A STUDY ON KNOWLEDGE AND PRACTICE OF IMMUNIZATION SERVICES AMONG AUXILIARY NURSE MIDWIVES OF SUBCENTRE AT CHIRANG DISTRICT, ASSAM

Shaheen Akhtar Choudhury[1], Jutika Ojah[2]

[1]Post Graduate Trainee, Department of Community Medicine, Gauhati Medical College.
[2]Professor and HOD, Department of Community Medicine, Gauhati Medical College.

ABSTRACT

INTRODUCTION

Immunization is one of the cost effective intervention for prevention of major illness in child. Only availability of vaccines is not sufficient, there are various other factors which influences the effectiveness of immunization. These factors are proper storage, transportation, administration along with knowledge and practices of health care worker.

MATERIALS AND METHODS

The present cross sectional study was conducted in the rural area of Chirang district, Assam in January 2015 to May 2015. 23 ANM at the session site were interviewed with the help of pre tested structured schedule and observation method.

RESULTS

Knowledge regarding dose and route of vaccines is 100%, knowledge regarding age at which 2nd dose of measles is given 86.95%, knowledge about freeze sensitive vaccine (DPT, TT) is 86.95% whereas Hep. B is 100%.

Practice of hand washing was 65.21% and practice of delivering 4 key messages were 73.91%. Practice of segregation of waste in red and black bag was 65.21%.

CONCLUSION

Knowledge gap were observed specifically for cold chain, open vial policy, heat and freeze sensitive vaccines. Flaws in practice of immunization were observed as for delivering 4 key messages and hand washing. Regular supervision and training can fill up the gap both in knowledge and practice.

KEYWORDS

Immunization, Vaccine, Segregation, Supervision.

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INTRODUCTION: Immunization is one of the cost effective intervention for prevention of major illness in childhood. It is one of the best indicators to evaluate the health outcomes and services distributed across social and economic groups. In India Expanded Programme of Immunization was launched in 1978, which was renamed as Universal Immunization Programme in 1985. Vaccination prevents 2 million deaths per year worldwide however; 2.5 million deaths continue to be caused by vaccine preventable diseases, mainly in Africa and Asia among children less than 5 years old.[1,2] The current immunization coverage is only around 75%.[3] According to the results released for the first phase of NFHS 4 (2015-2016) of 15 States and 2 Union Territories, full immunization coverage varies widely. At least 6 out of 10 children have received full immunization in 12 out of 15 states. Despite the program is operating in India since 1978, approximately 10 million infants and children remain unimmunized. It is higher than any other country in the world.[4] According to DLHS 3, Assam, full vaccination in rural Assam is 50.2% compared to urban which is 55.2%. Full vaccination coverage in the Chirang district is 52.1% according to DLHS 3 data. Various steps were undertaken by the government to strengthen immunization services. One of these step was Mission Indradhanush, which was launched by Government of India on 25th December 2014. It was realized that only provision of vaccines for the target population is not enough to reduce the morbidity and mortality associated with vaccine preventable disease. The quality of services should be given due attention for the success of Immunization programme. Cold chain and vaccine logistic maintenance is the backbone of Immunization Programme. The issue of vaccine procurement is its storage, transport and administration, and factors such as knowledge and practices of health workers contribute to success or failure of immunization programme.[5,6] In our present study we tried to assess the quality of immunization services, which is one of the essential component of the successful Immunization programme. The key role in immunization delivery is that of ANM, she is responsible for not only administering vaccines but also monitoring immunization coverage. The ANM is

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Corresponding Author:
Dr. Shaheen Akhtar Choudhury,
Prestige Tower, Block IV, H-2,
Puran Basti, Panjabari road, Guwahati-22.
E-mail: shaheenakhtarc@gmail.com
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responsible for maintaining the cold chain of the vaccine at the session. The correct immunization practices, the ANM is adhered to decide how effectively vaccination can prevent morbidity and mortality associated with vaccine preventable diseases.

OBJECTIVES OF THE STUDY:

- To assess the knowledge of immunization service among the ANM
- To assess the practices of immunization service among the ANM attending immunization session. (Safe Vaccine administration, advice and waste disposal).

MATERIALS AND METHODS: The present cross sectional study was conducted in the rural area of Chirang district, Assam in January 2015 to May 2015. From a total of 103 subcenters under 23 health facilities, one from each health facilities is randomly selected. Session site of each selected sub center is visited and ANM were interviewed using pre tested pre designed interview schedule and observed for their immunization practices. The study was conducted during the supervision visit at the Chirang district for Routine immunization. The nearest session site of the selected sub centre was visited and ANM were interviewed and observed for immunization practices.

Data Analysis: Data is analysed in Microsoft excel using percentages and bar diagram.

RESULTS:

Sl. No.	Knowledge of ANM about immunization	Respondents (%); n=23
1	BCG, DPT, OPV, DPT, Hep B Dose and route	
	Correct knowledge	23(100%)
	Incorrect knowledge	Nil
2	Measles dose and route	
	Correct knowledge	23(100%)
	Incorrect knowledge	Nil
3	Age of vaccine administration	
	Correct knowledge of BCG, OPV 1,2,3 OPV Booster, DPT 1,2,3, DPT Booster, Hep B 1,2,3, Measles1	23(100%)
	Correct knowledge Measles 2	20(86.95%)
4	Stage of VVM which is not in usable stage	
	1st stage	Nil
	2nd stage	Nil
	3rd stage	4(17.4%)
	4th stage	19(82.6%)
5	Steps of shake test	
	Correctly described	2(8.6%)
	Incorrectly described	21(91.3%)
6	Timing of discarding reconstituted vial	
	4 hours	23(100%)
	>4 hours	Nil
7	Vaccine following open vial policy	
	Hep B, OPV, Pentavalent	23(100%)
	DPT	19(82.6%)
	TT	20(86.9%)
8	Knowledge of ILR	
	Temperature 2-8 degree Celsius	23(100%)
	Temperature <2 or >8 degree Celsius	Nil
9	Arrangement of vaccine at ILR	
	Correct knowledge	18(78%)
	Incorrect knowledge	5(21.7%)

Table 1: Distribution of ANM according to knowledge of immunization

Table 1 shows that among the 23 ANM interviewed only 13.04% did not know the age of administration of measles 2nd dose. The vaccine vial monitor at 3rd and 4th stage are not in usable condition was known to 17.4% and 82.6% respectively. Shake test was not known to 91.3% of ANM. The correct arrangement of the vaccine in the ILR is known to only 21.7%.

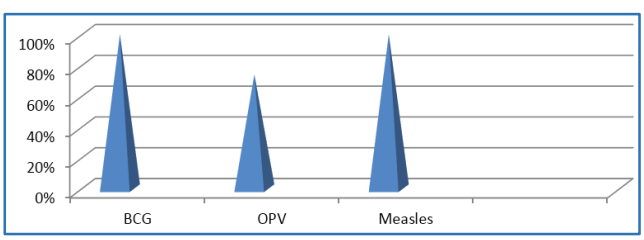

Fig. 1: Bar diagram showing knowledge of ANM about heat sensitive vaccine. (n=23)

Figure 1 showing knowledge of ANM about heat sensitive vaccine, where among 23 ANM, 23 i.e 100% has the knowledge of BCG and Measles as heat sensitive vaccine and 17 out of 23 i.e. 73.91% knew OPV as heat sensitive vaccine.

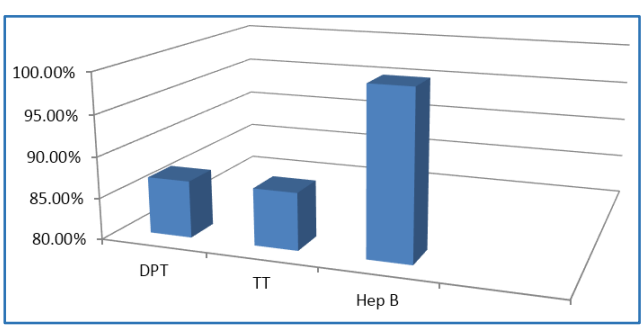

Fig. 2: Bar diagram showing knowledge of ANM about freeze sensitive vaccine. (n=23)

Figure 2 showing knowledge of ANM about freeze sensitive vaccine, where 23 out of 23 i.e. 100% knew about Hepatitis B as freeze sensitive vaccine and 20 out of 23 knew DPT and TT as freeze sensitive vaccine.

Sl. No.	Practice of ANM at the session site	No. of respondents (%); n=23
1	Availability of action plan at session site	
	Available	10 (43.5%)
	Not available	13 (56.5%)
2	Availability of updated beneficiary list	
	Updated list available	18 (78.3%)
	Non updated list	5 (21.7%)
3	Handwashing before vaccine administration	
	Yes	15 (65.2%)
	No	8 (34.8%)
4	Practice of checking correct date for vaccination	
	Yes	21 (91.3%)
	No	2 (8.7%)
5	Practice of checking vaccine vial for expiration date and label	
	Yes	21 (91.3%)
	No	2 (8.7%)
6	Use of AD syringe for vaccine administration	
	Yes	23 (100%)
	No	Nil
7	Practice of writing date and time of opening of vial	
	Writing date and time	13(56.5%)
	Not writing date and time	10 (43.5%)
8	Practice of delivering 4 key messages to the care giver	
	Yes	17 (73.9%)
	No	6 (26.1%)
9	Practice of advising care giver to wait for 30 mins after vaccine administration	
	Advice given	10 (43.47%)
	Advice not given	13 (56.52%)
10	Use of hub cutter	
	Yes	20 (86.95%)
	No	3 (13.04 %)
11	Segregation of waste in red and black bag	
	Yes	15 (65.2%)
	No	8 (34.8%)
12	Practice of waste management	
	Pit	17 (73.9%)
	Outsource	Nil
	Burn	6 (26.08%)

Table 2: Distribution of ANM according to the immunization practice in the session site

Table 2 shows that among the 23 ANM only 43.5% have available action plan at the session site. Updated beneficiary list was available was available with 78.3% of ANM. Hand washing is not practiced by 34.8% of ANM. The practice of writing date and time of opening of vaccine vial is seen among 56.5%. The practice of advising care giver to wait for 30 minutes is not seen among 56.5%.

DISCUSSION: The success of immunization programme depends on the quality of services rendered by the service provider. The quality of service is determined by the knowledge and practice of health worker. In the present study knowledge about dose and route was adequate. Knowledge gap is seen in mainly in the demonstration of Shake test and arrangement of vaccines in the ILR. The practice of ANM at the session site is essential for correct and good service delivery. In the present study availability of updated beneficiary list is seen in 78.3% which is similar to the study conducted by Singh et al at rural area of Ahmedabad where they found it to be 61.6%.[7] The practice of vaccine administration was appropriate, starting from checking correct date and time of vaccine administration, label of vaccine for expiry and use of AD syringe. The practice of writing date and time of opening of vaccine vial is essential for prevention of toxic shock syndrome in case of reconstituted vial and for maintenance of open vial policy properly. In the present study it was found that 43.5% were not practicing it which is quite high compared to the study of Singh et al where they found only 17% were not writing date and time of reconstitution in the vaccine vial. Segregation of immunization waste in red and black bag is seen among 65.2%, this was because there was not continuous supply of red and black bag at the sub centres. Waste management plan is appropriate in most the sites. According to study report of "Performance Assessment of Health Workers Training in RI in India" 2009,[7] the practice of health worker in correct route of vaccination in India is 84.4%, checking correct date for vaccination is 84.6%, compared to our study which is 100% and 91.3% respectively. Practice of delivering 4 key messages in our study is 73.9%, compared to the study finding of the study mentioned above, where the practice of explanation of potential adverse effect is 39.7%, explanation about the next visit is 38.5%. The practice of using AD syringe in the Performance report is 98.3% compared to in our study which is 100%. The practice of advice by the health worker to wait for 30 minutes in the Performance report is 14.7%, which is quite less compared to our study which is 43.47%. Availability of beneficiary list to the Health worker in the Performance report is 60%, which is less compared to our present study, where it is 78.3%.

CONCLUSION: In the present study knowledge gap observed, specifically for cold chain, open vial policy, heat and freeze sensitive vaccines. Flaws in practice of immunization were observed as for delivering 4 key messages and hand washing.

RECOMMENDATION:

1. Gaps observed can be removed by regular supportive supervision and periodic training on update of immunization service.
2. Weekly supervision is essential to adhere to the correct practices of immunization services in the sub centres and its proper environmental management.

LIMITATION OF THE STUDY: This study was conducted during the supervision visit at the Chirang district for routine immunization. This study was conducted for short period of time and in a small sample of population. We get a brief idea about the knowledge and practice of ANM in the Chirang district in our study. Further studies can be conducted in this area, of which limited data is available, taking larger sample size. Small sample size is the limitation of our study.

REFERENCES:

1. GIVS. Global Immunization Vision and Strategy 2006-2015. Geneva: WHO? UNICEF; 2005.
2. EPI. The social science and immunization research project. Wkly Epidemiol Rec 1998;73:285-8.
3. Anand S, Barnighausen T. Health workers and vaccination coverage in developing countries: an econometric analysis. Lancet 2007;369(9569):1277-1285.
4. Government of India. Immunization handbook for medical officers. New Delhi: Department of family welfare, Ministry of health & family welfare, 2008;15:130-1.
5. Adhikari P, Dhungel S, Shresta R, et al. Knowledge, attitude and practice study regarding facts for life. Nepal Med Coll J 2006;8:93-6.
6. Petrovic V, Seguljev Z, Gajin B. Maintaining the cold chain for vaccines. Med Pregl 2005;58:333-41.
7. Singh A, Chaudhari A, Mansuri S, et al. Process evaluation of special immunization weeks in rural areas of Ahmedabad district. Int J Sci Stud 2015;3(4):111-114.