

Process Evaluation of Special Immunization Weeks in Rural Areas of Ahmedabad District

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Abstract

Introduction: Vaccine preventable infectious diseases are one of the main causes of morbidity and mortality in children that can easily prevent by immunization. Vaccination is a proven and one of the most cost-effective child survival interventions. All countries in the world have an immunization program to deliver selected vaccines to the targeted beneficiaries, specially focusing on pregnant women, infants, and children who are at a high risk of diseases preventable by vaccines.

Materials and Methods: The present cross-sectional study which was conducted in rural areas of Ahmedabad district in May 2013-September 2013. We have monitored 60 session sites of immunization that were planned during special immunization weeks from May 2013 to September 2013. Totally 60 immunization sessions were evaluated with the help of pre-tested structured questionnaire information was gathered.

Results: Supervision by the higher authority was only in 13.3% of session site. Information, education and communication (IEC) material were displayed only in 25% of session site. Four key messages by auxiliary nurse midwife (ANM) were given in only 38.3% of session site. Duetist was available in 61.6% of session site. About 17% session sites there were no mobilizes. Regarding the availability of vaccine and diluents were available in 76.6% of session site. Reconstitution time was not written on the vial for almost 17% of session site. 81.6% Sessions were conducted as per plan.

Conclusion: There was lack of supervision. There was a lack of providing health education through IEC material. There was a lack of waste disposal measure. Activities like orientation training of ANM training for waste management should be planned and should be repeated at regular interval.

Key words: Process evaluation, Special immunization, Session sites, Vaccines, and logistics

INTRODUCTION

Vaccine preventable infectious diseases are one of the main causes of morbidity and mortality in children that can easily prevent by immunization. Vaccination is a proven and one of the most cost-effective child survival interventions.¹ All countries in the world have an immunization program to deliver selected vaccines to the targeted beneficiaries, specially focusing on pregnant women, infants, and children who are at a high risk of diseases preventable by vaccines.¹ In India Expanded

Immunization Program launched in 1978 which is renamed as Universal Immunization Program in 1985. Each year full immunization prevents approximately 4 lakh under-five deaths from vaccine-preventable diseases in India. However, close to 75 lakh children every year miss the benefits of childhood vaccinations. A majority of those missing the opportunity are from among underserved and marginalized populations. Being unvaccinated keeps them at highest risk of catching life-threatening childhood diseases. Globally, every fifth child is unimmunized.² Initially, the target was set to cover at least 85% of all infants by 1990.³ However, the current immunization coverage is only around 75%.⁴ Despite program is operating in India since 1978, approximately 10 million infants and children remains unimmunized. It is higher than any other country in the world.⁵ In India only 44% of infants receive full vaccination (all doses up to the age of 1-year), and 5% of infants do not

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receive any vaccine.⁶ To create awareness on the urgency to vaccinate every eligible child and pregnant women and intensify efforts to improve Routine Immunization (RI) coverage, Indian government has launched special immunization weeks (SIWs). 4 weeks, with 1-week each in the months of April, June, July, and August will be used to hold special immunization sessions specially in high-risk areas across the country.² It was realized that only providing vaccine just to achieve targets without giving proper attention on quality of immunization services does not promise a reduction in disease morbidity and mortality. For successful implementation of SIWs all its components such as planning of immunization sessions, cold chain and logistics management, community mobilization, and the appropriate technique of vaccination should also be looked carefully. One of the important elements for improving the immunization is a cold chain and vaccine logistics management which is the backbone of an immunization program. Cold chain and vaccine management are the left and right hands of an immunization program.⁷ It requires an in-depth process evaluation. World Health Organization (WHO) is monitoring routine immunization since 2005. Initially, it was only session site monitoring, but from 2009 started house to house. From 2013, some more changes were done as per the need of the program introduction of district level format for RI, introduction of block level format for RI, introduction of monitoring of monitors for RI session and H2H monitoring, change in session site format, change in house to house monitoring format. From January '14, the state has directed government staff and all partners to use the same formats.⁸ WHO's focus is to monitor and assess the impact of strategies and activities for reducing morbidity and mortality of vaccine-preventable diseases. Collection, analysis and interpretation of surveillance data is vital to guide vaccination policies and programs and ensure immunization targets are being reached.⁹

Aims

To evaluate the process components of SIWs in district Ahmedabad, Gujarat.

Objectives

- To evaluate planning of immunization sessions
- To evaluate cold chain and logistics management
- To evaluate community mobilization, appropriate technique of vaccination.

MATERIALS AND METHODS

The present cross-sectional study was conducted in rural areas of Ahmedabad district in May 2013-September 2013.

We had monitored 60 session sites of immunization that were planned during SIWs from May 2013 to September 2013. 60 sites were randomly selected from 20 PHCs of 4 taluka of Ahmedabad district. At each session site auxiliary nurse midwife/female health worker (ANM/FHW) was interviewed by pretested and predesigned performa and monitored for the vaccine administration and logistic. Data were fed and analyze under Microsoft Excel 2007.

RESULTS

Table 1 shows that of 60 session sites that we had monitored list of beneficiary was available in 61.6% sessions, mobilizers were present in 83.3% sites, ANM was giving four key messages only in 38.3% and information, education, and communication (IEC) material was displayed only in 25% session sites.

Table 2 shows that the status of vaccine administration process evaluation during immunization was found to be satisfactory. Of 60 session sites ANM was administrating the vaccines by correct technique in 91.6%, correct site and route of vaccination was found in 100%, adequate dose of vaccine was found in 100% and correct age of administration was found in 95% session sites.

Table 3 shows status of cold chain, logistics, safety issues at session we found that all vaccines along with diluents available in 76.6%, auto-disable syringes and needle were available at 95.0%, time of reconstitution was written on vial at 88.3%, ANM was using hub cutter and proper disposal of waste in proper manner only at 48.3% session sites. During monitoring no any stick injury to ANM was found.

Table 1: Status of IEC activity and infant mobilization during immunization session

Different parameters	Number N=60	Percentage
Duelist of beneficiaries available	37	61.6
Mobilizer present	50	83.3
ANM is giving all four key messages after vaccination	23	38.3
IEC material displayed	15	25.0

IEC: Information education communication, ANM: Auxiliary nurse midwife

Table 2: Status of vaccine administration process evaluation during immunization session

Different parameter	Number N=60	Percentage
Correct administration technique	55	91.6
Correct site and route of administration	60	100
Correct dose of vaccine	60	100
Correct age of administration	57	95.0

Table 3: Status of cold chain, logistics, and safety issues etc., at session site

Different parameter	Number N=60	Percentage
All vaccines along with diluents available	46	76.6
AD syringes and needle available	57	95.0
Time of reconstitution written on vial	53	88.3
Using hub cutter and proper disposal of waste	29	48.3
Needles stick injury to ANM	0	0.0

ANM: Auxiliary nurse midwife, AD: Auto disable

DISCUSSION

For achieving high coverage of immunization and better function of the system supervision is an essential factor. Supervision by higher authority was only in 13.3% of session site that was much lower may be due to lack of planning of supervision. IEC materials were displayed only in 25%, which also was poor as during vaccination we can provide information about the vaccine and other important health-related issue to the attendant by IEC. Four key messages are essential for success of immunization and must be given to the attendant of the beneficiary because without these messages attendant does not know where to come for next visit, what are the possible side effects. In the present study, we found that four key message by ANM were giving in only 38.3% of the visited site that were unsatisfactory. In 48.3% of the session hub cutter were used and proper disposal of waste were done so there were biowaste problem. List of beneficiary was available in 61.6% of session site. The infant mobilization to session site reduces if we are not preparing the list of due beneficiary infants. Manjunath and Pareek in his study reported that around 9.7% of mothers lacked information about the session as on maternal knowledge and perception about routine immunization.¹⁰ These mothers require active mobilization. Only one or two mobilizer was present in session at 83% sessions and at 17% there were no mobilizers. Regarding the availability of vaccine and diluents were available in 76.6% of the site. This was mainly because of shortage of bacillus calmette-guérin (BCG) vaccine and non-availability of colored bag for waste disposal. In National Immunization Program review no tracking of drop outs and left outs and missing opportunities due to wastage concerns were also identified.¹¹ In coldchain and logistics at vaccine sites, vaccine vial monitor for polio and pentavalent vaccine and shake test for freeze sensitive vaccine were satisfactory. However, reconstitution time was not written on vaccine vial for almost 17% of the site, which is important for prevention of toxic shock syndrome that may occurs in measles vaccine. Other vaccine safety aspects like the correct site for vaccination, dose and age were satisfactory. Injection safety issue was also good in district. No ANM reported needlestick injury that is because of proper training on

vaccine administration. Pandit and Choudhary in his study from the same district in 2004.¹² He has reported more than 19% of annual needle stick injuries among service providers in district Anand, India. 81.6% of sessions were conducted as per plan. About 18.4% of sessions were not conducted as per micro-plan due to various reasons such as session planned in routine immunization, session will be planned few day back, staff deputed for training, staff on leave, and vacant post. Lack of staff and resources for service delivery has also been reported by National Immunization Program review by WHO.¹¹

CONCLUSION

In present process evaluation study, we found that. There was the lack of supervision. There was the lack of providing health education through IEC material. There was the lack of waste disposal measure. There was the lack of mobilization of beneficiaries. Planning process and maintaining cold chain process were good. All logistics were available except the shortage of BCG vaccine. The cold chain was properly maintained. Vaccine administration process was good.

RECOMMENDATION

Activities like orientation training of ANM training for waste management should be planned and should be repeated at regular interval. Strengthening the cold chain systems should be done. Vacant posts of FHWs should be filled so that all sessions can be conducted. IEC material should be displayed which provide the opportunity of giving health education to the parents of the beneficiary.

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