

## Technical Note

# Monitoring experience of World Health Organization external monitor for Intensified Mission Indradhanush 5.0 vaccine drive in rural Cuddalore, Tamil Nadu

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## ABSTRACT

The Intensified Mission Indradhanush 5.0 (IMI 5.0) aimed to extend routine immunization services across India, with a focus on children up to 5 years old. Key objectives included boosting measles and rubella vaccination coverage. By September 30, 2023, over 34.6 million children and 6.5 million pregnant women had received vaccine doses nationally. The Surveillance Medical Officer (SMO) from WHO designated external monitors to oversee session sites and perform house-to-house monitoring. Monitoring took place from October 12-14, 2023, in three health blocks of Cuddalore District. Activities included observing two session sites per day (six total) and surveying 40 households per day (120 total). Separate checklists were provided for session site monitoring and house-to-house monitoring, as per WHO guidelines. All session sites adhered to the scheduled times and locations, with proper logistics. However, some lacked IEC materials for public awareness. House-to-house monitoring confirmed full vaccination coverage for under-five children, with no missed vaccinations identified. Recommendations were made to ANMs to have IEC material to enhance community participation. Monitoring of IMI 5.0 in Cuddalore District demonstrated strong adherence to guidelines and effective vaccination session implementation. House-to-house monitoring confirmed appropriate vaccination of under-five children, indicating successful outreach. Overall, this experience provided valuable insights into operational challenges and opportunities for improvement in future immunization campaigns.

**Keywords:** Immunization, Intensified Mission Indradhanush 5.0, Monitoring, Tamil Nadu, Vaccination

## INTRODUCTION

The Intensified Mission Indradhanush 5.0 (IMI 5.0), a pivotal routine immunization initiative led by the Union Ministry of Health and Family Welfare, is poised to culminate with the completion of its three rounds on October 14, 2023. The goal of IMI 5.0 was to extend routine immunization services to children and pregnant women who may have previously missed out or dropped out from the vaccination schedule across the entire nation.<sup>[1]</sup>

IMI 5.0 is strategically designed to boost immunization coverage for all vaccines prescribed under the Universal Immunization Program, aligning with the National Immunization Schedule. The present campaign encompasses all districts nationwide and includes children up to 5 years of age – a notable expansion from previous efforts that focused on children up to 2 years old. A key emphasis of the campaign is the augmentation of Measles and Rubella vaccination coverage, with a targeted objective of achieving Measles and Rubella elimination by 2023. The campaign unfolds

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in three rounds from 7<sup>th</sup> to 12<sup>th</sup> August, 11<sup>th</sup> to 16<sup>th</sup> September, and 9<sup>th</sup> to 14<sup>th</sup> October 2023 – comprising 6 days each month, including a dedicated routine immunization day. As of September 30, 2023, an impressive number of over 3,469,705 children and 655,480 pregnant women have received vaccine doses during the first two rounds of the IMI 5.0 campaign nationwide.<sup>[2]</sup>

Independent entities such as the World Health Organization, and other key partner agencies of Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH +A) in high-priority districts will oversee these campaigns. In addition, observers from national, state, and district levels will closely monitor these drives, and their valuable feedback will be relayed by the state and district task forces to facilitate necessary corrective measures.<sup>[3]</sup>

## MATERIAL AND METHODS

### Monitor designation

The surveillance medical officer from the World Health Organization (WHO) in each state and union territory designates external monitors to oversee session sites and conduct house-to-house monitoring during vaccination drives. I was appointed as an external monitor for the IMI 5.0 vaccine drive in three health blocks of Cuddalore District, Tamil Nadu.

### Monitoring area

District monitored: Cuddalore District.

Health blocks monitored: Three blocks (one block per day).

### Monitoring duration

Dates: October 12, 2023, to October 14, 2024.

Total days monitored: Three days.

### Monitoring activities

Session sites monitored: Two sites per day, a total of six session sites over 3 days.

House-to-house monitoring: Forty households with under-five children per day, a total of 120 households over 3 days.

### Monitoring method

Observation: Monitoring vaccination sessions and logistics at the session sites.

Record checking: Verifying vaccination records and due lists.

Interviews: Conducting interviews with auxiliary nurse midwives (ANMs) and parents of under-five children.

### Statistical analysis

The data collected during house-to-house monitoring and session site visits were analyzed to assess vaccination coverage among under-five children and the implementation of IMI 5.0. The analysis focused on the vaccination status of children, reasons for missed or dropped doses, and the availability of logistics at session sites.

### Monitoring tools

Separate checklists were provided for session site monitoring and house-to-house monitoring, as per WHO guidelines.

### Guidelines for session site monitoring

General information: Details of high-risk areas and the use of the U-WIN portal.

Vaccination delivery: Observation of vaccinations administered by ANMs, checking logistics, vaccine carrier status, vaccine/diluent availability, labeling of opened vaccines, and use of opened MR/Boston consulting group vaccines within 4 h.

Logistics and safety: Availability of ice packs, hub cutters with puncture containers, biomedical waste management, and adverse events following immunization (AEFI) management kits.

Training and information, education, and communication (IEC) materials: Verification of ANM training for IMI 5.0 and presence of IMI 5.0-specific IEC materials.

Interviews: Interactions with ANMs regarding their training and with caregivers about their children's vaccination.

### Guidelines for house-to-house monitoring

General information: Recording vaccination dates at birth, 6 weeks, 10 weeks, 14 weeks, 9–11 months, 16–23 months, and 24–59 months.

Vaccination status: IMI-specific vaccination status, reasons for missed or dropped doses, and MR1/MR2 status for children aged 24–59 months.

Data collection: Collected data from maternal child protection (MCP) cards to verify vaccination details and identify missed or dropped-out children. Throughout the monitoring process, I strictly adhered to the guidelines and checklists provided by the WHO to ensure accurate and comprehensive monitoring.

## RESULTS

### Session site monitoring

This phase of the monitoring involved categorizing session sites based on a provided checklist to identify high-risk areas.

All six sessions were determined to be non-high-risk areas and adhered to the scheduled time, location, and vaccinator assignments as outlined in the micro plan.

The monitoring process included observing the administration of vaccines by ANMs to ensure compliance with operational guidelines such as correct sequencing, safe injection practices, and delivering essential messages about vaccine details, side effects, card safety, and the next visit date and location. However, during the monitoring period, I did not witness ANMs administering vaccines to children. ANMs brought vaccine logistics, with supplies sourced from the Primary Health Center's cold chain point within an hour's reach of all session sites.

The headcount survey conducted for IMI 5.0 was specifically reviewed, and the records were found to be completed within a period of 1–2 months. The due list status, which included beneficiaries aged 0–2 years, 2–5 years, and pregnant women, was available at all session sites in paper format. The condition of the ice packs at the session sites varied, with one site having hard-frozen packs and the other sites having ice packs with both ice and water. The status of the vaccine carrier and the availability of the vaccine and diluent were checked, with open vials labeled with the time and date. Logistic checks ensured the availability of vaccination supplies, including auto-disable (AD) syringes, vaccine diluent, Vitamin A syrup and spoon, ORS, zinc tablets, and blank MCP cards, with all session sites having the necessary logistics at the time of monitoring.

In accordance with the WHO guidelines, each session site followed the logistics of waste disposal using waste disposal bags or containers, including blue puncture-proof containers, red bags, yellow bags, and bags for municipal waste, segregating waste as per central pollution control board (CPCB) guidelines to prevent infections to healthcare workers and the general public. All session sites adhered to the logistics and CPCB guidelines for waste segregation. The session sites had AEFI kits with adrenaline for anaphylactic reactions, but one session site lacked an adrenaline dosage chart in the AEFI kit and advised them to get the adrenaline dosage chart and also briefed them about the importance of adrenaline dosage chart as it is an emergency lifesaving drug.

No reports of supervision visits by medical officers or health supervisors were recorded at any session site during the IMI sessions site monitoring. The ANMs at the session sites underwent training on the principles of IMI 5.0, conducted surveys of households, and compiled lists of individuals due for vaccination based on the head count survey. The session sites were specifically designated for IMI 5.0 and were held in the same locations as regular immunization sessions.

It is required for all session sites to exhibit IEC materials for public awareness. However, not all session sites complied with this requirement. I have recommended that the remaining session sites display the IEC materials.

### House-to-house monitoring

House-to-house monitoring was conducted over three days, covering 40 households with under-five children per day. Details such as the child's name, parents' names, birthdate, vaccination dates, and age in months were collected from the Mother and Child Protection (MCP) card in each household to verify vaccination status and identify any children who may have missed or dropped out of the vaccination schedule.

It was verified whether the child had received age-appropriate vaccines, and the vaccination dates for each vaccine were noted. In cases where vaccines were due under the IMI 5.0 program, the vaccination status was documented, specifying whether the child was due for all doses or only some. Reasons for not receiving the due dose(s) were also recorded.

For children aged 2–5 years, verification was conducted to ensure receipt of MR1 and MR2 vaccines. At the conclusion of the house-to-house monitoring activity, it was determined that no child was due for IMI 5.0 vaccines, and all children were appropriately vaccinated for their age.

### DISCUSSION

The session site monitoring under IMI 5.0 revealed a robust adherence to the operational guidelines set forth by the campaign. Despite all monitored sites being categorized as non-high-risk areas, the meticulous organization and implementation observed ensured that the sessions were conducted as planned, with appropriate logging of locations. The logistic arrangements, including the transportation of vaccines from Primary Health Centers, were well-managed, ensuring the timely availability of necessary supplies at the session sites.

Waste management practices were commendable, with all session sites adhering to CPCB guidelines. This ensured the safe disposal of biomedical waste, protecting healthcare workers and the public from potential infections.<sup>[4]</sup> However, the absence of an adrenaline dosage chart at one site's AEFI kit was a significant oversight. Adrenaline is a critical emergency drug, and its correct dosage is vital for managing AEFI.<sup>[5]</sup> Immediate corrective actions and regular checks are recommended to ensure all session sites which are fully equipped.

The house-to-house monitoring conducted in Cuddalore District provided valuable insights into the vaccination status of under-five children. The comprehensive collection of vaccination data from MCP cards ensured an accurate assessment of immunization coverage.

It was encouraging to note that all children monitored were appropriately vaccinated for their age, with no missed or dropped-out cases identified during the monitoring period. This indicates effective outreach and follow-up mechanisms within the community, ensuring that children receive their scheduled vaccines.

### Challenges faced during monitoring

During the monitoring process, I did not encounter any major difficulties. However, one aspect that proved particularly challenging was conducting house-to-house monitoring for 120 households over a span of 3 days. This task required a substantial amount of time and effort, as it involved traveling between households, gathering detailed information, and ensuring thorough data collection and data entry. The sheer volume of households to be visited within a limited timeframe made the process demanding and required meticulous organization. Despite the overall smooth execution of the monitoring process, this component highlighted the intensity and effort required to achieve comprehensive coverage and accurate assessment.

### Recommendations for ANMs

1. Maintain an AEFI kit with an adrenaline dosage chart during all immunization sessions. This ensures swift intervention in case of adverse reactions, removing any ambiguity regarding the appropriate dosage.
2. Obtain IEC materials to raise awareness about the ongoing vaccination campaign, enhancing community understanding and participation.

### CONCLUSION

The monitoring of IMI 5.0 in Cuddalore District showed strong adherence to guidelines and effective vaccination session implementation. All session sites were well-managed, with correct vaccine logistics and waste disposal. House-to-house visits confirmed that all under-five children were appropriately vaccinated, indicating successful outreach. As a post-graduate student in community medicine, this served as an educational opportunity to understand the practical and operational aspects of the IMI 5.0 at the field level. It provided valuable insights into the challenges encountered by healthcare workers and beneficiaries. The monitoring responsibilities offered a chance to assess and address challenges, equipping them with the knowledge of how to effectively implement health programs.

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