

Original article

EVALUATION OF NATIONAL IMMUNIZATION DAY (NID) ACTIVITIES UNDER INTENSIFIED PULSE POLIO IMMUNIZATION PROGRAM (IPPI) FEB 2012 IN CENTRAL GUJARAT, INDIA

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ABSTRACT

Background: It has been more than 1 year since the last case of wild polio virus occurred in the country and we are at the final phase of polio eradication. It needs to enhance/ sustain all activities of polio eradication. This study was carried out to critically evaluate the various activities undertaken and make the suggestions for improvement during the National Immunization Day (NID) of February 2012 under Intensified Pulse Polio Immunization Program (IPPI) in urban/ rural areas of Ahmedabad, Kheda and Gandhinagar districts of Central Gujarat.

Methodology: External evaluators after a training cum orientation program undertook the evaluation of NID (Feb 2012) in 3 districts of Central Gujarat in identified 20 booths through assessing booth based vaccination and undertaking surveys of house to house activities and at migratory/ transit/ street sites.

Results: (a) Booth based activities: Most booths were accessible and had supply of logistics (IEC materials, stationeries, vaccines, cold chain equipments, marker pens). Understaffing and last minute replacement with untrained staff and non participation of community or nongovernmental organizations (NGOs) were some of the issues. (b) House to house visits: External monitors could detect 7 missed sites with 63 unvaccinated children while the in house health supervisors could not detect any site. False P detection rates were also high for external monitors (5.3%) than in house supervisors (1.3%). (c) Migratory sites: Visit to 118 migratory sites yielded even more children as not vaccinated (16.8%). 21 transit sites showed the inadequacies of program where almost one third of children could not be checked for the vaccination. (d) Street surveys: Street surveys done after completion of NID (Based on finger markings alone) found 12.7% children as not vaccinated.

Conclusions: Present communication aims to explore the problematic issues in achieving vaccination coverage, capacity building of team members and operational/ logistic aspects and provide intensive qualitative inputs.

Keywords: Polio vaccination, National Immunization Day (NID), Intensified pulse polio immunization program (IPPI)

INTRODUCTION

The impact of routine immunization (RI) along with IPPI against poliomyelitis is well established¹. As a result of sustained efforts, globally incidence of paralytic polio cases has decreased by more than 99 percent from an estimated 3, 50,000 cases (1988) to 650 cases (2011)². Since January 2011, no single case of Wild Polio Virus (WPV) has been reported in India and now its name has been removed from the list of polio endemic countries³. Quality surveillance under National Polio Surveillance Project (NPSP) and health department has been the key for this success and at this critical juncture, intensification of program is mainstay for eradication of poliomyelitis. Threats of its importation looms large in India due to migration from polio endemic and re-infected countries (Pakistan, Nigeria, China, Kenya etc)². One of the important activities under NPSP is the observance of National Immunization Days (NID) where the oral polio vaccine (OPV) is administered to all children who are below 5 years of age irrespective of their immunization status⁴. NID Feb 2012 was observed in Gujarat too and present study was conducted at that time in rural/ urban areas of 3 districts of Central Gujarat to explore road blockers in implementation of this program and identify effective means for improvement.

MATERIALS AND METHODS

Special campaign of NID was undertaken in entire Gujarat state on 19 February 2012 to vaccinate all children below 5 years by using trivalent Oral Polio Vaccine (t-OPV). It was followed by 2 days activities through house to house visits and visits to migratory/ transit sites to cover the left out children. As a built in component of this program, 9 external monitors were identified and given special training by one of us who is the Surveillance Medical Officer (AS). Four faculties (authors) of Community Medicine Department of a medical college worked as external monitors in rural/ urban areas of 3 districts of central Gujarat namely Ahmedabad, Kheda and Gandhinagar. Evaluatory exercise included the visits to vaccination booths on the first day followed by the monitoring of house to house activities done by the team members and surveys at migratory/ transit/ street sites on subsequent days. Data collection included the observation of activities at vaccination booths, interview of team members, guardians of beneficiaries on first day

followed by visit to other sites as mentioned earlier. All information was gathered on the formats designed by NPSP available at their web site⁴. While the booth based activities were observed only in Kheda district, rests of the activities were observed in all 3 districts. Present communication deals with the observations made by all 9 external monitors.

RESULTS

Booth based Activity: Out of 108 booths established for NID in urban areas of Kheda district, 20 (18.5%) were observed. Out of them, 2 were inaccessible for the beneficiaries/ guardians and 3 did not have enough display of information, education and communication (IEC) materials; it included 1 booth which was neither accessible nor had display of IEC materials. There were 6 booths which did not have minimum required 4 trained persons. It included 4 booths with 3 persons and 1 each with 2 and 1 trained persons respectively. All these booths had last minute replacement of team member (s) whose names were not given in the micro plan and obviously not trained for the current round. Total 3 booths (15%), did not have the presence of health staff (ASHA/ Anganwadi worker) and 9 booths (45%) did not have any representation of local NGO or community; it was confirmed by team members during the interview. During the visit of monitors, team members were mobilizing the community for vaccination. A practice of keeping vaccine vial in a small bowl with crushed ice/ ice cubes was observed in 8 booths. As a result of this at 2 booths, the wrapper of vial got removed from the vial and it became difficult to ascertain the status of Vaccine Vial Monitor (VVM); in such cases team members were instructed not to use these vaccines. No "stock out" of vaccine was seen at any of the booth visited. Indelible marker pen was used in all booths to mark the vaccinated children; however at 1 booth the marking was not done at the left little finger as instructed in the program. Similarly at 1 booth only, the tally sheet was not being filled up correctly and incidentally at the same booth the tally of used vials did not match with the number of vaccinated children.

Based on the interview of staff at vaccination booths, only at 1 booth staff did not have correct knowledge about the VVM. A total 40 parents/ guardians who brought children for vaccination were asked about how they came to know about this program (single response). Banners (47.5%)

and health staff (40%) were named as main sources followed by mass media (10%) and friends/ relatives (2.5%).

House To House Activity: Supervision of "house to house activity" was done by external monitors after completion of booth based and house to house activities by vaccination team members. Total 918 houses from all 3 districts were observed which yielded 45 (4.9%) households with false P marking (houses with unvaccinated children still marked with P by health staff); all false P were seen in urban areas. Together these 918 houses had 1114 children, of them 59 (5.3%) were unvaccinated. Monitors also reported 7 "missed" areas (5 urban & 2 rural) with 73 unvaccinated children. Missed areas are those which were totally missed by vaccinating teams during house to house visits. As part of supportive supervision, vaccinating teams were instructed to administer OPV to all these children and correct the markings at houses.

Migratory sites: They include construction site, slums, brick-kilns, nomadic population with large number of intra and inter-state migrants. Monitors visited 118 such sites in 3 districts and checked 1203 children for their vaccination status. Total 202 (16.8%) children were not vaccinated. Non vaccination was more common in rural (37.2%) than urban (13.1%) sites.

Transit sites: They include bus stands, railway stations and other religious or social congregations. Vaccinating teams are expected to check the children for finger markings. In case if the marking is missing, they should administer OPV drops to children and also do the markings. Out of 21 transit sites monitored, where vaccinating teams were present, a total 218 children were observed and it was found that 78 (35.8%) of them were not checked for finger marking. Based on the monitoring of VVM, the cold chain maintenance at transit sites was good.

Street survey: Street surveys were done by the monitors, after the completion of NID (3 - 4 days after booth based activities). Total 646 children were checked and 82 (12.7%) were still found as unimmunized (10.8% - urban & 17.3% - rural). When compared amongst 3 districts non vaccination was highest in Gandhinagar (14.5%) followed by Ahmedabad (12.4%) and Kheda (8.5%).

DISCUSSION

Last case of WPV in India occurred in Jan 2011 and we are in final phase of its eradication³. Therefore, high quality performance is must and intensive efforts are needed to find out the lacunae in various activities hindering the achievement of this goal.

The practice of pulse polio immunization (PPI) is there since 1995 and system since then has evolved and improved by learning through its experience and mistakes. Present communication aims to document good practices and identify/ discuss the lacunae and offer solutions (wherever possible).

Ideally every vaccination booth shall have minimum 4 persons who are trained just before the round. Further the booths should be accessible to beneficiaries and should have enough display of IEC materials⁴. Almost one third booths had less than 4 trained persons necessitating last minute replacement with untrained person hampering the activities. There were 2- 3 booths which were either inaccessible or did not have IEC materials or both. The role of volunteers/ local NGOs is crucial in community mobilization, however at almost half of the booths no representation of local community was found. In absence of this, team members were seen mobilizing community for vaccination. Practice of keeping vaccine vial outside in a bowl with crushed ice was observed at few booths and resulted in the removal of wrapper making the cold chain evaluation (VVM) impossible. Staff at 1 booth did not know the interpretation of VVM. These aspects should be taken up in future trainings because all such vials had to be discarded. There was no stock out of vaccine, and indelible marker pens were used everywhere in correct manner (except 1 booth). Tally sheet too was incorrectly filled up at 1 booth only which also had mismatch between children vaccinated and the vials consumed. Shortage of quality finger markers and non adherence of protocol of marking on the nail of left little finger was observed in few booths at Gandhinagar. Shortage of staff at booths, and lack of community participation has also been reported elsewhere⁵. Source of information about the program as revealed by interview of parents found banners/ hoardings put up few days before the program and health staff (including AWW & ASHA worker) as the main source. The mass media such as Radio, TV and newspapers which are quite cost intensive were found of little use in this study. A study from Valsad district⁶ however has reported

mass media along with health workers as common source for information.

When we aim to administer OPV to each and every eligible child, presence of missed areas and marking of false P are serious issues. House to house visits by monitors evaluate the working of vaccination team and identify the missed areas and houses with false P markings. Missed areas mean localities comprising of households which are totally missed out by vaccination team (intentionally or otherwise) while households marked with false P denotes the callousness of staff by marking a household as P (protected) without verifying that the children in this house have actually received the polio vaccine or not. Programmatically speaking, missed area is a serious issue as it denotes the non coverage of an entire area with all children of that area not receiving the vaccination, while at the level of worker's performance, false P is a serious concern. More false 'P' detection by external evaluators (houses of unvaccinated children being marked as 'P' instead of 'X'), implies callous attitude of health workers and supervisors even after so many rounds of activity. It is surprising to know that while the external monitors in this study could detect 7 missed areas with 73 unvaccinated children, the in house monitors (health supervisors) could not detect any missed area in entire area of 3 districts and Ahmedabad Municipal Corporation⁷. It can be understood as the health supervisors are involved in micro planning and subsequent detection of any missed area detected by them would reflect on their working only. False P rates in this study by external monitors were also high (5.3%) when compared with in house health supervisors (1.3%)⁷ emphasizing the need of deploying more external than in house monitors.

Visits to 118 migratory sites with 1203 eligible children, found 202 (16.8%) as not vaccinated. At 21 transit sites observed by us, deployed teams could check only two third of children. It may be due to the inadequate deployment (only one team with 2 members), inadequate supervision, lack of motivation of team members and no shift timings. Considering the fact that now the focus under the PPI is more on migrants³, migratory/transit sites need to be covered more intensely in terms of both performance and supervision. An intervention study in UP by Shah et al has also reported that more vaccination teams, shorter duration shifts and intense supervision at transit

sites resulted in better coverage with few missed children⁸.

In the street surveys, total 646 children were checked and 82 (12.7%) were still found as unimmunized (10.8% - urban & 17.3% - rural). When compared amongst 3 districts non vaccination was highest in Gandhinagar (14.5%) followed by Ahmedabad (12.4%) and Kheda (8.5%). As per the records of state health department (at the end of NID round)⁷, coverage was 100% in 3 districts except in Gandhinagar (96.6%). This discrepancy can be there as there is no protocol for verifying the age of beneficiary before giving the vaccine, therefore whenever in doubt it is better to administer the vaccine. So the possibility of some over reporting cannot be ruled out when the children above 5 years are given the vaccine and shown in the report. Majority of unimmunized children were mainly at migratory sites and lowest coverage amongst 3 districts was found in Gandhinagar district.

Finally the targets for the vaccination need to be realistic. While the population of 0-6 yrs for Ahmedabad (rural), Kheda and Gandhinagar districts as per Census 2011⁹ is 592526, the target for immunization (0-5 yrs) in NID Feb 2012 was 840743 which is disproportionately high. Obviously such high target makes the workings difficult.

RECOMMENDATIONS

Some of the recommendations are as follows:

1. More involvement of Community volunteers/ NGOs
2. Advance preparation of micro planning
3. Comprehensive and quality trainings with hands on giving vaccine, filling up the forms, doing finger markings, cold chain maintenance, interpretation of VVM and correct way of house marking (P or X).
4. Increased supervision including more deployment of external monitors

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