Measles Catch-up Immunization Campaign

Guidelines for Planning and Implementation

NATIONAL RURAL HEALTH MISSION
राष्ट्रीय ग्रामीण स्वास्थ्य मिशन

Ministry of Health and Family Welfare
Government of India

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Ministry of Health and Family Welfare
Government of India

June 2010

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सत्यमेव जयते

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Foreword

Measles is a highly infectious disease that kills many of our children; infants and young children, especially those who are malnourished, are at high risk of dying. But measles can be prevented with a safe and effective vaccine that gives long term immunity. Measles immunization directly contributes to the reduction of under-five child mortality and hence to the achievement of Millennium Development Goal number 4.

Government of India (GoI) had introduced measles vaccine in national programme from 1985. Since then the disease burden in India has reduced and this reduction can be further accelerated by improving the coverage of the 1st dose of measles vaccine which stands at 70% as per DLHS-3 survey and providing a second opportunity for measles vaccination.

Based on recommendations from expert committees, the second dose will be given through a measles catch-up campaign in 14 states covering 9 month to 10 year old children and remaining 21 states will cover through routine immunization to be given at 16-24 months old children.

The catch-up campaigns will target 134 million children in 14 states and will be a massive public health undertaking. These guidelines and handbooks have been developed to help programme managers and field staff at all levels in successful implementation of the catch-up campaigns.

I am happy to note that this manual is extremely practical and have listed in detail the tasks that functionaries at various levels need to do in catch-up campaign

This will be a major step towards reducing measles mortality burden in the country and I wish it every success.

(K. Sujatha Rao)

NATIONAL RURAL HEALTH MISSION
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National Rural Health Mission

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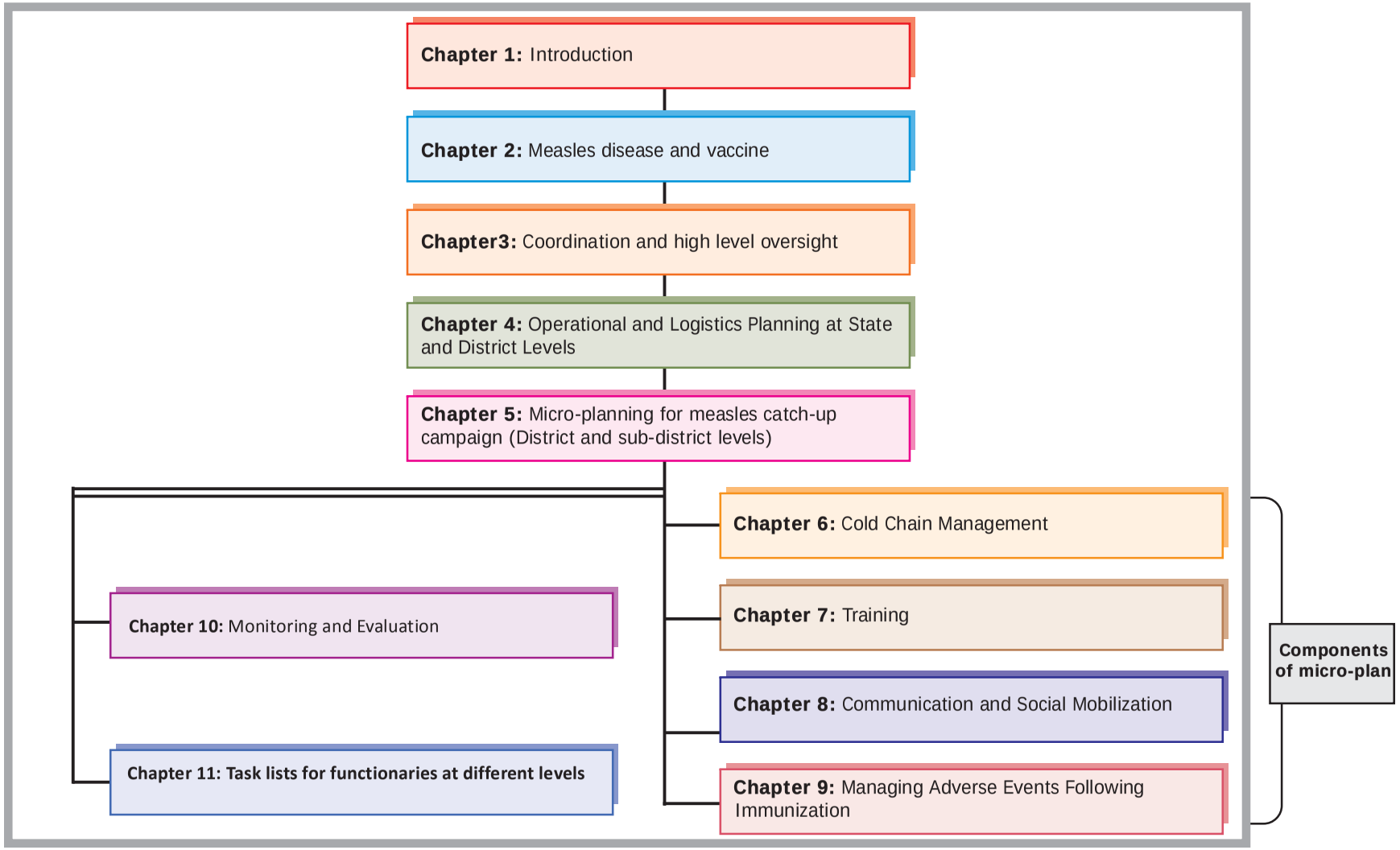

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ACRONYMS

Acronym	Expanded Form
ADS	Auto Disable Syringe
AEFI	Adverse Events Following Immunization
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWW	Anganwadi worker
BDO	Block Development Office/Officer
BPHC	Block Primary Health Centre
CES	Coverage Evaluation Survey
CMO	Chief Medical Officer (of district)
cMYP	Comprehensive Multi-Year Plan
CPCB	Central Pollution Control Board
DIO	District Immunization Officer
DLHS-3	District Level Household Survey - 3
EPI	Expanded Program on Immunization
GAVI	Global Alliance for Vaccines and Immunization
HA	Health Assistant
HI	Health Inspector
HIV	Human Immunodeficiency Virus
ICDS	Integrated Child Development Scheme
IM/IV	Intra-muscular/Intravenous routes of injection
IPC	Interpersonal Communication
MCV1	Measles containing vaccine 1st dose
MCV2	Measles containing vaccine 2nd dose
MO	Medical Officer
MO I/C	Medical Office in Charge (Block PHC/PHC)
NGO	Non Governmental Organization
OPD	Outpatient Department
ORC	Outreach Centre
PHC	Primary Health Centre
PHN	Public Health Nurse
RCA	Rapid Convenience Assessment
SIA	Supplementary immunization activity
SMO	Surveillance Medical Officer
TOT	Training of Trainer
UNF	United Nations Foundation
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VPD	Vaccine Preventable Disease
WHO	World Health Organization

GLOSSARY OF TERMS

High Risk: This is risk associated with not being vaccinated during the campaign such as floating children, street children, working children, children in prison, slums and brothel, migratory types, children living in tea estates, rice mills, brick kilns, construction sites, hard to reach areas etc. In these guidelines such populations have also been referred to as 'Hard to reach' populations.

Measles Catch-up campaign: A one-time event targeting multiple cohorts in which susceptible children have accumulated. The target age group depends on the susceptibility profile of the population. During measles catch-up campaign all children in the target age group will receive a supplementary dose of measles vaccine regardless of previous vaccination history or illness. In this plan the target age group is 9 months to <10 years old children.

Measles Follow-up campaign: A periodic event (every 3-5 years, according to the accumulation of susceptible) targeting children born after catch-up campaign to maintain low level of susceptibility. The periodicity depends on the routine immunization coverage, the existence of pockets of unprotected children and vaccine efficacy. The target age group for immunization in these campaigns should include all children aged over nine months who were born after the previous mass immunization (e.g. catch-up campaign).

Measles control: Reduction of measles morbidity and mortality in accordance with target; continued interventions are required to maintain the reduction.

Measles elimination: The situation in a large geographical area in which endemic transmission of measles cannot occur and also sustained transmission does not occur following the occurrence of an imported case; continued interventions are required.

Measles eradication: Interruption of measles transmission worldwide as a result of deliberate efforts; interventions are no longer required. Eradication represents the sum of successful elimination efforts in all countries.

Routine immunization: Regular provision of immunization services to successive cohorts of infants through vaccination at outreach and fixed sites.

Supplementary immunization activity (SIA): Mass campaigns targeting all children in a defined age group, with the objective of reaching a high proportion of susceptible individuals. Each campaign is conducted over a wide geographical area (e.g. province or country) in order to achieve a rapid reduction in the number of susceptible children. It is not usual to conduct screening for vaccination status and prior disease history (i.e. the campaigns are usually non-selective). Catch-up and follow-up campaigns are types of SIA.

EXECUTIVE SUMMARY

India is conducting Measles Catch-up Campaigns as a part of global effort to reduce measles morbidity and mortality. Target age group of this campaign is 9 months to <10 years children irrespective of their previous measles vaccination status or measles infection. Estimated 134 million children will be immunized in 14 states. Along with other technical and operational issues, two major challenges in this campaign are huge target group and mass vaccination with injectable antigen. India has a unique health infrastructure at primary care level. These primary care level health facilities are the strength of this campaign. Another strength is availability of a large number of trained vaccinators in health and family planning wings of MOH&FW. Ensuring the participation of these trained vaccinators is crucial to overcome the challenge of mass vaccination with injectable antigen considering injection safety of very large target group.

Recommended Key Strategies for Measles Mortality Reduction:

1. High coverage of measles 1st dose
2. Sensitive laboratory supported surveillance
3. Case management
4. 2nd opportunity for measles. There are 2 ways of providing 2nd opportunity they are
    a. Routine 2nd dose of measles
    b. Supplementary Immunization Activity (SIA) for measles

Key operational strategies for SIA:

1. Measles immunization will be given from fixed sites and each session site will remain open from 8:00 AM to 2:00 PM.
2. Routine immunization will continue uninterrupted per weekly schedule.
3. ASHA/AWW will mobilize target children to session site and also help ANM in organizing the session and manage crowd control.
4. Three weeks campaign:
    a. 1st week in educational institutes;
    b. 2nd and 3rd week in existing UIP outreach sites.
5. Only trained vaccinators will be used for vaccination.
6. Volunteer support will be required at each vaccination post.
7. Within national guidelines certain flexibility will be allowed at local level considering local limitations and constraints.

8. Pre-campaign, campaign and post campaign activities will be conducted according to guideline.
9. Strong monitoring of cold chain system is needed to ensure vaccine potency and safety.
10. Only the large vaccine carrier with four ice-packs will be used during campaign for transporting vaccines.
11. All components of immunization safety will be adhered to.
    a. Vaccine and diluents should be of the same manufacturer for reconstitution of vaccine.
    b. Reconstitution time should be recorded on each vaccine vial label.
    c. Reconstituted vaccine must be discarded 4 hours after dilution.
    d. Campaign wastes including sharps will be disposed safely according to guidelines.
12. Throughout the campaign period (3 weeks) one fixed vaccination centre in block and municipality will remain open to vaccinate the children missed during day-to-day campaign activities.

Rationale for Measles Catch-up Campaign

Measles is a leading cause of childhood mortality, and the reduction of child mortality is a key Millennium Development Goal. Analysis of measles outbreak data for the period 2006 to 2009, in states with outbreak surveillance reveals that around 90% of the measles cases were in the age group of <10 years.

Although reported coverage for measles vaccination is high, previous CES revealed that it never exceeded 70%. As measles vaccination does not confer 100% protection and sero-conversion rate is only 85% when given at 9 months of age, a substantial number of children remain unprotected even if they are vaccinated. Supplementary activities like measles catch-up campaign is required to sustain high measles vaccination coverage and also for providing a second opportunity for the unprotected children. Lessons learnt from this campaign will be useful for future immunization activities.

A follow up campaign may be required to maintain high population immunity against measles besides maintaining high routine immunization coverage. The timing and need for a follow-up campaign will be determined by routine immunization coverage rates, the quality of the catch-up campaign and surveillance data.

1. INTRODUCTION

Measles is a highly infectious and potentially fatal viral infection mainly affecting children. Immunization against measles directly contributes to the reduction of under-five child mortality and hence to the achievement of Millennium Development Goal number 4. In a recent review of Indian published literature the median case fatality ratio (CFR) of measles was found to 1.63%[1]. Even at this CFR the mortality burden of measles is high because the un-immunized individuals form a cohort of susceptibles for measles infection, often at a very young age.

Deaths from measles occur mainly due to complications of measles. Infants and young children, especially those who are malnourished, are at highest risk of dying. With the introduction of measles vaccine in national programme from 1985, which is given at 9 to 12 months of age, the disease burden has reduced and this reduction can be further accelerated by improving the coverage of the 1st dose of measles which stands at 69.6% as per DLHS-3 survey and providing second opportunity for measles vaccination. In controlled studies it has been found that measles vaccine efficacy is of the order of 89% when given at 9 months of age and approximately 99% when given at >12 months of age. Actual vaccine effectiveness, under field conditions, is usually lower. It is of the order of 85% when given at 9 months and 95% when given at >12 months of age[2].

The current global goal for Measles control, as stated in the Global Immunization Vision and Strategy 2006-2015 of the World Health Organization and United Nations Children's Fund, is to reduce measles deaths by 90% by 2010 compared to the estimated number in 2000. By 2008 global Measles mortality has reduced from 733,000 in 2000 to 164,000 in 2008 (78% reduction)[3]. The immunization Strategic Advisory Group of Experts (SAGE-2008) and WHO currently recommend that two doses of measles vaccine should be the standard for all national immunization programmes.

As of 2008, 192 of 193 Member States of WHO use 2 doses of measles vaccine in their national immunization programmes, India being the only exception. The Millennium Development Goal (MDG) 4 aims to reduce by two thirds between 1990 and 2015 the under-five mortality rate (U5MR) in the world. One of the key interventions to decrease

[1] Sudfeld CR, Halsey NA. Measles case fatality ratio in India: A review of community based studies. Indian Pediatrics. 2009; 46: 983-989
[2] The Immunological Basis for Immunization Series. Module 7: Measles Update 2009. pp 11
[3] Weekly Epidemiological Record, December 2009(49):509-513. Global reductions in measles mortality 2000-2008 and the risk of measles resurgence

U5MR and accelerate achievement of MDG4 is to strengthen measles control activities. As per the draft comprehensive Multi Year Strategic Plan (cMYP, 2010-17) for immunization of India the country aims to reduce by 90%, measles related mortality by 2013 when compared to 2000.

The key strategies being followed to achieve the goal are:

- Improving and sustaining high routine immunization coverage
- Providing second dose of measles vaccine through catch-up immunization campaigns and or routine second dose/follow up immunization campaigns;
- Establishing sensitive laboratory supported surveillance
- Appropriate case management, including administration of vitamin A

1.1 Rationale for second dose of measles

Previous coverage evaluation surveys have shown that mean national coverage with measles vaccine has never exceeded 70%. With 85% vaccine effectiveness for vaccination at 9 months, actual protection was offered to only 60% of annual birth cohorts (70% × 85% = 60%). In other words, at least 40% remained susceptible to measles. A second opportunity measles immunization given at or above one year of age (>95% effectiveness) along with simultaneous increase in first dose coverage in the population is an effective way to reduce the proportion of susceptible children in the community and to prevent measles outbreaks.

1.2 Measles second dose: implementation strategies in India

The National Technical Advisory Group on Immunization (NTAGI) has recommended second opportunity for measles vaccine through measles SIA for 17 States where evaluated coverage (CES 2006) for measles vaccine is less than 80% while for the remaining 18 States with evaluated coverage of more than 80% it has recommended a second dose of measles vaccine through routine immunization. The NTAGI further recommended phasing of SIA in these 17 States/ UTs and covering children between the ages of 9 months to < 10 years. The above strategy was also reviewed by the special committee setup by Ministry and the said committee has endorsed the same guiding principle as recommended by NTAGI.

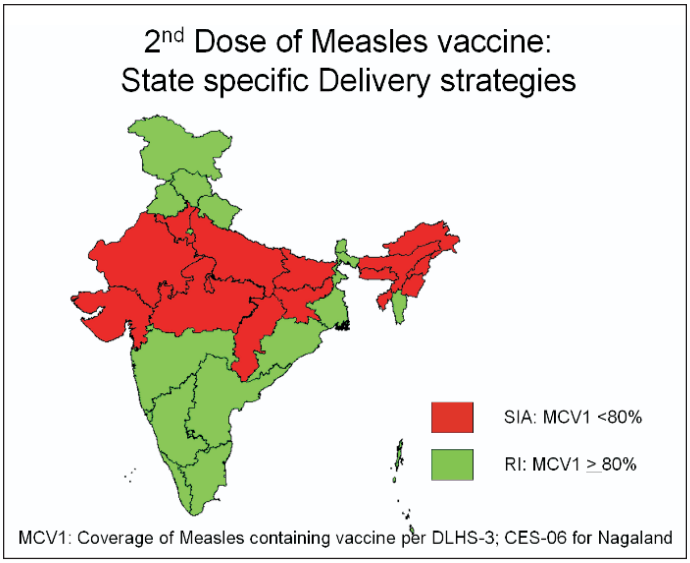


Figure 1-1: Measles 2nd dose introduction in India

Applying the 80% MCV1 coverage cut-off used by NTAGI from more recent evaluated coverage data

(DLHS-3) there are 21 states which qualify for MCV2 through RI and 14 states which qualify for large scale catch-up campaigns. Of these 21 states, 4 states/UTs (Delhi, Goa, Puducherry and Sikkim) are already using second dose of measles in their RI programme (as mumps-measles-rubella vaccine) through state resources.

1.2.1 MCV2 delivery strategies for states with sustained high MCV1 coverage (>=80%)

Both measles-rubella (MR) and mumps-measles-rubella (MMR) vaccines should be considered for the estimated 1-2 year old population for the 17 identified states and union territories. Based on cost considerations, the Ministry will take a final decision on the vaccine that will be introduced through UIP in these states.

1.2.2 MCV2 delivery strategies for states with MCV1 coverage <80%

Supplementary Immunization Activities (SIAs) providing a second opportunity for measles immunization is one of the most cost-effective child health interventions and have proven extremely effective in rapidly reducing measles mortality rates and strengthen ongoing routine immunization services at the same time. Furthermore, providing a second dose of measles vaccine rapidly reduces the proportion of susceptible children, thus preventing measles outbreaks and decreasing the overall disease burden.

SIAs also provide an opportunity to increase community awareness of immunizations and strengthen routine immunization programs. It further provides an occasion to build capacity to improve cold chain and logistic capacity, and strengthen local partnership and collaboration among various stakeholders.

[For details of MCV1 coverage by state please refer to annex.]

These guidelines describe the operational steps that should be undertaken to implement catch-up campaigns for measles immunization in selected states of the country.

Types of SIAs

Catch-up campaigns: This is a one-time effort to vaccinate all children in a defined age group (based on the epidemiology of the country) irrespective of their prior immunization status (history or record). The goal is to rapidly reduce the susceptible proportion in a population.

Follow-up campaigns: These are periodic mass campaigns every 2-4 years following catch-up campaigns. The purpose is to reduce any build up of susceptible since the previous SIAs. The target population is children born after the last catch-up campaign. The timing of the follow-up campaigns depends on the speed of accumulation of susceptible which is a function of routine immunization coverage and the coverage in preceding catch-up or follow-up.

KEY POINTS:

- ⇨ Immunization against measles contributes to reducing under-five mortality and is an indicator for MDG4.
- ⇨ Vaccine effectiveness of one dose of measles vaccine at 9 months of age is around 85%. Vaccine effectiveness goes up to 95% and above when given at >12 months of age.
- ⇨ MYP objective is to reduce measles related mortality by 90%, by 2013 when compared to 2000 levels.
- ⇨ Govt. of India has decided to introduce a second dose of measles vaccine in the national immunization programme per below state specific strategies:
- ⇨ In 14 states through catch-up campaigns targeting 9 months to 10 year old children
- ⇨ In 17 states/UT through routine immunization schedule for children between 16-24 months of age.
- ⇨ 4 states/UT have already introduced second dose (as MMR) for 1-2 year old children

2 MEASLES DISEASE AND VACCINE

2.1 Measles disease

The measles virus is one of the most infectious agents causing human disease. The virus is an exclusive human pathogen and has no animal reservoirs or vectors. Transmission is by respiratory droplets or direct contact. When the measles virus is introduced into a non-immune population, nearly 100% of individuals become infected and develop a clinical illness. In areas with tropical climates, most cases of measles occur during the dry season and in areas with temperate climates the peak is during the late winter and early spring.

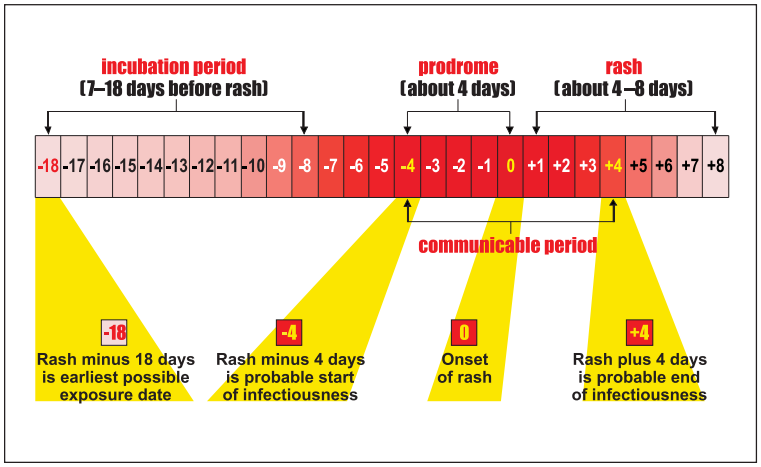


Figure 2-1: Measles disease: natural history

The average interval from exposure to onset of rash is 14 days (range 7-18 days). Patients are contagious 2-3 days before the rash until 1-2 days after the onset of the rash. Following inhalation of virus-containing droplets, measles virus infects the nasopharyngeal epithelium and soon spreads. Five to seven days after exposure, the infection is spread through the bloodstream to the skin, conjunctivae and respiratory tract. Towards the end of the incubation period patients develop the prodromal symptoms of high fever, cough, coryza and conjunctivitis. The typical maculopapular rash appears 3-4 days after the prodrome with a high fever peaking at 39-40°C. The rash spreads from the face and neck to the trunk and extremities fading after about 3 days. Patients normally improve by the third day of rash and fully recover 7-10 days from the onset of the disease.

Most persons recover from measles without sequelae. Complications associated with measles particularly in children less than 5 years of age may result in death. Case fatality from measles infection can form a significant and preventable proportion of the under five mortality burden. Complications include include otitis media (5-15%) and pneumonia (5-10%). In impoverished areas, persistent diarrhoea with protein-losing enteropathy may ensue, particularly in young infants.

2.2 Measles Vaccine

Measles is an extremely contagious viral disease that, before the widespread use of measles vaccine, affected almost every child in the world. An excellent live, attenuated measles vaccine has been available since the 1960s and currently reaches about 70% of the world's children through national childhood immunization programmes. The live, attenuated measles vaccines that are now internationally available are safe, effective and may be used interchangeably in immunization programmes. Measles vaccines are available, either as single-antigen vaccines or in combination with either rubella or mumps and rubella vaccines. When the MR or MMR vaccines are used, the protective immune response to each of the components remains unchanged.

2.3 Measles vaccine strains

Most of the live, attenuated measles vaccines used now originate from the Edmonston strain of measles virus isolated by Enders and Peebles in 1954. Subsequently, this strain underwent numerous passages in various cell cultures to become the attenuated Edmonston B-vaccine, which was licensed in the United States in 1963 and widely used until 1975.

Well known vaccine strains derived from the original Edmonston isolate include the Schwarz, the Edmonston-Zagreb (widely used in India) and the Moraten strains, all in widespread use since the 1960s.

2.4 Whom to vaccinate?

- All susceptible children and adults for whom measles vaccination is not contraindicated.
- Asymptomatic HIV infection is an indication, not a contraindication, for measles vaccination. Ideally, the vaccine should be offered as early as possible in the course of HIV infection.
- HIV-infected infants should receive measles vaccine at 6 months of age, followed by an additional dose at 9 months, in case they are not severely immune-compromised.
- The first dose is given through routine immunization between 9 and 12 months of age and a second dose is given after one year of age.
- In SIA campaigns all children in the target age group are vaccinated irrespective of previous immunization status or history of measles disease.

2.5 Vaccine characteristics

- Measles vaccine, like measles virus, is very stable when stored between minus 70 °C and minus 20 °C.
- Reconstituted measles vaccine loses about 50% of its potency after one hour at +20 °C and almost all potency after one hour at +37 °C.

Following reconstitution, the vaccine must be stored at +2 to +8°C and used within 4 hours.

- The vaccine is also very sensitive to sunlight, hence the need to keep it in coloured glass vials.
- The vaccine induces both humoral and cellular immune responses conferring long term immunity.

2.6 Adverse reactions to the vaccine

Adverse reactions following measles vaccination are generally mild and transient & can be as follows:

- Slight pain and tenderness at the site of injection may occur within 24 hours, sometimes followed by mild fever and local lymphadenopathy.
- About 7-12 days after vaccination, up to 5% of measles vaccine recipients may experience fever of at least 39.4°C for 1-2 days. The fever may occasionally (1: 3000) induce febrile seizures.
- A transient rash may occur in about 2% of vaccinees.
- Thrombocytopenic Purpura occurs in approximately 1 in 30,000 vaccinated individuals.
- One serious but extremely rare adverse effect is anaphylaxis due to measles vaccine. The risk is as low as to 1 in 1 million doses administered.
- Adverse events, with the exception of anaphylactic reactions, are less likely to occur after receipt of a second dose of measles-containing vaccine.

There is no evidence of an increased risk of encephalitis, permanent neurological sequelae or Guillain-Barré syndrome following measles vaccination.

The virtual disappearance of SSPE in countries where measles has been eliminated strongly suggests that the vaccine protects against SSPE by preventing measles infection.

There is no evidence to support reports that measles vaccination may be a risk factor for inflammatory bowel disease or for autism. Measles vaccine does not exacerbate tuberculosis.

2.7 Contraindications

- Measles vaccination should be avoided in high fever or serious disease and pregnancy.
- Persons with a history of an anaphylactic reaction to neomycin, gelatin or other components of the vaccine should not be vaccinated.
- Persons who are severely immunocompromised as a result of congenital disease, HIV infection, advanced leukaemia or lymphoma, serious malignant

disease, or treatment with high-dose steroids, alkylating agents or antimetabolites, or in persons who are receiving immunosuppressive therapeutic radiation

- Administration of immunoglobulins or other antibody-containing blood products may interfere with the immune response to the vaccine. Vaccination should be delayed for 3- 11 months after administration of blood or blood products, depending on the dose of measles antibody.
- Following measles vaccination, administration of such blood products should be avoided for 2 weeks, if possible.

2.8 Following are NOT contraindications for measles vaccination:

Malnutrition: In fact malnutrition is an indication to immunize. Malnourished children should be referred to nearest health centre for assessment and treatment after they have been immunized

Minor illness: such as mild respiratory infection, diarrhoea, and low grade fever for less than 3 days. These children should be referred to nearest health facility after they have been immunized.

2.9 Immunity to measles

- In controlled studies measles vaccine efficacy is 89% when given at 9 months and 99% when given at >12 months of age. Actual vaccine effectiveness, under field conditions, is usually lower. It is 85% when given at 9 months and 95% when given at >12 months of age
- Both the development and the persistence of serum antibodies following measles vaccination are lower than, but parallel to, the response following natural measles infection.
- The peak antibody response occurs 6 to 8 weeks after infection or vaccination. Immunity conferred by vaccination against measles has been shown to persist for at least 20 years and is generally thought to be life long for most individuals.

2.10 Vaccine dosage and administration

- Measles vaccine is lyophilized and reconstituted with pyrogen free double distilled sterile water (provided by the manufacturer) immediately prior to administration by injection.
- Entire amount of diluent in the ampoule provided by the manufacturer should be used to reconstitute the vaccine.
- Dose is 0.5 ml and should be administered subcutaneously in the right upper arm. The site is important for survey purpose.
- Each 0.5 ml dose of reconstituted vaccine should contain a minimum infective dose of at least 1,000 viral TCID50 (median tissue culture infective doses).

- Other live and inactivated bacterial and viral vaccines can be administered simultaneously without problem.

2.11 Vaccine storage and supply

- Vaccine should be stored at 2 to 8 °C and never left at room temperature. When used in the field, it should be transported in vaccine carriers with 4 frozen icepacks.
- The vaccine is also very sensitive to sunlight and should always be kept away from sunlight.
- Measles vaccine can be safely frozen without loss of potency. But diluents should never be frozen.
- Measles vaccine should always be reconstituted only with the diluent provided by the manufacturer. Before reconstitution both vaccine and diluent should be brought to the same temperature range (+2 to +8 °C).

KEY POINTS:

⇨ Measles is a highly infectious viral disease which can cause complications and death.

⇨ Measles vaccine is a live attenuated virus vaccine. It is safe and effective and provides long term immunity.

⇨ Measles vaccine is heat sensitive especially after reconstitution.

⇨ Measles vaccine should be reconstituted with diluent from the same manufacturer.

⇨ Reconstituted vaccine should be kept at +2 to +8 °C and disposed of after 4 hours or at end of immunization session whichever is earlier.

3. COORDINATION AND HIGH LEVEL OVERSIGHT FOR MEASLES CATCH-UP CAMPAIGN

3.1 Overall strategy for catch-up campaign

The highest level of political, administrative ownership, commitment and support needs to be sustained for successfully implementing measles catch-up campaigns. The Central Government, the State Governments, and international and national development partners need to work together and complement each other's strengths. Measles catch-up campaigns are a one time activity and therefore coverage must be near 100% in the target age-group to impact on disease transmission and rapidly build up population immunity.

The target age group for measles catch-up campaigns will be all children in the age group 9 months to 10 years (not reached their 10th birthday) irrespective of their prior measles immunization status or history of measles like illness.

In general, this age group constitutes 15% to 26% (median 20%) of the total population in the selected 14 states (enlisted in annex-1).

The following approach will be used for measles catch-up campaigns in India:

- During the campaign period, immunization activities for the campaign will be conducted on 4-5 working days of the week without disturbing the routine immunization/Village Health & Nutrition days of the week.
- To ensure safety, all children will be immunized at fixed posts ('Measles Session sites') only.
- On an average, a district will be able to complete the campaign in 3 weeks. Immunization session sites will operate from schools in the 1st week and from outreach sites in the community in 2nd and 3rd weeks.
- One village or an urban area will be covered in 1 day by a team(s). If the size of the village or urban area is large, multiple teams will be deployed so as to cover it in one day. But no vaccination team will conduct activities at two session sites in any one day.
- Several such vaccination teams will work simultaneously in a block or an urban municipality to complete the immunization activities in the shortest possible time without compromising on quality and safety of vaccination.
- A school session will start as soon as the school starts in the morning and will end when all children have been immunized. An outreach site will operate from 8 AM to 2 PM or until the last child has been vaccinated. The ANM will do her scheduled work in that area for that day after 2 PM. This will also ensure that the ANM is available in the area for at least 1 hour after the last injection to attend to any AEFI.

- Mobile teams will be used for covering hard to reach areas, mobile populations and temporary settlements. These teams will not go from house to house, but will immunize children from a fixed location in these high-risk population settlements.
- Supervisors will support the vaccinator teams on the day of activity and assess coverage on the day after the completion of activity with a structured check list.
- Areas having less than 90% coverage will be reached again by immunization teams to vaccinate the missed children.

Ensuring safe injections practices will be of paramount importance during the campaign and only trained vaccinators must be allowed to vaccinate children. Based on the experience of Japanese Encephalitis (JE) immunization campaign in India, it is planned to cover **125-150 children per vaccinator per day.** This number may go up to **200 per vaccinator** in a school where vaccinators do not have to wait for children to turn up at the session site.

3.2 Establishing SIA implementation committees

Establishing SIA implementation committees at national, state, district and sub-district levels for all aspects of the campaign is critical for success. Measles catch-up campaigns need coordination and participation of other departments at all levels - national, state, district and block for successful implementation and the achievement of high coverage levels. Regular scheduled meetings should be held with clear objectives, agendas, and reports of actions taken from previous meetings. This should include review of progress, problems encountered, proposed solutions and new action points with clearly defined responsibilities and deadlines. Minutes of the meetings and action points should be shared with all the participants. The committees should ensure that activities are completed, adhering to guidelines and timeliness.

3.3 National level

At the national level there will be two committees.

3.3.1 National Steering Committee: (NSC)

Will be chaired by the Secretary (Health and Family Welfare), Government of India. The role of steering committee is to:

- Coordinate activities among Government departments like Education, Women and Child Development (WCD), Social welfare, NRHM, DHR, NCDC, AYUSH, Home Affairs, Defence, Youth Affairs, Urban development, Railways, Civil Aviation, Shipping, Commerce, Labour, PRI etc. to mobilize human and other resources.
- Coordinate with civil society organizations like Rotary, Lions etc; professional bodies like IMA, IAP, IPHA, IAPSM etc and partners like WHO, National Polio Surveillance Project (NPSP), UNICEF, USAID, Red Cross and other organizations.

3.3.2 Central Operations Group (COG)

A Central Operations Group will be established to coordinate the technical aspects of the activity. It will comprise officials from Government of India, WHO, National Polio Surveillance Project (NPSP), UNICEF, USAID, Red Cross and other partners at the national level chaired by the Joint Secretary (RCH)/DC-MCH, Health & Family Welfare, Government of India.

The role of the Central Operations Group is to meet on a regular basis to:

- Provide technical and logistic support to plan, implement, monitor and evaluate the catch-up campaign at national and state levels.
- Ensure inter departmental coordination with donor coordination division, vaccine procurement division and IEC division to:
- Develop and finalize media plan with timeline.
- Monitor implementation of IEC/Social Mobilization activities at national, state and district levels.
- Coordinate with DAVP, Song and Drama Division, Doordarshan, AIR, Field publicity etc.
- Provide feedback to the Secretary and obtain timely approvals within the Government

3.4 State level

At the state level there will be two committees as below.

3.4.1 State Steering Committee (SSC)

At the state-level, the State Steering Committee for the campaign will be established under the chairmanship of the State Health Secretary. The role of the State Steering Committee is to mobilize human / other resources and coordinate planning and implementation of activities with other government departments and partner agencies.

The State Steering Committee will coordinate activities among Government departments like Education, Women and Child Development (WCD), Social welfare, NRHM, DHR, NCDC, AYUSH, Home Affairs, Defence, Youth Affairs, Urban development, Railways, Civil Aviation, Shipping, Commerce, Labour, PRI etc. to mobilize human and other resources.

Coordinate with civil society organizations like Rotary, Lions etc; professional bodies like IMA, IAP, IAPSM, IPHA etc and partners like WHO, National Polio Surveillance Project (NPSP), UNICEF, USAID, Red Cross and other organizations.

3.4.2 State Operations Group (SOG)

The SOG will lead planning and implementation activities at the state. The Mission Director/ DG /Director, Family Welfare will chair the Operations Group. The State Immunization Officer (SIO) will be the member-secretary. State level representatives of key Departments such as Social Welfare, Education, IDSP, Panchayati Raj Institutions, WCD, Transport, Media and partners such as WHO-NPSP, UNICEF, Red Cross, Professional bodies like IMA,

IAP etc, religious leaders, minority groups should be invited to attend coordination committee meetings. The role of the committee is to:

- Provide technical and logistic support to plan, implement, monitor and evaluate the catch-up campaigns at district level
- Ensure inter sectoral coordination and full utilization of resources from government and partners.
- Provide feedback to the Secretary and obtain timely approvals within the Government
- Develop a communication plan:
- Utilize all available resources and channels for delivering simple and clear messages to the community, which will help to ensure full turnout of children on the days of catch-up campaign.
- Draw up state specific IEC and IPC plans.
- Monitor implementation of IEC/social mobilization activities in the states.
- Respond appropriately to the media regarding program implementation, progress, safety and AEFI.

3.4.3 Catch-up campaign control room

The control room will be set up in each state. The State EPI Officer, State Cold Chain Officer, NPSP, UNICEF, representatives from other development partners and a nominated member from the state government should be stationed in the Control Room for planning, monitoring, coordination and implementation of activities.

The role of the control room should be to monitor preparedness on a day to day basis especially mobilization of human and other resources like transport, ensure inter-sectoral coordination and full utilization of resources from partner government and non-government departments. It should also monitor implementation of the programme during the activity. The control room should be providing feedback to the state steering committee and state operations group on progress being made and also on any obstacles being faced.

3.5 District level

3.5.1 District Task Force (DTF)

DTF should be formed under the chairmanship of the District Collector/ Magistrate in each district, CMO/DIO should be the member secretary. District level officers from Education, ICDS, Police, transport, Media, CDO, SDMs/BDOs, PRI, DUDA, Local bodies like municipalities, councils etc, professional bodies and partner organizations along with representatives from religious groups and opinion leaders should be the participating members of DTF.

The role of the district task force is to support, supervise, monitor and ensure implementation of the highest quality measles campaign in the district.

3.5.2 District Task Force Meetings

The District Task Force should meet at least five times. The District Magistrate/District Collector will chair these meetings. He/she may delegate this responsibility to CDO or ADM for some of these meetings. The second and the fourth meetings are critical and should always be chaired by District Magistrate. A compliance report on the decisions taken must be submitted in the subsequent meeting.

- First: Four weeks before the round to review preparations and logistics
- Second: One week prior to the start of the campaign to review preparedness, validate micro-plans and address any problems
- Third: One week after the start of the campaign to review progress of school activity and make corrections.
- Fourth: 2 weeks after the start of the campaign to review progress and make mid-course corrections.
- Fifth: Immediately after the completion of the campaign to review monitoring and other data and ensure that children in areas with low coverage are immunized immediately.

DM and CMO should also use these meetings to clear obstacles for planning and implementation of the programme.

- A control room at District level: A control room should be set up at the district level to monitor preparedness of blocks/ PHCs/ urban areas on a day to day basis and to monitor implementation of the programme during the activity and give feedback to the state control room.

3.6 Roles and responsibilities of District Magistrate/ Chief Medical Officer/District Immunization officer

3.6.1 District Magistrates/ District Collector/ Chief Executive Officer:

- Monitor the planning and implementation of measles catch-up campaign activities in the district.
- Regularly monitor the preparedness, progress and implementation and ensure that timely corrective steps are taken.
- Provide leadership to the programme and coordinate with other departments through the DTF.
- Depute senior officials from the administration and other sectors to supervise planning and implementation of the programme in various blocks and urban areas of the district. All senior officials will be accountable for their areas.
- Organize and conduct meeting of religious and community leaders as appropriate
- Chair the district media sensitization workshops and designate a media spokesperson (CMO/DIO).

3.6.2 Chief Medical Officer/ District Health Officer/ Civil Surgeon/District Medical and Health Officer:

- Ensure the preparedness of the district, like micro-planning, training, supervision, communication, cold chain, inter-departmental coordination, AEFI management to conduct a quality campaign.
- Make visits to sub district levels to review preparedness and monitor implementation.
- Release funds to blocks in time.
- Ensure organization of DTF and district media sensitization workshops.

3.6.3 District Immunisation Officer:

- Ensure review and finalization of micro-plans including IEC and social mobilization plans of all blocks and urban areas before start of activity.
- Ensure all vaccinators and supervisors have undergone training and orientation as required.
- Forecast, indent and distribute vaccine and other logistics.
- Make supervisory visits to sub district levels to review preparedness and monitor implementation.
- Collect compile and transmit data to state.
- Analyse feedback data and present it to DTF and at District review meetings for corrective actions.

3.7 Conducting pre-campaign meetings, trainings and workshops

To ensure that the micro-planning guidelines are followed, logistics and supplies properly arranged for, and personnel involved at all operational levels clearly understand their roles and activities to be undertaken; trainings/meetings listed below must be conducted before the measles catch-up campaign at each level. A meetings/training plan and timeline should be included in the micro-plan for each state, district and block.

3.7.1 National Planning Workshop

The objective of the meeting should be to sensitize the state level program managers on planning, implementation, monitoring and evaluation of catch-up campaign.

3.7.2 State Planning Workshop

The objective of the meeting should be to sensitize the district level program managers on the strategy to be followed, need for preparing microplans for their areas, and sort out issues of coordination between the implementing partners.

3.7.3 District Micro planning Meeting/Urban Area Planning Meeting

The objective of these meetings will be to train and sensitize the block medical officers (BMOs), other support staff and the urban area planners on how to develop and implement

micro-plans for their areas for the upcoming measles catch-up campaign. Special attention should be paid on developing area-specific IEC strategies for problem pockets.

3.7.4 District level Training of Trainers:

Training will be conducted with specific skill based behavioural objectives. Appropriate plans for such trainings have been outlined in Chapter 7.

3.7.5 Trainings for Micro planning and implementation at Block and sub-block levels

These training sessions will be utilized to develop the micro-plans as well as to train all implementation level functionaries as per training plans outlined in Chapter 7.

3.8 Post campaign review

State /District Review Meetings

A meeting should be organized immediately after completion of measles catch-up campaign activities to review the performance of measles catch-up campaign activity based on the feedback from monitors, state, district and block level supervisors. Data analysis from the measles catch-up campaign round should also be presented at this meeting.

Note:

Specific tasks at different levels have been listed in Chapter 11. The roles and responsibilities of sub-district level functionaries and other key departments and stakeholders have been provided in Annex.

Table 3-1: Timeline for Catch-up campaigns

S.No	Activity	Time period before or after catch-up campaign date	Level
1	Develop Action Plan (Central Operations group)	5-6 months before	National
2	Estimate Budget and operational costs for catch-up		National
3	Logistics timeline /Costs etc. For catch-up		National
4	Initiating process for procurement of vaccines and other logistics	6 months before	National
5	Training and Operational Guidelines including AEFI and Vaccinator guidelines	5 months before	National
6	Communication Package and Branding for SIA	4 months before	National
7	Print and Distribute operational guidelines	3 months before	National/State
8	Disseminate financial guidelines to states	3 months before	National

S.No	Activity	Time period before or after catch-up campaign date	Level
9	National Workshop	3 months before	National
10	State level workshops & Trainings at District/sub-district levels	2 months before	State/District
11	Prepare & review micro-plans	2 months before	District/Block
12	Training of vaccinators and ASHA/AWW	1 month before	District/Block
13	Review of cold chain systems at district/sub-district levels	3 months before	State/District/ Block
14	Flow of funds for Ops costs to state	1 month before	National
15	Flow of funds for Ops costs from state to district	3 weeks before	State
16	District level coordination meetings	Before campaign/ During campaign for mid-course correction/ After SIA to dentify gaps	District
17	Distribution of Vaccines and other logistics to state and districts	1 month before	National/State
18	Pre-campaign monitoring	2 weeks before	National/ State/District
19	Campaign monitoring	Concurrent	National/ State/District
20	Post-campaign coverage evaluation	1 month after	National/State
21	Post campaign review at state level	6 weeks after	National/State

KEY POINTS:

- ⇨ High level political commitment and inter-sectoral coordination required.
- ⇨ District level ownership by CMO and oversight of all operational aspects by DM are keys to successful implementation of measles catch-up campaigns.
- ⇨ District Task Force should review preparedness and intervene as necessary.
- ⇨ State and district level training and workshops must be task oriented and conducted according to stringent timelines.

4 OPERATIONAL AND LOGISTICS PLANNING (MACRO-PLANNING) AT STATE AND DISTRICT LEVELS

4.1 State level

In general, the following broad steps need to be followed in consultation between national and state levels:

- Solicit high-level political commitment;
- Establish appropriate inter-sectoral subcommittees for operations and social mobilization
- Support districts to mobilize additional human resources as necessary;
- Define roles of other departments and development partners.
- Develop an implementation plan taking into account the target age group, geographic area and timing for the various activities;
- Develop and coordinate an advocacy and communication strategy
- Adapt national training materials/guidelines for use at the state level.
- Organize and oversee training and micro-planning at district level;
- Coordinate with Central level for vaccine and other supplies in time
- Plan for distribution of vaccine, supplies and other campaign materials to district.
- Monitor district level preparedness (micro-plan, funds, logistics, training)
- Monitor implementation on a daily basis during the campaign and ensure mid-course corrections
- Assess and review performance and document lessons learnt

4.2 District level

The district should have the following information in its basic macro-plan:

- Availability and requirements of the following human resources and logistic items by block: (Format: District Vaccine, logistics & Human Resource plan)

- Human resource by category - supervisors, vaccinators, ASHA, AWW, volunteers
- Vaccine including diluents and syringes etc.
- Other logistics e.g. ice-packs, indelible ink marker pens, vaccination cards etc.
- Count of session sites and days of activity
- Logistic support for vaccine distribution
- Available and required Cold chain space (Chapter 6 / District Cold chain plan format)
- IEC/IPC and Media Management plan (see chapter 8)
- Data and information flow plan: In the preparatory phase all information must be submitted to the district level (logistic requirement, training plans etc.) according to timeline indicated above. During the days of activity, coverage reports must be submitted daily from Block to District by the same evening. District will send daily coverage reports to State latest by next morning and state will send to central level the same day. A consolidated coverage report mentioning that this is the final report must be submitted by District to State and from State to Centre within seven days of completion of activity. The coverage compilation formats for different levels are in the annex.
- Monitoring and evaluation plan: Chapter 10.

KEY POINTS:

⇨ Draw up estimates for human resource and logistics well in time and then refine the estimates based on a bottom-up approach.

⇨ Inventorize and estimate available cold chain space by type (ILR/Freezer) and level (State/District/Block/PHC).

⇨ Make a cold chain plan keeping space reserved for RI vaccines.

⇨ At the district level explore all sources for personnel skilled in safe injection practices.

The following are indicative norms for calculating logistic requirements in macro and micro planning for measles catch-up campaigns.

Table 4-1: Calculation norms to be used in macro and micro-planning

Activity / Unit	Norm
Target population	9 months - <10 years; This can vary between districts. Take the highest of the available estimates for planning.
1 outreach vaccinator day	= 150 children per vaccinator per day (OVD)
1 school vaccinator day	= 200 children per vaccinator per day (SVD)
No. of supervisors	1 supervisor per 3 teams
Wastage Multiplication Factor (WMF)	1.1 (for vaccines and AD syringes)
Vaccine doses required	= Target population X 1.1 (WMF)
Vaccine vials required	= Vaccine doses / 5 (for 5 dose vials)
Diluent vials required	= Vaccine vials required
Auto disable syringes (ADS) required	= Target population X 1.1 (WMF)
Reconstitution syringes (5 ml) required	= Vaccine vials
Hub cutters	At least 1 per vaccinator
Marker Pens	1 pen per 300 children. At least 1 per session site.
Red plastic bags	= 1 per 50 syringes
Black plastic bags	= 2 per session site per day
COLD CHAIN	
1 litre of cold chain space for vaccine storage	= 200 doses of measles vaccine (excluding diluents)
Cold chain space required for vaccine (in litres)	= measles vaccine doses required / 200
1 litre of cold chain space for diluent storage	= Diluents for 250 doses of measles vaccine
Minimum Cold chain space required for diluents (in litres)	= Diluent doses required for 1 day/250 [If there is constraint of cold chain capacity, diluents for next day's activity only can be stored in cold chain for 24 hours.]
Cold chain space required for infant immunization in UIP	55.5 cc per infant for all UIP vaccines to be given in 1 year
Daily ice pack requirement	= (Number of vaccinators X 12) + (Requirement for supervisors and cold boxes)
Total ice pack requirement (including freezing cycle)	= Daily ice pack requirement X 3

5 MICRO-PLANNING FOR MEASLES CATCH-UP CAMPAIGN (DISTRICT AND SUB-DISTRICT LEVELS)

5.1 Micro-planning Process at the District level

The district micro-plans must be developed in a bottom-up approach from the PHC level and should be flexible enough to take into account ground realities in different places. Village/urban area lists available with at the Block or PHC must be cross-checked against other sources (e.g. BDO office) for completeness to ensure that no areas are left out from the micro-plan.

The first step is to collect and compile the following background information. Please refer to the micro-planning formats as indicated below.

- Reliable estimates of target population (9 months to 10 years) by village / blocks / municipalities. Use the highest of the available estimates.
- Names and location of schools (Govt., Private, Madarsa, Kindergarten or Montessori schools etc.) and number of students enrolled in each school who fall within target age-group.
- Block-wise counts of available human resources qualified to give safe injections. An indicative list is below.
  - ANMs, LHVs
  - Alternate Vaccinators involved in Routine Immunization
  - Male Health Workers trained to give injections, pharmacists etc
  - Nurses in clinical duty.
  - Retired ANMs
  - Trained personnel available and willing to participate from the Private sector
  - Staff from medical and nursing colleges
  - Explore support from different sectors for urban areas: Municipal Health Departments, NGOs etc.
- Block-wise counts of available human resources who can assist the vaccinators:
  - Count of ASHA by Block
  - Count of ICDS workers (AWW and helpers) by Block from Dept. of Social Welfare

- Explore support from different sectors for urban areas: Municipal Health Departments
- Block-wise list of NGOs, youth-groups (NYK, NCC, NSS, youth clubs) etc.

- Estimate requirement of logistics (vaccine/diluents, ADS etc.) per norms given above (Block-PHC Logistic Format) by Block and by PHC.
- Estimate functioning cold chain space available at district, block/municipality and PHC levels separately (Chapter 6) and estimate cold chain space required for vaccine and diluents
- Available waste disposal facilities available in each block/PHC.

5.2 Micro-planning Process at the Block level

The basic unit of micro-planning will be the PHC/sub-centre area. The following will apply to the block micro-plan.

- In one day one vaccinator will cover on average
  - 200 beneficiaries at school site
  - 150 beneficiaries at outreach site
- A Vaccination team will have
  - 1-2 vaccinators* (ANM / Male HWs / LHV / retd. ANMs, LHVs / pharmacists / nurses / doctors)
  - 1 ASHA / Link worker or similar staff (for urban areas)
  - 1 AWW
  - 1 volunteer

** Note: In case the beneficiary load is 150-300 at outreach site or 200-400 at school site, the team will have two vaccinators.*

- ***One team-One day-One site***
  - Plan to complete measles immunization in one day in a village or an urban area (mohallas) or in a school by 1 or more teams as required. To ensure injection safety no team will conduct sessions at two different sites in one day.
  - For larger villages, separate teams may be strategically placed in different areas of the village to maximize coverage.

5.3 Types of session sites

Vaccines will be administered from four types of session sites during the catch-up campaign.

5.3.1 Session sites at Educational Institutes

All types of educational institutes where <10 years children attend will be used as vaccination sites. These sites will be covered in the first week of the campaign.

Urban wards may need extra vaccinators since they have higher number of schools. Temporary skilled vaccinators (nurses, intern doctors, private doctors, senior nursing students etc.) may be assigned to complete the vaccination in a school in one day.

5.3.2 Outreach site (regular RI sites and additional sites in village/urban mohalla)

Children who do not go to school or those left out during the vaccination week in schools will be covered from regular RI/UIP sites during the 2nd and 3rd weeks. Vaccinators will provide routine immunization services in two scheduled days of the week. During the remaining four days of the week, they will conduct campaign sessions.

5.3.3 Mobile (special) Teams / Additional Sites

Street children and other high-risk populations in urban areas may not attend school or community vaccination sites. These groups are most likely to have missed the routine dose in their infancy and may also miss the catch-up campaign dose if proper micro-planning is not done. Such groups require special approaches.

Places where these groups stay at night (e.g. railway station, bus stations, ferry ghats, unauthorized slums, construction sites, brick kilns, brothels etc.) should be identified in advance. Additional teams need to be assigned to reach them, and should work at unconventional times such as very early morning or at night. These teams will immunize children from a fixed location in these high-risk population settlements. These operations to reach high-risk target children need good planning and close supervision.

5.3.4 Facility based session site

All health facilities at PHC level and above will function as session sites throughout the campaign duration to immunize any children in the target age group coming to the health facility, for whom measles vaccine is indicated.

5.4 Duration of Session

- Catch-up campaign sessions sites will run from 8:00 AM to 2:00 PM. The vaccinators and ASHA/AWW will then perform their routine activities until 4:00 PM at this site.
- Sessions in educational institute will run as per school timing and complete all immunizations in one day.
- Mobile teams may have to work at unusual hours to reach special population groups. The time of activity for each day and area should be specifically recorded on the micro-plan for such activity.
- Parents/guardians of the children who accompany the child in the vaccination centre will be requested to wait for at least half an hour after administering the vaccine to observe whether any serious AEFI happens (e.g. anaphylaxis).

On an average there will be 1 working ANM (trained vaccinator) per 7,500 population. Currently this is the approximate average population of one sub-centre area.

Target age children in a population of 7,500 = 20% of 7,500 = 1,500

Number of vaccinator days needed to cover the eligible population in one sub-centre area = 1500/125 = 12 vaccinator days. [This can go up to 150 in which case number of days required to complete catch-up campaign would be even less.]

A proportion of these children will be immunized in schools in the 1st week of the campaign and the rest through outreach or mobile or fixed session sites in the 2nd and 3rd weeks. The exact proportion of children immunized in schools will vary according to school enrolment ratios and the coverage attained at school session sites.

Since 12 vaccinator-days will be needed for each sub-centre area, the entire district will be covered in 12 working days. Sparing two days of routine immunization per week, 3 weeks will be needed for these 12 working days.

5.5 Micro-plans at the Block/PHC level should have the following components (See chapter and format reference for further details)

- Session site and human resource plan with vaccine and logistic estimates by session sites
- Map showing location of session sites.
- Cold chain plan including ice pack freezing plan at Block/PHC level
- Logistics distribution plan with route charts on map
- Waste management plan
- Training plan
- Communication Plan
- AEFI management plan
- Supervision plan
- Plan for covering missed children
- Contingency plans for human resources, logistics and cold chain

5.5.1 Session site and human resource plan (Formats: Block_PHC Logistics, Outreach micro-plan, Education facility micro-plan)

For school session site:

- Based on the number of teams required, identify human resource by name, including support staff to be provided by the school and the date of activity in each school.

For outreach session site:

- Based on the number of teams required, identify human resources by name and the date of activity in each village/urban area (mohalla).
- Identify the location of the session site for each team on the map.

5.5.2 Vaccine and logistic estimates by session sites (Format Outreach micro-plan, Education facility micro-plan)

For calculating requirement of vaccine doses, diluent and AD syringes use a WMF of 1.1. However, note that children (generally 5-10 year old) will be immunized at school in the first week. In the 2nd and 3rd weeks when the outreach sessions will be conducted in a village/urban area, a proportion of children will already have been vaccinated at school. Block and district level planners should monitor the school coverage closely to fine tune the vaccine supplied to the outreach sessions. As a thumb rule, reduce vaccine doses supplied by 25% while distributing vaccine for the outreach sessions. This should be adjusted upwards or downwards depending on local situations, like school enrolment, coverage achieved in schools etc.

Vaccine doses supplied to school session (1st week) = No. of beneficiaries in school X 1.1

Vaccine doses supplied to outreach session (2nd & 3rd weeks)

= No. of beneficiaries in village X 1.1 X 75%.

5.5.3 Mapping

Update the block maps showing village/Municipal boundaries. Maps should have the following features:

- Village boundaries with target children population
- Educational institutes (including government and private schools, crèches, day-care centers, Madrassa)
- Current RI vaccination sites (both fixed and outreach).
- Possible additional sites - planned for measles catch-up campaigns at school and outreach sites (these sites should be planned to reach all communities)
- Hard to reach areas and under-served areas needing special efforts
- Major access routes
- Cold chain points
- Health facilities (PHC/Additional PHC)
- AEFI management sites (see below)

5.5.4 Cold chain plan (Chapter 6/Cold chain and CC contingency formats)

This should include

- Vaccine and diluents storage plan at district and sub-district levels
- Ice pack freezing plan at sub-district (block/PHC) levels

5.5.5 Vaccine and Logistics distribution plan (Form PHC vaccine distribution plan)

- Estimation of Vaccine and other logistics by session site by day.
- Distribution plan for vaccine and other logistics through alternate vaccine delivery system.
- Personnel movement plan including pick-up and drop points.

5.5.6 Waste management plan (Format Waste management plan)

- Identify where waste will be collected
- How it will be transported
- How it will be disinfected and disposed

5.5.7 Training plan (Chapter 7)

- Schedule training of trainers (TOT) at the district level
- Schedule of vaccinators and supervisors training with date, time and venue at block /PHC / municipality level.
- Schedule of volunteers / AWW/ ASHA training with date, time and venue at block/ PHC / municipality level.

5.5.8 Communication Plan (Chapter 8/Format PHC communication plan) and due listing (Due list format)

General IEC messages will be standardized from the central level.

In this campaign, the day of immunization activity will vary from village to village. Specific plans must be made for communicating dates to the parents individually through inter-personal communication by ASHA and/or AWW staff.

- Date of immunization activity for each village/urban area will be prominently displayed at Block PHC, PHC and Sub-centre.
- ASHA will prepare due list of target beneficiaries in her area and will also do IPC.
- The micro-plan should enlist the names of ASHA against the village and the dates on which she will make due list and do IPC in that village.
- Due listing should be completed at least 2 weeks before the campaign start date.
- IPC through invitation cards will be completed in the week prior to campaign start date.
- Supervisors / Block level staff should conduct random check visits to verify whether due listing and IPC has been conducted as per IPC plan by ASHA.

5.5.9 AEFI management plan (Chapter 9)

- All government health facilities and centres participating in national immunization program (except sub-centres) will be AEFI management centres.
- All Medical Officers will be trained in AEFI management.
- Additional private clinics/hospitals should be identified as AEFI management centres as required. Medical personnel of these facilities should also be trained in AEFI management protocols.
- The contact details of the closest AEFI management centre should be available at every session site.
- Referral mechanisms (including transport support for referral).

5.5.10 Supervision plan (PHC and District supervisory formats)

- On an average there will be one first line supervisor per three teams. They should be identified by name in the micro- plan. Their tasks have been outlined in Chapter 11.
- Number of available 1st line supervisors: Health Inspector (HI), Assistant Health Inspector (AHI), Sanitary Inspector (SI), NGO supervisors, if suitable;
- Intensive monitoring and supervision will be conducted to identify areas with low coverage (< 90%) for corrective action.

5.5.11 Plan for covering missed children

Supervisors will monitor areas immediately on completion of activity and check at least 20 target age-group children. BMO should review supervisors' checklists and monitoring feedback on a daily basis to identify areas requiring action as below. If according to either supervisors' or independent monitors' observations

- 2 or 3 children are found 'missed' (un-immunized), visit should be made to this area to motivate and mobilize missed children to the nearest campaign or routine immunization session site.
- 4 or more children are found un-immunized, the vaccinator team should revisit the area to immunize all missed children.

5.5.12 Contingency Plans for cold chain, logistics and human resources

Plans should be made out to cover contingencies in the event of power failure, equipment failure clearly delineating where the problem should be escalated and suggesting corrective measures.

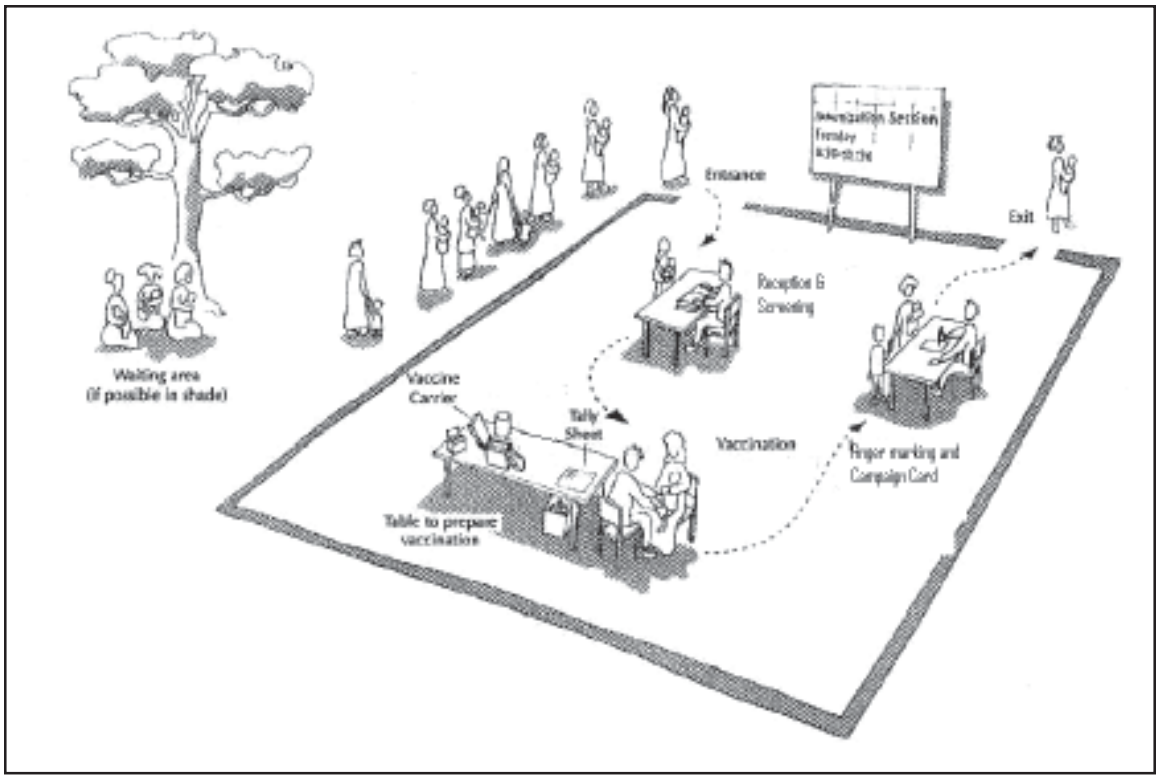


Figure 5-1: Measles immunization at session site

KEY POINTS:

- ⇨ All vaccination to be given by trained personnel from fixed sites.
- ⇨ One village /urban area to be covered in one day. No vaccinator will work at two session sites on the same day.
- ⇨ Schools will be covered in first week; outreach and hard to reach areas in 2nd and 3rd weeks.
- ⇨ ANM will continue with RI and other activities on scheduled days of the week.
- ⇨ Each beneficiary will wait for at least 30 minutes after measles vaccination. Vaccinators will wait for at least one hour at the site after vaccinating the last child.
- ⇨ Accurate and realistic micro-plans will be critical for success.
- ⇨ All injection waste materials will be disposed per CPCB norms.

6 COLD CHAIN MANAGEMENT DURING MEASLES CATCH-UP CAMPAIGN

6.1 Ensuring Effective Logistics

Logistics planned well in advance are critical to the success of Catch-up campaign. The major steps in ensuring excellent logistics during an immunization campaign are:

- Order vaccines in advance.
- Make a written distribution plan from PHC to session sites. The plan should include
- Responsible person at each post
- Specify when and how supplies will be distributed and returned.
- Return of unused vaccines in reverse cold chain.
- Return of injection wastes from vaccination posts and their disposal.
- Pay particular attention to logistics needs for hard to reach and under-served areas
- Ensure that vaccine, diluent from same manufacturer, AD syringes, reconstitution syringes and injection safety equipments are always distributed together in matching quantities.

6.2 Maintaining the Cold Chain System

Measles vaccine can be stored in either ILRs or deep freezers. In general, measles vaccine should be stored in walk-in-cold room or ILR at +2°C to +8°C temperature. **However, if there is shortage of ILR space, measles vaccine can be stored in WIF or deep freezer only for campaign activity.**

However, diluent should never be stored in freezer or in minus temperature because of threat of micro cracks in the ampoule and thus risk of contamination. Diluent ampoule can be stored in ambient temperature, until the day before the actual campaigns starts. **To optimally utilize cold chain space, only the diluents that will be used next morning will have to be stored in ILR for at least 24 hours to match temperature with vaccine during reconstitution.**

6.3 Estimation of cold space

During the supplementary immunization activities, a substantially larger cold chain capacity is needed than for routine immunization activities. To calculate the amount of cold chain space available for vaccine supplies for Catch-up campaign, the estimated amount of space used for routine immunization services needs to be subtracted from the total available space.

This requires an updated inventory of the working cold chain equipment available, and a review of the cold space provided by each type of equipment. As a general rule, every 200 doses of measles vaccine require approximately 1 litre of storage space (5 dose vials excluding diluents) and diluents for 250 doses will occupy another litre of cold chain space.

EXAMPLE

- **1 ILR small with net vaccine storage volume of 45 litre can store 9,000 doses of Measles vaccine without diluents (1800 five doses vials) which is adequate for immunizing 8,000 children (WMF = 1.1).**
- **1 ILR large with 108 litre net vaccine storage volume can store 21,600 doses of measles vaccine without diluents (4320 five dose vials) which is adequate for immunizing 19,600 children (WMF = 1.1).**

At the district level, cold chain space will mainly be utilized for storing vaccines. At the sub-district level (Block/PHC) cold chain space will be needed for freezing ice packs and storing vaccines and diluents. With current cold chain infrastructure, storage space for vaccine (routine and campaign) will not be big problem at sub-district levels (block/PHC), but there may be constraints at district level.

In case of inadequate space, vaccine can be supplied in multiple supply cycles. Since activity will be spread out over 3 weeks, vaccines can be supplied in aliquots (50% before activity, 25% at end of first week and 25% at end of second week) if there is a constraint of cold space.

During the campaign, only large standard vaccine carriers with four icepacks will be used for carrying vaccine. Each vaccinator at school or outreach site will require two vaccine carriers.

Cold chain space need for a District of 20 lakh population

(Considering 3 months storage of routine vaccine and birth rate of 25/1000)

Routine Immunisation

- Total number of children to be immunised every month i.e. 50,000/12=4167
- For every child to be fully immunised cold chain space need is 55.5 cubic cm
- Total cold chain space need for 3 months is 55.5*4167/1000 *3 = **694 litres,**

Measles catch-up campaign

- Age group for measles SIA is 9months to 10 yrs which is roughly 20% of the total population.
- Total children to be immunised with Measles vaccine ie.20,00,000* 20/100 =400,000
- Vaccine doses required = 400,000*1.1 (WMF) = 4,40,000
- Total cold chain space needed (in litres) for storage of Measles SIA vaccine (5 cc per dose): 4,40,000*5/1000 = 2200 litres.
- Hence total cold chain capacity requirement in district including RI and Measles SIA : 694 litres + 2200 litres = 2894 litres

This is equivalent to 27 large ILR s , each of 108 litres net storage capacity (combined storage)

Or

11 large Deep Freezer of 213 litre net vaccine storage capacity for measles vaccine only.

Options: To optimally utilize cold chain space, distribute vaccines and diluents (50-100%) from district store to Blocks and PHCs immediately.

Cold chain space needed for a Block PHC of 1 lakh population

(Considering 1 month storage of routine vaccine and birth rate of 25/1000)

Routine Immunisation

- Total number of children to be immunised every month ie 2500/12=210
- For every child to be fully immunised cold chain space need is 55.5 cubic cm and total cold chain space need is 55.5*210/1000=11.6 litres,

Measles catch-up campaign

- Age group for measles SIA is 9months to 10 yrs which assuming 20% of the total population.
- Total children to be immunised with Measles vaccine ie.100,000* 20/100 = 20,000
- Vaccine doses required = 20,000*1.1 (WMF) = 22,000
- Total cold chain space need (in litres) for storage of Measles SIA vaccine (5 cc per dose):

  22,000*5/1000 = 110 litres.

Hence total cold chain capacity requirement in a PHC including RI and Measles SIA : 11.6 litres + 110 litres = 121.6 litres

3 small ILR of 45 litre net capacity or 1 large ILR of 108 litre net capacity and 1-small ILR of 45 litre net capacity is adequate for both routine and Measles SIA

6.4 Icepack requirements

Sufficient icepacks need to be available for transport of the vaccines to the field and keeping the vaccines and diluent cool during the day. To sufficiently freeze icepacks, the icepack need to be kept in the freezer for 24 hours.

Vaccines carriers require 4 icepacks each and each team will need two vaccine carriers, i.e. 8 icepack per vaccinator per day, initially and at least one replacement set (4 ice packs) during the day.

Daily ice pack requirement = (No. of vaccinators x 8) + Additional ice packs for supervisors and cold boxes (considering 1 supervisor for 3 teams and at least 4 IPs of each team to be replaced daily). So, one vaccinator will need 12 ice packs (8 initially in two vaccine carriers + 4 as replacement ice packs.)

Total Ice pack requirement (freezing cycle) = Daily icepack requirement x 3

EXAMPLE:

A PHC has 6 teams with 6 vaccinators. Each vaccinator requires 2 vaccine carriers with 4 icepacks each plus 4 replacement icepacks for 1 day of activity. The total requirement for 1 day at the PHC is

- **6 vaccinators X 4 X 3 Ice packs = 72 ice packs**
- **2 Supervisors X 4 ice packs (1 vaccine carrier each) = 8 ice packs**
- **Additional IPs for cold boxes for storage and transportation of vaccine and diluents**

Total IP requirement for PHC (including freezing cycle) : (72 + 8) x 3 = 240 + additional requirement for cold box

Additional icepacks are required to transport vaccines from state to district and from districts to Block/health centre level.

Freezer capacity is needed to have required number of adequately frozen icepacks. The number of icepacks that each equipment can freeze is detailed below.

Table 6-1: Freezing and storage capacities for icepacks for Deep freezers of different make

Model	Manufacturer	type	Model	Ice pack making capacity / 24hrs	Ice-pack storage capacity
HAIER DF - Large	HAIER	DF - Large	HBD 286	39	350
Vest frost D/F Large	Vestfrost	DF - Large	MF-314	60	380
HAIER DF - Small	HAIER	DF - Small	HBD-116	18	140
Vest frost D/F small	Vestfrost	DF - Small	MF -114	25	130
Cold box - 20 ltr					92
Cold box - 5 ltr					42

Table 6- 2: Net vaccine storage volume of Deep freezers and ILRs of different make

Sr. No	Cold chain Equipment	Net vaccine storage volume in litre	Measles vaccine storage capacity in doses without diluents*	No of vials can be stored
1	ILR small	45	9,000	1800
2	ILR large	108	21,600	4320
3	DF Small	72	14,400	2880
4	DF Large	213	42,600	8520
5	WIC-Small(16 cubic meter)	6,930	13,86,000	2,77,200
6	WIC-Large (32 cubic meter)	13,440	26,88,000	5,37,600
	Non Electrical Cold chain Equipment			
1	Cold Box Large Model RCW 25/CF(Blue)	20.7	4000	800
2	Small vaccine cold box, Model CB/INO/C2/90	6.5	1300	520
3	Vaccine carrier (with 4 IP)	1	200	40 20-25 (With diluent)

*Each dose of measles vaccine occupies 5 cc (= 5 ml) of storage space without diluents.

6.5 Maintaining the cold chain from central store to health facilities

6.5.1 Cold boxes

In the absence of adequate ILR or DF, cold boxes can be used for storage of vaccines during a short period (from 2-7 days). Cold box can also be used for keeping diluents cool 24 hrs before vaccination if adequate space not available in the ILR .

6.5.2 Vaccine carrier packing

Only standard vaccine carrier with four icepacks should be used by vaccination teams during measles campaign. Ensure that vaccines and diluents are kept cool during the whole day; replace melted icepacks immediately.

One vaccine carrier can be packed with 100-125 vaccine doses (20-25 vials) with matching diluents. The other vaccine carrier may be stocked with balance vaccine doses and diluents required at the session site.

During packing a vaccine carrier put the diluents with paper packing box or original blister packs at the centre of the vaccine carrier and vaccine vials around. This is to avoid diluent ampoules from freezing by coming in direct contact with frozen icepacks.

Figure 6-1: Vaccine vials in zip lock bags

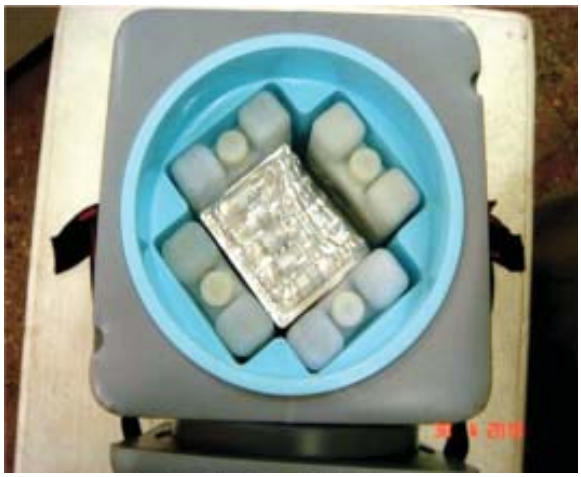
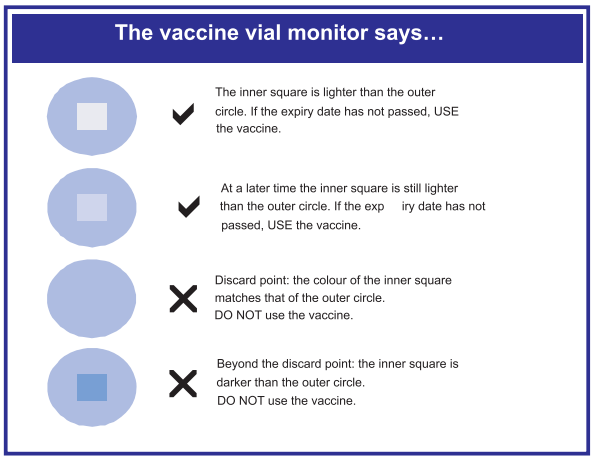


Figure 6-2: Diluents in blister packs above vaccine vials

6.5.3 Maintaining Cold Chain during Vaccination Session

- Measles vaccine is very sensitive to heat and sunlight. Never expose the vaccine carrier, the vaccine vial or icepack to direct sunlight.
- All vaccine and diluents should be kept inside the vaccine carrier with the lid closed until a child comes to the centre for vaccination.
- The VVM on the cap of the vaccine vial indicates whether the dry vaccine is usable or not. Once reconstituted, VVM is of no use to indicate usability of the vaccine
- At the time of reconstitution the diluent must have the same temperature as of the vaccine.
- Measles vaccine becomes more sensitive to heat after reconstitution. Reconstituted vaccine must be kept between +2 to +8 degrees Celsius and discarded 4 hours after reconstitution or at end of session whichever is earlier.



NB: for measles vaccine, the VMM only indicates the heat exposure of the dry vaccine; not after reconstitution.

- The vaccinator should take out one ice pack from the second vaccine carrier (with smaller stock) to keep one vial of reconstituted vaccine in the hole of the ice pack. Once the ice pack is fully melted, it should be replaced with a fresh frozen ice pack from the same vaccine carrier.
- Once the reconstituted vial is finished, the next vial should be taken out of the vaccine carrier for reconstitution only after arrival of another child in the vaccination session site or if another child is waiting for vaccination.
- At the end of the session, the vaccine carrier with all icepacks, unopened vaccine vials and diluents inside, should be sent back to the vaccine distribution centre.
- Intact sealed vials returned on previous day should get priority during packing and will be kept separately in the ILR on the top layer; so that, those will be used first the following day.
- One rubber band should be put on return after first issue and two if vial was taken out twice.
- If the vial is not used even in the third session, it should be brought back to the PHC and discarded per CPCB guidelines.

KEY POINTS:

⇨ Cold chain space will be required for measles vaccine, diluents and ice pack freezing.

⇨ At district level cold chain space will be used mainly for vaccine storage; at sub-district level, cold chain space will be needed for both vaccine and diluent storage and for ice pack freezing.

⇨ Measles vaccine can be stored in either ILRs or DFs.

⇨ Diluents must only be stored in ILR. To conserve cold chain space only one day's supply of diluents can be kept in ILR.

⇨ If the district has a WIC for the division/region then it can be used for storage of Measles vaccine with separate documentation.

⇨ Available DFs at the district level can be used for storage of Measles vaccine

⇨ As activity will take place over 3 weeks, district level stores can supply vaccines and diluents to district and sub-district level stores in 2-3 supply cycles (50% / 25% / 25%).

⇨ Ice pack requirement including freezing cycle = Ice pack required for a day X 3

7 TRAINING FOR MEASLES CATCH-UP CAMPAIGNS

All key players in Catch-up campaigns should be a part of the training sessions for the campaign. These should include Chief Medical Officer, DIO, all medical officers, supervisors, identified vaccinators, cold chain handlers, data handlers and other health staff directly or indirectly involved with the campaign.

7.1 Objectives

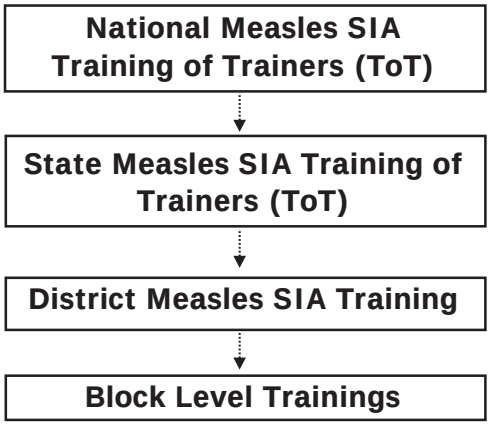
The overall objectives of the training are:

- To ensure that all staff involved in Measles SIA understand their role in the SIA
- That the micro-plans at the sub centre level are completed and
- That all vaccinators have appropriate knowledge and skills to conduct the SIA at each of their catchment areas.
- The batch size at all trainings at any level should not be more than 30.

7.2 The Training Cascade

Training for Catch-up campaign should occur as a cascade as below. A training plan / Schedule / calendar should be developed well in advance by the State, districts and each block based on the training load and availability of trainers.

Measles Supplementary Immunization Activity Training Cascade



7.3 National and State level Training of Trainers:

In the **first stage**, Master Level Training of Trainers (ToT) course for State Health Functionaries including Deputy Health Directors, State Immunization Officers, other identified State level master trainers at State Training Institutes and Medical Colleges should be conducted at the national level by the central team. The duration of the course will be one day. The facilitators will be resource persons from Immunization Division, GoI and experts from partner organizations. This training of trainers will be completed at least 2 months prior to the SIA in each phase.

In the **second stage**, ToT course will be conducted at state level for District Level Trainers. These would be identified by each district from among District level health officers, Medical Officers, Health Assistants, and Cold Chain Officers etc. The State level Master Trainers will facilitate this ToT. Duration will be one day. The training will be completed at least 6 weeks prior to the SIA in each phase.

In the **third stage**, each district will conduct a district SIA training of trainers for all block level trainers like medical officers, cold chain handlers, data handlers and other block level functionaries. This will be one day training and should be competed at least 4 weeks before the SIA in each phase.

7.4 Vaccinators', Supervisors' Training:

All vaccinators (ANMs, MPWs, Nurses and others) of each vaccination team and supervisors (HA, LHV, BEE, HS etc) will be trained by the Block Medical Officer and team (duration one day) at the block level. The training will be completed 1-2 weeks prior to the SIA in each phase.

7.5 Volunteer orientation

At PHC level will be done by the Medical Officers and supervisors. This will be 2-3 hours training and should be completed at least 1 week prior to the SIA.

7.6 Responsibilities at each level:

7.6.1 National level

- Develop and finalize the training module, materials and plans
- Make necessary printing of training materials and ensure distribution to all field outlets.
- Obtain approval for training plan, budget, and ensure disbursement of funds and provide the necessary logistics.
- Provide master level training to State level trainers and facilitate and supervise both state level and district level trainings.

7.6.2 Master trainer (State/District and team)

- Form training teams and obtain necessary master level training from the Central Team.

- Obtain necessary training materials, guidelines, and funds and distribute them to Block level.
- Plan and organize TOT training for block level vaccinators' training team, facilitate and supervise the training at blocks.

7.6.3 Trainers (Block Medical Officers and team)

- Plan the schedule for training and invite all vaccinators and supervisors for the training. Advise the vaccinators to bring draft micro plans prepared.
- Ensure adequate space for the participants so that they can sit in a "U" or semi-circle and have good eye-to-eye contact during the training. The venue should be clean, airy and allow speakers to be heard by all participants.
- Ensure that number of participants for each training course would not exceed 30. If there are more vaccinators then training should be conducted in batches of 30.

7.7 Contents of Training:

Ensure that all the following topics are covered during the training session:

- Objectives, rationale and strategy of the campaign
- Dates of campaign and target age group
- Micro planning including preparation of sub centre maps showing schools and outreach clinics
- Task allocation for each participants detailing roles and responsibilities
- Social mobilization including importance of IPC and registration of all target children
- Organization and management of a vaccination site
- Cold chain management including VVM, care of the vaccine and diluents during transportation and session period
- Reconstitution of measles vaccine & recording time of reconstitution and need to discard measles vaccine 4 hours after reconstitution/ after each session
- Injection technique with hands-on skills training
- Immunization safety
- Safe disposal of vaccination site wastes including sharps
- AEFI - its management, recording and reporting
- Use of tally form and reporting forms

- Supervision of campaign activities including rapid convenience survey
- Logistics arrangements for receiving vaccine and supplies for vaccination sites
- Financial arrangements

7.8 Essential Training Materials at Block Level:

- Vaccinator's guide
- Blank tally sheets
- Sub center micro-planning templates
- Information kits
- Copies of sample sub-center map
- IEC materials
- Note pads for participants
- Note pad for the trainer (to be used for recording participant's responses, questions and own observation about the training session)

7.9 Monitoring of Trainings:

- Each training session held at block level must be reported to the district level in a training workshop reporting format (Table 7-1).
- At least 10% of all block level trainings should be monitored by district program officers and their feedback must be documented at the district level by CMO/DIO (Table 7-2).

KEY POINTS:

⇨ Cascade strategy for training with training of trainers.

⇨ Batch size should not exceed 30 to allow for interactive participation by trainees.

⇨ Every training session should have pre-defined objectives, methods and assessment.

⇨ ANMs and supervisors will develop and review micro-plans during Block level training sessions.

⇨ Training sessions should be monitored.

Table 7-1: Training Workshop Reporting Format

1.	Name of Training Site	
2.	Dates of training workshop	
3.	Number of participants - Expected	
4.	Number of participants - Attended	
5.	List of participants with designation, address and place of work (attach registration copy)	
6.	Attach a copy of training program (agenda) including: Name of sessions Time allotted Name of resource person Methodology	
7.	Mention the training materials used	
8.	List training and other materials given to all participants in local language	Measles Catch-up training booklet Handouts from training materials FAQS Othera
9.	Evaluation of the training: Pre-post test evaluation done?	Yes No
10.	Remarks on the workshop indicating good experiences and problems/constraints faced	
11.	Remarks by facilitators/training organizers regarding: Trainings materials Release of funds Facilities available at the training venue	

Table 7-2: Checklist for monitoring the quality of training

1.	Date of visit	
2.	Place of visit (location of training venue)	
3.	Names and designation of persons who conducted the monitoring visit	
4.	Number of participants nominated /expected	
5.	Number of participants attended	
6.	Who were the trainees?	Vaccinators (HWs) Vaccinators (Others) Supervisors Medical Officers Volunteers
7.	Attach a copy of training program / agenda	
8.	Training and other materials given to all participants in local language	Measles Catch-up training booklet Handouts from training materials FAQs Others
9.	Pre/post test evaluation of participants done?	Yes No
10.	Feedback received from trainees and action taken?	Yes No
11.	Sessions assessment Whether session objectives were fulfilled Appropriate use of AV aids Methodology - one way, interactive, role play, question and answers	

8 COMMUNICATION AND SOCIAL MOBILIZATION

Appropriate communication and social mobilization interventions, based on evidence, will be critical to the success of the measles catch-up campaign. Rigorous planning and management processes will be necessary to mobilize the community for the campaign and address existing social norms and barriers to immunization.

At the very minimum, the objectives of this communication strategy are to:

- Inform people about the campaign
- Create momentum for immunization
- Help increase coverage

The broad components of the strategy include the following:

- Preparatory planning
- Communications needs assessment or situation analysis
- Developing the right messages and tools for specific communication objectives
- Implementing the communication campaign including
  - Advocacy
  - Social mobilization
  - Inter-personal communication
- Communication strategy for AEFI

Though each of these is a separate component in the broad strategy, they support each other and therefore the activities will necessarily have to run in parallel.

8.1 Preparatory planning

The overall campaign will engage a large number of stakeholders - from the policy makers at the centre and state to the targeted community member in the village. This calls for careful and detailed planning.

Interagency coordination: Communication operations management

Oversight to the implementation of the communication strategy will be provided by:

- Central level: National Steering Committee (NSC) and Central Operation Group (COG)
- State level: State Steering Committee (SSC) and State Operations Group (SOG)
- District level: District Task Force, headed by the District Collector.

A communication needs assessment should be carried out to:

- Understand past immunization campaigns
- Understand past communication programmes
- Understand the media environment and media use by target audience
- Assess the resources required to implement the campaign.

The communication needs assessment will help in:

- Development of specific messages and communication material
- Identifying appropriate communication channels

8.2 Communication campaign

The communication campaign begins with advocacy and social mobilization, and includes both IEC (information, education, communication) and IPC (Interpersonal communication). Apart from advocacy at state and district levels, all functionaries at the service delivery level (ANM, Supervisor, ASHA, AWW, volunteer) should be trained to deliver the right messages through IPC. This will include focus group discussions at the village level (involving opinion leaders and parents/caregivers) prior to the campaign to address their concerns and questions.

8.2.1 Advocacy

Success of a campaign will depend on strong advocacy with other Government departments and with civil society including the press and professional groups (IMA, IAP etc.). It will be worthwhile to identify and involve other organizations as partners in this effort,

- Briefing kit: To gain and maintain support of partners, a briefing package should be produced that will act as an appropriate advocacy tool and enable programme managers to gain support for the campaign.

Media advocacy

A very strong partner is media (both at the state and local levels). This calls for special advocacy with the media to gain their support for the campaign - from planning stages to the end of the campaign and after. Partnership with media will also be useful in the event of AEFI.

Potential advocacy tools

- Media kits: comprising factsheets, FAQs, pictures (if possible), list of contact addresses of spokespersons, key messages
- Media briefings, workshops

Advocacy at district level

General Advocacy Meeting: chaired by the District Collector/Magistrate with Chief Medical Officer (CMO)/District Immunization Officer (DIO) as member secretary.

Participants

District level officers from Education, ICDS, Police, Transport, Media, CDO, SDMs/BDOs, PRI, DUDA, Local bodies such as municipalities, councils, etc, professional bodies and partner organizations along with representatives from religious groups and opinion leaders should be the participating members of DTF.

Issues to discuss

- Plan strategies at the district level.
- Plan capacity building of health workers at district, block and village levels.
- Oversee the development and distribution of communications materials
- Ensure communication for AEFI is discussed and necessary action on this.

Potential advocacy tools

- PPT presentation on Measles campaign plan at the district level
- Measles fact sheet
- FAQs.
- Operations guideline.
- Media kit comprising factsheets and FAQs, operations outline, spokesperson details.
- Capacity building plan.
- M&E plan.
- AEFI management plan

Advocacy Meeting with Head Teachers

- All head teachers of schools having target children, Teachers Unions

Potential Advocacy Tools

- PPT presentations highlighting the background of the campaign and specific roles and responsibilities of schools with eligible children with areas of expected contribution from them to be displayed and discussed.

- Fact Sheets and FAQs.
- Flyers/ posters for students to be distributed to schools should be equal to the number of target children in that school so that, each student receives at least one flyer.

Advocacy meeting with local religious and community leaders

- Organize various meetings.
- Distribute material.
- Explain material and how to use them.
- Collect feedback on preliminary material and develop new ones accordingly.
- Engage community to develop appropriate messages, pre-test messages.

Potential Advocacy Tools

- Fact Sheets and FAQs to be distributed among participants.
- Flyers for participants and for distribution to mothers/caregivers of children aged 9 months to 10 years
- Case studies of successful measles campaigns in other parts of South Asia region.
- Specific material for specific groups such as separate material for health workers and religious leaders.

8.2.2 Social Mobilization (SM)

This involves identifying and mobilizing a range of stakeholders in gaining their support and contribution to the campaign. Social mobilization is a more intense form of advocacy, and includes communication activities that support the efforts in mobilizing the stakeholders, such as through mass media campaigns and interpersonal communication.

- **Orienting stakeholders to information material:** It is not only important to distribute print materials but also in many instances, orient the users to the effective use of these materials.
- **Addressing hard-to-reach communities:** A very important component in social mobilization is to ensure that hard-to-reach communities are addressed, and the campaign becomes inclusive.

SM helps improve community/social participation through interaction between health providers, community stakeholders, government sectors, international, national and civil society organizations and community members.

8.2.3 Inter personal communication (IPC)

- **Before the campaign**
  - At least two weeks before the campaign ASHA (or AWW if ASHA not designated) will visit all the households in her area and complete a

due listing of all target age group children (see due list format in annex). During the process of due listing ASHA will do IPC regarding the campaign and inform parents/care-givers about dates and session sites at schools and village as relevant.

- ❍ In the week before the campaign ASHA will revisit the households with target age group children and present invitation cards by name to all the target age group children in each household.

- **During the campaign**

  - ❍ After the school phase ASHA (or AWW) will check and update her due list for children who have been immunized at school and have a second opportunity for IPC for non-school going children and for school going children who have been missed in school phase.

  - ❍ On the campaign day in the village, by mid-morning ASHA (or AWW) will track the un-immunized children from her due list and persuade the parents through IPC to bring their children to the session site for measles immunization.

Urban areas will have to be covered in a similar manner in coordination with staff from urban ICDS, municipalities and other departments.

For a summary of advocacy, social mobilization, IPC, and mass media, please see table in Annex.

8.3 Communication regarding AEFI

Although, serious Adverse Events Following Immunization (AEFI) due to measles vaccine per se are extremely rare, coincidental occurrence of a serious AEFI and sensational media coverage may seriously undermine a catch-up campaign. Programme managers must therefore plan in advance a special communication strategy regarding Adverse Event Following Immunization (AEFI). Please refer to chapter on AEFI and annex for technical details. Communication strategies regarding AEFI can be made operational in two phases - before an AEFI and in the event of an AEFI.

8.3.1 Before an AEFI

Effective communication with the media needs a communication plan, a budget, pre-designated trained spokespersons on potential issues around AEFI and efficient coordination with the field staff. A good media plan should be in place before the immunization campaign starts. It consists of the following:

- **Maintain a database of journalists:** A list of print and electronic media journalists covering health with their contact information.

- **Information packages:** An information package should be developed with Frequently Asked Questions (FAQs) on measles and immunization in general and an AEFI Fact Sheet or a Technical Brief on measles vaccine preventable disease.

- **Keep media informed:** Send regular updates on any plans, programmes, decisions through email or hardcopy. Sensitize media about benefits of immunization and its impact globally and nationally.
- **Organize regular orientation workshops and field visits:** Help journalists achieve a better understanding of the measles campaign and immunization advantages. Always note all proceedings and discussions with journalists. This will help to be prepared with answers when required.
- **Identify and train one spokesperson at State and at district levels:** Identify in advance an appropriate spokesperson. Share contact details of spokesperson(s) before an immunization campaign starts with all concerned focal points at the district, state and national levels. This limits the possibility of conflicting messages coming from different sources. Ensure spokesperson(s) has experience or some training in dealing with media.

8.3.2 In the event of an AEFI

In consultation with state and district AEFI committee as appropriate, the spokesperson should collate all the information and prepare a written media release (with status updates at frequent intervals) before any media contact.

The media release should have:

- Key messages
- Answers for the likely and awkward questions
- Identifying which issues not to respond to (e.g., blaming an individual or speculating on the cause before the investigation is complete).

Key messages: Messages need to be as simple as possible. Use simple words and short sentences. Key messages are likely to include some of these facts:

- Benefit of immunization in preventing disease is well proven
- It is very risky not to immunize (risk of disease and complications)
- Vaccines do cause reactions, but these are rarely serious and most common reactions do not cause long term problems (see Table 9-2).
- immunization safety is of paramount importance, and any suspicion of a problem is investigated (advantage of well established immunization safety surveillance)
- The AEFI is currently being investigated and the immunization programme must continue to keep the population safe from disease.
- Action is being taken.

Communication with community and caregivers

In communicating with the community, it is useful to develop links with community leaders and peripheral health workers.

When communicating with parents/caregivers during an AEFI, it will be useful to:

- Listen patiently and sympathetically to caregivers and their concerns.
- Reassure and support the caregiver or patient but do not make false promises.
- Assist the caregiver with taking the patient to PHC/hospital facility in case of an AEFI.
- Keep the parent/guardian routinely informed of the progress of the patient.

[Further details regarding communication in the context of an AEFI are given in annex.]

KEY POINTS:

- ⇨ Communication plan should be developed with specific objectives, strategies and messages. Local adaptation, creativity and planning are strongly encouraged.
- ⇨ Communication plan should have components of advocacy, social mobilization and IPC.
- ⇨ ASHA/AWW will deliver invitation cards to each beneficiary as part of IPC.
- ⇨ Highly vulnerable groups such as hard-to-reach population, people historically resistant to vaccination campaigns, and dispersed population pose critical challenges and will need special attention during the campaign.
- ⇨ Communication with media regarding AEFI must be pre-planned and not ad-hoc. It should be handled by one designated and trained spokesperson.
- ⇨ Spokesperson should always speak with prepared talking points and media release notes.

9 MANAGING ADVERSE EVENTS FOLLOWING IMMUNIZATION (AEFI)

The program managers and implementers of the catch-up campaign must plan in advance to prevent and minimize AEFI and be ready to respond promptly and effectively in case of occurrence of any AEFI.

9.1 Definition

An adverse event following immunization (AEFI) is defined as a medical incident that takes place after immunization, causes concern and is believed to be caused by immunization. Occurrence of an adverse event after immunization does not necessarily imply that the vaccine is the cause of the adverse event. (For details please see Operational Guidelines on Surveillance and Response to AEFI, Govt. of India).

9.2 AEFI during catch-up campaigns

Live attenuated measles vaccines currently in use have an excellent track record for safety and efficacy. But a few children may experience some adverse effects from measles vaccine as listed below. Fortunately most adverse effects are mild and transient (local reaction, fever, rash) with no long term sequelae. One serious but extremely rare adverse effect of measles vaccine is anaphylaxis following vaccination.

During a catch-up campaign AEFIs must be rapidly detected and promptly responded to or else it can undermine confidence in the vaccine and immunization programme. This will ultimately have a negative impact on immunization programme and the objectives of catch-up campaign (high coverage and mortality reduction) will not be achieved.

Program managers should be aware that:

- A campaign involves a large number of doses given over a short period of time. As the number of measles vaccine doses administered will be far above than that administered in routine immunization in a year, this may lead to increase in absolute numbers of reported AEFI cases. However the rate of these events per dose administered is not increased.
- Programme errors which might lead to AEFI must be prevented at all costs through intensified training and adherence to proper vaccine /diluent handling and injection practices.
- Interactions with media are of crucial importance in managing the media repercussions of serious AEFI. A separate media plan should be in place beforehand. Please refer to chapter on Communication and Social Mobilization.

Table 9-1: List of AEFIs that may occur during a mass measles campaign #

Reaction*	Onset interval	Adverse Reactions: Case to dose ratio	Adverse Reactions: Incidence: (%) or per million doses
Local reaction at injection site	0-2 days	~1 in10	(~10%)
Fever	6-12 days	1 in 6 to 1 in 20	(5-15%)
Rash	6-12 days	~1 in 10	(~5%)
Febrile seizures **	6-12 days	1 in 3,000	330
Thrombocytopaenia (low platelet count)	15-35 days	1 in 30,000	30
Anaphylactic reaction (severe hypersensitivity reaction)	0-2 hours	~1 in 100,000	~10
Anaphylaxis	0-1 hour	~1 in 1,000,000	~1
Encephalopathy	6-12 days	<1 in 1,000,000	<1

* Reactions, (except local reactions and anaphylaxis) do not occur if already immune.

** Seizure risk is age-dependent, and lower for older children. Children over 6 years are unlikely to have febrile seizures.

Source: Mass measles immunization campaigns: reporting and investigating adverse events following immunization. (Revision May 2002); Immunization Safety Priority Project, Vaccine Assessment and Monitoring, Vaccines and Biologicals, WHO Geneva

The risk of complications from natural measles infection and disease is much higher than the risk of AEFI after vaccination as shown below. This is a powerful advocacy tool for programme managers.

Table 9-2: Risk of complications after natural measles infection and selected AEFI after measles vaccination*

Complication	Risk after natural disease# (events/nb. of cases)	Risk after vaccincation (events/nb. of doses)
Otitis media (Middle ear infection)	7%-9% of cases	0
Pneumonia	1%-6%	0
Diarrhoea	6%	0
Post-infectious encephalomyelitis	0.5-1/1000 cases	1/1,000,000 doses
Subacute sclerosing pan-encephalitis	1/100,000	0

* Source: Pless RP et al.: Monitoring vaccine safety during measles mass immunization campaigns. clinical and programmatic issues.

#: Risk as measured in developed countries. Risk likely higher in developing countries.

9.3 AEFI due to program errors

AEFI due to programme errors are by definition caused by an error in vaccine preparation, handling, or administration. This is not due to the vaccine per se, but due to human error and must be prevented at all costs through intensive training and adherence to safe injection practices. Two common causes of AEFI due to programme error with measles vaccine are the use of wrong diluents and using reconstituted vaccine beyond the recommended time of four hours.

Table 9-3: Programme errors leading to adverse events

Programme errors	Adverse event
Vaccine prepared incorrectly:	
vaccine reconstituted with incorrect diluent or with drugs substituted for vaccine or diluent (e.g. muscle relaxant, insulin)	Effect of drug (e.g., muscle relaxant, insulin) even death Ineffective vaccine
Non-sterile injection:	
reuse of disposable syringe or needle contaminated vaccine or diluent improperly sterilised syringe or needle	Infection (e.g., local suppuration at injection site, abscess, cellulitis, transmission of blood borne virus (e.g., HIV, hepatitis B or hepatitis C)).
Reuse of reconstituted vaccine at subsequent session	Systemic infection, sepsis, toxic shock syndrome (TSS).

9.4 Steps which will prevent programme errors with measles vaccine are:

9.4.1 Before reconstitution

- Check expiry date and VVM on seal of vaccine vial. **DO NOT USE IF VVM IS NOT IN USABLE STAGE OR VACCINE HAS EXPIRED.**
- Check expiry date on diluent ampoule. **DO NOT USE IF DILUENT HAS EXPIRED.**
- **CHECK THAT BOTH DILUENT AND VACCINE ARE FROM SAME MANUFACTURER AND THE LABEL ON DILUENT VIAL STATES THAT THE DILUENT IS FOR MEASLES VACCINE.**
- Check that both diluent and vaccine vials are free from visible dirt outside and that no extraneous particles are visible inside either vaccine or diluent vials.
- Check that cold chain has been maintained for both vaccine and diluent and both are at the same temperature.

9.4.2 During reconstitution

- Reconstitute only one vial at a time.
- Use a new reconstitution syringe (5 ml) to reconstitute each vial of vaccine maintaining full aseptic precautions. Do not use the same syringe to reconstitute vaccine in another vial;
- Use full amount of diluent in the vial to reconstitute measles vaccine.
- Do not touch needle or rubber cap during reconstitution.
- After reconstitution, the vial should not be rolled between the palms. The vial should be shaken gently upside down few times, holding the neck for mixing appropriately.
- Record time of reconstitution on measles vaccine vial label;
- Use only AD syringe to administer vaccine to every child.
- Do not withdraw vaccine from vial to pre-fill AD syringes.

9.4.3 After reconstitution

- Always keep reconstituted vaccine in the hole in the ice pack to maintain temperature at +2° to +8°C.
- **NEVER USE RECONSTITUTED MEASLES VACCINE BEYOND 4 HOURS AFTER RECONSTITUTION.** Using measles vaccine beyond 4 hours after reconstitution may result in Toxic Shock Syndrome (TSS) leading to death.
- **NEVER CARRY AND USE RECONSTITUTED VACCINE FROM ONE SESSION SITE TO ANOTHER.**
- Reconstituted vaccine must be discarded immediately if:
  - There is any suspicion that the opened vial has been contaminated, such as any visible dirt in the vial, the vial dropped on the ground, accidentally touching the rubber cap, and contact with water.
  - If the cold chain has not been maintained at any point prior to administering the vaccine to the child.
  - There is visible evidence of contamination, such as change in appearance and floating particles, cold chain obviously broken.

9.5 AEFI Monitoring and management plan during catch-up campaigns

Standard operating procedures have been laid out by Govt. of India for responding to AEFI (Operational Guidelines on Surveillance and Response to AEFI) and they should be followed during the catch-up campaign. During measles catch-up campaign AEFI detection and management should be done according to following plan.

9.5.1 AEFI Surveillance during Campaign

- All ANMs/ASHAs/AWWs and MOs must be sensitized to recognize and report AEFI promptly. They must know what to do in the event of an AEFI and the location of the nearest AEFI treatment centre.
- The district AEFI committee must be involved from the beginning of the campaign.
- The district AEFI committee will investigate all reported AEFI.

9.5.2 AEFI Management Centres

- During the catch-up campaign, every Govt. health facility from the PHC level and upwards which has at least one Medical officer posted will function as an AEFI management site.
- In addition BMO, in consultation with CMO will explore the possibility of setting up AEFI management centres in the clinics of physicians in the private sector or other Govt. Departments. Such AEFI management sites should be geographically dispersed within the Block so that in the event of an AEFI the child can be taken to the nearest AEFI management centre quickly.
- All such AEFI management centres should be listed out in the micro-plan with telephone number and addresses and all vaccinators and supervisors must know the contact details of the nearest AEFI centre from their area of activity for that day.
- All clinicians at the block level (Block PHC and PHC), district level (District hospitals and sub-divisional hospitals) and the designated clinicians in the AEFI management centres in the private sector will be trained in standard AEFI management and reporting procedures.
- All medical officers acting as supervisors will carry an emergency AEFI management kit.
- All AEFI management centres will be provided with AEFI treatment kits and AEFI reporting forms. The private sector management centres will be reimbursed for treatment costs of AEFI cases per standard protocol.

BMO and PHC MOI/C will be provided mobility support to quickly respond to reported AEFI.

The AEFI management centres will report the AEFI per laid out procedures in the national guidelines.

9.5.3 Response to an AEFI

- Serious AEFIs should be immediately referred to the nearest health facility/ AEFI centre and reported to the appropriate authority.
- The vaccinators and the supervisors at the vaccination site will provide primary management of AEFIs.
- If needed, they will refer serious AEFI to the nearest AEFI management centre.

- Transportation costs will be borne through untied funds with Village Health and Sanitation Committee (VHSC).

9.5.4 Contents of an AEFI Treatment kit

- Injection adrenalin (1:1000) solution - 2 ampoules
- Injection Hydrocortisone (100 mg) - 1 vial
- Disposable Syringe (insulin type) having 0.01 ml graduations and 26G IM needle - 2 sets
- Disposable Syringe (5 ml) and 24/26G IM needle - 2 sets
- Scalp vein set - 2 sets
- Tab Paracetamol (500 mg) - 10 tabs
- I/V fluids (Ringer lactate/Normal Saline): 1 unit in plastic bottle
- I/V fluids (5% Dextrose): 1 unit in plastic bottle
- IV drip set: 1 set
- Cotton wool + adhesive tape : 1 each
- AEFI reporting form (FIR)
- Label showing: Date of inspection, Expiry date of Inj. Adrenaline and shortest expiry date of any of the components
- Drug dosage tables for Inj Adrenaline and Hydrocortisone
- At hospital setting, Oxygen support and airway intubation facility should be available.

Figure 9-1: Contents of AEFI kit

9.6 Recognition and treatment of anaphylaxis

Anaphylaxis is a very rare (estimated as once every million doses of measles vaccine given) but severe and potentially fatal allergic reaction. When anaphylaxis does occur, the patient must be diagnosed properly, treated and managed urgently by trained staff and transferred to a hospital setting.

There is a high risk that health workers who lack training will misdiagnose faints (vasovagal syncope) and dizziness following immunization for the onset of anaphylaxis. Vaccinators, paramedics and physicians should be adequately trained so that they are able to distinguish anaphylaxis from fainting (Vasovagal syncope), anxiety and breath-holding spells, which are common benign reactions.

During fainting, the individual suddenly becomes pale, loses consciousness and collapses to the ground. Fainting is sometimes accompanied by brief clonic seizure activity (i.e., rhythmic jerking of the limbs), but this requires no specific treatment or investigation. Fainting is relatively common after immunization of adults and adolescents, but very rare in young children. It is managed by simply placing the patient in a recumbent position. Recovery of consciousness occurs within a minute or two, but patients may take some more time to recover fully.

An anxiety spell can lead to pale, fearful appearance and symptoms of hyperventilation (light-headed, dizziness, tingling in the hands and around the mouth). Breath holding occurs in young children and will lead to facial flushing and cyanosis. It can end in unconsciousness, during which breathing resumes.

Table 9-4: Signs and symptoms of anaphylaxis

Clinical Progression	Signs and symptoms of anaphylaxis
Mild, early warning signs	Itching of the skin, rash and swelling around injection site. Dizziness, general feeling of warmth
	Painless swelling in part of the body e.g., face or mouth. Flushed, itching skin, nasal congestion, sneezing, tears.
	Hoarseness, nausea, vomiting
	Swelling in the throat, difficulty breathing, abdominal pain
Late, life-threatening	Wheezing, noisy, difficulty breathing, collapse, low blood pressure,
Symptoms	irregular weak pulse

9.6.1 Recognition of anaphylaxis

Anaphylaxis is a severe reaction of rapid onset (usually 5-30 minutes after the injection) characterized by circulatory collapse. The early signs of anaphylaxis are generalized erythema

and urticaria with upper and/or lower respiratory tract obstruction. In more severe cases, limpness, pallor, loss of consciousness and hypotension become evident in addition. Vaccinators should be able to recognize the signs and symptoms of anaphylaxis in the box below.

In general, the more severe the reaction, the more rapid is the onset. Most life-threatening reactions begin within 10 minutes of immunization. That is why it is advised that the beneficiary be kept under observation for at least 30 minutes after the injection.

Unconsciousness is rarely the sole manifestation of anaphylaxis - it only occurs as a late event in severe cases. A strong central pulse (e.g. carotid) is maintained during a faint, but not in anaphylaxis. Anaphylaxis usually involves multiple body systems. However, symptoms limited to only one body system (e.g., skin itching) can occur, leading to delay in diagnosis. Occasional reports have described reactions where symptoms recur 8 to 12 hours after onset of the original attack and prolonged attacks lasting up to 48 hours.

Table 9-5: Distinguish anaphylaxis from Faint (Vasovagal reaction)

	Faint	**Anaphylaxis**
Onset	Usually at the time or soon after the injection	Usually some delay between 5-30 minutes after injection
System		
Skin	Pale, sweaty, cold and clammy	red, raised and itchy rash; swollen eyes, face, generalized rash
Respiratory	Normal to deep breaths	Noisy breathing from airways obstruction (wheeze or stridor)
Cardiovascular	Bradycardia, Transient Hypotension	Tachycardia, Hypotension
GI System	Nausea , Vomiting	Abdominal cramps
Neurological	Transient loss of consciousness,good response once prone	loss of consciousness, little response once prone

9.6.2 Treatment of anaphylaxis:

Once the diagnosis is made, **consider the patient as being in a potentially fatal condition, regardless of the severity of the current symptoms.** Begin treatment immediately and, at the same time, make plans to transfer the patient immediately to the hospital (if not already in a hospital setting).

Role of Adrenaline:

Adrenaline (epinephrine) stimulates the heart and reverses the spasm in the lung passages, and reduces edema and urticaria, thus countering the anaphylaxis. But this very potent

agent can cause irregular heartbeat, heart failure, severe hypertension, and tissue necrosis if used in inappropriate doses.

Every health facility should have health staff trained in treatment of anaphylaxis and should have rapid access to an emergency kit with adrenaline, and be familiar with its dosage and administration. The expiry date of the adrenaline should be written on the outside of the emergency kit and the whole kit should be checked three or four times a year. Adrenaline that has a brown tinge must be discarded. The adrenaline has a short expiry life, so monitor the expiry date on regular basis.

Steps in initial management:

- If already unconscious, place the patient in the recovery position and ensure that airway is clear.
- Assess heart rate and respiratory rate (if the patient has a strong carotid pulse, he/she is probably not suffering from anaphylaxis).
- If appropriate, begin cardiopulmonary resuscitation (CPR).
- Give adrenaline 1:1000 (See below for correct dose for age or weight) by deep intramuscular injection into the opposite limb to that in which the vaccine was given. (Subcutaneous administration is acceptable in mild cases) and give an additional half dose around the injection site (to delay antigen absorption).
- If the patient is conscious after the adrenaline is given, place his/her head lower than the feet and keep the patient warm.
- Give Inj. Hydrocortisone IM or slow IV per dosage chart below.
- Give oxygen by face mask, if available.
- Call for professional assistance but never leave the patient alone. Call an ambulance (or arrange other means of transport, after the first injection of adrenaline, or sooner if there are sufficient people available to help you.
- If there is no improvement in the patient's condition within 10-20 minutes, of the first injection, repeat the dose of adrenaline up to a maximum of three doses in total. Recovery from anaphylactic shock is usually rapid after adrenaline.
- Record, or get someone to record, vital signs (pulse rate, respiratory rate and blood pressure), as well as time and exact dose of any medication given. Make sure the details accompany the patient when s/he is transferred.
- Mark the immunization card clearly so the individual never gets a repeat dose of the offending vaccine. At a suitable moment, explain to parents or relatives the importance of avoiding the vaccine in the future.
- Report the occurrence of anaphylaxis to the appropriate officer by phone followed by the reporting form.

Adrenaline dosage: 1:1000 adrenaline (epinephrine) at a dose of 0.01ml/kg up to a maximum of 0.5 ml injected intramuscularly (or subcutaneously in very mild cases)

If the weight of the patient is unknown, an approximate guide is below:

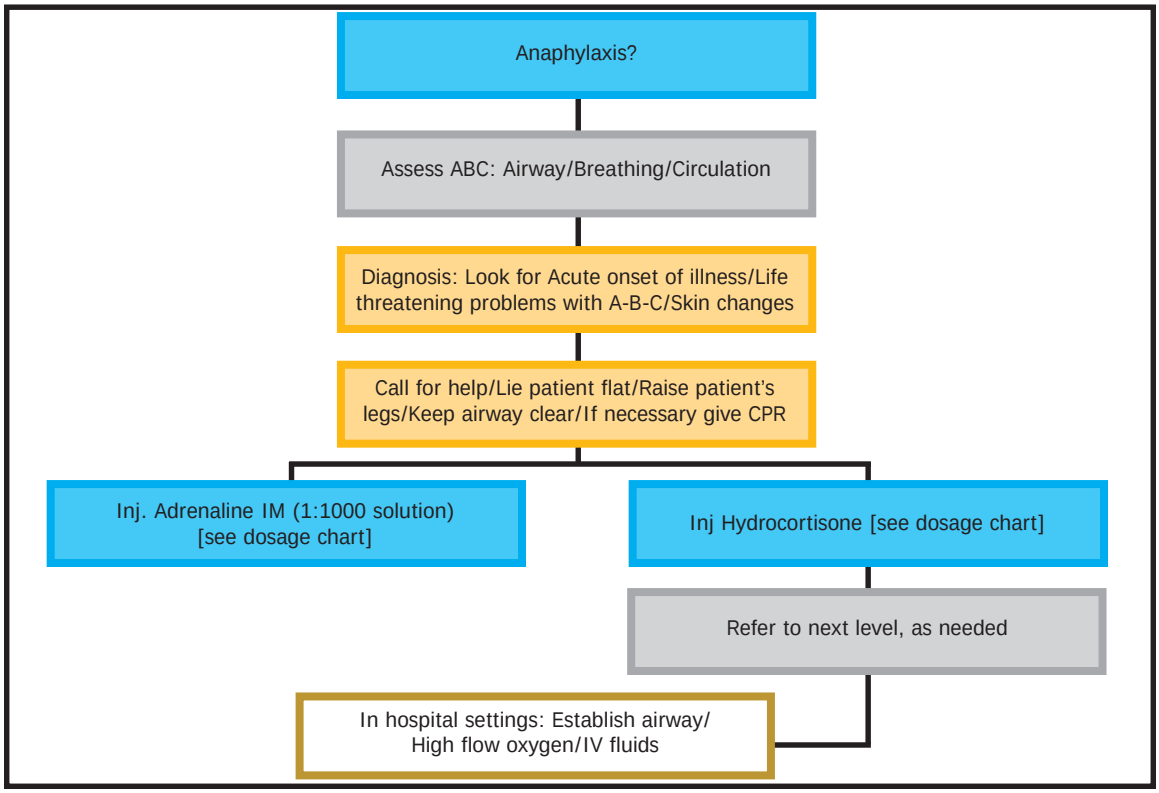
Table 9-6: Injection Adrenaline (1:1000 solution) Dosage Chart IM

Age	Dosage	
Less than 2 years	0.0625 ml	(1/16th of a ml)
2-5 years	0.125 ml	(1/8th of a ml)
6-11 years	0.25 ml	(1/4th of a ml)
11+ years	0.5 ml	(1/2 of a ml)

Table 9-7: Injection Hydrocortisone (IM or slow IV): Dosage Chart

Age	Dosage
Less than 6 months	25 mg
6 months to 6 years	50 mg
6-12 years	100 mg
>12 years	200 mg

Figure 9-2: Treatment protocol for anaphylaxis



KEY POINTS:

- ⇨ Measles vaccine is a safe and effective vaccine.
- ⇨ AEFI due to programme errors must be prevented at all costs.
- ⇨ Very rarely measles vaccine can cause serious AEFI (e.g. anaphylaxis) which must be treated promptly.
- ⇨ All Govt. facilities from PHC level upwards will function as AEFI management centres with designated medical officers.
- ⇨ All AEFI management centres must be fully equipped with AEFI kits and have copies of treatment protocols prominently displayed.

10 MONITORING AND EVALUATION OF THE CAMPAIGN

10.1 Monitoring by State and District Observers

State and District level Officers should be allotted districts/blocks/urban areas which should be meticulously visited before the activity for monitoring the preparedness and during the activity to monitor the implementation of the activity. The observers should identify any constraints that are likely to affect the implementation of the programme and find solutions to remove any bottlenecks.

10.2 Preparatory phase

All state observers should attend District Task Force meetings and report back to the State Family Welfare Secretary on the quality and effectiveness of these meetings.

Observers should also review the micro plans to ensure that:

- All components are present.
- All geographical areas have been included.
- Logistic calculations and cold chain plan are realistic and adequate.
- Team composition is appropriate with trained vaccinators and assistants identified.
- Areas requiring special attention have been identified and plans developed to cover them.
- Trainings have been planned for all vaccinators and supervisors and assistants.
- IEC/ Social Mobilization plans have been developed and documented.

10.3 Implementation phase

All officers should again visit their allotted districts / blocks/ urban areas during the implementation phase to assess the quality as also the completeness of coverage of children 9 months to 10 years of age.

Observers will use standardized monitoring formats for making rapid convenience assessments (RCA) of the quality of activity in an area. They will be briefed about the methodology of monitoring (RCA) before the measles catch-up campaign. RCA is an extremely useful tool to uncover pockets of un-immunized children and take corrective actions.

Qualitative and quantitative assessment on the immunization activity from observers should be utilized for mid-course corrective actions like retraining of vaccinators, review of micro-

plans etc. or immediate corrective actions like repeating the activity in an area where significant number of unimmunized children are found after completion of activity.

10.4 Post campaign phase

10.4.1 Process level assessment

Following the campaign, review meetings should take place at District, State and National levels to identify the strengths and weaknesses of the activities. Supervision and monitoring questionnaires used during the campaign should be collected and analyzed in order to provide quantitative information related to the process of implementing the activity. In addition, it will be important to qualitatively document the impressions and experiences from the field. It is important that all stakeholders - personnel and staff involved in the planning and service delivery aspects of the activity as well as the community beneficiaries - participate in this process to document best practices and lessons learned to ensure the highest quality of campaigns in the future.

10.4.2 Output level assessment

The outcome of the catch-up campaign is measured by the proportion of the target population (children 9 months to 10 years) who were vaccinated during the SIA. There are two approaches to estimate measles campaign vaccination coverage:

- Administratively based on campaign field reports and estimated target populations
- Conventional household surveys using cluster sampling methodologies

The first approach can be problematic if target population - denominator information - is not current or up to date. The second approach is often used to validate administrative coverage and is seen as the gold standard for assessment of the coverage attained during a measles catch-up campaign.

10.5 Evaluation of the impact of the campaign

Impact of the campaign is related to the reduction in measles related morbidity and mortality as a result of the measles catch-up campaign and the increased immunity of the population to the virus. This is measured through sensitive laboratory supported measles surveillance.

KEY POINTS:

- ⇨ Senior officers from district should start monitoring preparedness well before the campaign.
- ⇨ Unbiased and reliable observations by observers and monitors will help pinpoint problems.
- ⇨ Observers and monitors should be supportive and help solve problems identified.
- ⇨ RCA is an extremely useful tool to uncover pockets of missed children/area and take corrective actions.
- ⇨ Post activity coverage evaluations should be planned in advance.

11 TASK LISTS FOR MEASLES CATCH-UP CAMPAIGN

A measles catch-up campaign is a one time opportunity and must be of high quality to attain near 100% coverage. This will only be possible if:

- Realistic and detailed micro-plans are drawn up well in time.
- Micro-plans are reviewed and refined in the run-up to the activity.
- Supportive supervision at District and Block levels from the time of planning itself until the end of activity..
- All health functionaries including doctors, ASHA/AWW and volunteers are trained well before the activity.
- Proactive engagement with media and targeted IPC with community are implemented prior to the campaign.
- During implementation, appropriate corrective actions are taken based on feedback from monitoring reports

This chapter outlines the tasks that program managers and implementers at district and sub-district levels will perform before, during and after the measles catch-up campaign.

11.1 District Level

The Chief medical officer has overall accountability for the programme and the DIO will be the programme officer at the district level.

Pre-campaign tasks

- Through the mechanism of the DTF, coordinate with District authorities and other departments and minute action points and circulate.
- At least 2 months before starting the campaign, CMO should assign Block/ Municipal level responsibilities to Deputy CMOs. Deputy CMOs should make regular visits to the blocks/Municipalities and review their preparedness and solve problems faced by BMOH.
- At least 1 month before starting campaign, prepare and communicate district plan and logistics demand to state.
- Conduct TOT of trainers 6-8 weeks before start of activity

- Finalize block-level micro-plans at least 4 weeks before start of activity.
- The week before the activity:
  - Review DTF is arranged
  - Block level trainings are held
  - Logistics (vaccines, diluents, AD and mixing syringes) have reached district.
  - Other materials - IEC materials, recording formats etc. have reached or have been procured by the district.
  - First consignment of bundled vaccines (vaccines, diluents, syringes) is sent to the blocks as per cold chain plan. Such consignments may have to be sent 2-3 times during the activity depending on cold chain storage and freezing capacities and the electricity situation at the Block level.
  - IEC/IPC plans have been executed per schedule
  - Waste disposal mechanisms at PHC level and other cold chain points are in place.
  - AEFI response and management plan is in place.

Tasks during campaign days

- Activate district control room to:
  - Monitor logistic utilization and address shortages if any
  - Monitor daily coverage reports and take action in problem areas
  - Respond to any AEFI reports promptly and proactively
  - Review school based campaign (end of 1st week) and decide on contingency plans.

District level officers (like Deputy CMOs, DPMs, DPHN, Health information Officers) assigned with Block supervisory responsibilities to check block, PHC and sub-centre level implementation through field visits. During field visits they will assess the following and solve identified problems:

- Coverage using standard data collection tool to identify missed children/ areas for corrective action.
- Adherence to all injection safety norms by vaccinators.
- Effectiveness of IEC/IPC strategies
- Cold chain status including ice pack freezing
- Adherence to safe disposal norms for injection waste materials.

Post campaign tasks

- Immediately after the round, make special plans to cover missed out children in areas with low coverage (<90%).
- Finalize reports to be sent to state level.
- Take final stock of all vaccines and other logistics at District, Block and sub-block storage sites
- Utilize measles catch-up session site micro-plans to improve RI session micro-plans for district.

11.2 Block Level / PHC

The Block Medical Officer (BMO) has overall accountability for the programme at the Block level. The MO I/C of the PHC will have overall accountability for the programme at the PHC area. For municipal areas, CMO in consultation with District Magistrate and Municipal authorities will designate an accountable person.

Pre-campaign tasks

- BMO should build a team of Medical Officers, Block Programme Managers and other senior public heath staff in the block to help him supervise and implement the activity.
- BMO should ensure that Block micro-plan complete in all respects (including identification of persons by names at session sites, cold chain plan and logistic movement plan) is ready at least 4 weeks before start of activity.
- Cold chain: Review functioning cold chain equipment available in the Block (Block level, PHC, additional PHC etc.) and solve problems in consultation with district.
- Training:
  - Draw up session-wise training plans for all persons involved with activity.
  - Ensure that trainings are held with full participation, including training of absentees in later sessions. Training should be completed per training schedule days before start of activity.
  - Ensure that doctors designated in AEFI component of micro-plan are trained in measles AEFI management
- Logistic movement plan:
  - Make out detailed logistic movement plan including plan for hiring of vehicles, if needed.
  - Make spot visits to some special areas or hard to reach areas to asses feasibility of logistic movement plan to these areas

- IEC/IPC:
  - Meet with religious leaders, opinion leaders in the community and school teachers to solicit their support.
  - Ensure that IEC materials are displayed per plan.
  - Ensure that ASHS/AWW carry out local level IPC in the three days before the activity begins in the Block.
  - AEFI management sites (Public and Private sectors): Identify, review and train the AEFI management sites.

In the week before the activity

- Review status of trainings
- All cold chain equipments are ready to receive vaccine and diluents and adequate contingency plans have been made for power failures.
- Receive and store logistics (vaccines, diluents, AD and mixing syringes) from district. Redistribute to PHC level per block cold chain plan.
- Receive and distribute other materials - IEC materials, recording formats etc.
- Review that due listing and IEC/IPC plans have been executed per schedule including local level IPC by ASHA.
- Review logistic movement plan:
  - For distributing vaccines
  - For collecting unused vaccines and injection waste materials.
  - Review that all waste disposal facilities and mechanisms are in place at Block and PHC levels per CPCB guidelines.

IMPORTANT!!

Issue the vaccine only on the day of activity. Do not allow vaccine to be issued on day before the activity under any circumstances.

Tasks during campaign days

- Check that logistics and personnel have moved out per plan
- Check that AEFI management centres are ready with all equipments and medicines
- By mid-morning check for
  - Any reports of vaccine shortages
  - Any problems reported from any area like AEFI

- Monitor logistic utilization and address shortages if any
- Review school based campaign (end of 1st week) and decide on contingency plans in consultation with district.
- Make contingency plans for immunizing missed out children.
- BMOH and the block level team should make spot visits to some areas. During field visits they will assess the following and solve identified problems:
  - Visit some immunization sessions in progress
  - Assess adherence to all injection safety norms by vaccinators.
  - Implementation & Effectiveness of IEC/IPC strategies
  - Verify functionality of cold chain status at session sites
  - Adherence to safe disposal norms for injection waste materials.
  - Assess coverage using standard data collection tool and initiate appropriate actions.
- Send daily coverage reports to the district.
- Conduct daily evening review meetings with supervisors and monitor daily coverage reports and take action in problem areas

Post campaign tasks

- Immediately after the round, review the data and make special plans to cover missed out children in areas with low coverage (<90%).
- Finalize reports to be sent to district level.
- Take final stock of all vaccines and other logistics at Block and sub-block storage sites
- Utilize measles SIA session site micro-plans to improve RI session micro-plans for Block.

11.3 Tasks of 1st line Supervisor

First line supervisors will be accountable for all aspects of the campaign in areas allocated to them. One supervisor will supervise three teams.

Supervisors should be selected from existing health supervisors, block level ICDS and other key block level government functionaries. They should be familiar with the area allocated to them. All supervisors must receive training prior to the activity in the technical as well as operational aspects of the program. Supervisors should be well motivated, physically fit, and supportive of the vaccination teams in the field. Each supervisor should be independently mobile.

Pre-campaign Tasks

- Familiarize themselves with the area allocated.

- Assist the BMO/PHC-MO in formulating accurate micro plans. This includes:
  - Collating all data (villages by population, schools etc.) for area under him/her
  - Selecting appropriate session site locations
  - Selecting vaccinators, ASHA, AWW and volunteers
  - Rational distribution of teams and session sites according to target population in village/urban area
  - Developing maps showing vaccination sites located at schools and outreach sites and for hard to reach populations
- Check that logistic distribution plan is realistic and all vaccination teams understand pick-up and drop points for vaccines, logistics etc.
- Ensure that ANM, ASHA, AWW and volunteers working with him/her attend the trainings on schedule
- All team members know the nearest AEFI management points and their contact details
- Make random visits to the field to ensure that ASHA has completed house-listing of target beneficiaries and has distributed the session site invitation slips.

Tasks during campaign days

Supervisors shall use Supervisory Checklist to assess the quality of activity at the session sites and coverage in areas where immunization activity has been completed.

Supervisors should be independently mobile and must carry logistic support with them to replenish vaccine, diluents, and injection equipment quickly if teams run out of them.

- Supervisors should visit each session site at least twice and check:
  - Last minute absenteeism of vaccinators, shortage of vaccines/logistics and solve them
  - Vaccinator is adhering to safe injection practices (cold chain, aseptic precautions, safe disposal etc.)
  - Record of vaccination is being maintained properly
  - Parents are being provided with record of vaccination (vaccination cards) with clear instructions to retain the same
  - Parents of under-five children are reminded of other routine immunization doses with instructions to bring the child in the next immunization session in the village
  - Proper information about AEFI is being provided to the parents

- Supervisors will also check:
  - School session site: eligible children from all classes in the school and from the village where the school is situated are being immunized.
  - Outreach session sites: local ASHA/AWW are assisting the team by mobilizing children to the session site.
  - Mobile teams for hard to reach/high risk populations: Proactively support the teams working in such areas
- Supervisors shall visit all the areas where teams have completed their work the previous day and assess the coverage with the help of supervisors' check list. Based on their findings the BMOH/PHC-MO will decide on the appropriate corrective response.
- At the end of the day's activity, supervisors will
  - Collect, compile and analyze data from vaccination teams
  - Attend the evening meeting at block and give feedback to medical officer

Post campaign tasks

- Organize repeat immunization activities in areas with low coverage identified through RCA assessment and as decided at District/Block level.
- If there are only a few missed children, ensure that all of them are immunized in the routine immunization session in the village immediately following the campaign.

Tasks of implementers at Session sites (vaccinators, ASHA/AWW, volunteers)

Proper implementation of activities at the vaccination session sites is the key to success. At the session site, a vaccinator team will usually comprise 3 members. Each member has a specific role in measles catch-up campaign as below.

11.4 Tasks of vaccinator

Pre-campaign tasks

- Provide accurate information regarding her sub-centre area including new settlements (permanent or temporary) and hamlets which have come up after last review of RI micro-plan. She should also provide information about schools in private and public sector in her area.
- Assist block level person to prepare micro-plan for her sub-centre area including plans for vaccine delivery and logistics.
- Participate in trainings and coordinate with all ASHA, AWW and volunteers in her area to attend the appropriate training sessions
- Liaise with community leaders in the catchment area and ensure that ASHA prepares the due list and distributes invitation cards to beneficiaries.

- Coordinate with local ANM regarding location of measles session sites, ASHA, AWW and local leaders etc.
- Check that appropriate plans have been made for delivery and pick-up of vaccines and other logistics during campaign days.
- To ensure safety and accountability, when two vaccinators are working they will work in parallel, that is, each will administer the vaccine independently.

On the day of activity

- Organize measles session site with help from ASHA/AWW and volunteer. Ensure that all IEC materials are displayed at the session site properly
- Check that she has received all logistics in appropriate quantity and quality (vaccines, diluents, tally sheets, immunization cards, marker pens, cotton-wool etc.)
- Check that measles vaccine and diluents are from same manufacturer and within expiry date;
- Administer vaccine following all safety norms. Dose is 0.5 ml and should be administered subcutaneously in the right upper arm. The site is important for survey purpose.
- Record campaign dose in tally sheet. Check that tally forms are correctly completed and summarized at the end of each day;
- Ensure that every immunized child gets a catch-up campaign card.
- Supervise and guide ASHA, AWW and volunteers in her team.
- Ask each beneficiary to wait for at least 30 minutes after vaccination.
- Respond to AEFIs;
- Wait for one hour after vaccinating the last child at the site to respond to AEFI, if any.
- Dispose of all immunization waste materials following proper guidelines.

After the activity in one village:

- On the RI session days during the campaign, when ANM goes to the village where she usually works, she should ask ASHA to mobilize those children (9 months to 10 years) who were missed in the catch-up campaign and complete their measles immunization.

11.5 Tasks of ASHA / AWW

Pre-campaign

- Participate in trainings arranged at PHC or Block level.
- Arrange for proper site and facilities for a session site if it is located at a site where no RI sessions are held.

- Prepare a due-list for all beneficiaries in her area.
- IPC to all families through invitation card to target age group children at least 3 days before the activity in the block.
- Mobilize community: Get PRI representative to convene a meeting of the VHSC at least one week before the activity in village

During the campaign: (at session site)

- Assist ANM to set up and manage the session site.
- Arrange local village leader to inaugurate the session site
- Mobilize children to the session site. If turnout is low by mid-morning, she should visit households with children in the target age group and persuade them to get their children immunized.
- Assist ANM in running the session site - welcome families to the session site, assist mother to hold their children properly and generally assist in crowd control.
- Assist in finger marking and tally sheet marking in coordination with ANM.
- Remind parents of eligible children to complete routine immunization.
- Advise where to report in case of an AEFI and report to ANM if she is aware of any AEFI.
- At the end of the day she should identify children in her area who have not been immunized from previously prepared due list.
- Mobilize children who have been missed in catch-up activity to get vaccinated during RI session.

Post campaign

- In the next RI session day in her village, arrange with her local ANM to immunize children who have been missed during the campaign.

11.6 Tasks of the volunteer

Pre-campaign

- Participate actively in trainings before the campaign.

During campaign

- Crowd control
- Finger-mark vaccinated child
- Tally sheet marking for vaccinated children under ANM guidance;
- Give the campaign card to child

11.7 Logistics to be supplied to each team

Each day, every vaccination team will receive the following items according to distribution plan:

- Adequate amount of measles vaccines and diluents (from same manufacturer) according to the target population for that day
- Vaccines and diluents must be packed in separate zip-lock plastic bags inside the vaccine carrier with 4 frozen ice packs.
- Adequate number of 0.5 ml. AD syringes
- Adequate number of 5 ml. reconstitution syringes to match the vaccine vials supplied
- 1 hub-cutter for each vaccinator
- 1-2 red bag for bio-hazardous waste materials
- 1-2 black plastic bags for other wastes
- One cotton pack (25 gm)
- Tally sheets
- 150-200 Vaccination cards for each vaccinator
- 1 marker pen will be supplied to each vaccinator for 2 days (250-300 children)
- IEC materials for displaying session site location

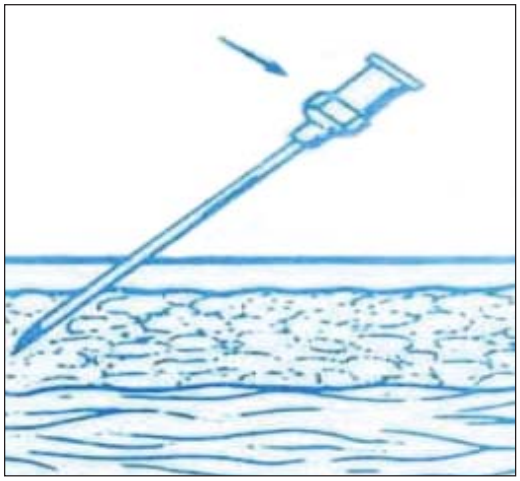


Figure 11-1: Angle for Subcutaneous injection

Figure 11-2: Holding the child properly

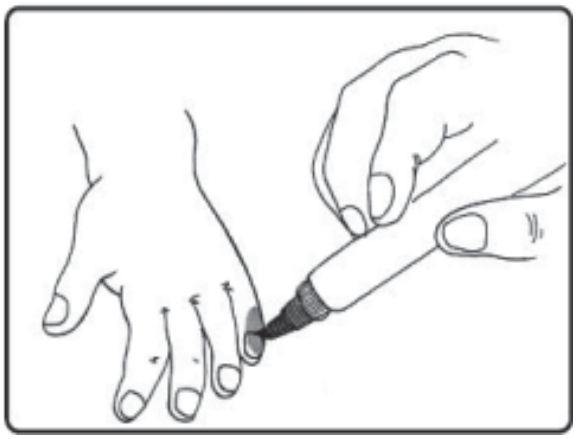


Figure 11-3: Finger marking with indelible ink

11.8 Ensuring Injection Safety

As in routine service, all vaccinators will use only auto-disable (AD) syringes during the measles campaign. These syringes prevent person-to-person transmission of blood borne pathogens. Remember

- Use a new sterile packed AD syringe for each injection for each child.
- Use the same syringe to draw and administer the vaccine.
- Do not pre-fill syringes.
- DO NOT ATTEMPT TO RECAP the needle. This practice can lead to needle stick injuries.
- Immediately after injecting the child, the AD syringe must be cut from hub (plastic part at base of needle) using the hub cutter, and cut part of the syringe put in the red bag. DO NOT PUT the syringes on the table or in a tray after the injection.
- Do not use AD syringes that have damaged packaging, or have passed the manufacturer expiry date.
- Wash your hands with soap before and after the session.

11.9 Safe disposal of injection waste

- Cut the hub of the AD syringe immediately after administering the injection using the Hub cutter.
- The cut needles will get collected in the puncture proof translucent container of the hub cutter.
- Store broken vials in the same hub cutter

- Segregate and store the plastic portion of the cut syringes and unbroken (but discarded) vials in the red bag.
- All other non-infectious wastes will go into black bag.
- Carry the Immunization waste generated in the outreach sessions and hand over these to the PHC, for further disposal.
- Wash the containers properly for re-use.

11.10 Returning used and Unused Supplies

All vials (USED, UNUSED and PARTIALLY USED) must be returned through AVD to the vaccine distribution point. Supplies that remain unused at the end of session, including unopened vaccines and diluents, should be returned to the centre from where they were distributed (PHC/UHC) maintaining a reverse cold chain for the vaccine. Completed and signed tally form, should also be returned with vaccine carrier. It is important to ensure:

Returned unused vials must be properly marked and immediately stored at correct temperature;

- On next day those marked vials are supplied and used first;
- Ensure that all unused reconstituted measles vaccines are discarded at the end of the day.
- Never place reconstituted measles vaccine in an ILR to use on the next day.

KEY POINTS:

⇨ All functionaries at every level have pre-defined tasks before, during and after the catch-up campaign.

⇨ Before the campaign the thrust areas will be
- Proper planning for logistics and cold chain
- Realistic micro-planning in a bottom-up approach
- Training
- IEC and individualized IPC to beneficiaries

⇨ During the campaign the thrust areas will be
- Supportive supervision
- Intense monitoring and mid-course corrections
- Prevention of programme errors at all costs

⇨ After the campaign the thrust areas will be
- Document lessons learnt
- Assess coverage
- Utilize catch-up session micro-plans to improve RI micro-plans

Annex

Annex - 1: MCV1 coverage

States and union territories by MCV1 coverage in CES-06 and DLHS-3 (sorted in descending order of MCV1 coverage DLHS-3)

Sl. No.	States/UTs	CES-06 MCV1 (%)	DLHS-3 MCV-1 (%)
1.	GOA	96.7	99.1
2.	TAMIL NADU	94.9	97.6
3.	HIMACHAL PRADESH	94.2	94.5
4.	A & N ISLANDS	89.9	92.8
5.	SIKKIM	85.6	92.5
6.	LAKSHADWEEP	90.8	91.9
7.	PONDICHERRY	96.9	91.1
8.	DAMAN & DIU	90.2	90.9
9.	PUNJAB	82.1	89.1
10.	ANDHRA PRADESH	86.2	88.6
11.	KERALA	90.8	87.9
12.	CHANDIGARH	92.3	87.3
13.	KARNATAKA	89.8	85.2
14.	MAHARASHTRA	74.3	84.5
15.	D & N HAVELI	88.6	84.4
16.	MIZORAM	76.1	83.9
17.	DELHI	89.2	83.1
18.	WEST BENGAL	85.5	82.8
19.	UTTARAKHAND	78.6	82.1
20.	JAMMU & KASHMIR	84.8	81.4
21.	ORISSA	85.8	81.1
22.	CHATTISGARH	78.4	79.9
23.	GUJARAT	79.7	72.6
24.	JHARKHAND	62.2	70.5
25.	HARYANA	76.8	69
26.	RAJASTHAN	62.4	67.5
27.	ARUNACHAL PRADESH	59.8	65.5
28.	ASSAM	47.3	64.4
29.	MANIPUR	73.7	58.9
30.	MADHYA PRADESH	71.8	57.7
31.	BIHAR	46	54.2
32.	MEGHALAYA	56.3	52.5
33.	TRIPURA	65.6	51.7
34.	UTTAR PRADESH	46.7	47
35.	NAGALAND	46.1	Not available

Annex - 2 : Role of other Govt. departments and other organizations in measles catch up campaigns

Education, NCC, NSS and NYK:

- Organize measles vaccination centres in schools where there are children under 10 years of age
- Identify a nodal person for coordinating the school based vaccination activity, like providing space in the school, mobilizing and controlling the flow of children.
- Mobilize school teachers to support vaccination teams in school based activity.
- Send out prior intimation to parents of school children regarding days of measles immunization at the school and seek their cooperation.

Social Welfare:

- Facilitate use of ICDS centres as measles session sites wherever required.
- ICDS workers should be part of vaccination teams.
- Assign ICDS workers to distribute and display IEC materials like handouts, posters and banners in their areas and mobilize local community leaders/mothers groups to raise community awareness about measles catch-up campaign.

Panchayati Raj Institutions:

- Gram Panchayat Vikas Adhikari (Village development secretaries), Lekhpals, Village Pradhans and Panchayat members should mobilize community to attend the measles session site.
- Launch the programme in their areas.
- Help to identify and provide suitable locations for measles session sites where routine immunization sessions are not held regularly.
- Village Health and Sanitation Committee (VHSC) will support the catch-up campaign in the following ways.
  - ➤ In case there are no regular RI session sites in a village, VHSC should help identify appropriate place for session site
  - ➤ Provide logistic support to team like chair, benches, water etc
  - ➤ Identify volunteers to assist on the session day
  - ➤ Identify and mobilize left-out children
  - ➤ If needed, utilize untied VHSC funds for transporting AEFI cases to nearest AEFI management centre.

Other Government departments like Home Affairs, Defence, Telecom, ESI, Information & Broadcasting etc.

- Allow measles session sites to be located in their premises if needed.
- Government workers may be part of vaccination teams and at least help to cover their own residential colonies.
- Government offices should display IEC materials like posters and banners.
- Police wireless may be used to convey urgent messages for measles catch-up campaign messages.
- Concerned departments should allow the key messages of measles catch-up campaign programme to be printed on telephone, electricity and water bills.
- Telephone exchanges may be requested to send text and voice messages.

Professional medical bodies:

- National, state and district chapters of all professional bodies should send out a formal communication to all their members requesting them to mobilize their clients.
- All private and public physicians, private practitioners and other health professionals can inform their clients of the dates of and the need for all children 9 months to 10 years of age to receive a dose of measles irrespective of their prior immunization status.
- Display IEC materials at their clinics.
- Sensitize members to manage AEFIs at their facilities, if they come across any.
- Assist vaccination teams to convince reluctant parents, if needed.
- Health professionals can also help to monitor the catch-up activities in coordination with local government/partner counterparts.

NGOs/other voluntary organizations:

- Create community awareness for measles catch-up campaign by contacting community leaders, developing, distributing and displaying IEC materials.
- Measles session sites may be located at their premises.
- Help to mobilize the parents to the session site and support vaccination teams during activity.

Annex - 3: Communication with media regarding AEFI

In the event of an AEFI, it is essential to present information to the media in a way that will generate a sense of credibility and confidence by being:

- Honest - never lie; if you do not know, say so, but promise to find out (e.g. "We don't know at this time, but we have taken steps to answer that question") a lie or cover-up can become a bigger news story than the initial event.
- Caring - create a strong, compassionate, competent image for yourself and the immunization programme
- Clear - avoid jargon; use simple phrases and give examples to clarify meaning
- Serious - jokes can be disastrous and the subject is rarely amusing anyway
- Responsible - don't be defensive (e.g. "We will see if there is any truth in the report."), but accept responsibility appropriate to your position and avoid blaming someone else
- Responsive - hold a daily press conference if that is what is needed to meet the needs of the public and media; regular contact helps build a trusting relationship with the media.
- Positive - reframe the situation in positive terms; use terms such as vaccine safety (which has a positive connotation) rather than adverse event

When facing a hostile interviewer, prepare these techniques:

- Block - respond to a negative question with a positive answer (e.g., when asked, "How many children have died from immunization?", answer: "Immunization saves lives. Since our immunization programme began X children have been immunized, and of them Y% might have died from one of these diseases. That is the context in which we must consider the tragic, but thankfully rare adverse events which follow immunization.")
- Bridge - having answered a difficult question, move quickly to something linked but positive (see example below)
- Correct what is wrong - immediately correct information from the interviewer that is wrong. Be assertive, not aggressive and state the facts simply, factually and in a friendly way
- Stay cool - no matter how bad it gets, don't get angry or defensive; stay friendly, polite and warm
- Be assertive - means stating what you want to say in a clear way without getting aggressive; take time to think about the response and don't be rushed or forced.

Example of bridge technique

Question: Does vaccination cause abscesses?

Answer: (Face the element of truth) We know that vaccination can rarely cause abscesses. (here comes the first bridge....) That is why we train staff to avoid them by using a sterile needle and syringe for every child. (Now comes the second bridge) When this policy is combined with purchasing only the highest quality vaccines approved by Govt. of India, we are able to assure parents that all vaccines used in the immunization programme in the country are safe.

Annex 4: Summary of Advocacy, Social Mobilization, IPC and Mass Media

Key Behavioural Objective - Parents/caregivers give informed consent/approval to teachers and vaccinators for their children to be immunized and bring their children for vaccination on the scheduled day.		
Audiences	**Media Interventions**	**Communication Activities**
Parents/ caregivers of school children 5 to 10 years old	IPC **Tools:** Flipcharts Handouts Video clips where possible	• ASHAs/ANMs/AWWs/CBOs will conduct face-to-face and small group counselling sessions to inform, negotiate and discuss about: • The benefits of measles immunization • Identify eligible children for vaccination, date, venue and time • Misbelieves and practices that might prevent parents/caregivers from bringing their children for immunization
	Community Mobilization **Tools:** **Posters Handouts** **Miking Events: VHND, Health Fairs**	• To activate social networks (community leaders, volunteers, religious groups, women groups) and encourage peer communication (mother to mother) to reach remote areas in order to disseminate information about the benefits of immunization indicating when and where to get vaccinated.
	Mass media **Tools:** Cable Spots Local ads Community radio	• To promote measles immunizations on national and community radios and national television using radio drama (TV-Radio PAS and radio magazines that include information about age for immunization, and places and time of vaccinations. • To provide reminder materials for immunization vaccination card and other important documents related to the child.
School Teachers/ school children	**IPC** **Tools:** Flipcharts Handouts Video clips where possible Comic books	• To train teachers to teach school children and parents about the benefit of measles immunization in connection withchild health, including information about the date, time and place of vaccination. • To encourage children to educate/share information with their parents on the importance of measles immunization, date, time and vaccination site.

Community	**Advocacy** **Tools:** PPTs Handouts Video clips	• With religious, political leaders, media, health services, panchayat, and other community leaders: ➤ To increase and maintain acceptance and support for immunization ➤ To promote and sustain community involvement with service delivery and child tracking, and media partnerships at various levels.
	Community Mobilization	• To promote and hold community discussions and meetings with leaders and community at large in public settings to address concerns about immunization and plan immunization activities. • To organize community tracking systems to remind and motivate families when a vaccination is due. • To strengthen the alliance between local authorities and religious organizations to disseminate positive messages about measles immunization and mitigate misbelieves about vaccination.
	Mass media:	• To generate and maintain support for immunization programs, and maintain public confidence in vaccine safety through radio-TV PSA, press release and media interview, media coverage of immunization campaigns, encouraging positive reporting..
	Edutainment:	• To use (if possible) existing edutainment initiatives (Kyunki, Meena radio, Govt health soap) to promote the value of measles vaccine, model key behaviours, and maintain public trust in immunization through national and local broadcasting, and use in small group discussions with tape recorder/CD player, loud speakers in public gatherings.
	Capacity building	• To train community volunteers in IPC skills on measles immunization to disseminate positive messages, indicating when and where to get vaccinated and FAQs • To train community leaders (the example of training priests to convey health messages at the end of the mass) in specific knowledge related to measles/measles immunization and brief them about the nature and scope of their involvement in support to immunization.
Frontline health workers	**Capacity building**	• To train (refresher training) frontline health workers in counselling skills in immunization (training session should include issues about respect for traditional practices, client-oriented services and understanding of lack immunization compliance).

Formats

Group I: Block and sub-block level formats

Group II: District & State level formats

Group III: Monitoring/RCA formats

Group 1: Planning and Reporting Formats: Sub-centre, PHC/Block level

S No	Level	Name of format	Who will fill
1.	Sub-centre	Village List / School List / H2R List	ANM
2.	Sub-centre	Beneficiary Due List & Invitation card (2a)	ASHA / AWW / Volunteers / ANM
3.	PHC / Block	Educational Facility Micro-Plan	ANM + Supervisor
4.	PHC / Block	Outreach Micro-plan	ANM + Supervisor
5.	PHC / Block	High-risk population (H2R) Micro-Plan	ANM + Supervisor + MO
6.	PHC / Block	PHC /Block Logistics & Human Resource Plan	PHC / Block Cold Chain Handler
7.	PHC / Block	Vaccine Distribution Plan	PHC / Block Cold Chain Handler
8.	PHC / Block	Waste Management Plan	Cold Chain Handler + MO
9.	PHC / Block	Communication Plan	Supervisor + MO + ANM
10.	PHC / Block	Supervisor Plan	Supervisor
11.	PHC / Block	Cold Chain Contingency Plan	Cold Chain Handler + MO
12.	Session Site	Tally Sheet	Vaccinator (ANM)
13.	Session Site	Immunization Card	Vaccinator (ANM) / AWW
14.	Sector	Supervisor Checklist	Supervisor
15.	PHC	Supervisor Compilation report	Supervisor
16.	Block	Block Compilation Report	Block Data Handler (IO / Computer / HS etc)

Form 1

Measles Catch-up Campaign 2010

Subcenter-wise Village / School / H2R Base line Information

District: PHC/UHC:

Sector (sub-centre)/Urban Area: Name of Supervisor: Name of Health Worker:

Sl. No	Name of Village / Hamlet / Tola / Urban Mohalla	Category Hard-to-reach (H2R) / Under-served (US)	Population	Estimated Beneficiaries (9 m - < 10 y)	No. of vaccinators Required for the Village	Name of Schools in the Village / Hamlet / Tola / Urban Mohalla	Estimated Beneficiaries (< 10 y) enrolled in the school*	No. of vaccinators Required for the Schools
	a	b	c	d	e = d/150	f	g	h = g/200
						1. 2. 3.		
						1. 2. 3.		
						1. 2. 3.		
						1. 2. 3.		
						1. 2. 3.		
						1. 2. 3.		
						1. 2. 3.		
						1. 2. 3.		

* Include all children enrolled in the school. These children may be from other villages as well.

Form 2

Measles Catch-up Campaign 2010

Beneficiary Due List

District: Block PHC/UHC:

Subcenter Name of ANM:

Village/Urban Area: Name of ASHA/AWW:

Sr. No.	Father Name	Name of Beneficiary	Age	Sex (M/F)	School Going? (Y/N)	Invitation Card Given? (Y/N)

Form 2a

Prototype of Invitation card for measles catch-up campaign

You're invited for the Measles Catch-up Immunization Campaign

State Logo

Date of Campaign: .....

Venue of Session: .....

Name of the child:

Name of father/mother:

ANM **ASHA** **AWW**

Form 3

Measles Catch-up Campaign 2010

School Microplan Form

State: State: District: Block: PHC/UHC:

						Team Details		Nodal Person from School			Logistics requirement							
Sr No	Village / Urban Locality	Name of school	DATE and TIME of vaccination	Number of Target children (<10 yrs children) in the school	No. of Vaccinators Required (= children/200)	Name of Vaccinator(s)	Name of (ASHA, AWW, volunteer)	Name	Contact Number	Name and designation of 1st line supervisor	Measles Vaccine Vials (5 dose vial) (D x 1.1)/5	Measles Diluent Ampoules = K	AD (0.5 ml) syringe (D x 1.1)	Reconstitution syringe (5 ml) (= K)	Hub Cutter (1 per vaccinator)	Marker Pens	Red Plastic Bags (1 bag per 50 syringes)	Black Plastic Bags (2 per site)
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
							1. 2. 3.											
							1. 2. 3.											
							1. 2. 3.											
							1. 2. 3.											
							1. 2. 3.											
							1. 2. 3.											
							1. 2. 3.											
							1. 2. 3.											
							1. 2. 3.											
							1. 2. 3.											

* Educational Institute: All schools (Private and Government), Day-care centers, Creches, where children upto 10 years age are likley to be found

Form 4

Measles Catch-up Campaign 2010
Outreach Microplan Form

State : ______________ District: ______________ Block: ______________ PHC / UHC: ______________

Urban area / Subcenter: ______________

Sr No	Village / Urban Locality & Location of session site	Date of vaccination	Number of Target children (9 mo to <10 yrs)	No. of VaccinatorsRequired	Team Details			Logistics requirement							
					Name of Vaccinator(s)	Name of (ASHA, AWW, volunteer)	Name and designation of 1st line supervisor	Measles Vaccine vials* 0.75 x [(C x 1.1)/5]	Measles Diluent Ampoules = H	AD (0.5 ml) syringe* 0.75 X (C x 1.1)	Reconstitution syringe (5 ml) (= H)	Hub Cutter (1 per vaccinator)	Marker Pens	Red Plastic Bags (1 bag per 50 syringes)	Black Plastic Bags (2 per site)
	A	B	C	D = C/150	E	F	G	H	I	J	K	L	M	N	O
						1. 2. 3.									
						1. 2. 3.									
						1. 2. 3.									
						1. 2. 3.									
						1. 2. 3.									
						1. 2. 3.									
						1. 2. 3.									
						1. 2. 3.									
						1. 2. 3.									
						1. 2. 3.									

* It is assumed that at least 25% of the beneficiaries of the village/mohalla will be covered during school vaccination in the first week of the campaign. Hence vaccine requirement for outreach session is calculated for the remaining 75% beneficiaries. This may be revised according to local situation.

Form 5

Measles Catch-up Campaign 2010
High Risk Population - H2R Micro-plan form

State : ____________________ District: ____________________ Block: ______________ PHC / UHC: ________________

Date:

						Team Details			Logistics requirement							
H2R Team Number	Subcenter / Urban Area	Name and address of the site	Number of Target children (9 mo to <10 yrs)	Date of Activity	Time of activity	Name of Vaccinator(s)	Name of volunteers (ASHA, AWW, others)	Name and designation of 1st line supervisor	Measles Vaccine Vials (5 dose vial) (C x 1.1)/5	Measles Diluent Ampoules = Col I	AD (0.5 ml) syringe (C x 1.1)	Reconstitution syringe (5 ml) = Col I	Hub Cutter (1 per vaccinator)	Marker Pens	Red Plastic Bags (1 bag per 50 syringes)	Black Plastic Bags (2 per site)
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
							1. 2. 3.									
							1. 2. 3.									
							1. 2. 3.									
							1. 2. 3.									
							1. 2. 3.									
							1. 2. 3.									
							1. 2. 3.									
							1. 2. 3.									
							1. 2. 3.									
							1. 2. 3.									

Form 6

Measles Catch-up Campaign 2010
PHC / Block Vaccine, Logistics and Human Resource Plan

State: District: Block: PHC/UHC:

Sr No	Subcenter / Urban Area	Target (9 months to <10 yrs. children)	Vaccination site					Logistics requirement									Human Resources		
			School sites (Number)	Outreach session site (Number)	Fixed Session site (Number)	Mobile/Special sites for hard to reach area (Number)	Total sites (Number)	Measles Vaccine vials (5 dose vial) (B x 1.1)/5	Measles Diluent Ampoules	AD (0.5 ml) syringe (B x 1.1)	Reconstitution syringe (5 ml) (= H)	Hub Cutters (at least 1 per vaccinator)	Red Plastic bags (1 per 50 syringes)	Black Plastic Bags (2 per session)	Cotton roll (50 gm pack) (= G)	Indelible Marker Pens (1 pen per 300 beneficiaries)	Total vaccinators (Number)	Total ASHA/AWW /volunteers (Number)	Total Supervisors (Number)
	A	B	C	D	E	F	G	H	I = H	J	K	L	M	N	O	P = B / 300	Q	R	S
	Total																		

Form 7

Measles Catch-up Campaign 2010
Day-wise Vaccine Distribution Plan

Date:
District: Block: PHC / UHC: Day of Campaign: 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20/21

					Logistics to be sent													Logistics Received back								
Sr No	Subcenter / urban area	Name of school or outreach vaccination site	Distance from ILR Point (in km)	Approx. Time Taken from ILR point to session site (Hours)	Number of Measles Vaccine (vials)	Number of Measles Diluent (Ampoules)	Number of vaccine carriers to be sent = No. of vials to be sent ÷ 25	Number of AD (0.5 ml) syringe	Number of Reconstitution syringe (5 ml)	Number of Hub Cutter	Number of Red Plastic bags	Number of Black Plastic Bag	No. of Indelible Ink Pens	No. of Tally Sheets	Name of Vaccinators	AVD name	Mode of Vaccine Delivery (Cycle / M.cycle / Others)	Unused Measles Vaccine (No. of vials)	Unused Diluent (No. of Ampoules)	Status of VVM Usable (Y/N)	AD (0.5 ml) syringe Number	Reconstitution syringe (5 ml) Number	Filled Hub Cutter (Y / N)	Non-sharp Bio-hazardous materials in Red Plastic bags (Y / N)	Non Bio-hazardous waste in Black Plastic Bag (Y / N)	Daily session report (vaccinator Tally Sheet) (Y / N)

Form 8

Measles Catch-up Campaign 2010

District: Block:

PHC/UHC:

Waste Managemeent Plan

Sr No	Subcenter / urban area	Name of educational institute or vaccination site	Name of courier responsible for carrying session site waste to PHC for disposal		Name of Person responsible	Phone number
				Chemical disinfection of Sharps from Hub Cutter at PHC		
				Chemical disinfection of non-sharps from red plastic bag		
				Disposal of Sharps in pit		
				Disposal of diisinfected non-sharps by selling for recycling		

Form 9

Measles Catch-up Campaign 2010
Communication Plan

District: Block: PHC/UHC:

Sr No	Subcenter / urban area	Name of Vaccination site	Names of Villages Covered by this site (including tagged villages / hamlets / tolas)	IEC Materials and plan						Miking Plan			Interpersonal Communication						
				No. Posters Reqd.	Date of display	No. of banners Reqd.	Date of Display	No. of FAQ booklets Reqd.	Date of Distribution	Number of Miking days required	Dates of miking	Timing	Date of H-to-H visit for DUE-LISTING by ASHA/AWW	Date of H-to-H visit for Invitation Card Distribution by ASHA/AWW	Name of ASHA	Number of Due-list formats reqd.	Number of Invitation Slips Reqd.	Date of Community Meeting	Name of Facilitator

Form 10

Measles Catch-up Campaign 2010
Supervisor Plan

Name of Supervisor: Designation:

State: District: Block: PHC/UHC:

DAY NUMBER	Date	Name of session site 1	Time of 1st visit	Time of 2nd visit	Name of session site 2	Time of 1st visit	Time of 2nd visit	Name of session site 3	Time of 1st visit	Time of 2nd visit	Name of session site 4	Time of 1st visit	Time of 2nd visit

Form 11

Measles Catch-up Campaign 2010
Cold Chain Contingency Plan

District: **Block:**
PHC/UHC:

In Case of
1 ILR / Deep Freezer Breaks Down
2 Power Failure which is not likely to be restored within 24 hours
3 Power Failure of more than 4 hours and generator is not working

Person responsible for taking action:		
1 Name:	Designation:	Contact Number:
2 Name:	Designation:	Contact Number:
3 Name:	Designation:	Contact Number:

If the first named is not available, the second named will be responsible; if first and second persons are not available, the third named will be responsible for taking action

What to Do?		
	1	Transfer vaccine to the cold box with frozen icepacks. Place a thermometer inside the cold box.
	2	Keep diluent outside and ensure that diluent is transported to session site in Vaccine Carrier
	3	If cold boxes not sufficient in number, move vaccine to _____. Contact Person is Mr. _____. His contact number is _____
If ILR breaks down	4	Inform DIO and District Cold chain Technician, Mr _____ on Phone no.
If Deep Freezer breaks down	1	Freeze icepacks in _____ice factory at _____. Contact person is Mr. _____ and his contact number is _____
	2	Inform DIO and District Cold chain Technician, Mr _____ on Phone no.
If Power Failure for more than 4 hours	1	Inform MO I/C
	2	Inform local electricity department and enquire when electric supply likely to be restored. If it is

Important Contact Details

Sr No	Designation	Name	Phone Number	Mobile No.
1	Block Medical Officer			
2	DIO			
3	District Cold Chain Technician			

Form 12

Measles Catch-up Campaign 2010

VACCINATOR TALLY SHEET

State _____ District: _____ Block _____ Urban area/Village: _____ Date: _____

Name of site:_____ Team No. _____ Location and contact details of nearest AEFI Centre _____

Type of site (Put √ mark) Fixed ☐ Outreach ☐ School ☐ Mobile ☐

Age Group	Tick 1 box for each child vaccinated																				Total
9 months - < 5 years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
5 years - < 10 years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
Grand Total																					

	Measles (vials)		Syringes			Plastic Bags	
	Vaccine	Diluent	AD (0.5 ml)	Reconstitution	Hub Cutter	Red	Black
Received							
Used, partially used, Wasted							
Returned (unused)							

Name and designation of vaccinators:

Name of AWW/ASHA/volunteers:
1
2
3

Name, designation and signature of supervisor:
1
2

MAINTAIN INJECTION SAFETY. CHECK EXPIRY DATE. CHECK VVM BEFORE RECONSTITUTION. USE ONE DISPOSABLE MIXING SYRINGE TO RECONSTITUTE ONE VIAL.

USE ONLY DILUENT FOR MEASLES VACCINE MANUFACTURED BY SAME MANUFACTURER. USE ADS SYRINGES. MAINTAIN COLD CHAIN. DISPOSE WASTE SAFELY

DISCARD RECONSTITUTED VACCINE AFTER 4 HOURS OR AT END OF SESSION WHICHEVER IS EARLIER. CHILDREN WILL WAIT FOR AT LEAST 30 MIN AFTER VACCINATION.

Form 13

Vaccination Card - Measles Catch-up Campaign 2010

STATE: DISTRICT: BLOCK:

Name_____

Age : _____ Years _____ Months _____

Sex : _____ Male / Female

Father's Name : _____

Permanent Address : _____

_____

_____

Session Site Where Vaccinated : _____

Date of Vaccination _____/ _____ / _____
(Day) (Month) (Year)

Any Adverse Events upto 30 mins after vaccination?

In case of swelling / Pain over site of injection : **Apply Cold Pack / Wet Towel**

In case of Fever after vaccination : **Take Paracetamol tablet after consulting Health Worker**

In case of other serious events : **Rush to nearest PHC /** _____

(Name of the nearest AEFI management center)

Form 14

Measles Catch-up Campaign 2010
Check-list for Supervisors

Name of the Supervisor: Designation: PHC/UHC:
Block: District:

		Site 1	Site 2	Site 3	Site 4
Observe	Name of the site visited				
	Type of site (Urban ward (U) / Rural area (R) / Educational Instt (E) / Hard-to-reach (H)				
	Is this site as per microplan? (Y / N)				
	Are all vaccinators available as per microplan? (Y / N)				
	Are other team members as per microplan? (Y / N)				
	Does the vaccination site have visible IEC (Banners/Posters)? (Y / N)				
	Are team members managing the crowd well? (Y / N)				
	Measles vaccine and diluents are stored in vaccine carrier (VC with 4 ice packs) (Y / N)				
	Reconstituted vial is kept in the hole of 1 ice pack removed from the vaccine carrier (Y / N)				
	Time of reconstitution is noted on the label of the vial (Y / N)				
	Diluent is kept cool in vaccine carrier before reconstitution? (Y / N)				
	Only one vial is reconstituted at a time? (Y / N)				
	Whole of diluent is used for reconstituting a vial? (Y / N)				
	Vaccinators administering the vaccine through subcutaneous route (Y / N)				
	Vaccinators administering the vaccine to the right arm? (Y / N)				
	The sterile part of the syringes remain untouched during reconstitution, drawing and administering vaccine (Y / N)				
	Tallying is done correctly immediately after vaccinating each child (Y / N)				
	Used syringes are not recapped (Y / N)				
	Used syringes are being cut using hub cutter immediately after use?				
Interview the Vaccinators	How was vaccine distributed for the session sites? (AVD / Supervisor / ANM)				
	Does the vaccination site have all necessary logistics? (Y / N)				
	Is a functional hub cutter available at session site? (Y / N)				
	Are AEFI reporting form and investigation form present at the site (Y / N)				
	Do the Vaccinators know what to do in case of a serious AEFI (primary care, referral and reporting)? (Y / N)				
	Whether social mobilization is being done by house visits to invite benefiaries? (Y / N)				
Verify	Adequate measles vaccine vial is present at the site [Adequate = (target x 1.1)/5] (Y / N)				
	Adequate AD syringe (0.5 ml) is present at the site [Adequate = target x 1.1] (Y / N)				
	Are Ice packs inside the vaccine carrier completely melted? (Y / N)				
	Is VVM (vaccine vial monitor) in usable stage? (Y / N)				
	Adequate Reconstitution syringe is present at the site [Adequate = # of Measles vaccine vial supplied] (Y / N)				
	Measles vaccine and diluents are made of same manufacturer (Y / N)				
	Measles vaccine, diluents and syringes are all within date of expiry (Y / N)				
	Do the number of vials used and beneficiaries vaccinated as per tally sheet match reasonably? (Y / N)				

COMMENTS AND OBSERVATIONS:

Supervisor should visit the area where campaign was done on previous day. S/he should survey at least 20 chidlren in households across the village / urban ward (including areas which are isolated or on the border of the ward/sub-block or on the farthest

		Site 1	Site 2	Site 3	Site 4	Total
	Name of Site Visited					
a)	Number of households visited					
b)	Number of 9 months to <10 years aged children in those households					
c)	Number of children found not vaccinated in campaign					
d)	Percent of unvaccinated children (c/b x 100)					

If 1 - 3 children (out of 20) are found 'missed' (un-immunized) at a site, request the guardians to take their children to the nearest site where vaccination is going on today.

If 4 or more children (out of 20) are found un-immunized at a site, plan for a repeat immunization in the area.

Form 15

Measles Catch-up Campaign 2010
Supervisor Report

District: _____ **Block:**

PHC/UHC: **Name of Supervisor:**

Date: _____/_____/_____ **Day of Activity:** 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18

Team no.	Session site type (School/ Outreach/ Fixed)	Session Site Name	Vaccinated			No. of Measles vials used	No. of unused Measles Vials returned	No. of AD syringes used	No. of unused AD syringes returned
			9 m to < 5 y	5 y to < 10 y	Total Number				
Sector sub-total									
Mobile teams for Hard to Reach Areas									
TOTAL in Sector									

This form should be compiled by the respective supervisors using data from respective tally sheets.

Supervisor's comments:
1. How many immunization centers were visited? _____

2. I distributed additional vaccine / syringes / Ice packs to team/s during my supervisory visit:
Yes/No (If Yes: Which team? _____)

3. I am satisfied with the overall activity in my area: Yes/ No (If No please give reasons in a separate sheet of paper highlighting reasons and add to this sheet)

_____
Name and Signature of Supervisor

Form 16

Measles Catch-up Campaign 2010
Block Report

District: _____ Block:

Date: ___/___/_____ Day of Activity: 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18

Sr No	PHC	Name of Supervisor	Vaccinated			No. of Measles vials used	No. of unused Measles Vials returned	No. AD syringes used	No. of unused AD syringes returned
			9 m to < 5 y	5 y to < 10 y	Total Number				
	Block sub-total								
	Mobile teams for Hard to Reach Areas								
	TOTAL in Block								

This form should be compiled by the block data handler using data from respective supervisor reports.

Name and Signature of MO in-charge

Group 2: Planning and Reporting Formats: District / State level

S No	Level	Name of format	Who will fill
17.	District	District HR & Logistics Planning Format	District Cold Chain Officer + DIO
18.	District	District Cold Chain Planning Format	District Cold Chain Officer + DIO
19.	District	District Cold Chain Contingency Plan	District Cold Chain Officer
20.	District	District Supervision Plan	DIO and Other Program Managers
21.	District	District Compilation Report	District Computer Assistant / Data Handler / Statistical Officer (to be signed off by DIO)
22.	State	State Compilation Report	State Computer Assistant (to be signed off by SEPIO)
23.	State/District/Block	Consolidated Report (End of activity)	SEPIO /DIO / BMO

Form 17

Measles Catch-up Campaign 2010
District HR, Vaccine and Logistics Plan

State: District

Sr No	Block or Urban Area	Target (9 months to <10 yrs. children)	Vaccination site					Logistics requirement									Human resource		
			School sites (Number)	Outreach session site (Number)	Fixed* Session site (Number)	Mobile site for hard to reach area (Number)	Total sites (Number)	Measles Vaccine vials (5 dose vial) (B x 1.1)/5	Measles Diluent Vials	AD (0.5 ml) syringe (B x 1.1)	Reconstitution syringe (5 ml) (= H)	Hub Cutters (at least 1 per vaccinator)	Red Plastic bags	Black Plastic Bags	Cotton roll (50 gm pack) (= G)	Indelible Marker Pens (1 pen per 300 beneficiaries)	Total vaccinators (Number)	Total ASHA / AWW / volunteers (Number)	Total Supervisors (Number)
	A	B	C	D	E	F	G	H	I = H	J	K	L	M	N	O	P = B / 300	Q	R	S
	Total																		

Note: Fixed site will run on all working days of the 3 weeks campaign (total 18 days). The first week will target school. Any facilitiy providing routine immunization service during the SIA period will hold the regular session on due date and will also provide measles vaccination to 9 months to <10 years children during SIA period.

Form 18

Measles Catch-up Campaign 2010
District Cold chain Plan

State: District:

Sr No	Block	Target population	Cold Chain															Logistics			
			Measles Vaccine Doses Required	Maximum Diluent Doses Required per day	Cold Chain Space required for Measles Vaccine (Litres) = (D x 5/1000)	Maximum Cold Chain space required for diluents per day (litres) @ 4 ml per dose = (Col E X4/1000)	Equipment Available for Measles vaccine			Total Available Space# (Ltrs)	Space Available for SIA (Total Space minus space required for Routine Immun.)	Excess / Deficit	CC space for Freezing of Ice Packs		Cold Boxes Available		Number of Vaccine Carriers required (2 x total teams + Supervisors + replacement IP)	Number of Ice packs required per day (14 x no. of vaccinators per day)	AD Syringes (0.5 ml) Required	5 ml Recon. Syringes required	Whether Adequate Dry Space Available (Y / N)	In case of space not available, where logistics will be stored
							ILR MK 144 (Number)	ILR MK 304 (Number)	Deep Freezers - only for Measles vaccine and not for diluents(Ltrs)				No of Deep Freezers (Excluding DFs considered for vaccine storage)	Other Options like Ice factory, domestic refrigerators etc	5 L	20 L						
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
District Total																						

ILRs - MK 144 has 45 Lts and MK 304 has 108 Lts of available space for vaccine storage; DEEP FREEZERs - MF 314 has 264 Lts and MF 114 has 72 Lts of available space for vaccine storage.
COLD BOX (5 Lts) - can store about 1500 doses of mixed antigen. COLD BOX (20 Lts) - can store about 6000 doses of mixed antigen
Cold chain storage space needed for RI: 55.5 ml per child per year for all RI antigens.

Form 19

Cold Chain Contingency Plan

State: **District:**

In Case of
1 ILR / Deep Freezer Breaks Down
2 Power Failure which is not likely to be restored within 24 hours
3 Power Failure of more than 4 hours and generator is not working

Person responsible for taking action:

1 Name:	Designation:	Contact Number:
2 Name:	Designation:	Contact Number:
3 Name:	Designation:	Contact Number:

If the first named is not available, the second named will be responsible; if first and second persons are not available, the third named will be responsible for taking action

What to Do??

If ILR breaks down	1	Transfer vaccine to the cold box with frozen icepacks. Place a thermometer inside the cold box.
	2	Keep diluent outside and ensure that diluent is transported to session site in Vaccine Carrier
	3	If cold boxes not sufficient in number, move vaccine to _____. Contact Person is Mr. _____. His contact number is _____
	4	Inform DIO and District Cold chain Technician, Mr _____ on Phone no. _____
If Deep Freezer breaks down	1	Freeze icepacks in _____ice factory at _____. Contact person is Mr. _____ and his contact number is _____
	2	Inform DIO and District Cold chain Technician, Mr _____ on Phone no. _____
If Power Failure for more than 4 hours	1	Inform BMO, DIO and CMO
	2	Inform local electricity department and enquire when electric supply likely to be restored. If it is going to take more than 24 hours, take actions as mentioned in ILR and DF breakdown above

Important Contact Details

Sr No	Designation	Name	Phone Number	Mobile No.
1	District Cold Chain Technician			
2	DIO			
3	Chief Medical Officer			

Form 20

Measles Catch-up Campaign 2010
District-level Supervision Plan

State: District:

Sr No.	Name and Designation of District Level Supervisor	Date		Date		Date		Date		Date	
		Details of Planned visit		Details of Planned visit		Details of Planned visit		Details of Planned visit		Details of Planned visit	
		PHC	Village(s)/Schools /H2R	PHC	Village(s)/Schools /H2R	PHC	Village(s)/Schools /H2R	PHC	Village(s)/Schools /H2R	PHC	Village(s)/Schools /H2R

Form 21

Measles Catch-up Campaign 2010
District Report

District: _____

Date: ____/____/_____ Day of Activity: 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18

Sl #.:	Name of Block	Vaccinated			No. of Measles vial used	No. AD syringes used
		9 m to < 5 y	5 y to < 10 y	Total Number		
Sub-total						
Mobile teams for Hard to Reach Areas						
TOTAL in District						

This form should be compiled by the district data handler using data from respective block reports.

Name and Signature of Chief Medical Officer

Form 22

Measles Catch-up Campaign 2010
State Report

State: _____

Date of report: ____/____/_____ Day of Activity: 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18

Sr No	Name of District	Vaccinated			No. of Measles vial used	No. AD syringes used
		9 m to < 5 y	5 y to < 10 y	Total Number		
Sub-total						
Mobile teams for Hard to Reach Areas						
TOTAL in State						

This form should be compiled by the state data handler using data from respective district reports.

Name and Signature of State Immunization Officer

Form 23

Measles Catch-up Campaign 2010
Consolidated Block / District / State Report

State: _____ **District:** _____ **Block :** _____

Date of report: ____/____/_____

Date of activity	Vaccinated			No. of Measles vials used	No. AD syringes used
	9 m to < 5 y	5 y to < 10 y	Total Number		
Total					

** State should specify which districts conducted the catch-up campaign

Name and Signature of SEPIO / DIO / MO-in-charge

Group III: Monitoring / RCA formats

S No	Level	Name of format	Who will fill
24.	Village / Session Site	Rapid Assessment Format	National / Independent Independent Observer

Form 24

Measles Catch-up Campaign 2010
Rapid Assessment

Name of the Observer: Designation: Organization:

State:_____ District:_____ Block:_____ Village/Mohalla:_____

Area type: Urban/Rural H2R/High-risk population: Yes/No

National or Independent Observers are expected to conduct as many RCAs as possible (at least one) daily. Conduct assessment only in areas where campaign session has already taken place. Try to identify missed communities, especially in isolated areas, at the farthest point from the vaccination site, socially segregated groups, street children, working children in small enterprises or markets, etc. Start in a central location, and pick a direction at random to start by tossing a coin. Begin with the first house facing you. Identify and tally 20 target-age children in 20 households. If a household has more than one eligible child, include only one randomly selected child from each household. To do this, list the eligible children on the back of the form, assign each a number (1, 2, 3, etc.), and use the first number of the serial number on a money bill to select and record only one child. You may have to visit more than 20 houses if any of the houses does not have any children. If any children were unvaccinated, send them to the nearest vaccination site that is open on that day or to the fixed site of that area. If 2 or 3 children are found unvaccinated, inform the supervisor/authority to motivate and mobilize all missed children to visit nearest campaign or routine immunization session site. If 4 or more children are found un-immunized, the vaccination team should revisit the area to immunize all missed children.If any AEFI is noticed, direct the guardian to the nearest health facility/AEFI management centre.

Mark the following questions and tick accordingly in the appropriate column

I. Did the child receive measles vaccine during this campaign?
- If Yes — Tick under RECEIVED column
- If No — Tick under MISSED column and write name & address on the back side of this page

II. Was this the first measles vaccine the child ever received?
(Remember, vaccinated child will also get a tally under RECEIVED column)
- If Yes — Tick under ZERO DOSE column

III. Did the child have any AEFI after vaccination?
- If Yes — Put serial number of AEFI in the boxes of REPORTED AEFI column

1 Injection site abscess
2 Any condition required seeking service of a doctor or hospital
3 Any condition required hospitalization
4 Death
5 Others (explain on the opposite side)

Location of surveyed area (write village/mohalla/ward)	Date of survey	Vaccination status in the recent Measles Catch-up campaign		Zero dose Previously never vaccinated	Reported AEFI *NOTE: report AEFIs to proper authorities
		Received	Missed		
Total					

Question: (if child was unvaccinated): *"Why was the child not vaccinated during the campaign?"*

Put a tick against most important reason mentioned by guardians/caregivers of the missed children for not vaccinating:	Total
1. Parents didn't know about the campaign	
2. Parents didn't know about place or date of the campaign	
3. Parents didn't give importance	
4. The child was sick	
5. There was no vaccine at the site	
6. There was no vaccinator at the site (check whether s/he went on scheduled date or not)	
7. Fear of injection	
8. Fear of AEFI	
9. Site was too far	
9. Very long queue	
11. Traveling	
12. Others	

NOTES

Ministry of Health and Family Welfare
Government of India