of infants with 3 doses of DPT, OPV, one dose of measles vaccine by 1990. The immunization services are being provided through

existing health care delivery system (i.e. MCH Centres, primary health centres and subcentres etc). Although target is 100% immunization, no country even in the industrialized world, has ever achieved 100% immunization in children.² Approximately, 9 million RI sessions are held in India each year targeting 26 million children and 30 million pregnant women. The sessions are served through a massive 27,000 cold chain stores.^{3,4} In spite of all recommendations, certain challenges remain to be solved before planning to introduce a new vaccine in the public health system. Most vital of the issues is political commitment and will. Some operational challenges such as logistic supply including cold chain storage and microplanning have to be taken into consideration. Further workforce training including training of trainers as well as frontline health workers is necessary.5 The Village Health and Nutrition day (VHND) is to be organized once every month at the AWC or Gram panchayat or any other suitable location in every village. Depending upon the Injection load it is organized twice, once in a month or once in two months. The package of services includes various maternal and child health services of which immunization is essential service to be provided to all children of village.⁶ It was realized that just providing vaccine to achieve targets without giving attention to quality of services doesn't guarantee a reduction in disease morbidity & mortality.⁷ There is also increasing need to ensure that providers stick to service delivery protocols to achieve better health outcomes.8 Therefore the Study was aimed to assess the immunization sessions carried out in the area covered by PHC Ghatnandur District Beed.

Objectives

Objectives of the study were to evaluate the immunization programme including human resources, logistics for immunization, equipment and availability of health workers. Immunization sessions were also studied for information provided regarding side effects of vaccines, and service delivery at the beneficiary level.

METHODS

Study site and population

PHC Ghatnandur is located near Ambajogai and Parali in Beed district having population of 41181 as per midyear population 2016. There are 24 villages in PHC area with 21 Grampanchayats.

The study was carried in 21 Grampanchayats covered by Ghatnadur PHC. Total population under study was approximately 40000. Evaluation of the immunization programme including human resources, logistics for immunization, equipment and availability of health workers was carried out using semi structured preformed questionnaire. Immunization sessions were also studied for information provided regarding side effects of

vaccines, and service delivery at beneficiary level. An observation check list was used for every immunization session conducted at all villages. Study period was June 2016 to December 2016 i.e. 6 months.

Data analysis

Percentages were computed for various variables under study. The study was carried out by medical officer and his supervision team.

RESULTS

Assessment of availability of human resources at the immunization sessions.

Out of total 21 villages surveyed, results shown that medical officer was present in all immunization sessions. Health assistant was present at 13 (61.90%) immunization sites and auxiliary nurse midwife was present in 14 (66.67%) immunization sites. Participation by ASHA and aanganwadi worker was seen in all sessions. Beneficiary list was prepared in 18 (85.71%) sessions. Three immunization sessions started at 9.00 AM while 18 (85.71%) sessions were started before 10.00 AM. All sessions finished till 12.00 PM.

Assessment according to availability of logistics at the time of immunization session

Distribution of villages according to availability of logistics at the time of immunization session is presented in Table 1.

Quality assessment of village according to appropriate immunization service providers.

Out of total 21 sessions, number of BCG doses given were less than 5 at 15 immunization sites, 5 to 10 doses were given at 5 immunization sites and more than 10 doses were given at 1 immunization site (Table 2).

Out of total 21 sessions, number of pentavalent or DPT doses given were less than 5 at 14 immunization sites, 5 to 10 doses were given at 6 immunization sites and more than 10 doses were given at 1 immunization site (Table 3).

Out of total 21 sessions, number of measles doses given was less than 5 at 19 immunization sites, 5 to 10 doses were given at 2 immunization sites (Table 4).

Out of total 21 sessions, OPV doses given were less than 5 at 14 immunization sites, 5 to 10 doses were given at 6 immunization sites. At 1 immunization session more than 10 doses were given (Table 5).

Table 1: Distribution of villages according to availability of logistics at the time of immunization session (n=21).

Sr no	Logistics	Available in sufficient amount (%)	Not available (%)	Total villages (%)
1	Vaccine in sufficient	15 (71.42)		21 (100)
	amount	Vaccines were less than required at 6 immunization sites.		
2	Auto disable syringes	21 (100)	0 (0.00)	21 (100)
3	Hub Cutter	16 (76.19)	5 (23.80)	21(100)
4	Weight Machine	17 (80.95)	4 (19.04)	21 (100)
5	BP Apparatus	17 (80.95)	4 (19.04)	21 (100)
6	HB meter	15 (71.42)	6 (28.57)	21 (100)
7	Pregnancy Kits	17 (80.95)	4 (19.04)	21 (100)
8	Urine Strips	14 (66.66)	7 (33.33)	21 (100)
9	AEFI Kit	2 (9.52)	8 (38.09)	21 (100)
		AEFI kits were incomplete at11 immunization sites.		
10	BMW bags	16 (76.19)	5 (23.80)	21 (100)
11	Vitamin A bottles	20 (95.23)	1 (4.76)	21 (100)
12	Spoon for Vit A	16 (76.19)	5 (23.80)	21 (100)

Table 2: Distribution of villages according to BCG vaccine delivery services.

No. of villages BCG vaccine	Yes (%)	No (%)	Total no. of villages surveyed (%)
Availability of auto disposable syringes	21 (100)	0	21 (100)
Date and time of dilution written on vial	15 (71.42)	6 (28.57)	21 (100)
Used given diluent for reconstitution	21 (100)	0	21 (100)
Vaccine given intradermal on left shoulder	20 (95.23)	1 (4.76)	21 (100)
Information about side effects was given to vaccine	5 (23.80)	16 (76.19)	21 (100)

Table 3: Distribution of villages according to DPT and pentavalent vaccine delivery services.

No. of villages	Yes (%)	No (%)	Total no. of villages
DPT and pentavalent vaccine			surveyed (%)
Availability of auto disposable syringes	21 (100)	0	21 (100)
Vaccine given intramuscular on right thigh	21 (100)	0	21 (100)
Information about side effects was given to vaccinee	18 (85.71)	3 (14.28)	21 (100)
Tab paracetamol given	20 (95.23)	1 (4.76)	21 (100)
Frozen vaccines found	1 (4.76)	20 (95.23)	21 (100)

Table 4: Distribution of villages according to measles vaccine delivery services.

No. of villages	Voc (9/)	No (%)	Total no. of villages
Measles vaccine	Yes (%)	140 (70)	surveyed (%)
Availability of auto disposable syringes	21 (100)	0 (0)	21 (100)
Date and time of dilution written on vial	15 (71.42)	6 (28.57)	21 (100)
Used given diluent for reconstitution	21 (100)	0 (0)	21 (100)
Vaccine given subcutaneously on left shoulder	18 (85.71)	03 (14.28)	21 (100)
Information about side effects was given to vaccine	03 (14.28)	18 (85.71)	21 (100)

Table 5: Distribution of villages according to OPV vaccine delivery services.

No. of villages OPV vaccine	Yes (%)	No (%)	Total no. of villages surveyed (%)
VVM status within stage 1 and 2	21 (100)	0 (0)	21 (100)
Expired vaccine found	0 (0)	21 (100)	21 (100)
Information about regarding not to give hot food to child till 2 hours	15 (71.42)	6 (28.57)	21 (100)

Vitamin A was given as per schedule at immunization sites. 19 immunization sites gave less than 5 doses and 5-10 doses were given at 2 immunization sites. Spoon was used and required dose was given at 18 immunization sites.

DISCUSSION

In the present study, medical officer has visited every immunization session. MOIC was present at 78% of sessions in the study carried out by Khandhedia et al.⁸ The presence of MOIC is crucial for on job training and on site correction for false practices.

Health assistant male or female is must for each immunization session. Health assistant was present at 61.90% immunization sites and Auxiliary nurse midwife was present in 66.67% immunization sites in the present study. Sometimes contractual additional ANMS were also present at the sessions. Beneficiary list is must for each session. In the present study, Beneficiary list was prepared in 18 (85.71%) sessions. Parmar et al found the 0% presence of MOIC at session site.9 Parmar et al had also found 100% presence of AWW, ASHA and FHW at all session sites. FHW and ASHA/AWW were present at 92% sites in the study carried out by Khandhedia et al.8 Availability of instruments is the primary requirement for effective VHND. More than 60% of all immunization sites were having sufficient logistics at the time of immunization sessions in the present study.

In the present study no frozen or expired vaccine was found at any immunization session and VVM was in stage I and II at all session sessions. In the study carried out by Khandhedia et al also, frozen vaccine was not found at any session site and VVM was in stage I and II at all sites. The findings were comparable to the study carried out by Shah et al. 10

In the present study, information regarding side effects and adverse effects of DPT, pentavalent and OPV vaccines were given to majority of vaccines but information regarding BCG and measles was provided at few sessions only. None of the mothers were given all four key messages in the study carried out by Khandhedia, et al.⁸ Similarly Parmar et al and Kotecha et al observed that giving information about adverse effects after vaccination was lacking in majority of session. 9,11 62% vaccines were given information in their study carried out in Anand district by Patel et al. 4 Kotecha et al also observed that giving four important key messages after vaccination was lacking.11 Questions were not allowed by service provider which led to non-interaction between provider and mother. Waiting duration was long in immunization for few mothers, on an average 30 min was acceptable but, few mothers had to wait for 1-2 h. Facilities and equipment were average for immunization because of which people were unhappy especially on the non-availability of disposable needle, syringes, and vaccines like tetanus toxoid and BCG in certain places at certain time, 20% of clients felt many a times their queries were not answered and sometimes Thursday sessions of immunization were missed out in study by Rashmi, Vijaykumar. No interaction between vaccine provider and mother was also found in study by Mawjdeh, Al-Qutob et al. 13

CONCLUSION

Availability of logistics for vaccination sessions was more than 80% at all vaccination sessions. Vaccine delivery services were good in study area. Information about side effects was the loophole in vaccine delivery services. Message regarding side effects of vaccines was not conveyed to most of the population.

Recommendations

Availability of logistics for vaccination sessions should be 100% at all immunization sessions. Information about side effects should be conveyed 100% to of the population.

The study should be extended to larger area for generalization of results.

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Institutional Ethics Committee

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