



**NATIONAL PRIMARY HEALTH CARE DEVELOPMENT AGENCY**  
**FEDERAL MINISTRY OF HEALTH**  
**NIGERIA**



# **2017/2018 Measles Vaccination Campaign (MVC)**



## **FIELD GUIDE**

**October 2017**

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## Abbreviations and Acronyms

<b>ADS</b>	Auto-disable syringe for injection
<b>AEFI</b>	Adverse events following immunization
<b>CBO</b>	Community based organization
<b>CCO</b>	Cold chain officer
<b>CHO</b>	Community health officer
<b>CPR</b>	Cardio-pulmonary resuscitation
<b>DIP</b>	Daily implementation plan
<b>DSNO</b>	District surveillance notification officer
<b>ERC</b>	Expert review meeting
<b>EPI</b>	Expanded Programme on Immunization
<b>FAQ</b>	Frequently asked questions
<b>ICC</b>	Interagency Coordinating Committee
<b>IDP</b>	Internally displaced person/persons
<b>IDSR</b>	Integrated Disease Surveillance and Response
<b>IEC</b>	Information, education, and communication
<b>IPD</b>	Immunization Plus Days
<b>LGA</b>	Local government area
<b>MCV</b>	Measles containing vaccine
<b>MST</b>	Management supervision team
<b>MVC</b>	Measles Vaccination Campaign
<b>NGO</b>	Non-governmental organization
<b>NMTCC</b>	National Measles Technical Coordination Committee
<b>NPHCDA</b>	National Primary Health Care Development Agency
<b>ODK</b>	Open Data Kit (mobile phone data collection tool)
<b>PHC</b>	Primary health care
<b>PTA</b>	Parent teachers association
<b>RCM</b>	Rapid convenience monitoring
<b>RI</b>	Routine immunization
<b>SIA</b>	Supplemental immunization activity
<b>SMC</b>	Social mobilization committee
<b>SMS</b>	Short message service
<b>TBA</b>	Traditional birth attendants
<b>TFI</b>	Task Force on Immunization
<b>UNICEF</b>	United Nations Children’s Fund
<b>VCM</b>	Volunteer community mobilizer
<b>VDC</b>	Village development committee
<b>VPD</b>	Vaccine preventable disease
<b>VVM</b>	Vaccine vial monitor
<b>WDC</b>	Ward development committee
<b>WFP</b>	Ward focal person
<b>WHO</b>	World Health Organization
<b>WPV</b>	Wild polio virus

# 1. Introduction

Measles is one of the most infectious human diseases and can cause serious illness, lifelong complications and death. Prior to the availability of measles vaccine, measles infected over 90% of children before they reached 15 years of age. These infections were estimated to cause more than two million deaths and about 60,000 cases of blindness annually worldwide.

The highly effective, safe and relatively inexpensive Measles Containing Vaccine (MCV) protects individuals from the infection, and their widespread use can completely stop the spread of the viruses in populations that achieve and maintain high levels of vaccination coverage.

The country being a signatory to the global and regional elimination of measles by the year 2020, went on to develop a strategic plan aligning with that of the regional and global plan. Strategies to achieve these targets include:

- Achieving and maintaining  $\geq 95\%$  national vaccination coverage and reaching all children at the ward level through routine immunization (RI) and supplemental immunization activities (SIAs)
- Achieving and maintaining a high quality surveillance system
- Developing and maintaining outbreak preparedness and response including case management

Given the current cumulative number of unimmunized children, epidemiological age shift of those affected by the disease and high incidence of measles, the government of Nigeria and its partner agencies plans to conduct a measles follow-up vaccination campaign from November to December 2017 and February/March 2018 for the Northern and Southern States respectively.

## 1.1 Rationale for 2017 Measles Vaccination Campaign (Follow-Up)

Several measles SIAs have been conducted in Nigeria with the aim of providing an additional opportunity for vaccination. The aim of SIAs is to increase population immunity (i.e., herd immunity) and reduce measles virus transmission.

In 2005/2006, Nigeria implemented the first measles vaccination campaign (Catch-Up). Phase one covered the Northern states in December 2005, and phase two covered the Southern states in October 2006. The target population was children aged 9 months to  $<15$  years. The administrative coverage in Northern states was 95.2% (28,538,974 doses administered) and 83% (26,353,793) in Southern states.

Follow-up campaigns are periodic mass immunization campaigns conducted every 2–4 years to vaccinate children in new birth cohorts (susceptibles) since the previous campaign. The timing of the follow-up campaign depends on the rate of accumulation of susceptibles, which is determined by routine immunization coverage and coverage in previous vaccination campaigns.

Unlike past SIAs, the 2015/2016 measles follow-up SIA did not result in a decrease in the number of reported measles cases in 2016, despite achieving coverage of 84.5% nationwide. In 2015, 12,423 confirmed cases were reported, whereas in 2016, 17,135 confirmed cases were reported, corresponding to an incidence of 89.3 cases per million per year.

## 1.2 Goal and Objectives of the Measles Vaccination Campaign

The goal of the measles MVC (follow-up) is to reduce measles transmission by achieving  $>95\%$  coverage in all states and LGAs in line with the National Measles Strategic Plan.

The objectives are to:

1. Achieve  $\geq 95\%$  national measles vaccination coverage and reach all targeted children.
2. Implement a higher quality campaign than previously, which incorporates lessons learned from previous measles and polio vaccination campaigns

3. Uses the opportunity provided by the follow-up measles campaign to reach previously missed children with one dose of measles vaccine by leveraging the polio campaign strategies
4. Use opportunities provided by the measles vaccination campaign to strengthen the health system and immunization program (i.e., EPI service delivery, cold chain capacity, supply chain management, waste management, strengthening VPD case detection and notification, data reporting and analysis, micro-planning at LGA/ward/health facility levels)
5. Strengthen the pharmacovigilance system for monitoring adverse events following immunization (AEFIs)

To achieve these objectives, Nigeria is making concerted efforts to:

- Improve planning and coordination
- Commence timely planning and execution of pre-campaign activities
- Ensure higher campaign quality by adequately addressing lessons learned from previous campaigns
- Ensure timely implementation of post-campaign activities

The planned measles vaccination campaign will be a stand-alone campaign (i.e., no other antigens administered), however strategies will be adopted to improve uptake of routine immunization (RI) services. Uptake of RI services will be promoted through social mobilization activities.

### 1.3 Target Population

The 2017/2018 MVC will vaccinate all children aged 9–59 months in all states.

### 1.4. Scope

The 2017/2018 MVC will be implemented in two phases (Northern and Southern). A staggered approach within each state will be adopted in both phases to maximize human resource availability.

#### Phase 1: Northern

- Stream 1 (NW states): November 9 – 14 and November 16– 21 Stream 2 (NE states): November 30– December 5 and December 7–12
- Stream 3 (NCZ states and FCT): February 1–6 and February 8–13

#### Phase 2: Southern

- 17 Southern States: March 8–13 and March 15–20

This field-guide is intended to describe in detail the activities needed to implement a successful follow-up campaign. They are presented in a format that can be rapidly implemented by the health authorities at the state and LGA levels.

## 2.0 Measles Vaccine

Measles vaccine is made from live attenuated virus. A number of live attenuated measles vaccines are currently available, either as monovalent vaccine or as MCV with one or more of rubella mumps and varicella vaccines. The measles vaccines that are internationally available are safe and effective.

### 2.1 Measles Vaccine Storage and Handling

The vaccine is relatively heat-stable in the lyophilized form, but rapidly loses potency when exposed to heat after reconstitution. Therefore, from the national down to the LGA level, it is recommended to keep the vaccine at a temperature of +2°C to +8°C and protected from light.

Every vial of measles vaccine has the vaccine vial monitor (VVM) on its cap, which used to monitor the amount of time and heat exposure to which the vaccine vial is subjected. All reconstituted vaccines should be discarded six hours after reconstitution or at the end of the session, whichever comes first. The diluents should be at the same cold temperature as the vaccine at the time of reconstitution.



### 2.1 Doses and Administration

Measles vaccine is given in a single dose of 0.5 ml subcutaneously, usually at the upper outer part of the child's left arm. For routine immunization, it is recommended that measles vaccine be administered beginning at 9 months – the age when most children have lost maternally derived protection (maternal antibodies). There are virtually no contraindications to measles vaccination. For the Measles Vaccination Campaign, **all children aged 9–59 months** (9 months to less than 5 years) **should receive a dose of measles vaccine, regardless of previous vaccination history.**



### 3. Vaccination Post Strategies

#### 3.1 Fixed Vaccination Post

These vaccination posts are located at health facilities where measles vaccination will be provided throughout the day, for the six days of the campaign. The term fixed refers to the structure not the team. These sites will also serve as depots for storage and distribution of vaccine and other supplies to other vaccination post. Most fixed vaccination posts will be health facilities.

#### 3.2 Temporary Vaccination Post

These vaccination posts will be located at popular locations near the targeted community such as schools, mosques/churches, houses of traditional leader, bus stops, streets and bus terminals, motor parks, hard-to-reach areas, borders (local and international) and market areas. Selection of such temporary vaccination posts/outreach sites will be determined by the size of the target population, geographic proximity to the nearest fixed or other temporary vaccination post, and time/workload required to vaccinate all children in the target population.

#### 3.3 Strategies for Special Populations

The underserved populations in Nigeria include children within the target age living in security-compromised areas, hard to reach areas, urban slums, internally displaced persons (IDPs), nomads, scattered settlements, and area without functional primary health care (PHC) services. These children are persistently missed during routine immunization and SIAs. A number of measures will be taken to address the following persistent issues, these include:

##### 3.3.1 Collaboration with the Nigerian military in security compromised areas

Based on experience with both the measles and polio outbreak responses in the three North Eastern states, strong plans must be in place to ensure adequate campaign vaccination coverage despite ongoing insecurity. As a mitigating strategy, such areas will be mapped and based on individual state peculiarities; security personnel's (civil and organized) will be leveraged to reach those areas. Through effective coordination with the Borno and Yobe polio EOCs, lessons from their already established security tracking and "Reaching Every Settlement" (RES) and "Reaching inaccessible communities", (RIC) strategies will be applied to measles campaign planning and implementation. At the national level an advocacy and engagement with the Ministry of Defense Health implementation programme has been carried out to provide support during planning and implementation of the campaign in security-compromised communities.

##### 3.3.2 Planning for IDPs and host communities

There are a significant number of IDPs displaced due to the security challenges in the North East. From previous campaigns and the recent measles outbreak response (February 2017), it was observed that vaccination of IDPs was inadequately planned; as such there were missed children within the camps and the host communities. In order to cover these populations, strong coordination must be established with agencies and organizations tracking IDP movement as well as managing and supporting both formal and informal IDP camps, including NEMA, OCHA, International Rescue Committee, ICRC, UNICEF, church diocese and others. With their inputs, a dedicated micro planning exercise and social mobilization activities would be planned for IDPs residing in camps as well as those in surrounding host communities. In IDPs camps with established health clinics or outreach services, such structures will be leveraged to target IDPs in their catchment area.

##### 3.3.3 Hard to Reach (HTR) populations

Every state will develop a micro plan, which will include list of HTR settlements and communities. Each settlement will have a special vaccination team who will be responsible for this underserved population. Special considerations will be given during allocation of resources (human and funds) to these areas. Vaccination teams should include residents of these areas where necessary. Timing of visits by teams should take into consideration the movement of the residents.

#### 3.3.4 Urban Slums

All urban slums have their own leaders, who will be engaged during planning for each settlement. Temporary posts will be established in these areas as needed with a strong community mobilization and crowd control strategy.

#### 3.3.5 Collaboration with religious groups

Partnerships will be established with leaders of religious groups including churches and mosques to promote communication on the measles campaign to their followers and enable immunization of target children after worship sessions. This will increase the reach of the campaign to children who might otherwise be missed.

#### 3.3.6 Appointment of child advocates/school outreach and sensitization

As part of the mobilization efforts, child advocates will be appointed who will be provided necessary information and resources to influence parents and their peers to receive the measles vaccine during the upcoming SIA. Similarly, in areas where the target population are concentrated in schools, individuals or groups (CBOs, NGOs, FBOs) will be sensitized and encouraged to adopt schools for the purpose of mobilization of the school authorities/Parent Teacher Association (PTA).

## 4. Campaign Roles and Responsibilities

### 4.1 National Level

Planning and coordination of the 2017/2018 MVC is being driven by an independent National Measles Technical Coordinating Committee (NMTCC) headed by a Chairman. This committee comprises Government and a large array of partners. There is also an established collaboration between the NMTCC and several line ministries including the Ministries of Education, Defense, Interior, Environment, Women affairs, Finance etc.

#### 4.1.1 Responsibilities at National Level

- Developing the campaign proposal and submission to funding and partner agencies
- Ensuring timely release of government funds for the campaign
- Developing the National Plan of Action (i.e., schedule of activities)
- Harmonizing established committees and subcommittees:
  - Advocacy, Communication & Social Mobilization Committee
  - Logistics and Cold Chain Committee
  - Training Committee
  - Adverse Events Following Immunization (AEFI) Committee
  - Monitoring and Evaluation Committee
- Conducting intra-country resource mobilization to close funding gaps
- Coordinating procurement of vaccines and supplies
- Developing training plans/guidelines and materials for training
- Developing communication and social mobilization plans
- Recruiting extra personnel (national and international supervisors) as needed
- Organizing national level Training of Trainers (TOT)
- Assessing the cold chain capacity and developing a distribution plan for vaccines and other supplies
- Organizing, compiling and analyzing state micro plans
- Distributing vaccines, supplies, and other campaign materials based on micro plans
- Developing an accountability framework that looks at monitoring the quality of the MVC, including human resources, activities, daily debriefing of state teams and identification of corrective actions/constraints
- Tracking pre-implementation, implementation, and post-implementation activities at national, state, and LGA levels use chronogram and dashboard data
- Monitoring and supervision of preparedness at all levels
- Verification of state micro plans

### 4.2 State Level

#### 4.2.1 Composition of State Team

State team has membership from state officials and partners based in the state. The main responsibility of the state team is to coordinate, train, supervise, and monitor planning and implementation of the MVC. The state team is accountable for quality campaign in all LGAs within the state. The team should be made up of:

- Executive secretary/Chairman SPHCDA/B (Chairman)
- Director PHC, SPHCDBs
- Director Public Health, State Ministry of Health Chairperson
- Director PHC Ministry of Local Government and Chieftaincy Affairs
- Disease Surveillance and Notification Officers (DSNO)
- State Immunization Officer (SIO)
- State Health Educator
- State Cold Chain Officer (State CCO)
- Partners
- Traditional (most senior) and religious leaders

#### 4.2.2 Responsibilities of State Team

- Ensuring state counterpart funding is provided to support the campaign
- Reviewing lessons learnt and best practices observed during previous campaigns
- Conducting measles risk assessment
- Developing a plan of action that specifies activities in relation to the National Plan of Action
- Organizing/conducting a stakeholders meeting to plan for MVC.
- Activating coordination committees and subcommittees (Advocacy Communication and Social Mobilization including Resource Mobilization Committee, Logistics and Cold Chain Committee, Training Committee, AEFI Committee, and Monitoring and Evaluation Committee)
- Conducting local resource mobilization by identifying key stakeholders (e.g. State Minister of Finance, State Minister of Women Affairs and Social Development, Minister of Education, Minister of Local Government)
- Developing plans for training on micro planning and implementation at state, LGA and ward level
- Developing Advocacy, Communication and Social Mobilization plans
- Assessing the cold chain capacity and develop a logistics and distribution plan for vaccines and other supplies
- Organizing, compiling, and analyzing LGAs micro-plans
- Developing a monitoring and supervision plan for state and national level supervisors
- Identifying and designating referral hospitals for AEFI management
- Procuring and distributing AEFI kits
- Mapping all available incinerators in the state (government and private-owned), and signing a memorandum of understanding with budget, with a waste management company
- Updating the readiness assessment dashboard on weekly basis (8 weeks, 4 weeks, 3 weeks, 2 weeks, 1 week, and 3 days before implementation; updating and taking action on LGA-level readiness assessment data at 4 weeks, 3 weeks, 2 weeks, 1 week, and 3 days before implementation); submitting both to the NMTCC weekly
- Recruiting and deploying state technical facilitators (STF)
- Sending call-in data daily to NMTCC during campaign
- Monitoring coverage during the campaign and identifying low coverage areas and need for mop-ups

#### 4.3 LGA Level

The main responsibility of the LGA team is to coordinate, train, supervise, plan and implement MVC activities within the LGA. The LGA team is accountable for quality campaign in all wards.

##### 4.3.1 Composition of the LGA Team

- LGA Chairman or traditional district head
- LGA Director of PHC – Chairperson
- Local Immunization Officer (LIO)
- LGA Disease Surveillance and Notification Officer (LGA DSNO)/monitoring and evaluation officer in some Southern states
- LGA Health Educator
- LGA Cold Chain Officer (LGA CCO)
- State Technical Facilitator (STF)
- Traditional and religious leaders
- Partner agencies where available, including WHO LGA facilitator

##### 4.3.1.1 State Technical Facilitator (1 per LGA)

Each LGA will have a State Technical Facilitator (STF) deployed by the State Team ~10 days before implementation until the end of the campaign. Such a person must be a senior health worker with previous experience in the organization and management of immunization activities. They can be drawn from of schools

of health technology/nursing/midwifery/ allied health-training institutions or other health related senior positions in the State. The STF is accountable for the quality of the outcome of the MVC at the LGA level.

Responsibilities include:

- Supporting the LGA Team to develop the comprehensive LGA MVC micro plan
- Ensuring the Vaccination Post Supervisor and vaccination team are selected as per criteria given
- Training of LGA team and ward focal persons
- Supervising ward level training
- Ensuring there are ward maps and micro plans showing all the MVC catchment areas and fixed and temporary vaccination posts, and displayed at the LGA and Wards
- Monitoring and supervising implementation of all preparation and implementation activities
- Supervising the process of selection of vaccination team members
- Ensuring that the distribution plan for vaccine and other supplies are available
- Ensuring that the waste management plan is clear to all Ward Focal Persons
- Supervising and monitoring the waste management for the LGA
- Monitoring and auditing all AEFIs
- Reviewing and collecting pre-implementation and implementation monitoring data, including readiness assessment dashboard data, and advising wards accordingly
- Supporting LGA Team to do the daily analysis of wards and settlements and taking appropriate actions to improve coverage
- Submitting daily call in data for all wards to State on daily basis, by 6pm
- Conduct rapid convenience monitoring (RCM)
- Coordinating LGA review meetings on all days of the campaign
- Deployment to LGA pre-campaign 9 days; overseeing campaign (6 days); overseeing (mop ups/data collection) : 6 days

#### 4.3.2 Responsibilities of LGA Team

- Ensuring state counterpart funding is provided, especially for fueling of generators and repairing cold chain equipment as needed
- Reactivating inter-sectorial collaboration stakeholders' committees
- Updating cold chain inventory, evaluate storage capacity and develop distribution plan for vaccines and supplies
- Ensuring adequate supply of cold chain equipment and generators as needed
- Ensuring timely availability of vaccines, supplies, and tools for all wards and teams
- Developing and implementing training plans for micro planning and implementation training
- Developing advocacy, communication, and social mobilization and resource mobilization plans
- Compiling, analyzing, and validating ward micro plans
- Developing plan for transportation of teams and materials
- Developing and implementing supervisory plans (pre-implementation and during implementation)
- Updating LGA-level readiness assessment to report to state dashboard data at 4 weeks, 3 weeks, 2 weeks, 1 week, and 3 days pre-implementation and submitting to state level
- Planning AEFI case management
- Developing waste management plans
- Conducting daily LGA evening review meetings on all days of campaign and mop-ups
- Activating non-compliance committees to resolve cases of non-compliance during the campaign
- Recruiting and training independent monitors to conduct daily rapid convenience monitoring in areas with high risk of low coverage
- Sending daily call-in data to state level for every day of the campaign

## 4.4 Ward Level

### 4.4.1 Composition of the Ward Team and Responsibilities

#### 4.4.1.1 Ward Focal Person (WFP)

The WFP should be a senior health worker with minimum qualification of community health extension worker (CHEW), residing in the ward of assignment; nurses or midwives are preferable.

Responsibilities include:

- Seeking the support of the traditional leader, ward councilor, and other key influencers to conduct key activities
- Developing the ward level micro plan
- Collaborating with vaccination team supervisors to develop the Daily Implementation Plan, ensuring that all eligible children in the ward are assigned to catchment areas within 1 km of the corresponding vaccination post
- Facilitating and participating in community and house-to-house mobilization prior to implementation of MVC
- Ensuring the vaccination post supervisors and vaccinators are qualified to administer injection
- Verifying that the measles recorders are literate in English
- Posting a vaccination team and supervisory movement plan on the wall of the ward PHC, including location and contact numbers of each team for each day during the campaign
- Ensuring that all teams leave on time each day and that teams have adequate supplies according to the daily implementation plan (DIP)
- Alert LGA about low compliance wards, and develop a plan for corrective action
- Ensuring there is a ward map showing all the MVC catchment areas
- Ensuring the SIA daily implementation plans are displayed clearly at the ward or health facility, and being adhered to
- Ensuring the hard to reach areas and special populations are reached
- Ensure the waste management plan is clear to all vaccination post supervisors.
- Monitoring waste management at the vaccination post and ward level
- Monitoring and supervising implementation and AEFIs
- Collecting data daily, and acting on tally/RCM data for corrective action
- Conducting evening review meetings at the ward level with vaccination team supervisors and community leaders
- Identifying low performing teams and team members and taking appropriate measures, including replacing poor performing team members
- Reporting daily call-in data to the LGA by 5pm each day
- Participating in the daily LGA review meeting and reporting on campaign coverage and issues
- Conducting a feedback meeting post implementation

#### 4.4.1.2 Traditional leaders

Traditional leaders play an important role at the ward level. Responsibilities include:

- Presiding over catchment area planning meeting
- Inviting community CBOs, Qur'anic school heads, school heads, youth leaders, representatives of Faith Based Organization (FBOs) and women's organizations
- Ensuring walk through at the catchment area level with community leaders to identify special places where children can be found (e.g., churches, Islamiyah schools, nursery schools, markets, motor parks, Qur'anic schools) to inform daily work/implementation plans
- Updating the list of settlements and special places during micro planning

- Supporting the selection of personnel to ensure that team members selected as vaccinators, recorders and town announcers are selected according to stipulated criteria (see next section)
- Reviewing and endorsing the daily implementation work plan (DIP)
- Ensuring that all the settlements on the daily implementation plan are covered and are no more than 1 km from the vaccination post
- Raising awareness about the importance of measles vaccination and keeping the vaccination card
- Resolving issues with non-compliance, including informing village head/district heads of persistent non-compliance and developing a plan for corrective action
- Ensuring the town announcer make clear and accurate announcements prior, during, and post implementation
- Ensuring the messages disseminated by town announcers post implementation are designed to promote follow up with Routine immunization
- Supporting continuous house-to-house mobilization before, during and after implementation, and promoting continuity with routine immunization
- Ensuring every child is reached within the community
- Engaging and sensitizing members of the communities about the upcoming measles vaccination campaign, including securing the support of ward, village, and district heads
- Encouraging caregivers to ensure that children are fully immunized (completing their routine immunization schedule)
- Sensitizing caregivers through sermons at gatherings or at places of worship (mosques, churches) on the importance of the measles campaign
- Identifying house-to-house mobilisers who will track eligible children 9 to 59 months before the campaign and promoting the campaign before and during the campaign
- Encouraging the participation of the community during the micro planning process

## 4.5 Vaccination Teams

Each catchment area should have a vaccination team, each with its own daily implementation plan (DIP), developed during the micro planning process.

### 4.5.1 Vaccination Post Team Supervisor

The team supervisor should be a health worker with minimum qualification of community health extension worker (CHEW). Nurses, midwives, tutors of health technology/nursing/midwifery/allied professions should be engaged where they are available. Vaccination team supervisors must be qualified to administer vaccine. Responsibilities include:

- Collecting the list of eligible children within the catchment area
- Developing the DIP in close coordination with the WFP and the community and ensuring that it is adhered to during implementation
- Supporting house-to-house mobilization by the house-to-house mobilizer and the town announcer
- Participating in social mobilization with volunteers and community leaders
- Participating in the training of vaccination team members
- Ensuring that social mobilization activities before and during implementation are carried out
- Ensuring the availability of cold chain and logistics materials based on the DIP
- Ensuring the availability of vaccines and injectable devices based on the DIP
- Ensuring that all eligible children are given measles vaccine regardless of their previous vaccination status
- Monitoring, managing, and reporting all AEFI cases to the WFP
- Recording all AEFI cases on the line listing form
- Collecting data daily (i.e., tally sheets, AEFI reporting form, AEFI linelist) and submitting to the WFP
- Ensuring all materials, particularly needles and syringes, are properly collected



- Collecting safety boxes from the vaccination post and ensuring they are properly disposed of at the ward/designated area every day
- Monitoring and supervising the implementation, and the performance of team members
- Participating in the daily ward review meeting and informing the WFP of any campaign-related issues
- Line listing children that were missed and ensuring that they are vaccinated by the end of the day, or before the vaccination team moves to a new vaccination post
- Performs duties as a vaccinator (i.e., vaccinator 1), including reconstitution of vaccine and administration of vaccine, which include all duties as specified under vaccinator 2 (see below)

#### 4.5.2 Vaccinator 2

Only qualified health workers should perform vaccination and reconstitution. Responsibilities include:

- Ensuring measles vaccine administration is done safely, considering all safety measures
- Monitoring and responding to reactions to measles vaccine and recording on AEFI forms
- Tallying all children vaccinated
- Directing clients to the recorder after vaccination
- Informing caregivers of possible expected side effects of vaccination
- Asking caregivers to wait at least 10 minutes before departing to ensure there is no immediate, serious reaction to the vaccine (e.g., anaphylaxis)
- Advising parents/caregivers about routine immunization

#### 4.5.3 Community Leader/Crowd Controller

- Mobilize the community to the vaccination post
- Ensure orderly flow of clients at the vaccination post
- Intervene to resolve non-compliance
- Participate in community sensitization and dialogue
- Determine eligibility of children for vaccination (i.e., ages 9 to 59 months)

#### 4.5.4. Measles Recorders (2 on each team)

- Pre-fill designated portions (section 1) of vaccination cards before the day of the vaccination session
- Complete vaccination cards for children who have received the vaccine
- Mark the nail bed of the Left thumb of all children who are vaccinated

#### 4.5.5 House-to-House Mobilizers

The house-to-house mobilizer should be a trusted member of the community (e.g. faith Based Organizations). In the north, the house-to-house mobilizer must be female.

- Travel from house to house to inform caregivers and children of upcoming measles vaccination campaign beginning 6 days before the campaign and continuing through the day of the campaign vaccination session(s)
- Promote the campaign during implementation
- Line list of missed children in each catchment area during the campaign

#### 4.5.6 Town Announcer

The town announcer should be a person recognized by the community before the campaign as a trusted town announcer.

- Announces the campaign according to the itinerary informed by the vaccination team supervisor or WFP before the campaign
- Makes clear announcements during implementation about the location and time of vaccination regarding the purpose, time and place of the vaccination session, and that all children 9-59 months old should be vaccinated during the campaign regardless of previous vaccination status.





## 5. Pre-Implementation Activities

The success of the MVC depends on a substantial amount of pre-implementation work leading up to the campaign proper. Key activities, described below, include: funding; identifying roles and responsibilities; advocacy, communication and social mobilization; training; micro plan and DIP development; and readiness assessment.

Specific plans that need to be developed for the MVC include:

- MVC work plan/chronogram
- Micro plans and DIPs
- Training plans
- Waste management plans
- Vaccine distribution plans
- Management and monitoring of AEFI plans
- Communication and social mobilization plan, including rumour and crisis management plan
- Monitoring and supervision plan

### 5.1 Funding

The NMTCC gave specific guidance and budget to states (i.e., the replicated Measles Technical Coordinating Committees [NTCC]) for funding needs to mobilize resources to conduct planned activities. The NMTCC is expected to conduct financial tracking of funds released across state, LGA and ward levels.

#### 5.1.1 State Counterpart Funds

State counterpart funds are to be released 2 months before the campaign, in order to cover the following activities:

- Procurement of AEFI kits
- Logistics for waste management
- Transportation and payment of additional teams (above those initially budgeted for)
- Transport logistics for mop ups
- State and LGA supervisors
- House-to-house mobilization
- Maintenance of cold chain and logistics

#### 5.1.2 Logistics Funds

Logistics funds are to be released to states 2 weeks before the campaign, in order to cover the following activities:

- Team transportation (at ward level)
- Fueling of generators (at state and LGA levels)
- Distribution of vaccine and supplies (at ward levels)

## 5.2 Advocacy, Communication, and Social Mobilization (ACSM)

Lessons learnt from previous campaigns that led to poor demand creation and low coverage at all levels include:

1. Communication and social mobilization activities were delayed
2. Non-compliance pockets existed
3. Lack of information by caregivers
4. Lack of political engagement/commitment at all levels

The following demand creation activities and innovations are recommended to address the gaps identified previously. National and state level pre-implementation activities should commence at least 2 months before implementation; LGA and ward level activities should commence at least 1 month before implementation.

### 5.2.1 ACSM at the National Level

- *Planning and Coordination:* Develop communication/social mobilization plans including rumour/crisis management plans with state health educators
- *Advocacy:* Conduct advocacy visits to key government stakeholders (e.g., National Assembly, Governor's forum, line ministries [Education, Women's Affairs, Information, Defense, Interior, Environment, NOA, NYCS, etc.], Nigeria Communication Commission, National Broadcasting Commission, NESREA, ALGON, etc.) as well as private sector stakeholders
- *Stakeholder Engagement:* Conduct stakeholder meetings for national level medical groups, CBOs, religious bodies, etc.
- *Media Orientation:* Develop, translate, pre-test, print, and distribute IEC materials (electronic and print) to states and LGAs; produce and air radio and television jingles, public service announcements, features (e.g., Radio Link)
- *Social Media:* Disseminate positive information about the campaign using various social media platforms, including Facebook, Instagram, Twitter, Tumblr, You Tube, WhatsApp, etc.
- *Rumour surveillance:* be vigilant in identifying any negative messages in traditional media, social media or other media regarding immunization in general, the campaign, or related topics that could present obstacles to a successful campaign; report these to NMTCC for further action
- *Campaign Launch:* Conduct a press briefing (Honorable Minister for Health/NPHCDA ED), a national-level flag off event (President/Honorable Minister for Health/High level official)
- *Monitoring and Supportive Supervision:* Monitor communication before and during implementation and field visits

### 5.2.2 ACSM at the State Level

- *Planning/Coordination:* Develop communication/social mobilization plans including rumour/crisis management plans with MDAs and social mobilization networks
- *Advocacy:* Develop partnerships with relevant organizations; engage and sensitize stakeholders (e.g., religious leaders, traditional leaders, education teams, CSOs/FBOs, LGA Chairmen, media)
- *Rumour surveillance:* be vigilant in identifying any negative messages in traditional media, social media or through partner agencies and CBOs, NGOs, opinion groups, etc regarding immunization in general, the campaign, or related topics that could present obstacles to a successful campaign; report these to the SIO and Director of the State PHCDA for further action
- *State Launch:* Conduct a press briefing (Honorable Commissioner for Health/ESSPHCDA, etc.)
- *State Level Flag Off:* (Governor, Honorable Commissioner for Health/ESSPHCDA, etc.)
- *Media Engagement:* Conduct weekly radio discussion programs

### 5.2.3 ACSM at the LGA Level

- *Planning/Coordination:* Develop a social mobilization plan, coordinate with MDAs and social mobilization focal groups, develop social mapping with community leaders; conduct IPC skills training for health workers
- *Sensitization Meetings:* Develop partnerships (public-private) with CBOs, NGOs, traditional leaders, key opinion leaders women's groups, etc. and conduct sensitization meetings
- *Edutainment Events:* Conduct road shows, rallies, and theatre performances using artists, majigi, mascots, papalolos, masquerade, etc.) in strategic places
- *Rumour surveillance:* be vigilant in identifying any negative messages in traditional media, social media or through partner agencies and CBOs, NGOs, opinion groups, etc. regarding immunization in general, the campaign, or related topics that could present obstacles to a successful campaign; report these to the LIO and LGA PHCC/MOH/HOD for further action
- *Campaign Launch:* Organize LGA flag offs specifically to feature LGA Chairmen and key influencers
- *Material Distribution:* Distribute all IEC materials to wards
- *Information and Crisis Management:* Establish a rapid response team for crisis communication

- *Monitoring/Supervision:* Conduct monitoring and supportive supervision of communication teams at LGA and ward levels

#### 5.2.4 ACSM at the Ward Level

- *Planning/Coordination:* Micro planning and pre-implementation of social mobilization activities should involve WFP working closely with WDCs/VDCs as well as traditional and religious leaders, ensuring that hard to reach communities are included in plans
- *Sensitization Meetings:* Conduct planning meetings with community leaders, WDCs, VDCs, community/influential opinion leaders, school and Qur'anic teachers; hold special meetings and community forums with key stakeholder groups including those from special populations (e.g., IDPs, nomadic, fishing communities)
- *House-to-house Mobilization:* House-to-house mobilizers should be used before and during the campaign
- *Materials Distribution:* Ensure that IEC materials are visible and disseminate throughout the wards; disseminate key messages on the benefits of immunization and safekeeping of vaccination cards
- *Schools Engagement:* WFPs and supervisors should officially write to schools and meet with school heads to inform them about the MVC and ensure messages are given to school children for onward transmission to parents to receive consent
- *Town Announcements:* Ensure and facilitate regular and sustained announcements in mosques, churches, public places, and during community events; ensure announcements transmit accurate messages

### 5.3 Risk/Crisis Communication Plans and Responding to Rumours

The public is often exposed to inaccurate or exaggerated information about immunization. It is important to anticipate rumours or potential over-reactions to isolated severe adverse events following immunization that may occur during campaigns. Proactive strategies are needed to address potential public perception risks to the campaign so that they do not derail the SIA or routine immunization more broadly.

Preventing outbreaks **of rumours and negative messaging** involves early engagement and consultation with key immunization stakeholders and community leaders to help maintain a favorable environment, mitigate any potential issues and ensure the accuracy of information disseminated through networks. A national crisis communication plan has been prepared and updated to respond to rumours. At lower levels, a Rapid Response team are in place to inform a rapid, coordinated and effective response to rumours.

Activities within **the national** crisis communication plan include:

- Advance training of credible and informed spokespeople, at appropriate levels, who will be available to speak to the media rapidly and regularly during crisis situations;
- Briefing of key media reporters, sharing clear and concise information prior to or during the SIA to facilitate a rapid response to any negative or inaccurate claims;
- Providing guidance to health personnel so that they can respond adequately to rumours or questions;
- Regularly disseminating up-to-date information through channels most used by the target audiences.

In addition to the crisis communication plan, media and rumour surveillance should be established several weeks before and during the campaign to rapidly detect and respond to any potential dangers to the campaign. Pro-immunization traditional and social media communication materials also should be developed.

Rumours or public reactions to AEFIs should be reported by the ward focal person to the Local Immunization Officer, who in turn should report to the LGA Primary Health Care Director, who then will report to the Director of the State Primary Health Care and Development Agency (SPHCDA). The SPHCDA Director will report to the

**Chair** of the National Measles Technical Coordinating Committee (NMTCC) who will report to the Executive Director of the National Primary Health Care Development Agency (NPHCDA).



To gain or maintain the trust of the public, it is important to avoid mixed messages from multiple experts, late release of Information, paternalistic or authoritarian attitudes, and failing to counter rumours and myths in real-time.

General rules for crisis communication at every level include:

- Be first to communicate and define the problem in appropriate terms
- Be accurate in describing the issue, its implications and responses
- Be credible in all communications by being honest, frank, and open
- Speak clearly with compassion and empathy
- Show respect and listen to your audience
- Accept and involve the public as a legitimate partner
- Coordinate and collaborate with other credible sources
- Accept that the media also have needs: try to accommodate them
- Plan carefully and evaluate performance

Key Principles (Things to Do)	Common Errors (Things to Avoid)
Be first	Mixed messages from multiple experts
Be right	Information released late
Be credible	Paternalistic attitudes
Express empathy	Failing to counter rumours in real-time
Promote action	Public power struggles and confusion
Show respect	

## 5.4 Training

As part of the innovations and plans to ensure a successful measles campaign 2017/2018, all efforts should be geared towards improving on previous measles SIAs conducted. Effective collaboration with the Training Working Group across all levels is key to a successful campaign. This working group is expected to function based on previous best practices for training and in line with global standards and country context.

Cascading Training of Trainers (TOT) will be done at zonal, state, LGA, and ward levels for the following topics:

- Micro plan (and daily implementation plan)
- Implementation of MVC

All Training Working Groups should be involved from the onset in the development of the training plans for the state and LGA.

- All training must have a planning meeting and a plan developed that has the following: venue, number of facilitators, number of participants, dates, agenda, budgets (including food, training materials, transportation, etc.)
- Training planning meeting should include a visit to the training venue, assembling training materials; facilitators should be made to rehearse their topics or presentation for colleagues to comment and critics to provide final inputs.

- All measles training should include administration of the training monitoring checklist (on ODK), a training report including SWOT analysis, and lessons learned
- For each level of training, quality of facilitation, material content and information disseminated will be evaluated using a training evaluation checklist. Training should be interactive and include demonstrations and simulation exercises
- Trainings should be supported with appropriate materials, based on the size of the training audience:
  - Reference materials (operational guidelines, field guide, forms, etc.)
  - Agenda
  - Pre- and post-test evaluations
  - White or black board, marker pens or chalk
  - Flip charts
  - In focus and screen (for PowerPoint presentations and video projection)
  - Laptop computer
  - Folders containing writing pads, pens/pencils
  - Injection equipment (for implementation training): vaccine vials, syringes, safety boxes, AEFI kit, safety boxes and plastic bags, cotton swabs)
  - Cold chain equipment (for implementation training): vaccine carriers, icepacks, and cold boxes
  - Data tools: MVC cards, tally sheets, check lists, daily summary form, GIS maps, and reporting forms
  - Training evaluation form

## 5.5 Micro Planning and Development of Daily Implementation Plans

A micro plan is a detailed bottom-up planning process **conducted at the ward level** and then aggregated at higher levels (i.e., LGA, then state), and should be guided by the **ward focal person (WFP)**. It details human, material and financial resource needs and operational details required to reach all target age group (9–59 months). Operational target populations are provided from the national or state level and should be used for micro planning, unless there are verifiable errors with estimates (e.g., demonstrated population influx in the ward in the past 12 months).



The objectives of the micro plan are to:

- Ensure all eligible children (ages 9–59 months) are reached
- Ensure all human, material, financial requirements for the campaign are adequately mapped out
- Provide operational clarity on adequately reaching all wards and settlements

### 5.5.1 Micro Plan Guiding Factors

- Community members need to participate actively in the planning process and should be engaged
- All settlements must be identified and clustered by proximity, to determine where a vaccination post should be located
- The number and location of vaccination posts should be determined such that no caregiver should travel >1km to arrive at a vaccination post
- Special places, hard to reach areas, and security challenged areas should be mapped and identified in advance, with specific strategies, including additional temporary posts or mobile teams (note: mobile teams are pre-budgeted for at the state level, paid for by state counterpart funds),
- The suggested workload for a vaccination team in urban settings is vaccinating 175 children per day

- The suggested workload for a vaccination team in rural settings is vaccinating 125 children per day
- The number of vaccination teams required for each individual vaccination post should be based on the size of the target population and the required workload
- Supply chain requirements (vaccine, cold chain logistics, devices) should be estimated using the operational target population multiplied by the appropriate wastage factor

### 5.5.2 Expected Outcomes of the Micro Plan

1. Operational target population determined to the settlement level (NW states, NE states, and NCZ states are provided target population estimates by the NMTCC using GIS data; Southern states will use the most recent enumeration/walkthrough data for operational target population estimates)
2. The list of settlements, settlement profiles is completed
3. Vaccination posts are identified and assigned to specific vaccination teams (on specific days)
4. Ward maps are generated with daily implementation plans
5. The number of personnel required are calculated, and assigned to specific vaccination posts, for each day of the campaign
6. The number of vaccines, devices, and cold chain logistics requirements are calculated in advance
7. Referral health facilities for AEFI management are identified in advance

### 5.5.3 Steps for Ward Micro Planning

1. The WFP should identify an agenda and itinerary for the micro planning process
2. The WFP should work with the previous/proposed vaccination team supervisors, traditional leaders and other community representatives to develop the micro plan and DIPs, and engage other stakeholders (e.g., councilors, WDC, CBOs, FOMWAN representative, CAN representative, traditional birth attendants, field volunteers, volunteer community mobilizers, other influencers) at a stakeholders meeting to participate in the micro planning process
3. The group should identify qualified and experienced health workers and potential vaccination team members in the ward, including those working in both public and private facilities
4. The group should generate a list of all settlements as well as the operational target population living within each settlement (**for states using GIS data, these settlement lists should be used**; any change in the operational target population or settlement listing requires justification and the GPS coordinates of the new settlement to be reported to the LGA/state)
5. Settlements should be profiled, including whether they are a) urban or rural, b) hard to reach, c) nomadic, d) border settlements, e) IDP camps, f) security challenged areas
6. The group should list all places where children might be found (e.g., schools, markets, churches, mosques, etc.) and when they are most likely to be found there
7. The group should develop a map showing the location of all settlements, including hard to reach settlements, and the location of all proposed vaccination posts (within 1km of all settlements in the catchment area)
8. The WFP should calculate the number of vaccination teams required for each vaccination post and overall after reviewing the micro plans, DIPs and catchment area maps; as a rough guide, the number of teams should be the total number of vaccination team days required, divided by 6
9. The team should visit the proposed vaccination posts (fixed and temporary posts), and determine whether they are appropriate, and how they will be reached from the take-off point

#### Clustering of Settlements to Catchment Areas

#### Selection of Specific Vaccination Posts



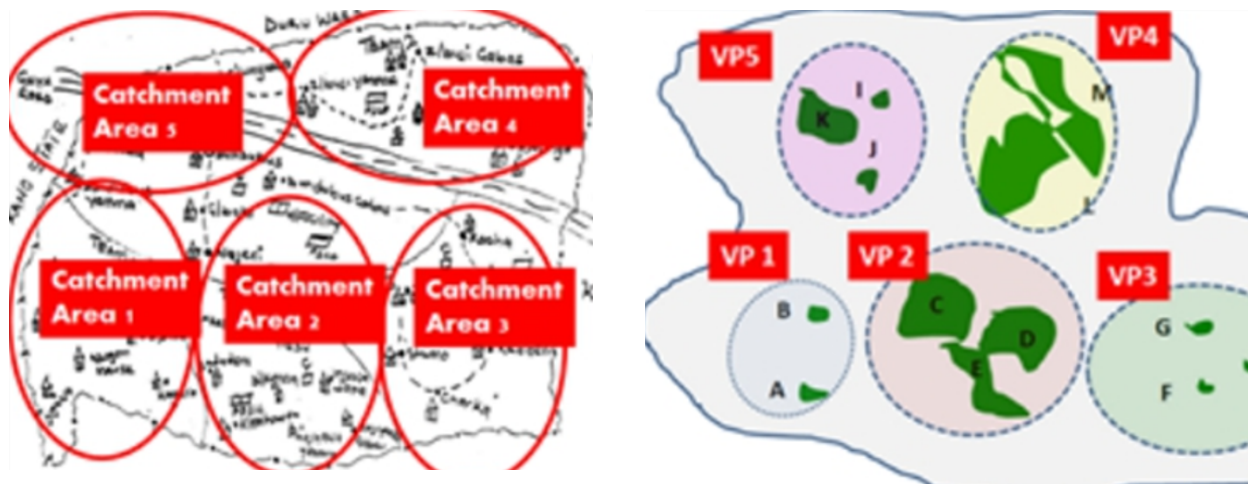


Figure: Clustering settlements to vaccination posts: the catchment area is the area served by 1 vaccination posts; the vaccination post should be within 1km walk for each settlement in the catchment area.

#### 5.5.4. Estimating Immunization Session Supplies

Vaccine needs are estimated based on the target population multiplied by the vaccine wastage factor. The wastage factor is determined from the expected wastage rate (usually 10% for measles campaigns) as follows:  $100 / (100 - \text{wastage rate})$ . For a wastage rate of 10%, the **WF is 1.11**.

A table to calculate the immunization session supplies is provided below.

IMMUNIZATION SESSION SUPPLIES	
Wastage multiplication factor (WMF) for vaccines	1.11 <sup>a</sup>
Wastage multiplication factor (WMF) for AD syringes	1.11
Vaccine doses required	Target population × WMF
Vaccine vials required	Vaccine doses / 10 (for 10-dose vials)
Diluent vials required	1 per vaccine vial
AD syringes required	Target population × WMF (1 per vaccine dose)
RUP reconstitution/mixing syringes required	1 per vaccine vial
Safety boxes (5 L)	(Total syringes) / 100
Clean gauze swabs	0.5 roll per team per day
Soap	1 bar per vaccination team
Trays	1 per vaccination team
Indelible marker pens	1 marker pen per vaccination team per day
AEFI treatment kits	1 per health centre

#### 5.5.5 Cold Chain Requirements

Measles vaccine must be maintained at +2°C to +8°C and protected from light before and after reconstitution, making the presence of a functional cold chain at all levels critical. After reconstitution (mixing lyophilized vaccine with diluent), the vaccine must be maintained at +2°C to +8°C and protected from light, but must be discarded 6 hours from the time of reconstitution, or the end of the vaccination day, whichever comes first (**reconstituted vaccine cannot be reused on another day**).



During the micro planning process, the focal person should take an inventory of the cold chain equipment at the facility level using the cold chain inventory form (in the micro plan). The number of vaccines estimated to be used at each level will determine the refrigerator (ILR) requirements. The number of icepacks estimated to be used at each level will determine the deep freezer (DF) requirements.

### Refrigerator

Unused (un-reconstituted) vials of vaccine should be kept in a **(ice-lined) refrigerator (ILR)**, at the state, LGA, or health facility level. Different types of ILRs have different storage capacities. The inventory should include the type of ILR and the capacity of the ILR. The ILR should be used to store unused vaccine. The diluent does not need to be stored in the ILR until one day in advance of the campaign to ensure that it is at the appropriate temperature.

### Vaccine Carrier

When teams take vaccine from the take-off point and travel to vaccination posts, they will keep the vaccine and diluent cold and protected in a **vaccine carrier**. Vaccine carriers are insulated containers that, when lined with **conditioned icepacks**, keep measles vaccine and diluent cold at the required temperature and protected from direct sunlight. The vaccine carrier should be kept closed when not in use with conditioned icepacks in place and can be used for an entire vaccination day. The recommended vaccine carrier for the MVC is the **Gio'Style vaccine carrier**. Each team should have a minimum of 2 vaccine carriers – one to preserve the unopened vaccines and diluent cold and the other to hold the reconstituted vaccines inside the slit in the foam cover. In this way the icepacks with the unopened vaccine vials and diluent will remain frozen longer and maintain the temperature inside the vaccine carrier at appropriate temperatures.

If there are insufficient Gio'Style vaccine carriers, RUSH vaccine carriers can be used. RUSH vaccine carriers only require 2 x 0.3/0.4 L icepacks each, however, RUSH vaccine carriers hold less vaccine than Gio'Style.

### Foam Pad

The foam pad fits on top of the icepacks in the vaccine carrier. Within the foam pad are some slits that allow vaccine vials to be inserted into the foam. **Vaccine vials and diluent should not be directly in contact with the ice pack.** The foam pad serves as a temporary lid to maintain the cold temperature in the opened vaccine carrier and keep unopened vaccine vials inside the carrier at the correct temperature, as well as provide a surface to hold, protect, and keep the opened vaccine vial at the appropriate temperature.

### Icepacks

Icepacks are flat, rectangular plastic bottles that are filled with water and then frozen in the freezer. Icepacks are used to keep vaccines and diluents at the correct temperature inside the vaccine carrier. Eight icepacks per vaccination team (4 per vaccine carrier) are needed for each vaccination team. For those ward-level health facilities without sufficient freezing capacity, the LGA will provide a cold box with a two-day supply of frozen icepacks for all vaccination teams. Hence for microplanning purposes each team should be allocated 16 icepacks to be used every two days. For those ward level health facilities with sufficient freezing capacity, vaccination teams still need to be allocated 16 icepacks, eight to be used in two vaccine carriers while the other eight are being frozen.

To prepare a frozen ice pack:

1. Fill with water, leaving some room for air at the top
2. Hold upside-down and squeeze, to make sure the ice pack does not leak
3. Place icepacks upright in freezer, *leaving room between the icepacks for air to circulate*
4. Let generator run continuously for 14–16 hours per day, with a rest period in between days; this is the amount of time it takes to freeze the icepacks
5. Start freezing icepacks 7 days before the start of the campaign; do not try to freeze all of the icepacks in one day, this will take too long and could damage the compressor

6. Wait for a full freezerload of icepacks to be frozen, then remove all ice packs, and replace with icepacks that need to be frozen

### *Cold Boxes*

Two cold boxes are required at each ward:

- 1 cold box, with 24 x 0.6L icepacks, will be used for storing unused vaccine and diluent; the cold box can store 8,000 doses of measles vaccine including diluent
- 1 cold box should be used to store 0.3/0.4L frozen icepacks (these icepacks are often frozen at the LGA or state level)

### *Deep Freezer*

Deep freezers are used to freeze icepacks. The number of icepacks that can fit in a deep freezer differs by the model of the deep freezer. Because deep freezers are often not available in sufficient quantities at the ward level, freezing of icepacks must occur in many cases at the LGA or state level, and a “fast chain” must be used (see below) to ensure that icepacks reach the ward level in time and can be stored in cold boxes.

### *Contingency Planning for Inadequate Storage*

If there are problems of inadequate cold chain space at any level, the following options can be applied:

- Use a “fast chain”: send vaccine with sufficient icepacks rapidly through the level with inadequate cold chain space to reach the level where cold chain space is adequate
  - Only WHOPQS pre-qualified passive devices should be used
  - Sufficient number of passive devices and frozen icepacks should be available
  - An efficient supply chain plan should be developed and implemented
  - Personnel must be trained on this special measure
  - A temperature monitoring device should be in each passive device
- Strategically time the delivery/collection of RI or campaign vaccines to leverage storage space before and during the campaign
- Identify alternative freezing sites for freezing of icepacks (state cold stores, NPHCDA zonal cold stores, satellite cold stores, private cold rooms, partners willing to participate in the MCV [e.g., Coca Cola, etc.])

### *Cold Chain Maintenance and Emergency Planning*

Planned preventive maintenance should be undertaken before the campaign to reduce the chance of failure during the campaign.

An emergency cold chain plan should be prepared in case there is disruption of the cold chain during the campaign. The emergency cold chain plan should include alternative power sources (e.g., generators, other facilities), special communications/requests to the power company to re-route power, and alternative cold stores as described above under “contingency planning”.

### **5.5.6 Waste Management Planning**

The state waste management committee should lead develop waste management plans identifying holding points for waste, incineration facilities in the state, and identifying the flow of waste from vaccination posts to holding points, and then to incineration sites.

Safety boxes that contain used needles and syringes should be **incinerated** in an auto-combustion type incinerator. Open pit burning produces toxic emissions, presents a health and environmental hazard and is not recommended by the WHO.

The following elements should be incorporated into the waste management plan:

- Clear assignment of responsibilities to all personnel involved in waste disposal management
- A holding point for the LGA and state level must be identified

- Map with the location of every LGA/holding area and incineration site in the state should be prepared
- Budget must be developed at the state
- State is responsible for signing a memorandum of understanding with incineration facilities (public or private)
- The state level should include a timeline for incineration within one month of campaign completion

### 5.5.7 Identify Transport Needs

During the micro planning process, transportation with a corresponding budget for all activities must be anticipated:

- Transportation for social mobilization
- Transportation of vaccines, devices, cold chain equipment
- Transportation of personnel from the take off point to the vaccination post, between vaccination posts, and return to the take off point at the end of the day
- Transportation of personnel for monitoring and supervision
- Transportation for AEFI referral and case management
- Waste disposal

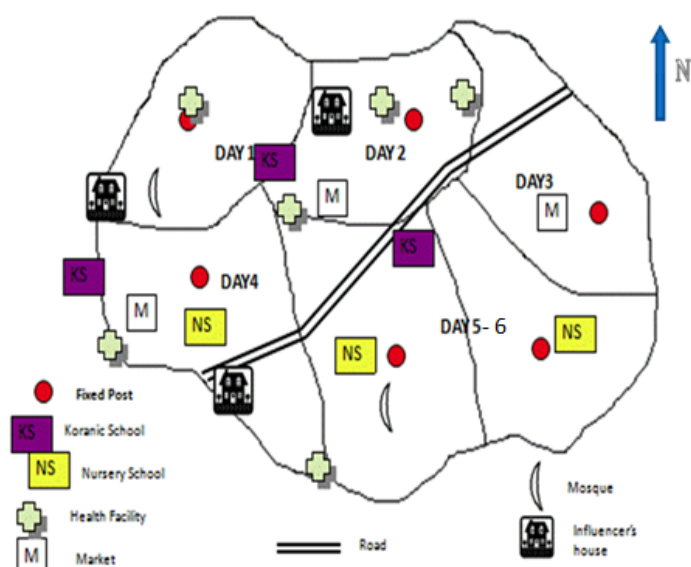
### 5.5.8 Daily Implementation Plan

During the micro planning process, a daily implementation plan (DIP) should be prepared for each catchment area (as described above). The DIP is a planning tool used to guide vaccination teams during implementation; it should list the location of the vaccination post on each day, the settlements covered by the vaccination post, and the operational target population for each day. These calculations permit the calculation of the number and movement plans of vaccination teams, as well as vaccination session supplies required, so that every child in the ward is covered.

A key component of the daily implementation plan is the identification of specific personnel and their roles on the vaccination team. The DIP can be used to anticipate *who* will be *where*, and what the daily objectives are. Further, the DIP allows vaccination teams to determine their estimated (administrative) coverage during the campaign, by comparing their tally sheet data with the daily operational target population. However, as some children may not have been included in the DIP, the team should *not* consider the session completed once the number of vaccinated children reaches the size of the DIP target population. The DIP should ensure that the workload of vaccination teams is balanced.

The aspects of the DIP are:

- Name and contact information of all team members
- Catchment area profile
- Location of vaccination posts, lists of settlements covered, and target populations
- Identification of special populations and hard to reach areas
- Vaccination supplies required on each day at each vaccination post
- Transportation plan



### 5.5.9 Catchment Area Map

The catchment area map should correspond with the daily implementation plan. The map should include:

- Names of areas/settlements
- North arrow to orient the map
- Legend with key features (e.g., health facilities, schools, etc.)
- Health facility names
- Locations of churches, mosques, schools, and markets
- Areas with special populations
- Location of vaccination posts
- The day on which each vaccination post will be covered

#### How to Identify Vaccination posts within a Catchment area

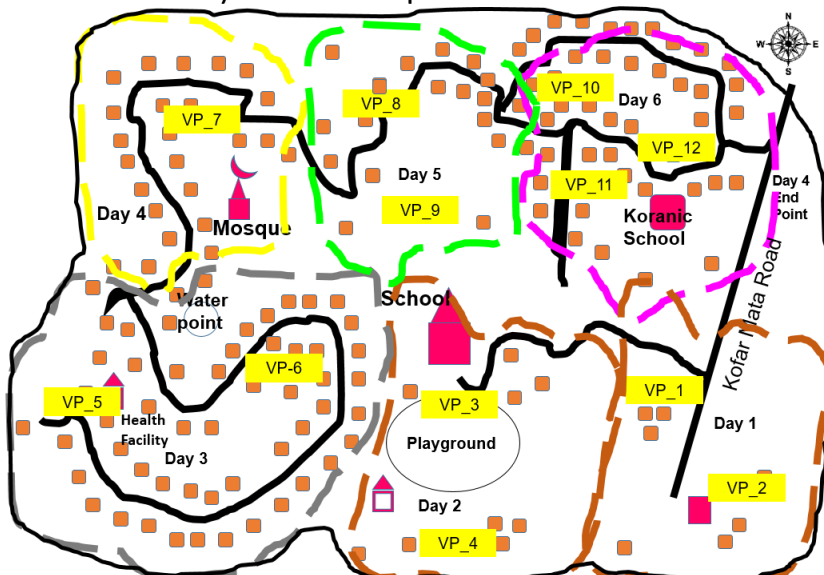


Figure: Example of a catchment area map; all health facilities, schools, mosques are displayed as well as the day on which vaccination activities will occur at each vaccination post. Vaccination posts should be within 1km walk of every person in the catchment area.

### 5.5.10 Quality Assurance of Micro Plans

#### *Micro Plan Validation*

Supervision teams from the LGA and state will review micro plans to validate the accuracy of the population, distribution of vaccination posts, number of health facilities, AEFI referral centers, number of health workers to serve as vaccinators, and logistics requirements. Results of micro plan validation activities are recorded in ODK and transmitted to the national level for analysis. Any needed corrections to the micro plans should occur on-site.

#### *Micro Plan Verification*

Micro plan verification is conducted at the end of the micro planning process, after the data have been validated by the LGA and state supervisors and collated at the state level. Verifiers from the national level (NPHCDA and partner agencies) work with focal persons at the state level and use a standardized tool to evaluate state-level micro plan data and selected LGA micro plan data and actual ward level micro plans. The micro plans cannot be approved by the Core Group (national) until the verification process has been completed.

## 5.6 Readiness Assessment

Readiness assessment is a critical component of the MVC. Readiness at ward, LGA, state, and national levels will be periodically assessed to ensure that each level is ready to conduct a successful campaign. If essential preparation activities are delayed or incomplete, the ward, LGA or state may be determined not to be ready and the campaign postponed in those areas.

### 5.6.1 National Readiness

National readiness will be monitored using the MVC **national chronogram/Gantt chart**. This tool provides target dates for every activity in the campaign and ensures that NMTCC activities are conducted on schedule. This tool is updated weekly.

### 5.6.2 State Readiness

State readiness assessment is monitored internally by the MVC work plan, and by the national level using the **readiness dashboard**. States are to provide data on the status of individual campaign preparation activities at 8 weeks, 4 weeks, 3 weeks, 2 weeks, 1 week, and 3 days before the campaign. State dashboard data are due on the Friday of the reporting week at 12 pm; readiness data are analyzed weekly by the NMTCC and discussed with state level officials.

### 5.6.3 LGA Readiness

LGA readiness data are reported through the **state dashboard**, using a similar tool as used for state readiness but with LGA- and ward-specific preparation activities. LGA readiness data are due to the national level (NMTCC) at 12 pm on Friday at 4 weeks, 2 weeks, 1 week, and 3 days before the campaign, together with state level readiness data. As such, LGA readiness data should be reported to the state level at least one day earlier so that it can be collated by the state and sent to the national level (NTMCC). State level supervisors should carefully review the LGA readiness status by preparation activity and assist LGAs that are not on track to complete their necessary preparation activities in a timely manner.

### 5.6.4 Ward Readiness

Ward readiness is measured using the **pre-implementation checklist** (see Annex). The pre-implementation checklist is completed by LGA and state supervisors, national consultants, national supervisors, and members of the national MST (management supervision team). The pre-implementation checklist evaluates planning, ACSM activities, and presence of adequate logistics at the ward and health facility levels. These data are collected using ODK and submitted in real-time, at 3 weeks, 2 weeks, 1 week, and 3 days before the campaign.

## 6. Implementation Activities

The objective of the campaign is to ensure that all children 9–59 months receive measles vaccine regardless of previous vaccination status.

Implementation activities include:

- Advocacy, communication, and social mobilization activities (ACSM)
- Maintenance of cold chain
- Vaccine and supplies distribution and logistics
- Vaccination post layout
- Safely administering measles vaccine
- Waste disposal
- Adverse events following immunization monitoring
- End of day activities
- Monitoring and supervision
- Data collection and transmission

### 6.1 Advocacy, Communication, and Social Mobilization (ACSM)

National and state level ACSM activities during the campaign include:

- Conducting press briefings and flag-off
- Organizing and monitoring the walk (rally) for MVC
- Monitoring and supervision of communication and social mobilization activities such as media reports, radio/TV discussions/PSAs, airing of jingles, and social media activities
- Tracking implementation of communication/social mobilization activities
- Rumour surveillance (as described above in 6.3.1 and 6.3.2) and communication activities in response to anti-vaccination messages and severe AEFIs (see section 6.4)

LGA and ward level ACSM activities during the campaign include:

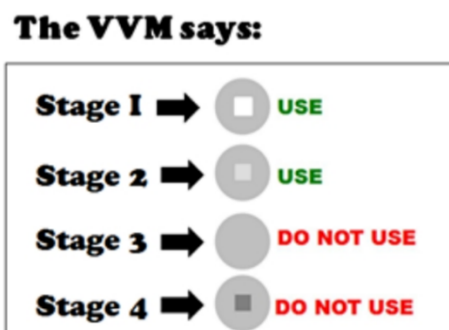
- Conducting and monitoring the flag off by community leaders
- Conducting and monitoring Majigi shows in areas with acceptance challenges
- Conducting and monitoring rallies, road shows, edutainment (e.g., Papalolo , mascot, etc.)
- Monitoring and supervising communication and social mobilization activities including house-to-house mobilization by community mobilizers, WDCs/VDCs, NOA/COMOs and FBOs/CBOs
- Rumour surveillance (as described above in 6.3.3 and 6.3.4) and communication activities in response to anti-vaccination messages and severe AEFIs (see section 6.4)

### 6.2 Cold Chain Management

On campaign days, maintaining the cold chain is critical to ensure that the vaccine will be safe and potent when administered.

- Vaccine distribution to the ward/health facility level (take off points) should be done the night before the campaign to ensure that there will be no delays on implementation days
- The generator should be run for 14–16 hours on each implementation day for freezing of icepacks and/or storage of vaccine/diluent
- The WFP should store the vaccines in the cold box or PQS pre-qualified refrigerators at the appropriate storage temperature (+2°C to +8°C)
  - Cold boxes can be used for storage of frozen icepacks and vaccine/diluent at the ward level, as described above in section 6.5.5
- The CCO should remind WFPs on conditioning of icepacks
- The temperature monitoring device should be placed alongside the vaccines

- The WFP should ensure the vaccine's VVM are in stage I or II before distribution to the teams (see figure)
- The WFP should remind team supervisors the importance of good vaccine management practices, including vaccine carrier and foam pad use, VVM interpretation, avoiding heat exposure and direct sunlight



*Figure: The VVM indicates whether the vaccine has been kept properly in the cold chain (only valid before reconstitution of vaccine). Stage III or IV vaccine must be discarded; the supervisor should be informed.*

### 6.3 Vaccine and Supplies Logistics

It is critical that each vaccination team has all of the appropriate vaccines and supplies required for the entire day. The number of materials required should be calculated and documented in advance on the DIP. Vaccines and supplies should be available at takeoff points, and each team should be provided a list of the requirements for the day (that corresponds with the DIP), as well as what was provided. The number of vaccine vials, injection equipment, safety boxes and other supplies to reach the estimated number of children in the target population should be in accordance with the guidance provided in section 6.6.4. To prepare for possible larger numbers of eligible children than accounted for in the DIP, the team should carry extra doses of vaccine, injection equipment, and vaccination cards. Unused vaccine and injection equipment should be returned to the takeoff point at the end of the day. VVM of returned vaccine should indicate that the vaccine is at stage I or stage II.

Items required for each vaccination team per vaccination session include:

- Measles vaccine vials (Target Population\*1.11/10 – round up) + buffer
- Diluent vials (Target Population\*1.11/10) + buffer
- 0.5mL auto-disable syringes (Target Population\*1.11) + buffer
- 5mL reconstitution syringes (Target Population\*1.11/10) + buffer
- Cotton wool for cleaning injection site
- Tally sheet for measles vaccinators (1 per vaccinator)
- AEFI reporting form and line listing form (1 per team)
- AEFI kit (1 per team) – see section 7.7 for contents
- Safety boxes (Target Population/100\*1.11)
- Vaccination cards (pre-filled) (Target Population\*1.05) + buffer
- Pen markers (1 per vaccinator)
- Vaccine carriers (1 per vaccinator)
- Icepacks (4 per vaccine carrier; 8 total)
- Waste basket for other waste
- Ballpoint pens (1 per recorder)
- Daily implementation plan (1 per team)



### 6.3.1 Vaccine Handling at the Vaccination Post

In order to ensure that the vaccine will remain safe and potent at the vaccination post, a number of measures must be taken:

- Vaccines must be kept in the vaccine carrier, within a polythene bag (e.g., Ziploc)
- Icepacks should be kept inside the vaccine carrier, to prevent melting
- The vaccine carrier should only be opened when needed
- Reconstituted vaccine should be kept in the foam pad, not directly on top of icepacks or in a cup filled with ice water
- Ensure the reconstituted vaccine is protected from sunlight
- Ice (other than icepacks) should not be placed inside the vaccine carrier
- Open vials that have been under melted water are considered to be contaminated and must be discarded immediately
- Any vaccine without appropriate labelling (expiry date, batch number, VVM) should not be used
- Diluent must be kept in the vaccine carrier with vaccine
- Syringes should not be pre-filled with vaccine; only one syringe should be filled at a time
- Only one vial of measles vaccine should be reconstituted at a time

### 6.3.2 Vaccine Reconstitution

Before reconstituting the vaccine, check the label and ensure that it is measles vaccine. Note the manufacturer and expiry date, and make sure the vaccine is not expired. Discard the vial if it is missing a label or if it is expired. Next, look at the VVM. The VVM is on the top of the vaccine vial and indicates if the vaccine is safe to use. Stage 1 or stage 2 vaccine can be used. Stage 3 or stage 4 vaccine should be discarded.

Next, check the diluent and ensure that it has been stored at 2 to 8 degrees Celsius, that it is made by the same manufacturer as the vaccine, and that it is not expired.

Use the reconstitution syringe to withdraw **ALL of the contents of the diluent** and carefully add it to the lyophilized measles vaccine. After the diluent is added to the vaccine, gently agitate until the powder has visibly dissolved, and store the reconstituted vaccine in the foam slit. Discard the reconstitution syringe immediately in the safety box. These syringes must not be reused.

Reconstitute one vial of vaccine at a time when it is ready for use. Reconstituted measles vaccine can only be used for a maximum of 6 hours before it must be discarded. Reconstituted vaccine should be discarded at the end of the session or after 6 hours, whichever comes first. Note: it is possible that 1 vial of vaccine can be used for >10 doses.

### 6.4 Vaccination Post Layout

Vaccination posts can be fixed or temporary posts (see Sections 4.1 & 4.2). Temporary versus fixed vaccination posts refer to the type of structure where the vaccination activity takes place, not the team. Temporary vaccination posts are located at schools, mosques/churches, market areas, hard-to-reach areas, and other places where vaccination activities do not occur daily, but may correspond to outreach sites normally used during routine immunization. The vaccination team is likely to operate a different temporary vaccination post each day, as indicated by the daily implementation plan

Important characteristics of vaccination posts are:

- 1) Adequate crowd control
- 2) Presence of a well-organized screening area
- 3) Efficient client flow of clients, avoiding “bottlenecks”
- 4) Adequate space for the vaccination team, and
- 5) Presence of an AEFI kit at the vaccination post



### 6.4.1 Adequate Crowd Control

The crowd controller is usually a community leader who screens children for eligibility and maintains order at the vaccination post. Larger vaccination posts might require more crowd controllers. The crowd controller should discuss with parents the age of eligibility, that is 9 months to 59 months, and use visual cues or milestones to ensure that children are eligible for the campaign. Vaccinating children outside of the target age group might lead to shortfalls in vaccine at temporary posts. However, any child who is age-eligible should be vaccinated at the post, regardless of where the child usually resides.

### 6.4.2 Presence of a Well-Organized Screening Area

The crowd controller(s) should be based in the waiting area, and should send children to the vaccinators one by one only when the vaccinators are ready.

### 6.4.3 Efficient Flow of Clients, Avoiding “Bottlenecks”

An efficient vaccination post should have a one-way flow of clients. That is, eligible children start in the waiting area, move to the vaccination area, move to the area for receiving finger-marking and vaccination cards, and exit to a place where they can be watched or monitored. The easiest layout is a straight line, although in smaller spaces, a “U” design can work. It is important that children only move in one direction.

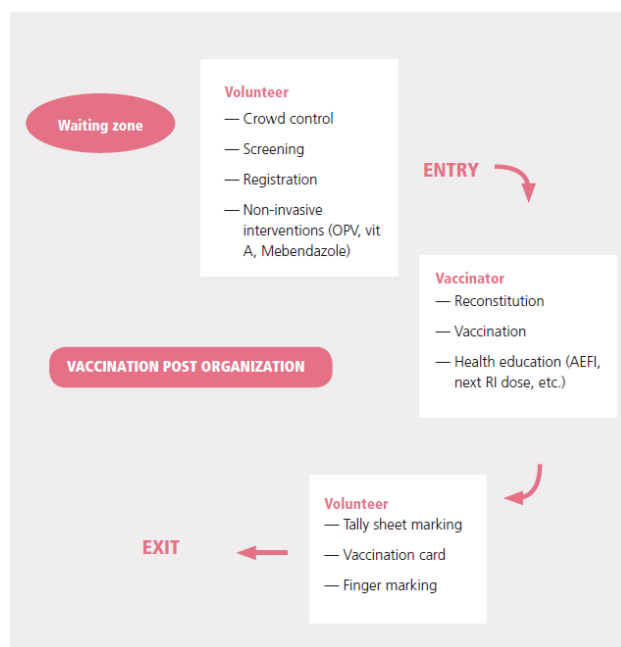


Figure: Example of a vaccination post layout

### 6.4.4 Adequate Space for the Vaccination Team

Preventing crowding and ensuring the vaccinators have enough space to work can help to prevent adverse events. If completion of the vaccination card is causing a bottleneck, the recorder should move further away from the vaccinators to give children who have recently been vaccinated more room to wait.

Note that vaccination posts tend to be busiest in the morning and quieter in the afternoon. It is critical that even if the number of clients decreases throughout the day, that vaccination team members remain at the post until every child in the catchment area is known to be vaccinated. House-to-house mobilizers and monitors who are conducting rapid convenience monitoring can help the team to know when they have completed vaccinating all eligible children.

### 6.4.5 Presence of AEFI Kit at the Vaccination Post

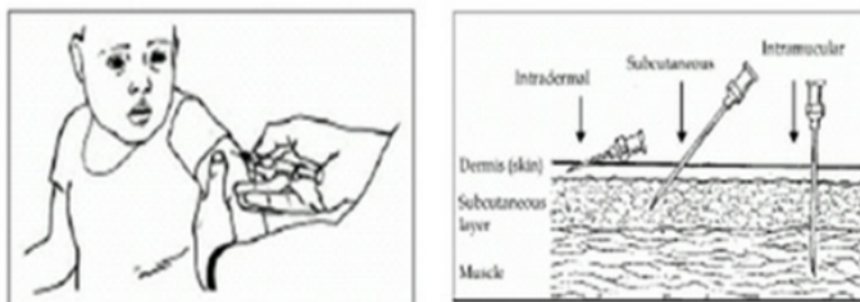
Every vaccination post should be prepared for an adverse event following immunization, and should have an AEFI kit. All AEFIs must be reported. Teams should have AEFI plans in place, which include emergency medical care for anaphylaxis and taking the child to a health facility identified in the event of a severe AEFI.

## 6.5 Safely Administering Measles Vaccine

The measles vaccine is a live attenuated virus. Each vaccine vial contains enough vaccine for 10 doses. After the vaccine has been reconstituted, it is ready for use (and should be stored in the foam pad). The vaccine should be administered **subcutaneously**.

When you are ready to vaccinate the child, withdraw 0.5mL of reconstituted vaccine from the vial into a sterile, auto-disable syringe. Fill only one syringe at a time.

Ensure the child is comfortable and that you have access to the left upper arm. A volunteer or caregiver should hold small children to ensure that the child is in the correct position and will not move during the vaccination. Clean the injection site with cotton wool and clean water if it is visibly soiled. Inject the vaccine into the site at a 45-degree angle into the subcutaneous layer. Do not touch the needle.



When all of the vaccine has been administered, withdraw the needle from the skin and discard immediately into the safety box without recapping. Recapping syringes can increase your own risk for injury and infection. Auto-disable syringes are designed to be used only once and must not be reused.

The vaccinator should place a tally mark on the tally form after each child vaccinated, and refer the child to the team member who will mark his/her finger and provide a vaccination card.

Children should be monitored for a possible adverse event by the caregiver or a volunteer for 30 minutes after vaccination.

### 6.5.1 Finger Marking

After the child has been vaccinated, the recorder is responsible for marking the nail and the nail bed of the left thumb.

## 6.6 Waste Disposal

### 6.6.1 Injection Waste Disposal

All used needles and syringes must be deposited immediately after use into the safety boxes provided.

The safety boxes should never be completely full. When they reach  $\frac{3}{4}$  full, inform your supervisor and use a new safety box. One box can hold 100 syringes and needles. The used safety box should be discarded at the end of the day at the health facility, following the waste management plan. If, for any reason, a post runs out of safety boxes, used injection equipment can be disposed of in a puncture-resistant container with a lid, such as a bucket (with a lid). A cardboard box is not puncture resistant.



Filled safety boxes should be collected by the supervisor and taken to the designated holding area. The WFP is responsible for collecting the waste for the ward and transporting it to the LGA level.

Needles and syringes should not be transferred from container to container, and should not be left in a public area of the post or the health facility. Everyone who handles the safety boxes, including vaccination post workers, drivers, and healthcare facility workers, should be aware of the risks posed by contaminated equipment and sharps. Care must be taken to avoid spillage from containers. Decontamination/disinfection should be done in vehicles where spillage of safety box contents has occurred.

Safety boxes should only be used for disposal of used injection equipment.

### 6.6.2 Non-Injection Waste Disposal

Empty, partially used and unopened vials should be returned to the ward level at the end of the day. Unopened vials may be used on subsequent days provided the VVM remains at stage 1 or 2. At the end of the campaign, the empty, partially used and unopened vials will be transported from the ward level to the LGA stores/holding point by WFPs. They will then be transported onward to the state level incineration point in large biohazard bags. At the state level, the collected waste should be properly stored in a secure warehouse pending readiness of the state incinerator. For states without incinerators, waste should be transferred to the nearest state with incineration capacity.

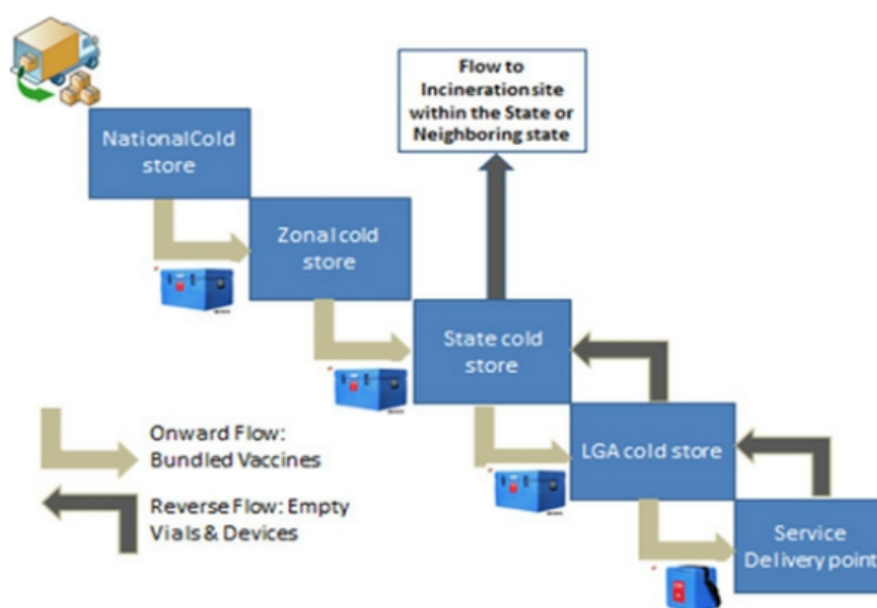


Figure: Reverse logistics flow for waste management.

## 6.7 Adverse Events Following Immunization (AEFI)

An Adverse Event Following Immunizations (AEFI) is a medical incident that follows immunization and may or may not have a causal relationship with the usage of the vaccine. AEFIs can occur from point of immunization up until 6 weeks following the campaign.

Because the MVC involves a large population of children to be vaccinated within a short period of time, there is a possibility of having AEFI cases that requires a robust surveillance system.

Some SIAs have been halted midway through the campaign, and have resulted in the loss of trust in the immunization programme following the occurrence of serious AEFIs that have not been properly managed. These negative experiences could have been avoided or their impact reduced with an appropriate response. **It is, therefore, very important that immunization programmes monitor AEFI throughout the SIA and take immediate measures to address all serious AEFI.** Should serious AEFIs occur and reported by the media, the crisis communication plan should be activated to allay public concerns about the safety of the immunization campaign.

Each team must have a qualified health worker as supervisor who will also double as the primary first line care provider to manage AEFIs.

For case management of AEFIs, refer to Annex 1.

### 6.7.1 Classification of AEFIs

Mild	An incident or reaction that does not pose any threat to life. Most events following immunization are mild and transient, including soreness at the site, mild fever, and rash.
Serious	Events that result in hospitalization and death. Such events are extremely rare and occur at rates that are a small fraction of the rate of complications of measles disease itself. These include high fever, convulsions, sepsis, abscess, and <b>anaphylactic shock</b> .

Cause-specific type of AEFI	Definition
<b>Vaccine product-related reaction</b>	An AEFI that is caused or precipitated by a vaccine due to one or more of the inherent properties of the vaccine product.
<b>Vaccine quality defect-related reaction</b>	An AEFI that is caused or precipitated by one or more quality defects of the vaccine product, including its administration device as provided by the manufacturer.
<b>Immunization error-related reaction</b> (formerly "programme error")	An AEFI that is caused by inappropriate vaccine handling, prescribing or administration and thus by its nature is preventable.
<b>Immunization anxiety-related reaction</b>	An AEFI arising from anxiety about the immunization.
<b>Coincidental event</b>	An AEFI that is caused by something other than the vaccine product, immunization error or immunization anxiety, but a temporal association with immunization exists.

### 6.7.2 Frequency of AEFIs

Serious AEFIs are rare events. The following table summarizes some AEFIs and their respective incidence:

Event	Onset Interval	Case to Vaccination Dose Ratio
Local reaction at injection site	0–2 days	1 in 10
Fever	6–12 days	1 in 6 to 1 in 20
Rash	6–12 days	1 in 20
Febrile seizure	6–12 days	1 in 3,000
Low platelets	15–35 days	1 in 30,000
Anaphylactic reaction (severe hypersensitivity)	0–2 hours	1 in 100,000
Anaphylaxis	0–1 hour	1 in 1,000,000
Encephalopathy	6–12 days	<1 in 1,000,000

### 6.7.3 Identification of Adverse Events

“Trigger events” must be closely monitored during the campaign. Children should wait for 30 minutes at the vaccination post following vaccination to ensure that an AEFI is not missed, particularly anaphylaxis, which can be life threatening. Specific events to monitor:

- Any injection site abscess following immunization
- Any severe local reaction to vaccination (i.e., swelling extending >5cm from injection site; redness and swelling for >3 days)
- Any case requiring hospitalization that is thought by health workers or the public to be related to immunization
- Any case of anaphylaxis or anaphylactic shock
- Any other severe or unusual medical incidents believed by health workers or the public to have been caused by, or related to, immunization
- Any death thought by health workers or the public to be related to immunization

### 6.7.4 Cases of AEFI for Investigation and Reporting

All cases of AEFI should be line listed on the AEFI line listing form. Any serious cases also should have an AEFI reporting form completed. Cases to be reported include the following:

- A serious event requiring hospitalization or resulting in death
- A serious event of unexplained cause
- An event causing significant parental or community concern
- Certain events (e.g., toxic shock syndrome, sepsis, abscess) are likely to arise from programme errors (and might result in clusters) and must always be investigated so corrective actions can take place.

The LGA and state should be notified immediately of any serious AEFIs that take place, so that investigation can be supported, and so that the rapid response team/crisis communication team can be made aware.

### 6.7.5 AEFI Referrals

During the pre-implementation/planning process, an AEFI referral plan should be created and implemented should a serious AEFI that requires medical attention occur. Emergency medical care (e.g., in response to anaphylaxis) should be done immediately by the vaccination post supervisor, using the on-site AEFI kit. Transportation to the health facility/AEFI management center should not be delayed.

### 6.7.6 Contents of AEFI Kits

Item	Quantity
Hydrocortisone	2 vials
Sterile water for injection	2 vials
Adrenaline for injection	2 ampules
Needle/Syringe 2mL	2 needles/2 syringes
Paracetamol tablet 500mg	1 sachet

## 6.8 End of Day Activities

At the end of each implementation day, a number of activities should be completed:

- Each vaccination team should sum the number of children vaccinated in each section of their tally sheets and count the number of vials used, wasted, and to be returned to the takeoff point
- All safety boxes should be secured shut, labelled, and collected for disposal
- Buckets should be returned to posts for the following day's session
- Remaining vaccine vials (used and unused) should be returned to the takeoff point, along with other equipment
- All unused or empty reconstituted measles vaccine vials should be placed in a plastic bag and returned to the takeoff point
- Tally sheets and AEFI line listing forms should be submitted to the WFP
- The town announcer for the following day's activities should be notified, to convey the importance of measles vaccination and the location and time of vaccination activities
- The WFP should convene a ward review meeting with vaccination team supervisors
- The LGA evening review meeting should take place
- WFP should report all tally and AEFI data to the LGA level; the LGA level should report all tally and AEFI data to the state

## 6.9 Monitoring and Supervision

During implementation, monitors and supervisors will be deployed to observe vaccination teams and complete implementation checklists.

*Monitors* and supervisors also will perform rapid convenience monitoring (inside household and outside household) and make "pass/fail" determinations for specific high risk sites. Monitors and supervisors can provide feedback to teams, WFPs, and LGA staff to report identified areas that require additional vaccination efforts, including mopping up. *Supervisors* also will oversee the activities of vaccination teams, WFPs, and LGAs. Supervisors have the authority to correct teams and staff to improve performance, whereas monitors may make respectful recommendations.

### 7.9.1 Rapid Convenience Monitoring

#### 6.9.1 Rapid Convenience Monitoring

Rapid convenience monitoring (RCM) is a process that is used in order to identify if a small area has reached adequate coverage with a **pass/fail result**. RCM does not determine coverage, as it is done only in a small area (should be done in a high risk area, where expected coverage is particularly low; i.e., border areas, hard to reach areas, etc.) and does not employ any principles of random sampling. RCM is conducted by monitors and supervisors and is implemented during the campaign. The monitors and supervisors, then feedback the results to the vaccination teams, WFPS and LIOs so that mopping up operations may be effectively and efficiently conducted and all areas within their catchment attained high ( $\geq 95\%$ ) coverage.

RCM should be performed in the following areas:

- Hard to reach
- Areas with migrant or ethnic minority groups
- Catchment area borders and scattered settlements
- Densely populated areas with a history of non-compliance/low coverage

Before beginning RCM, monitors and supervisors should obtain a map of the area, review the daily implementation plan, and speak with local area staff about the site(s) to be monitored. RCM should be conducted only in areas where immunization services have been completed. Safety of the monitors and supervisors should be considered, and escorts provided in security challenged areas, if needed.

### *Inside Household Monitoring*

Inside household monitoring requires going door-to-door in the selected small area. Usually, monitors going to households should be female.

- Monitors should obtain responses from 15 households
- The following data should be collected on the inside household monitoring form (see Annex):
  - Number of eligible children
  - Number of children vaccinated during the campaign (by evidence of card or finger marking)
  - Reasons for missed vaccination
  - Reason for refusing vaccination
  - If household is completely vaccinated
- Monitors should then aggregate the data, and determine whether corrective action should take place:
  - If <90% of eligible children were vaccinated, corrective action should take place
  - If <14 households completely vaccinated, then corrective action should take place
- Monitors should report the findings to the vaccination team supervisor and indicate whether corrective action (i.e., extended vaccination efforts, outreach, returning to the vaccination post on another day for mop up), is needed
- Monitors should attend the LGA review meetings and present findings to the LGA to give real time evidence based recommendations for achieving ≥95% coverage.
- Monitors should give RCM data to the LIO at the LGA so that it can be transmitted to the state for further analysis

### *Outside Household Monitoring*

Outside household monitoring should also be performed in areas that are at high risk. This monitoring should be done in public spaces, such as schools, churches, mosques, market areas, and play areas. Monitors can be male or female.

- In each settlement: visit 2 sites for outside household monitoring
- In each settlement: sample 20 children from outside of household total (i.e., ~10 from each site)
- The following data should be collected on the outside household monitoring form (see Annex):
  - Child number
  - Location where child was identified
  - Age of child
  - If vaccinated during the campaign (based on vaccination card or finger marking)
- If <95% of children approached were vaccinated, the monitor should report the data to the vaccination post supervisor to take corrective action, as above
- Monitoring data should be reported at the LGA review meeting and shared with the LGA for forward transmission to the state for further analysis

## **6.9.2 Implementation Checklist/Vaccination Post Monitoring and Supervision**

In addition to performing RCM, supervisors (LGA, state, national, and MSTs) will monitor vaccination post activities, and should provide immediate corrective action. In essence, the supervisors should ensure that all of the guidelines in this field manual are being followed.

In order to structure the supervision, supervisors should complete, on paper and ODK, the implementation checklist. The implementation checklist systematically assesses the various elements, including:

- Vaccination post cold chain
- Required and available vaccines and supplies
- Vaccination post arrangement
- Recording



- Injection practice/safety
- Social mobilization
- Monitoring coverage

The most critical role of the supervisor is to provide *immediate feedback and correction of teams that have deficiencies*. The supervisor should report findings at the Ward/LGA evening review meeting, by reviewing and submitting the completed paper forms.

Data should be sent by ODK to the NPHCDA server, where it will be analyzed.

## 6.10 Data Collection and Transmission

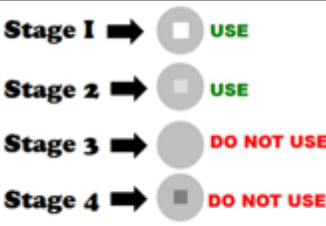
Data helps to estimate coverage, identify needs for supplies, identify implementation problems, and identify when corrective actions need to be taken.


Data collection:

- At the beginning of the day, the vaccination post supervisor should record the number of vials of measles vaccine, reconstitution syringes, auto-disable syringes, and safety boxes received in the lower half of the vaccination tally sheet (see Annex)
- Vaccinators should confirm the age, sex, and previous vaccination status of the child, and make a tally mark in the appropriate part of the tally sheet after each child vaccinated
- At the end of the day, vaccinators should record the total number of children vaccinated in the appropriate column; if more than one form was used that day, they should staple the forms together
- The vaccination post supervisor should review and verify the tally sheets before submitting to the ward focal person
- The ward focal person should cross check and summary the daily report on the daily summary sheet for submission to the LGA team at the daily LGA review meeting
- By 6pm, the State technical facilitator should compile all of the information and relay the data to the state



## Annex 1: Operational Guideline (Field Summary)

	<b>Guidelines</b>	
<b>Age Group</b>	Targeted age group for Measles campaign = Children 9 to 59 months – Give all children irrespective of previous immunization status	
<b>Vaccination strategies</b>	<b>Fixed vaccination posts:</b> These posts are located at permanent health facilities and are expected to mobilize and vaccinate children from surrounding households to health facilities. Team supervisors must ensure that the daily workload expected of this post is achieved by ensuring that mobiliser continually visit households to bring eligible children throughout the day. These sites will also serve as depots for storage and distribution of vaccines and other supplies to other fixed and temporary fixed vaccination posts.	
	<b>Temporary fixed vaccination posts:</b> These posts will be located at Schools, Mosques/Churches, houses of Traditional leader(s), Bus stops, Streets and bus terminals, farms, Motor Parks, Hard-to-reach areas, borders, IDP camps, Orphanages, Prisons, Market areas and Other transit points. The duration of vaccination will be determined by the population density. The location of this sites must and duration of stay must be captured on the team daily implementation work plan (DIPs)	
<b>Daily Implementation Work Plan</b>	Each vaccination team must have a Daily Implementation Plan (DIP) showing: 1) catchment area including take-off point; 2) team composition and designation; 3) list of settlements; 4) settlement profile, including special populations needing targeting; 5) target population per day; 6) settlements to be covered per day; 7) vaccines and logistics required per day. In addition, 8) the team should have an updated, hand-drawn map of the catchment area.	
<b>Organization of a Vaccination Post</b>	Some important characteristics of a well-functioning vaccination posts are: 1) adequate crowd control 2) well organized screening area 3) efficient client flow through the post (design the fixed post for efficient flow of clients and avoid “bottle-necks” such as overcrowding, confusion and very long waiting time i.e. mothers/guardians waiting for long before being attended) 4) adequate space for the vaccination team; 5) AEFI kit is available at the vaccination post.	
<b>Team Composition</b>	<ul style="list-style-type: none"> <li>• Vaccinator 1 (post supervisor/vaccinator) – supervises team, vaccinates and tallies</li> <li>• Vaccinator 2 – vaccinates and completes tally sheet</li> <li>• 2 recorders – records on vaccination cards</li> <li>• 1 town announcer – makes announcement within the catchment area</li> <li>• 1 community leader/crowd controller – screens for eligibility and maintains order at the vaccination post</li> <li>• 1 house-to-house mobiliser – mobilises the caregivers and eligible children to the vaccination post.</li> </ul>	
<b>Reconstituting Measles Vaccine</b>	Steps in reconstituting measles vaccine: <ol style="list-style-type: none"> <li>1. Wash your hands with clean water and soap</li> <li>2. Check the expiry date and the stage of VVM and use only if in stage 1 or 2 (see figure)</li> <li>3. Ensure the vaccine is measles vaccine</li> <li>4. If there is no label on the vaccine discard</li> <li>5. Check the label on the diluent to verify it is from the same manufacturer as the vaccine. <b>If not, discard</b></li> <li>6. Ensure diluent and vaccine are 2–8° C</li> <li>7. Reconstitute measles vaccine using reconstitution syringe</li> <li>8. Shake the reconstituted measles vaccine until the vaccine powder has completely dissolved</li> </ol>	 <p>Figure: VVM Interpretation</p>

<p><b>Administering the Measles Vaccine</b></p> 	<p>To administer the Measles Vaccine, the following should be observed:</p> <ol style="list-style-type: none"> <li>1. Wash your hands before start of the session</li> <li>2. Withdraw 0.5ml of reconstituted measles vaccine. Do not attempt to draw plunger back to expel air. If you need to expel air, tap syringe gently with fore finger</li> <li>3. Discard the needle cap immediately into the waste bin. Do not recap</li> <li>4. Ensure the child is held firmly by caregiver or volunteer</li> <li>5. Hold the child's <b>LEFT</b> arm from underneath; your fingers should reach around the arm and pinch up the skin; the dose should be administered to the upper part of the left upper arm</li> <li>6. The injection site should be cleaned with cotton wool dipped in clean water to remove dirt</li> <li>7. Administer <b>subcutaneously</b> into pinched skin at 45 degrees (not straight down)</li> <li>8. Press the plunger with your thumb to inject the vaccine</li> <li>9. Withdraw needle from skin and drop syringe with needle into safety box <b>without recapping</b></li> <li>10. If there is bleeding, give the caretaker dry cotton wool to press the bleeding site, <b>do not rub</b></li> <li>11. Ask the parents/caregivers to wait for at least 10 minutes to ensure that there is no reaction after the vaccination</li> </ol>	
<p><b>Discarding Reconstituted Measles Vaccine</b></p>	<p>Reconstituted vaccine must be discarded immediately if: 1) sterile procedures have not been fully observed; 2) there is any suspicion that the opened vial has been contaminated; 3) there is visible evidence of contamination (e.g. a change in appearance, floating particles or the cold chain has obviously been broken); 4) after six hours of reconstitution of measles vaccine no matter the degree of sterility of procedures if the vial has not been used up during the session.</p>	
<p><b>Vaccine Carriers (2 per team)</b></p>	<p>Each team will keep measles vaccines, diluents, and four (4) ice packs in each of two (2) <del>Glo's</del> vaccine carriers. Vaccines and diluents should be taken from one vaccine carrier first until empty, and then from the second vaccine carrier. Place the reconstituted measles vaccine into the foam pad of the vaccine carrier to keep it cool and protected from light.</p>	
<p><b>Waste Management</b></p>	<p>Used syringes will be immediately discarded into safety boxes at the vaccination posts without recapping. At the end of each day, the team will bring back their <math>\frac{3}{4}</math> filled safety boxes to the designated collection point. Ward focal person (WFP) is responsible for collection of the safety boxes from the vaccination team supervisor. Any other waste should not be put into the safety boxes. At the end of the campaign, the safety boxes are moved to the LGA for further conveying to designated incineration site. Other immunization-related waste (e.g., used cotton wool, syringe caps, wrappers) should be collected and disposed of appropriately at the health facility.</p>	
<p><b>AEFI</b></p>	<p><b>Mild</b></p>	<p>All AEFI cases should be reported on the AEFI reporting form. Inform parents/caregivers of possible common minor side effects such as fever, tenderness at vaccination site, joint pain and body rash. Advise parents/caregivers to treat mild symptoms at home or take child to the ward health facility. If you are notified of rumors about the campaign, provide reassurance to the parent/caregiver and notify WFP who will notify the LGA.</p>
	<p><b>Severe</b></p>	<p>Refer to the health facility designated in the AEFI contingency plan all severe AEFI (injection site abscess, severe local reaction, high grade fever, anaphylaxis or seizures) and report.</p>
	<p><b>Anaphylaxis</b></p>	<p>Anaphylaxis is a very severe reaction, which may occur rarely after any injection including measles vaccination. The patient collapses with signs of shock and breathing problems. In case of anaphylaxis: 1) attend to patient immediately, 2) check breathing and heartbeat; 3) if the patient is not breathing, secure the airway and ventilate. If there is no heartbeat, do CPR (cardio-pulmonary resuscitation); 4) give adrenalin 1:1000 (epinephrine) at a dose of 0.01mL/kg up to a maximum of 0.5 mL injected intramuscularly or subcutaneously in very mild cases. Children &lt;3 years: (0.1 ml subcutaneous at once; Children 4-7 years: 0.2 ml subcutaneous at once) 5) transfer the child to a hospital, accompanied by a health worker</p>

**Annex 2: Pre-Implementation Checklist****2017/2018 MVC Pre-Implementation Check List**Instructions:

To be filled by Supervisors from National, State team, LGA, Ward Team and conducted at the a) **LGA**, b) **ward**, and c) **health facility levels**. Verification must be conducted 3 weeks, 2 weeks, 1 week, and 3 days prior to implementation. The report of the verification exercise must be submitted accordingly Checklists should be completed and shared at LGA and State levels. Checklist should be scored by section (**Yes = 1, No =0**).

Scoring should be done by section		
Section	Minimum Score	Score Achieved (Total Score per Section)
A: Planning (10 points)	7	
B: Social Mobilization (7 points)	5	
C: Logistics (18 points)	15	

Indicate Level of supervision: ☐ LGA ☐ Ward ☐ Health Facility Start Date of Campaign: \_\_\_\_\_

Supervisor Name: \_\_\_\_\_ Agency: \_\_\_\_\_ Date: \_\_\_\_\_

State:	LGA:	Ward:
Settlement:	Health Facility:	

A. PLANNING AND COORDINATION	YES (1 point)	NO (0 points)
1. Has a micro-plan been developed at this level? Tick "YES" if you observe a copy of the micro-plan and the plan clearly addresses the target populations, vaccine requirements, personnel, transport, cold chain, injection safety and waste management plan		
2. Has a detailed ward map showing the vaccination posts been developed at this level? Tick "YES" if you observe a copy of the detailed ward map showing all vaccination posts, catchment areas, all settlements and schools		
3. Has a detailed vaccination post daily implementation work plan (DIP) been developed at this level? Tick "YES" if you observe a copy of the detailed vaccination post daily implementation plan		
4. Is this level up to date in the implementation of planned activities? Review the schedule of activities with the Focal Person at this level to see if planned activities have been or are being implemented as planned. Tick "YES" if you are convinced that activities related to planning and coordination have been implemented as scheduled		
5. Have adequate arrangements been made for covering hard to reach areas and special populations or groups such as nomads? Each level is expected to identify hard to reach areas and special populations and plan specially for them. Tick "YES" if you are satisfied that this level has identified hard to reach areas and populations and that plans are in place to ensure that they are adequately covered during the campaign		
6. Is there an effective inter-sectoral coordination mechanism at this level? Each level is expected to hold regular inter-sectoral meetings (must include Security (JTF), Women affair, NOA, Education and Community Development) to coordinate planning and implementation of the campaign. Tick "YES" if you observe a copy of the minutes of such meeting held not later than 1 month ago		
7. Have all required funds been made available to this level? Tick "YES" if after a review of the micro-plan budget, the Focal Person at this level confirms that all required funds have been received.)		
8. Has this level secured all the personnel needed for the MVC? And is the list available? Tick "YES" if you observe the list of all identified – Ward Focal Person, , 2 Recorders, and 1 Crowd Controller, 1 Town announcer, 1 House to House Mobilizer		
9. TICK yes if this level have secured enough HWs that could work as MVC vaccinators (2 Health Workers)		
10. Have the personnel at this level been trained for MVC? Tick "YES" if you observe records confirming training of all the personnel for the campaign		
11. Has an operational unit been set up for this campaign at this level? State and LGA level (Working Groups: LWG, SMWG, TWG, Ops WG) must have an operation team to coordinate		



preparation; implementation and daily feedback for the campaign. Tick "YES" if you are convinced that the operation team has established		
<b>B. ADVOCACY COMMUNICATION AND SOCIAL MOBILIZATION</b>	<b>YES (1 point)</b>	<b>NO (0 points)</b>
<b>1. Is there a plan for social mobilization at this level?</b> Tick "YES" if you see the plan for social mobilization at the LGA level that includes ward level religious, traditional leaders, influential persons, and plans for reaching hard to reach and minority communities		
<b>2. Is there a functional social mobilization committee at this level?</b> Tick "YES" if you observe a copy of the minutes of meeting and attendance sheet in preparation for the MVCs		
<b>3. Is this level up to date in the implementation of planned social mobilization activities?</b> Review the social mobilization activities with the Focal Person at this level to see if planned activities have been or are being implemented as planned. Tick "YES" if you are convinced that activities are being implemented as scheduled		
<b>4. Has high-level management met and discussed on the MVC at this level?</b> Tick "YES" if you observe a record of any high level management meeting with all stake holders (Politicians, Women groups, CBOs, Administrators, Traditional and Religious) at LGA and Ward level chaired by the LGA Chairman/Ward Councillor. (Sight minutes of meeting and attendance sheet)		
<b>5. Are adequate quantities of Information Education and Communication (IEC) materials available?</b> Tick "YES" if material(s) are available e.g. banners, posters, flyers, FAQs, Q&As etc.		
<b>6. Do members of the general public know the MVC dates?</b> (Randomly select and interview 3-5 members of the community)		
<b>7. Were community dialogue sessions, compound meeting held for the MVC?</b> Tick YES only if you attended or the reporter gave details on where, when, who facilitated, issues raised and decisions		
<b>C. COLD CHAIN AND LOGISTICS</b> Vaccines and devices are expected to be at the State at least 2 weeks before the campaign, LGA 3 days before the campaign. Freezing of ice packs (IPs) should commence at least 1 week at all levels	<b>YES (1 point)</b>	<b>NO (0 points)</b>
<b>1. Have vaccines, diluents, AD syringes, reconstitution syringes and safety boxes been distributed as bundled (i.e. all together), to the lower level?</b> Tick "YES" if you observe records of distribution of vaccines, devices and diluents to the lower levels and are satisfied that lower levels were supplied an equal number of vials of vaccines and diluent		
<b>2. Has this level developed vaccine, diluent and devices distribution plan?</b> Tick YES after sighting the distribution plan		
<b>3. Has this level commenced freezing of icepacks for the campaign?</b> Tick YES after verifying availability of sufficient frozen icepacks for the MVC 4 (0.3/0.4) IP/Giostyle) and 24 IP(0.6)/48(0.3/0.4) Cold box)		
<b>4. Has this level made adequate arrangements to meet the transport requirements of the MVC operation?</b> Tick "YES" if you are satisfied with the arrangements made		
<b>Based on the Target Population, Number of Vaccination Teams, and Target Population, fill out the table below:</b>		
Target Population: _____	Number of Vaccination Teams: _____	
	Adequate Number?	
<b>Supply (requirement)</b>	<b>Number Required</b>	<b>Number Available</b>
<b>3. Giostyle Vaccine Carriers (2/team)</b>		
<b>4. Ice Packs (16/team)</b>		
<b>5. Cold Box</b>		
<b>6. Measles vaccine vials</b> (Target population * 1.11 / 10, rounded up)		
<b>7. Auto-disable Syringes/Needles</b> (Target population * 1.11)		
<b>8. Reconstitution Syringes/Needles</b> (Measles vaccine vials * 1.11)		
<b>9. Safety boxes</b> ([AD syringes + reconstitution syringes]*1.05 / 100)		
<b>10. Tally sheets</b> (Number of vaccination teams * 6 * 2 * 1.11)		
<b>11. Summary sheets</b> (6 per ward * 1.11)		
<b>12. Cotton wool</b> (500g roll) (# teams * 2)		
<b>13. Measles vaccination cards</b> (Target population * 1.05)		
<b>14. AEFI kits</b> (# vaccination teams)		

15. AEFI forms (# teams * 1.11)				
16. Plastic bags (# vaccination teams * 6 * 2 * 1.11)				
17. Pen Markers (# teams * 4 * 1.11)				
18. Has this level made adequate arrangements for the disposal of used needles/syringes and other wastes? Each level is expected to have a waste management plan. Request for this plan and confirm that the site for disposal has been prepared and waste management staff assigned and trained				

**REMARKS**


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Supervisor Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Annex 3: Vaccination Card**

 <div style="text-align: center;"> <b>FEDERAL MINISTRY OF HEALTH</b>  <b>NATIONAL PRIMARY HEALTH CARE DEVELOPMENT AGENCY</b>  <b>Non-Polio SIA Vaccination Card</b> </div> 	
<b>Part 1</b> <i>To be pre-filled by recorder</i>	State: _____ LGA: _____ Ward: _____ Settlement: _____ HF: _____ Name of Vaccinator: _____ LIO's Phone Number: _____ Date of Vaccination: _____
<b>Part 2</b> <i>To be filled by recorder at vaccination post</i>	Name of Child: _____ Age: _____ Sex: _____ Type of Vaccine: Measles      Batch Number: _____      Expiry Date: _____
<b>Part 3</b> <i>To be filled by supervisor in case of AEFI</i>	AEFI Observed: _____ Date of Onset: _____      Time of Onset: _____

Note: One card is issued per vaccination activity. Any child participating in more than one campaign (for different vaccines) will have a card for each campaign

## Annex 4: Tally Sheet

### 2017 MEASLES CAMPAIGN TALLY SHEET Vaccination Team Tally Sheet

INSTRUCTIONS: This form should be filled by Measles Vaccinator. Use a separate tally sheet each day.

State: \_\_\_\_\_ LGA: \_\_\_\_\_ Ward: \_\_\_\_\_ Date: \_\_\_\_\_  
Vaccination PostCode/location: \_\_\_\_\_ Vaccination Team Code: \_\_\_\_\_ Vaccinators Name: \_\_\_\_\_

Daily Target Population from DIP: \_\_\_\_\_

Service Delivery Post type (Tick in the appropriate box)

Fixed

☐

Temporary

☐

SETTLEMENT NAME	1.	2.	3.	4.	Sub- Total
Measles Zero Dose 9 - 11 months	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
Measles Zero Dose 9 - 11 months	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
Other Doses 9 - 11 months	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
Other Doses 9 - 11 months	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
Measles Zero Dose 12 - 59 months	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
Measles Zero Dose 12 - 59 months	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
Other Doses 12-59 months	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
	Male	00000	00000	00000	00000
Other Doses 12-59 months	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
	Female	00000	00000	00000	00000
TOTAL					

TOTAL

	MINOR CASES				SERIOUS CASES			
AEFI REPORTED	00000	00000	00000	00000	00000	00000	00000	
	00000	00000	00000	00000	00000	00000	00000	
	00000	00000	00000	00000	00000	00000	00000	
	00000	00000	00000	00000	00000	00000	00000	
	00000	00000	00000	00000	00000	00000	00000	

	Materials Received, Used and Returned					
	Measles (vials)		Syringes		Safety Boxes	Vaccination Cards
	Vaccine	Diluent	Auto Disable	Reconstitution		
1. Received						
2. Total Used and Wasted						
3. Returned						
4. Batch Number						

## Annex 5: Implementation Checklist

This is an implementation process checklist to supervise the quality of implementation of MVC at the vaccination post and the immunization catchment area. Every supervisor at LGA and Ward levels must use the checklist at the vaccination post. As much as possible, application of this checklist should not interrupt services at the post.

Supervisor Name: \_\_\_\_\_

Agency: \_\_\_\_\_

State:	LGA:	Ward:
Settlement:	Health Facility:	Target Population:
Vaccination Team Code:	Vaccination Post Code/Location:	

A. COLD CHAIN				YES	NO
1. Does each vaccination team have two Gio style vaccine carriers for the measles vaccine?					
2. Is there a vaccine carrier solely dedicated for storing vaccines and diluents at the Post?					
3. Are ice packs conditioned?					
4. Are vaccine vials being used placed on a foam pad inside a vaccine carrier?					
5. Are vaccines and diluents not in use stored in the second vaccine carrier with conditioned ice packs?					
B. REQUIRED and AVAILABLE COMMODITIES AND SUPPLIES					
Complete the table below <i>before answering</i> questions 6–20					
	Req.	Avail.		Req.	Avail.
# Vials of Measles Vaccine	20	15	# Pen Markers		
# Vials of Measles Vaccine Diluent			# Tally Sheets		
# Auto-disable Syringes			# AEFI Case Investigation Forms		
# Reconstitution Syringes/Needles			# AEFI Line Listing Forms		
# Safety Boxes			# AEFI Kits		
# Rolls Cotton Wool			# Plastic Bags		
C. ADEQUATE QUANTITIES OF COMMODITIES AND SUPPLIES				YES	NO
6. Is there at least a day supply of Measles vaccines and measles diluents?					
7. Is the number of AD syringes equal to the number of doses of injectable vaccines?					
8. Is the number of reconstitution syringes/needles $\geq$ number of vials of measles vaccines vials?					
9. Is the number of safety boxes to be used today sufficient? (A total of 100 Reconstitution syringes + Auto-disable Syringes for one safety box)					
D. VACCINATION POST ARRANGMENT				YES	NO
10. Are there vaccination team members complete at the post? {expect to see (a).1team supervisor/vaccinator, (b) second vaccinator,(c) 2 recorders, (d) community leader/crowd controller}					
11. Was the team provided with any means of transportation to their vaccination post?					
12. Is the layout of the vaccination post arrange based on the Measles Field guideline?					
13. Is there clear and orderly flow of clients at the post with adequate crowd control?					
E. RECORDING				YES	NO
14. Are the vaccinators accurately recording number of children immunized on the tally sheets during session? (cross check the number of empty measles vaccine vials sighted compared to the number of children immunised)					
15. Is the number of doses available at the time of visit enough to reach the remaining target population for that day?					
F. MONITORING OF AEFI				YES	NO
16. Are there copies of the AEFI forms at the Vaccination Post?					
17. Do the vaccination post supervisor and the vaccinators at the post know the types of AEFI to report?					
18. Do the vaccination post supervisor and vaccinators know what information to include on the AEFI form?					
19. Does the vaccination post supervisor know how to manage a case of AEFI?					
20. Does the vaccination post have an AEFI kit?					
21. Have any AEFI been reported at this vaccination post?					
G. INJECTION PRACTICE/SAFETY				YES	NO
Observe the health worker vaccinating at least 2 clients					





## Annex 6: Inside Household Monitoring Form

### 2017 MEASLES HOUSEHOLD MONITORING FORM, NIGERIA

#### In / End Process

NOTE: Fill out one form for each settlement monitored. Choose the highest risk area of the settlement (most likely to have unvaccinated children), choose a direction at random, and sample 15 households.

Settlement: \_\_\_\_\_ Ward: \_\_\_\_\_ LGA: \_\_\_\_\_ State: \_\_\_\_\_

Vaccination Team Supervisors Name: \_\_\_\_\_ Vaccination Team Code: \_\_\_\_\_

Household number	Number of children physically seen in the household		Total no. of children seen (3 - 59 mths)	Total no. of children seen with Measles card	Total no. of unvaccinated children 9mths to 59months (Measles)	Are all children in target population vaccinated in household? (0 = NO; 1 = YES)	Indicate number per reason for unvaccinated children aged 9-59 months (in #):			If in (K), any child did not present, indicate reasons (See Codes, multiple reasons OK):	If in (L), any child was non-compliant, indicate reasons (See Codes, multiple reasons OK):	Source of campaign information (insert codes as key below, multiple reasons OK)
	9 - 11 mths	12 to 59 mths					Child not presented	Non-compliance	Fixed post too far			
A	B	C	D	E	F=D-E	G	H	I	J	K	L	M
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
Total	0	0	0	0	0	0	0	0				

% of Target Population Vaccinated #DIV/0!

#### Thresholds for Corrective Action

Number of houses (out of 15) with all SIA-eligible children vaccinated <14  
Percentage of eligible children vaccinated <90%

Any comments (e.g. did you find pockets of unimmunized children or houses not visited? Describe): \_\_\_\_\_

MONITOR'S NAME: \_\_\_\_\_ AGENCY/ORGANIZATION: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

#### CODES:

Reasons for Child not presented: 1= child already had R1 measles dose ; 2 = child already had measles infection; 3 = child sick; 4= School; 5 = Farm; 6 = market; 7=Social event with mother; 8 = lack of information; 9= Others

Reasons for Non-compliance: 1 = Vaccine safety; 2 = Religious belief; 3= No felt need; 4 = Political differences; 5 = No caregiver consent; 6 = Unhappy with immunization team; 7= Reason not given; 8= Others

Source of campaign information (all that apply): 1 = Town crier; 2 = Radio; 3= TV; 4 = Traditional leader; 5=Religious Leader; 6 Neighbour, friend; 7= Community dialogue; 8= Celebrity;

9= Film/Theatre show; 10= SMS; 11= Health Worker; 12= Other sources; 13= Not aware of campaign

NOTE: also returned after daily activities to LGA STE or National External Consultant. Keep a copy for yourself

## Annex 7: Outside Household Monitoring Form

### MEASLES VACCINATION CAMPAIGN 2017/2018

[ ] In-process [ ] End - process

#### OUTSIDE HOUSEHOLD MONITORING FORM

(fill one form per settlement; sample 20 children per settlement including at least 2 children 9–11 months)

Date: \_\_\_\_\_ State: \_\_\_\_\_ LGA: \_\_\_\_\_ Ward: \_\_\_\_\_ Name of the settlement: \_\_\_\_\_

Type of area: Urban / Rural village / Rural Scattered / HTR / Border / Temp nomadic Name of monitor: \_\_\_\_\_ Designation: \_\_\_\_\_  
Government / NPHCDA: Federal / Zonal / State Monitor; WHO: IM / FV / LGAF/ CC / SC / ZC / STOP / STC / WCO / INT; UNICEF: LGA Monitor / State Monitor / National Monitor / International; CDC - N-STOP / Others; NGOs & Other Partners (specify) \_\_\_\_\_

<b>Instructions:</b> <ol style="list-style-type: none"> <li>To be used by ALL monitors (see below)</li> <li>All Male / Non local language speaking monitors to be accompanied by a female interpreter, who can understand, speak the local language</li> <li>The assessment of completeness of immunization activity to be conducted concurrently</li> <li>Monitor should carry the microplan of that area with them to the settlement</li> <li>At the end of the day, the monitor should attend the ward/LGA evening review meeting and reports results; completed forms should be submitted to the LGA</li> </ol>	<ol style="list-style-type: none"> <li>In each settlement the monitor should identify children from 2 different sites (e.g., streets, motor parks, markets, schools, etc.) in areas that are high risk for non-vaccination</li> <li>The monitor should survey a total of 20 children who are aged 9–59 months in total from the settlement (~10 from each site); at least 2 of the children should be aged 9–11 months</li> <li>The target number of vaccinated children is &gt;95%; therefore if &gt;1 in 20 children were unvaccinated, then corrective actions must be taken</li> </ol>
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Record the details as below. Put a tally for each child seen. For totals count only those tallied

- Only children with indelible ink finger mark of left thumb are considered vaccinated with Measles vaccine
- Tally rows B and D if child is NOT Vaccinated. There is NO row for children Vaccinated

Use these columns optionally if needed to visit >2 sites in order to sample 20 children in a settlement

Name of Site		1. _____	2. _____	3. _____	4. _____	Total
Children 9–11 Months	A. CHILD (9 TO 11 MONTHS) CHECKED	00000 00000	00000 00000	00000 00000	00000 00000	
	B. Child 9 to 11 months seen with left thumb NOT marked	00000 00000	00000 00000	00000 00000	00000 00000	
Children 12–59 Months	C. CHILD (12 TO 59 MONTHS) CHECKED	00000 00000	00000 00000	00000 00000	00000 00000	
	D. Child 12 to 59 months seen with left thumb NOT marked	00000 00000	00000 00000	00000 00000	00000 00000	

Aware of any child with health problems after the Measles vaccination? If yes, indicate the name of the household owner and report \_\_\_\_\_

Monitor's name: \_\_\_\_\_ Signature \_\_\_\_\_