Measles Immunization
Catch-up Campaign

What is measles?
Measles is one of the most infectious diseases. Measles is an acute viral illness caused by a virus from the *paramyxovirus* family. Almost all children with low immunity contract measles if exposed to the virus. As a respiratory disease, the measles virus reduces immunity and children may die of pneumonia, diarrhoea and encephalitis after measles. They may also suffer permanent disability (blindness, encephalitis.). Measles is a human disease with no known animal reservoir. Measles remains a leading cause of death among young children despite the availability of a safe and effective vaccine for the past 40 years.

Who are the most at risk?
Non-immunized people, especially young children, are at highest risk for measles and its complications, including death.

What is the current measles situation?
Global: While measles is now rare in many industrialized countries, it remains a common illness in many developing countries. In 1980, before the use of measles vaccine was widespread, WHO estimates there were 2.6 million deaths from measles worldwide. During 2000–2008, global measles mortality declined by 78%, from an estimated 733 000 deaths in 2000 to 164 000 in 2008. In countries where measles has been largely eliminated, cases imported from other countries remain an important source of infection.

India: While India has made significant progress in child survival, measles remains a leading cause of death and disability among young children. An estimated 50,000 to 100,000 children die from measles annually, making it one of the leading causes of child death. National routine measles vaccination coverage is 69% (DLHS-3). When vaccine efficacy of 85% at 9 months of age, is taken into account approximately 41% (31% un-immunized + 15% of immunized who failed to seroconvert) of children in each birth cohort remain susceptible to measles due to
dropout, left out, and failure to develop immunity.

**How is the disease prevented?**

Measles can be prevented by immunizing children with measles vaccine. This vaccine is safe and effective. As per the national immunization schedule, one dose is given at 9-12 months of age through subcutaneous route.

**Why a measles campaign?**

Although good routine immunization services exist in the country to immunize children <1 year of age, only 69% have received measles vaccine. As measles vaccination confers immunity in 85% of children when given at 9 months of age, a substantial number of children remain unprotected even if they are vaccinated. Hence a catch-up campaign offers a 2nd opportunity to the susceptible group of children and a way to maintain population immunity against measles and sustain high measles vaccination coverage.

**What is the aim of the campaign?**

The campaign target is to vaccinate all children, aged between 9 months and <10 years with measles vaccine in 14 targeted states with routine measles vaccination rates below 80%. Children will be vaccinated irrespective of their previous measles vaccination status. Because measles virus is extremely infectious campaign should reach more than 90% of the targeted children. Overall, the campaign will target 13.4 crore children of 9 months to 10 years of age.

**What is the campaign strategy?**

The measles campaign will be conducted over a period of 3 weeks. It will be conducted in educational institutions and the community separately. All available vaccinators, including alternate vaccinators, will work both in educational institutions and in outreach sites at community level. The vaccination will be conducted in educational institutions during the 1st week and in the routine immunization sites during the 2nd and 3rd weeks without interrupting routine immunization and VHND services. At least one fixed site in each PHC/CHC/District hospital will remain open on every working day throughout the campaign period. Additional teams will be deployed for hard-to-reach areas and to cover mobile populations.

**Who will be vaccinated?**

All children aged 9 months to <10 years will be vaccinated regardless of previous vaccination status or history of measles like illness. Children, who
have already received a dose of routine measles vaccine prior to the campaign, may be given vaccine doses during the campaign. If a child aged 9-12 months has not received any routine measles vaccine, the dose given during campaign will be considered as a campaign dose. Guardians will be requested to bring the child 4 weeks later to any routine immunization session to receive the regular dose.

**Who are the vaccinators?**
A vaccination team will have four / five members:

1 team = 1-2 vaccinators (ANM / Male HWs / LHV / retd. ANMs, LHV / Pharmacists / Nurses / Doctors) + 1 ASHA + 1 AWW + 1 volunteer

**How will the children register?**
Starting three or four weeks prior to the actual campaign, ASHA will conduct house-to-house canvassing highlighting the importance of the campaign and vaccination schedule in the area. All children will be enlisted in a registration form that indicates whether a child is a student or not. An invitation card will be given to all beneficiaries. IPC will be conducted in educational institutions by PHC/CHC Medical Officers/supervisors to motivate authorities and seek their support to ensure the presence of target students on the day of the campaign.

**What is Auto Disable Syringe (AD)?**
AD syringe is a type of disposable syringe where one cannot draw vaccine more than the specified volume of AD. Secondly the AD syringe gets locked after full delivery of the vaccine thereby preventing its reuse. These features enable the service provider from giving over dose of vaccine and injection safety by preventing reuse.

**How should the vaccine be administered?**
Only 0.5 ml Auto Disable (AD) syringes will be used to administer the vaccine. The dose of 0.5 ml will be given subcutaneously in the upper outer quadrant of the right arm.

**When should measles vaccination not be administered?**
Children with high fever or other signs of serious disease should be vaccinated only after consultation with their physicians. Most importantly, children with a history of severe reactions to measles vaccine should not be vaccinated.
What are the campaign sites?

Fixed sites:
• Educational institutions will be covered during the first week followed by outreach session sites in the community in 2nd and 3rd week. Each villages / Mohalla will be covered in one day.
• At least one fixed site in each PHC / CHC / District hospital / UHCS / PPCs / medical college hospitals will remain open on every working day throughout the campaign period.

Mobile Teams / Additional Sites: Hard-to-reach areas, Street children, working children or other high-risk populations in urban and rural areas may not be present at school or community vaccination sites. Mobile teams will be assigned to reach them.

What are the cold chain, vaccine and logistics distribution arrangements? During the campaign, only vaccine carriers with four icepacks will be used for carrying vaccine. These carriers can accommodate 20 measles vaccine vials and 20 diluents ampoules. Each team will be supplied with four extra icepacks in a separate vaccine carrier. Diluents will be kept between +2 to +8 degree celsius, one day before they are used. Each immunization team will use 2 vaccine carriers i.e., one for measles vaccines and the other for extra icepacks to boost the cold chain. There will be buffer stocks of vaccines, injection materials, frozen icepacks and other cold chain equipment and transport arrangement ready for any emergencies.

What are the waste disposal arrangements? CPCB guidelines of immunization waste disposal will be followed. Each vaccination team will be
provided with a Hub-cutter, red and black plastic bags for safe disposal of immunization waste. Arrangements will also be made for collection and transport of the waste from session sites to the PHCs for chemical disinfection and terminal disposal in safety pit.

**Adverse Events Following Immunization (AEFI)**

Measles vaccine has been in use for more than 40 years and has an excellent track record for safety and efficacy. In very rare instances, measles vaccine may give rise to anaphylaxis reaction which must be treated urgently.

The vaccine must also be handled properly to prevent AEFI due to ‘program errors’. All vaccine vials have a vaccine vial monitor (VVM) on the cap which will help vaccinators monitor the cold chain until the vaccine is reconstituted. After reconstitution, the vaccine must be kept at +2 to +8°Celsius and **must be discarded after 4 hours**.

**How will AEFI cases be managed?**

All children vaccinated with measles must be observed for 30 minutes immediately after vaccination. If there is any AEFI case within these 30 minutes or beyond will be managed by at the facility where they have been vaccinated. In case of outreach session sites, they will be managed in the nearest PHC/CHC or in the additional sites like private clinics, MO on supervisory visits carrying emergency management kit. The Village Health and Sanitation Committees (VHSC) will be empowered to transport the serious AEFI cases to the nearest AEFI Management centre.

**How will the campaign be supervised?**

The success of the campaign will depend largely on the work of the motivated and hard-working front line personnel who have contributed and participated in preparing the microplans, facilitated training and helped identify and solve the problems faced while planning the campaign. One supervisor will be assigned for every 3 vaccination teams. The supervisors will be Heath Assistant (Male), HS, HI, BEE, MO.

It is important for the campaign that all supervisors have technical skills to identify and correct any problem in the cold chain, injection technique and to actually vaccinate children when needed. Each supervisor will also visit areas covered by the vaccinators on the previous day and conduct house-to-house survey to detect any missed children.
What are the monitoring arrangements?

In addition to supervisors, district, divisional, and national managers and independent observers from partner agencies will monitor the campaign. Independent observers will also conduct Rapid Convenience Assessments (RCA) using RCA forms, to identify pockets of non-vaccinated children and help plan the revisits to the area to immunize missed children.

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List of Acronyms

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AD</td>
<td>Auto Disable Syringe</td>
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<tr>
<td>AEFI</td>
<td>Adverse Event Following Immunization</td>
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<tr>
<td>ANM</td>
<td>Auxiliary Nurse Midwife</td>
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<td>ASHA</td>
<td>Accredited Social Health Activist</td>
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<td>AWW</td>
<td>Angan Wadi Worker</td>
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<tr>
<td>BEE</td>
<td>Block Extension Educator</td>
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<td>CHC</td>
<td>Community Health Centres</td>
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<tr>
<td>CPCB</td>
<td>Central Pollution Control Board</td>
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<tr>
<td>HI</td>
<td>Health Inspector</td>
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<td>HS</td>
<td>Health Supervisor</td>
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<td>LHV</td>
<td>Lady Health Visitor</td>
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<td>MO</td>
<td>Medical Officer</td>
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<td>PHC</td>
<td>Primary Health Centres</td>
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<tr>
<td>RCA</td>
<td>Rapid Convenience Assessments</td>
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<td>UHC</td>
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<td>UNICEF</td>
<td>United Nations Children Fund</td>
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<td>VHND</td>
<td>Village Health and Nutrition Day</td>
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<td>VHSC</td>
<td>Village Health and Sanitation Committees</td>
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<td>VVM</td>
<td>Vaccine Vial Monitor</td>
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<td>WHO</td>
<td>World Health organization</td>
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