

Original Research Article

Process evaluation of mission Indradhanush immunization program in urban and rural communities of Ahmedabad district of Gujarat

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ABSTRACT

Background: Mission Indradhanush has been launched in December 2014 as a special drive to vaccinate all unvaccinated and partially vaccinated children. This study was conducted with an aim to evaluate process of mission Indradhanush immunization program in urban and rural communities of Ahmedabad district, Gujarat.

Methods: Community based cross-sectional study carried out at places such as urban slums with migration, nomadic sites, brick kilns, construction sites, underserved and hard to reach areas from July 2015 to July 2017. Cluster sampling method has been used, adapted from WHO 30-cluster sampling. Thirty (30) clusters were selected using probability proportional to the population size (PPS). Each PHC/UHC was taken as one cluster.

Results: All the planned session being held as per micro plan (100%). Due lists of beneficiaries were present at all sites but not updated at 6 (10%) session sites. Mobilizers were present at 58 (96.67%) session sites. ANMs were giving all 4 key messages at 86.67% of session sites. 115 (95.8%) caregivers told source of information was home visits of ASHA/AWW. 66(55.00%) mothers were aware about when to come for next visit and 70 (58.33%) aware about which vaccines were given on MI session day.

Conclusions: All the session sites had micro plan and due list, which is major achievement and positive sign of successful implementation of mission Indradhanush. Availability of vaccines and other logistics were also up to the mark. Over all implementation process was satisfactory and according to operational guidelines of MI.

Keywords: Mission Indradhanush, Cluster sampling, Process evaluation, Brick kilns

INTRODUCTION

“Vaccines are one of the most successful and cost-effective health investments in history.”¹ According to the State of the World's Vaccines and Immunization 2009 report, Immunization - even with the addition of the new, more costly vaccines - remains one of the most cost-effective health interventions.²

The expanded programme on immunization (EPI) was initiated by the Government of India in 1978 with the objective of reducing morbidity, mortality and disability from vaccine preventable diseases (VPD) by making vaccination services available to all eligible children free of cost through the public health sector.³ Immunization programme-World's largest such programme in 1985. Initially the target was set to cover at least 85% of infants. However national socio-demographic goals in

National Population Policy set a target of achieving universal immunization of children by 2010.⁴

The Ministry of Health and Family Welfare, Government of India (MoHFW-GoI), launched Mission Indradhanush (MI) in December 2014 as a special drive to vaccinate all unvaccinated and partially vaccinated children. The mission focuses on interventions to improve full immunization coverage for children in India from 65% in 2014 to at least 90% earlier than 2020; this will be done through special catch-up drives.⁵ For successful implementation of immunization service all its components – planning of immunization sessions, cold-chain and logistics management, community mobilization, appropriate technique of vaccination etc. should be carefully looked into. In view of this, requires an in-depth evaluation.⁶ The present study was conducted with an aim to evaluate process of mission Indradhanush immunization program in urban and rural communities of Ahmedabad District, Gujarat.

METHODS

A community based cross-sectional study was conducted in Urban and Rural communities of Ahmedabad District. These include immunization session sites at areas such as Urban slums with migration, Nomadic sites, Brick kilns, Construction sites, Underserved & hard to reach areas.

Cluster sampling method has been used which was adapted from WHO 30-cluster sampling. Thirty (30) clusters were selected using probability proportional to the population size (PPS). Each PHC or UHC was taken as one cluster.⁷ A list of all PHCs and UHCs of Ahmedabad was procured. A class interval (2, 43,844) was obtained by dividing the total population by 30 (number of clusters). A random number less than the cluster interval (2,43,844) were generated with the help of a currency note. The cluster, which represented this number, was picked up as the first cluster and subsequent clusters were selected by adding the cluster interval of 2, 43,844. Thus, 30 clusters were selected. 2 MI session sites per cluster were observed. So total 30×2 =60 session sites were observed. The study was carried out from July 2015 to July 2017.

Data was collected at mission Indradhanush session sites by interviewing the subjects with the help of pre tested, pre designed structured questionnaire and by observing them. Before data collection, informed consent was obtained from the participants.

Following things were observed at session sites: Session site according to micro plan or not, availability of MI specific duelist of beneficiaries, vaccine logistics, IEC materials, knowledge, attitude and practices of ANMs and ASHA workers. Focused group discussions (FGD) with mothers/caregivers were also done for qualitative data to study their knowledge, attitude and practices on immunization. Data entry was done in Microsoft Excel

and Data were analyzed using Epi Info software (7.1.0.6). Collected data was checked for consistency. Simple proportions calculated and χ^2 test was applied to check statistical significance.

RESULTS

Sixty (60) MI outreach session sites were monitored at the actual time when immunization sessions were going on.

Qualitative data was also obtained from 120 mothers who came to vaccinate their child by focused group discussion.

Table 1: Safe injection practices` observations at MI session sites (n=60).

| Different aspects | N | % |
|---|----|------|
| ANMs not cutting each syringe with hub cutter immediately after use | 3 | 5.00 |
| Adequate quantity of reconstitution syringe not available | 0 | 0 |
| AD syringe used for injection not in adequate amount | 0 | 0 |
| ANMs were touching any part of needle | 1 | 1.70 |
| Correct sites for all vaccines by ANMs | 57 | 95.0 |

Table 1 show, safe injection practices of ANMs. Out of total 60, at 3(5.00%) sessions, ANMs were not cutting syringes immediately after use with hub cutter. 3 (10%) ANMs were not giving vaccines at correct sites according to National Immunization schedule.

Table 2 represents, scenario of session sites of MI. All 60 (100%) sessions were held as per micro plan. 44 (73.34%) sessions were visited by supervisors of respective health facilities. 54 (94%) sessions were held at sites other than routine immunization sites, 4 (6.67%) sessions were held at the same sites of routine immunization. MI specific due lists were presents at all sites but 6 (10%) sites had due lists which were not updated based on head count. 241 (80.4%) children were mobilized for vaccination at session sites by mobilizers.

Table 3 shows health care providers` knowledge about immunization schedule and MI specific incentives. 3 (5%) ANMs were failed to answer correct order of vaccines according to schedule. 5 (8.33%) were not able to remember correct doses of vaccines. 8 (13.33%) ANMs were not giving all 4 key messages to care givers. 10 (16.66%) ASHAs were not aware about incentives for their work in MI.

Table 2: Availability of due list, micro plan at mission Indradhanush session sites (n=60).

| Different aspects | | N | % |
|--|---|-----|-------|
| MI immunization sessions | Planned session not being held | 0 | 0 |
| | Session sites not as per micro plan | 2 | 3.34 |
| | Not easily accessible session sites | 1 | 1.66 |
| | Same location where routine immunization usually being held | 4 | 6.67 |
| | visited by supervisor | 44 | 73.34 |
| MI specific due list & micro plan | Sessions not having due list | 0 | 0 |
| | Due list not updated | 6 | 10.00 |
| | Mobilizers not present according to micro plan | 2 | 3.34 |
| | Tally list not updated | 3 | 5.00 |
| | Children mobilized by ASHA/AWW | 241 | 80.41 |

Table 3: Knowledge of ANMs & ASHA workers at MI session sites.

| Health care providers | | N | % |
|---|---|----|-------|
| Knowledge of ANMs and ASHAs during MI immunization | ANMs did not know correct National Immunization schedule of all vaccines | 3 | 5.00 |
| | ANMs did not know correct doses as per National Immunization schedule of all vaccines | 5 | 8.33 |
| | ANMs not giving all 4 key messages properly to care givers of children | 8 | 13.33 |
| | ANMs not aware whom to contact immediately if any AEFI (Adverse Effect Following Immunization) occurred | 5 | 8.33 |
| | ASHAs not aware about norms of payment of incentives | 10 | 16.66 |

Table 4 shows availability of vaccines, logistics and IEC materials during MI sessions. No major problems were found. No vaccine was used beyond expiry date. Out of 60, at 3 (5.00%) sites date and time were not marked on vaccine vials. At 4 (6.67%) sites blank MCP cards were not available. At 3 (5%) sites, red and black bags were not available. AEFI kits were not available at 2 (3.33%) sites.

Table 5 shows knowledge attitude and practices of parents. Out of total 120, only 24 (20%) caregivers were

aware about name MI. 115 (95.8%) care givers told that source of information was home visits of ASHA/AWW. 66 (55%) care givers were aware about when to come for next dose and 70 (58.33%) were aware about vaccines given on MI session day.

Table 4: Availability of vaccines, logistics and IEC materials (n=60).

| Vaccines, logistics and IEC | | N | % |
|---------------------------------|---|---|------|
| Vaccines and logistics | Vaccines and diluents adequate amount unavailable | 1 | 1.70 |
| | Opened vaccine vials with no date and time marked | 3 | 5.00 |
| | Unavailability of blank MCP cards | 4 | 6.67 |
| | AEFI kit unavailable | 2 | 3.33 |
| | Vitamin A solution unavailability | 3 | 5.00 |
| | Red and black bag not available | 3 | 5.00 |
| MI specific IEC material | Posters not available | 0 | 0 |
| | Banners not presents | 3 | 5.00 |

Table 5: Knowledge of parents regarding MI at session sites (n=120).

| Different aspects | | N | % |
|---|--|-----|-------|
| Knowledge attitude and practices of caregivers | Parents aware about name Mission Indradhanush | 24 | 20.00 |
| | Major source of information – ASHA/AWW | 115 | 95.81 |
| | Major source of information – banner/posters or neighbours | 5 | 4.16 |
| | Parents aware about next subsequent visit | 66 | 55.00 |
| | Parents aware about which vaccine was given today | 70 | 58.33 |

DISCUSSION

In present study, all the sixty planned session being held as per micro plan (100%) and only 2 (3.34%) sessions were held at different sites other than mentioned in micro plan. Majority sites were easily accessible and (93%) sessions were held at sites other than routine immunization sites. Due lists of beneficiaries were present at all sites but not updated at 6 (10%) session sites (Table 2). Mobilizers were present at 58 (96.67%) session sites. At almost all session sites, adequate vaccines and diluents were present. At all sites (100%) functional hub cutter and MI specific IEC materials in

form of banners or posters were present. 58 (96.67%) sites had AEFI kit. Adequate quantity of reconstitution and AD syringes were present at all the sites (Table 4). All 4 key messages of immunization were given by ANMs in 86.67% of session sites. 10 (16.66%) ASHA workers were not aware about MI specific incentives for their work. 115 (95.8%) mothers told that source of information was home visits of ASHA/AWW. Only 24 (20%) mothers were aware about name MI. 66 (55%) mothers were aware about when to come for next dose and 70 (58.33%) were aware about which vaccines were given on MI session day (Table 5).

A study done by Patel et al in rural areas of Anand, Gujarat observed that 54.5% auxiliary nurse midwife (ANM) had maintained due list, almost half than present study.⁸ This difference is because of proper implementation of operational guidelines of MI, role of external organizations and strong political will. The due list is vital in tracking the beneficiaries. It was prepared in advance before the day of immunization. In his study, mobilizers were present at 50% session sites according to micro plan. They observed that use of separate syringe and needle for each injection was 100%, correct selection of Injection sites and route was 95.4%, similar to present study. ANMs were giving all 4 key messages after vaccination in 62.5% session, lower than around 25%. So at session sites quality-wise no major issues were found and it was satisfactory. Biradar et al in Bijapur district, Karnataka observed DPT, Measles and TT vaccines were available in all the (100%) session sites, BCG and OPV vaccines were available in (97.8%) session sites, similar to present study.⁹

CONCLUSION

A study was conducted from July 2015 to July 2017, with a broad aim to evaluate MI immunization program in urban and rural communities of Ahmedabad District. Process evaluation of MI was done by using various indicators. Total 60 MI session sites were monitored. Five major process indicators were used. Amongst those five, one is all ANMs had session wise MI micro plan and due list. Another is 86.7% ANMs delivered all 4 key messages to caregivers. Third one is only 5% of sessions did not have MI specific banners or posters. Fourth one is 73.4% of sessions were visited by any of supervisor and

last one is 83.3% of ASHA workers were aware about norms of incentives for MI.

All the session sites had micro plan and due list, which is major achievement and positive sign of successful implementation of MI. Availability of vaccines and other logistics were also up to the mark. Grass root workers like ASHA/ Anganwadi workers played vital role in mobilizing children to session sites and their work should be appreciated. Over all implementation process was satisfactory and according to operational guidelines of MI.

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