



MONITORING OF MEASLES RUBELLA VACCINATION SESSIONS AT SCHOOLS IN PUNE CITY

Dr Sana Rafiq Khuroo*

Third Year Resident, Department of community medicine, Bharati Vidyapeeth (DTU) Medical College. *Corresponding Author

Dr Varsha Mahesh Vaidya

Professor Department of Community Medicine, Bharati Vidyapeeth Medical College, Dhankawadi, Pune, Maharashtra, India. 411043.

Dr A P S Narula

Assistant Professor Department of Community Medicine, Bharati Vidyapeeth Medical College, Dhankawadi, Pune, Maharashtra, India. 411043.

ABSTRACT

Introduction: India with the support of WHO launched one of the world's largest vaccination campaigns against measles and rubella on 5 February 2017. The campaign was launched to vaccinate children in the age group of 9 months to 15 years with measles and rubella vaccine. In Maharashtra state the campaign started from 27th November 2018. All eligible children were vaccinated at the following session sites: Schools, Health sub-centers, Anganwadi centers, fixed outreach sessions and mobile posts in villages and urban areas, Government health facilities will vaccinate on all days of campaign. **Aim and objectives:** To monitor vaccination injection practices, cold chain maintenance and safe needle disposal at measles rubella vaccination sessions at schools in Pune city. **Material and methods:** Study was a cross sectional study. 5 schools in each 5 Wards (Bibewadi, Kondwa, Hadapsar, Wanowri, and Dhankawadi) out of the 15 wards of Pune Municipal Corporation were MR vaccination campaign session will take place will be studied in 2nd week of the campaign. After obtaining permission from the WHO surveillance medical officer The above mentioned sites were visited on vaccination day. A structured Performa based on WHO checklist were filled on observation of all the sites selected. **Results:** 92% of the vaccinators have attended training sessions, 16% of the vaccinators were wearing gloves, Swabbing of the skin done by 52% , 80% of the vaccinators were administering vaccine through subcutaneous route, cold chain were maintained to 100% perfection and Safe needle disposal practices were maintained to 100%. **Conclusion:** Need for better training to healthcare workers about safe practices and proper implementation of vaccination campaign.

KEYWORDS : Measles, Rubella, Vaccination, monitoring

INTRODUCTION

Measles is an acute, serious, communicable and highly contagious viral disease. Measles is one of the main causes of morbidity and mortality in children under the age of 5. Rubella disease is a mild viral infection affecting both children as well as adults. When rubella infection occurs during the first trimester of pregnancy, it affects the embryo in utero that can cause fetal death in the form of spontaneous abortions and stillbirth. A child can be born with serious congenital anomalies like congenital cataract, glaucoma, cardiac defects, deafness, hepatosplenomegaly, hematological disorder, microcephaly and mental retardation. This can lead to severe lifelong disabilities in the child known as CRS.(1)

India with the support of WHO launched one of the world's largest vaccination campaigns against measles and rubella on 5 February 2017. The campaign was launched to vaccinate more than 35 million children in the age group of 9 months to 15 years with MR (measles and rubella) vaccine, measles which affects an estimated 2.5 million children every year. The campaign also marks the introduction of rubella vaccine in India's childhood immunization programme to address CRS which causes birth defects nearly 40000 children every year.(2)

Under the Measles-Rubella (MR) campaign, all children in the target age group (between 9 months and less than 15 years) will be given a single shot of MR vaccination, irrespective of their previous measles/rubella vaccination status or measles/rubella disease status.

All eligible children will be vaccinated at the following session sites:

Schools: First 1-2 weeks of campaign
Health sub-centres, anganwadi centres, fixed outreach sessions and mobile/special posts in villages and urban

areas: Next 1-2 weeks of campaign

Government health facilities will vaccinate on all days of campaign.(3)

After completion of the campaign, MR vaccine will be introduced in routine immunization and will replace measles vaccine, given at 9-12 months and 16-24 months of age of child(3)

Monitoring is the systematic and continuous process of examining data, procedures, and practices, it is used to measure progress, identify problems, develop solutions, and guide policies and interventions.

Components of monitoring:

- Programme management,
- Vaccine supply, quality, and logistic,
- Surveillance and monitoring,
- Advocacy and communication.

AIM: To monitor vaccination injection practices, cold chain maintenance and safe needle disposal at measles rubella vaccination sessions at schools in pune city.

OBJECTIVES:

1. To monitor vaccination injection practices at vaccination session site.
2. To monitor the maintenance of cold chain at vaccination session site
3. To monitor safe needle disposal at vaccination session site.

MATERIAL AND METHODS:

It was a cross sectional study conducted in pune city of Maharashtra. Out of 15 wards of Pune Municipal corporation 5

wards (Bibewadi, Kondwa, Hadapsar, Wanowri, and Dhankawadi) were randomly selected. From each ward 5 schools were randomly selected where MR vaccination campaign session was taking place. Data was collected in second week of the campaign after obtaining permission from the WHO surveillance medical officer. The above-mentioned sites were visited on vaccination day after taking permission from the school principal. A structured Performa based on WHO checklist was filled on observation of all the sites selected. Questionnaires was having three sections: Section I on Practices related to MR Vaccine and Cold Chain comprising of 5 questions, section II on Practices related to injecting the vaccination having 9 questions and section III on Practices related to Safe needle disposal having 5 questions. For data collection WHO's standard Performa for monitoring visits was used. Mode of maintaining cold chain, temp of the cold chain, date of expiry of vaccine, diluent and syringe, time of constitution of vial, aseptic precautions during vaccination, site of giving vaccination, route of administering vaccine, use of disposable syringes, disposal of the syringes was observed. The collected data was coded and entered in Microsoft Excel sheet. The data was analyzing using SPSS (Statistical Package for social sciences) version 25.0 software.

RESULTS

The study results were divided into three sections

Section I: Practices related to MR Vaccine and Cold Chain

The results showed that all the MR vaccine and cold chain practices were done quite effectively as all the school sites (100%) stored MR vaccine and diluent in vaccine carrier with 4 ice packs. All school sites (100%) taken care about the MR vaccine diluent and syringes for the expiry dates. All school sites (100%) reported that no vial with VVM in unusable stage kept inside the vaccine carrier.

Section II: Practices related to injecting the vaccination

The results showed that maximum vaccinators 23 (92%) have attended the training sessions while 2 (8%) haven't gone through the training. Only 4 (16%) wear the gloves while giving vaccination while maximum 21 (84%) didn't wear. Near to half of the vaccinators 12 (48%) didn't follow the practice of swabbing the skin before giving injection. All vaccinators 25 (100%) used the whole diluents for constituting the vial. All vaccinators (100%) practiced the labeling of time of constitution. No Vaccinator touched the needle of the syringe anytime during reconstitution, drawing and administering vaccine to the child. Maximum vaccinators 20 (80%) administered the vaccine through subcutaneous route correctly while 5 (20%) didn't practiced it. All vaccinators (100%) administered the vaccine to the right arm.

Section III: Practices related to Safe needle disposal

The results showed that all session sites (100%) had the availability of functional hub cutter. All vaccinators (100%) cut the used syringes in the hub cutter immediately after the use. No vaccinator practiced the recapping of the needle. All sites (100%) collected used syringes in red plastic bag or container. All sites (100%) collected used vials in cardboard boxes with blue color marking.

DISCUSSION

The results showed that all the MR vaccine and cold chain practices were done quite effectively at all the session sites. All sites stored MR vaccine and diluent in vaccine carrier with 4 ice packs, taken care about the MR vaccine, diluent and syringes for the expiry dates. No vial with VVM in unusable stage kept inside the vaccine carrier. Practices related to Vaccinator reported that though a large proportion of respondents had received formal training on vaccine handling and storage, there still existed some practice gaps. Mavimbe et al strongly indicates the need to improve and integrate the knowledge and practices on cold chain management, especially to the peripheral level workers, by

providing them with adequate training and supervision, and demonstrating how that can be effectively integrated with practice.(4) Hadiati et al recommends suggests that the standard practice for skin preparation with regards to vaccination or other injectables is swabbing the injection site with a saturated 60% to 70% alcohol swab for 30 seconds and allowing the area to dry for 30 seconds(5).Nermine etal also supported in the study by reporting 58.1% HWs not wearing the gloves before the cannula insertion. (6)CDC has also recommends that HWs must be trained for Vaccinations as they play critical roles in proper vaccine storage, handling, and administration. (7) Practices related to safe needle disposal was quite effective in the present study. The results are supported by E agbenu et al where Vaccinators used the hub cutters for disposal of syringes found hub cutters easy to use and safe. We know that the basis for any vaccination drive is cold chain management activity, handling of vaccinations and safe syringe disposal. Without capable personnel to properly manage cold chain equipment's guided by stipulated procedures, all cold chain activities end in futility as sub-potent vaccines end up being administered to clients. We conclude that the practices related to cold chain maintenance and safe needle disposal was up to the mark. But there is a need for better training of healthcare workers about safe injection practices.

CONFLICT OF INTEREST

We declare no conflict of interest in the course of this study.

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