Year of Intensification of Routine Immunization (2012-13)

Ready Reference Guide for Health Workers

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Department of Family Welfare
Ministry of Health & Family Welfare
Government of India, New Delhi
Introduction

Government of India has declared year 2012 as the year of intensification of routine immunization. The key objective of this campaign is to improve full immunization coverage and reach all beneficiaries, particularly in remote, backward and inaccessible areas and urban slums. In addition to this Government of India has also expanded the Universal Immunization Programme by introducing 2\textsuperscript{nd} dose of measles, hepatitis B and pentavalent vaccination.

This handbook developed with technical assistance from USAID/MCHIP is meant for health workers and supervisors involved in routine immunization. It has been developed with a view to serve as a ready reference guide in the field for essential components of routine immunization like cold chain, planning and organization of RI sessions and injection safety, including waste management.

The intention is to provide updated information that is practical, as well as technically and operationally sound. This handy tool can be carried along at all times and referred to whenever needed.
Year of Intensification of Routine Immunization (2012-13)

The Universal Immunization Programme in India is one of the largest programmes in the world, targeting to reach approximately 29 million pregnant women and 26 million infants every year.

India’s full immunization coverage stands at 61% and there are large number of beneficiaries which are either not reached (left out) or are not tracked for full immunization (drop out). India has the highest number of children who have not received DPT 3 in the world (approximately 7.4 million).

Majority of these children reside in Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, Gujarat, Orissa and Assam. In order to improve immunization coverage and performance, particularly among the priority districts of the country, Government of India has declared year 2012-13 as the “Year of Intensification of Routine Immunization (IRI)”.

The strategic framework for IRI includes:

- Advocacy for political and bureaucratic commitment for the program
- Strengthening communication, social mobilization
- Review mechanisms at different levels
- Implementation of area specific coverage improvement plans
- Institutional capacity building
- Strengthening of cold chain infrastructure and vaccine logistics management
- Institutionalization of AEFI and VPD surveillance and
- Building partnership with stakeholders.

In addition to this, four rounds of immunization weeks will be conducted during the year specifically focusing on unreached and under reached areas and communities; and a mobile service delivery mechanism by name “Teeka Express” will be launched for providing services to underserved populations, tribal, hard to reach areas, urban and peri-urban areas and migrant population.
## List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD</td>
<td>Auto Disable (Syringe)</td>
</tr>
<tr>
<td>AEFI</td>
<td>Adverse Event Following Immunization</td>
</tr>
<tr>
<td>AFP</td>
<td>Acute Flaccid Paralysis</td>
</tr>
<tr>
<td>ANM</td>
<td>Auxiliary Nurse and Midwife</td>
</tr>
<tr>
<td>ASHA</td>
<td>Accredited Social Health Activist</td>
</tr>
<tr>
<td>BCG</td>
<td>Bacillus Calmette Guerin (Vaccine)</td>
</tr>
<tr>
<td>DF</td>
<td>Deep Freezer</td>
</tr>
<tr>
<td>DPT</td>
<td>Diphtheria, Pertussis, Tetanus (Vaccine)</td>
</tr>
<tr>
<td>DT</td>
<td>Diphtheria, Tetanus (Vaccine)</td>
</tr>
<tr>
<td>DTaP</td>
<td>Diphtheria, Tetanus, acellular Pertussis (Vaccine)</td>
</tr>
<tr>
<td>EEFO</td>
<td>Early Expiry First Out</td>
</tr>
<tr>
<td>Hep B</td>
<td>Hepatitis B (Vaccine)</td>
</tr>
<tr>
<td>ILR</td>
<td>Ice Lined Refrigerator</td>
</tr>
<tr>
<td>IU</td>
<td>International Unit</td>
</tr>
<tr>
<td>JE</td>
<td>Japanese Encephalitis</td>
</tr>
<tr>
<td>MCH</td>
<td>Maternal and Child Health</td>
</tr>
<tr>
<td>MCHIP</td>
<td>Maternal and Child Health Integrated Program</td>
</tr>
<tr>
<td>ml</td>
<td>Milli liter</td>
</tr>
<tr>
<td>OPV</td>
<td>Oral Polio Vaccine</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary Health Centre</td>
</tr>
<tr>
<td>RI</td>
<td>Routine Immunization</td>
</tr>
<tr>
<td>TT</td>
<td>Tetanus Toxoid</td>
</tr>
<tr>
<td>UIP</td>
<td>Universal Immunization Program</td>
</tr>
<tr>
<td>VPD</td>
<td>Vaccine Preventable Disease</td>
</tr>
<tr>
<td>VVM</td>
<td>Vaccine Vial Monitor</td>
</tr>
</tbody>
</table>
Childhood Tuberculosis
- A child with fever and/or cough for more than 2 weeks, with loss of weight or no weight gain
- History of contact with a suspected or diagnosed case of active tuberculosis

Polio
- Sudden onset of weakness and floppiness in any part of the body in a child less than 15 years of age.
- Paralysis in a person of any age in whom polio is suspected.

Diphtheria
- Sore throat, mild fever and gray patch or patches in the throat.
- Obstructed breathing due to membrane in the throat.

Pertussis (Whooping Cough)
- History of repeated and violent coughing, with any one of following:
  - Cough persisting for two or more weeks, fits of coughing
  - Cough followed by vomiting or typical whoops in older infants

Neonatal Tetanus
- History of normal suck & cry during first 2 days of life
- Onset of illness between 3-28 days of life
- Inability to suck followed by stiffness of neck and body and/or jerking of muscles.

Measles
- History of fever with rash, with cough or running nose or red eyes

Japanese Encephalitis (JE)
- Acute onset of fever with change in mental status (such as confusion, disorientation or coma) and seizures.

Hepatitis B
- Fever, headache, nausea, vomiting, jaundice (yellowish eyes) and light or gray stools.
- Final confirmation is done by laboratory tests.
**National Immunization Schedule**

<table>
<thead>
<tr>
<th>Pregnant Women</th>
<th>TT</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Early in pregnancy</td>
<td>![Injection Image]</td>
</tr>
<tr>
<td>• 4 weeks after 1st dose</td>
<td>![Injection Image]</td>
</tr>
</tbody>
</table>

If pregnant women have received 2 doses of TT within last 3 years, then only one booster dose is given.

2nd or booster dose should be given before 36 weeks of pregnancy. However, it may be given even if more than 36 weeks have passed.

<table>
<thead>
<tr>
<th>For infants</th>
<th>BCG</th>
<th>Hepatitis B</th>
<th>DPT</th>
<th>OPV</th>
<th>Measles</th>
</tr>
</thead>
<tbody>
<tr>
<td>• At birth</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
</tr>
<tr>
<td>• 1 ½ months (6 weeks)</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
</tr>
<tr>
<td>• 2 ½ months (10 weeks)</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
</tr>
<tr>
<td>• 3 ½ months (14 weeks)</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
</tr>
<tr>
<td>• 9 (completed) – 12 months</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For children</th>
<th>DPT</th>
<th>OPV</th>
<th>Measles</th>
<th>JE</th>
<th>TT</th>
</tr>
</thead>
<tbody>
<tr>
<td>• At 16 – 24 months</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
</tr>
<tr>
<td>• At 5 – 6 years</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
</tr>
<tr>
<td>• At 10 years</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
</tr>
<tr>
<td>• At 16 years</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
<td>![Injection Image]</td>
</tr>
</tbody>
</table>

**Vitamin A Supplementation**

- Total 9 prophylactic doses of vitamin A should be given - first dose (1 ml) along with Measles vaccine at 9-12 months; and 2nd to 9th doses (2 ml) to children 1-5 years of age during biannual rounds.
- Vitamin A solution must be kept away from direct sunlight and use till expiry date. Bottle once opened should be used within 8 weeks of opening.
- For treating children with symptoms of vitamin A deficiency, administer 2 lac IU immediately after diagnosis, followed by another dose (2 lac IU) 1-4 weeks later.

**REMEMBER**

- TT can be given to a woman in labour, if she has not previously received TT.
- Birth dose of Hepatitis B is only given within 24 hours after birth, and zero dose of OPV is given up to 15 days after birth
- JE vaccine is given only in select endemic districts after the campaign.
Site and route of vaccination

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Dose</th>
<th>Route</th>
<th>Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>TT</td>
<td>0.5 ml</td>
<td>Intra muscular</td>
<td>Upper arm</td>
</tr>
<tr>
<td>BCG</td>
<td>0.1 ml *</td>
<td>Intra dermal</td>
<td>Left upper arm</td>
</tr>
<tr>
<td>DPT#</td>
<td>0.5 ml</td>
<td>Intra muscular</td>
<td>Antero lateral mid thigh</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>0.5 ml</td>
<td>Intra muscular</td>
<td>Antero lateral mid thigh</td>
</tr>
<tr>
<td>OPV</td>
<td>2 drops</td>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>Measles</td>
<td>0.5 ml</td>
<td>Sub cutaneous</td>
<td>Right upper arm</td>
</tr>
<tr>
<td>JE</td>
<td>0.5 ml</td>
<td>Sub cutaneous</td>
<td>Left upper arm</td>
</tr>
</tbody>
</table>

* Dose of BCG till one month of age is 0.05 ml
# DPT 2nd booster at 5-6 years is given on upper arm

Positioning

**B.C.G.**
- The baby's right arm embraces the parent's back and is held under the parent's left arm.
- The baby’s left arm and legs are controlled by the parent’s right arm and hand.

**D.P.T. & Hep B**
- One of the baby's arms embraces the parent's back and is held under the parent's arm.
- The other arm and legs are firmly controlled by the parent's hand.
- Give DPT and Hep B on different legs.

**Measles**
- The baby’s left arm embraces the parent's back and is held under the parent's right arm.
- The parents' hands firmly hold and control the baby’s head and the baby’s right arm.

Inject the vaccine at the correct site and use the correct route
Inject vaccine using steady pressure and withdraw needle at the angle of insertion
Do not massage/rub the injection site after giving injection
# Points to Remember

## BCG Vaccine
- BCG can be given till one year of age
- There is no need to re-vaccinate the child even if no scar is formed.

## OPV Vaccine
- OPV can be given till 5 years of age
- OPV and vitamin A can be given with DPT booster dose
- An infant can be breast fed immediately after giving OPV

## Measles Vaccine
- All efforts should be made to immunize the children at the right age i.e. 1st dose at completed 9 months to 12 months and 2nd dose at 16-24 months.
- If a child comes late then give 2 doses at one month interval until 5 years of age.
- Measles catch up campaigns are organized to vaccinate all children in an age group in a state/district with one dose of measles irrespective of previous vaccination status.
- Child must receive routine doses of measles vaccine according to immunization schedule irrespective of measles catch up campaign dose.

## JE Vaccine
- JE is a single dose vaccine, and if any child has received the vaccine during campaign, then there is no need to repeat the dose in RI.
- Child can receive JE vaccine through RI till the age of 15 years.

## DPT Vaccine
- DPT can be given till 7 years of age
- There should be a minimum gap of 4 weeks between two doses of DPT
- DT has now been replaced by DPT in immunization schedule. In case a child is allergic to DPT or develops encephalopathy after DPT, give DTaP/DT for remaining doses.

## Hepatitis B Vaccine
- Hepatitis B and DPT vaccine cannot be mixed together or administered by the same syringe
- Birth dose of this vaccine is effective in preventing perinatal transmission of Hepatitis B infection if given within first 24 hours after birth

## TT Vaccine
- TT should be given as soon as pregnancy is diagnosed.
- 2nd dose of TT should be given during the pregnancy as per the schedule.
- TT at the age of 10 and 16 years are to be given to both boys and girls.

## All Vaccines
- DPT & Hepatitis B vaccines are given on antero lateral aspect of mid thigh to prevent damage to sciatic nerve.
- For vaccines requiring more than one dose, there is no need to restart the schedule if more time has lapsed after previous doses. Rather only remaining doses need to be administered at 4 weeks interval.
Maintaining Cold Chain

Proper cold chain maintenance is required at all levels because if the vaccines are exposed to too much heat, light or cold, they may be damaged and may lose their potency or effectiveness.

**REMEMBER**

- All vaccines are sensitive to heat.
- BCG and Measles vaccines are also sensitive to light exposure.
- Hepatitis B, DPT and TT vaccines lose their potency on freezing.
- At PHC level, all vaccines are stored in ILR for a period of one month at temperature of +2 to +8 °C.
- Diluents should be stored in the ILR at least 24 hours before use.
- Vaccine carriers are used for transporting vaccines from PHC to immunization sessions and for storing them during the session.

**Vaccine sensitivity to heat**

- BCG (after reconstitution)
- OPV
- Measles
- DPT
- BCG (before reconstitution)
- TT, Hep B, JE

**Vaccine sensitivity to cold**

- Most: Hepatitis B, DPT, TT
- Least: BCG, Measles

**Checking heat damage (reading VVM)…**

When the inner square is lighter than the outer circle, and if expiry date has not passed, then vaccine can be used.

**Discard point:** the colour of inner square matches with outer circle – **Do not use the vaccine**

**Beyond the discard point:** the colour of inner square is darker than outer circle - **Do not use the vaccine**
Using ILR and DF

At PHC level, ILRs’ are used for storing all UIP vaccines

Make sure that all vaccines and diluents are stored at +2 to +8°C
Monitor storage temperature twice a day (morning & evening)

REMEmBER

• All vaccines must be kept in the basket of the ILR along with diluents.
• If baskets are not available, store vaccines (other than OPV and Measles) over two rows of empty ice packs kept flat on the platform of the ILR. OPV and Measles can be kept over two rows of empty ice packs on the floor of the ILR.

At PHC level, Deep Freezers are used only for preparation of ice packs and are not to be used for storing UIP vaccines.

Order of vaccines from top to bottom
Hep B
DPT, TT
BCG
Measles
OPV

Follow Early Expiry First Out (EEFO)

Place vaccines away from direct contact with ILR walls and keep space between boxes

Store diluents in baskets, for 24 hours before next session

Discard frozen Hep B, DPT or TT vial

Large compartment
Wipe dry and arrange 20-25 unfrozen ice packs vertically (never flat) in a crisscross pattern with space for air circulation

Small compartment
Arrange and store frozen ice packs vertically, in layers. Also store in cold boxes

Store frozen ice packs only up to half the height of the large compartment
Using Vaccine Carrier

Packing the carrier...

- Condition the frozen ice packs: keep frozen ice packs in open till they water droplets appear on their surface. Check conditioning by shaking ice pack and listening for the sound of water.
- Wipe the ice packs dry and place four conditioned ice packs against the sides of the carrier.
- Unconditioned ice packs may damage freeze sensitive vaccines (DPT, TT & Hep B)
- Put required number of vaccine vials, diluent ampoules and dropper for OPV in zipper lock polythene bag and place it in the center of the carrier.
- Close the lid securely

Check

- All four ice packs are conditioned
- Lid of carrier fits tightly
- Insulation of carrier (no cracks)

Never

- Drop or sit on the carrier
- Leave carrier in sunlight
- Leave the lid open once packed

Collect vaccines in the carrier on the session day. Vaccine carrier may not store vaccine effectively beyond 12 hours.

When receiving vaccines, check for:

- All required vaccines are kept properly in the carrier
- All vaccine vials have readable labels
- All vaccine are within expiry dates and usable VVM

During immunization session...

- Take only one ice pack out of the carrier for keeping OPV and reconstituted vaccines (BCG, Measles and JE) on it.
- Ice pack once taken out, should not be put back in the carrier till the end of session.
- Never put freeze sensitive vaccines (DPT, TT, Hepatitis B) on ice pack
Using AD Syringes

• Use only AD (Auto Disable) syringes for giving vaccinations.
• Select the correct syringe for the vaccine i.e. 0.1 ml AD syringe for BCG and 0.5 ml AD syringe for all other vaccines.
• Check the packaging of the syringe. Don’t use if the package is damaged, opened or expired.
• Tear the package from the plunger side and take out the syringe by holding its barrel.
• Do not move the plunger until you are ready to fill the syringe with vaccine.
• Remove the needle cap of the syringe, take the appropriate vaccine vial, invert the vial, and insert the needle into the vial through the rubber cap.
• Do not inject air into the vial as this will lock the syringe.
• Do not insert needle beyond the level of vaccine in the vial as this may draw air bubble into the syringe.
• Do not touch the needle or rubber cap (septum) of the vial.
• Pull the plunger back slowly to fill the syringe. The plunger will automatically stop when the necessary dose of vaccine has been drawn (0.1 or 0.5 ml).
• In case air is drawn into the syringe – take out the needle, hold the syringe upright, tap the barrel to bring the bubbles towards the tip of the syringe and then carefully push plunger to expel the air bubble.

• Use 5 ml disposable syringes for reconstituting BCG, Measles and JE.
• Use separate syringes for reconstituting different vaccines.
• Never use the used syringe again as it may lead to AEFI.
Using Hub Cutter

• Hub cutter is used at the immunization session site for cutting hub and needle of the used syringes.

• It segregates infected sharps into a puncture proof container and thus prevent injury to service provider, beneficiary and community members.

1. Immediately after use, carefully insert the hub with needle of used syringe (and not just the metal part of the needle) into the insertion hole.

2. Hold the syringe and use the other hand to clamp the handles till the hub is completely cut. The cut needle and hub will drop into the puncture proof container.

3. Place the plastic part of the cut syringe in the red disposal bag.

• Also use hub cutter to store broken diluent ampoules and vaccine vials at the session site.

• Collect broken vials and ampoules on paper and put it in hub cutter after opening the lid.

• Never touch any sharp (cut needles, broken vials or ampoules).

• Never cut metal part of needle.
All waste generated during the immunization session is to be segregated, and returned back at the end of session, to the health facility, for disinfection and proper disposal.

Never leave or throw immunization waste at the session site
Never burn used syringes or any other immunization waste
Never store the waste at session site, sub center or facility

**USE AT SESSION SITE:**

- **Red disposal bag** to store (1) cut plastic part of syringes, (2) used empty or discarded unbroken vials
- **Black disposal bag** to store (1) needle caps, (2) syringe packaging
- **Hub cutter** to store, (1) cut hub and needle of syringes (2) broken vials & ampoules

**At the end of session send back to health facility**

- Unused and remaining vaccine in proper cold chain
- Session report
- All immunization waste in hub cutter and red and black disposal bags
Ensuring Safe Injections

• Keep hands clean before giving injections
  • Wash or disinfect hands before preparing injections
  • Cover any small cuts on service provider’s skin
  • If the injection site is dirty, wash it with clean water
  • Avoid giving injections if the skin at injection site of the recipient is infected or compromised by local infection

• Use sterile injection equipment, every time
  • Always use new AD syringe for each injection and a new disposable syringe for reconstitution of freeze dried vaccines.

• Prevent the contamination of vaccine & injection equipment
  • Prepare each injection in a clean area where contamination from blood or body fluids is unlikely.
  • Never touch the needle of syringe or rubber cap of vaccine vial
  • Discard any needle that has touched any non-sterile surface
  • Do not rub the injection site after giving vaccine
  • Never use spirit swab or any other antiseptic to clean the injection site before giving injection.

• Prevent needle-stick injuries
  • Do not recap or bend needles
  • Anticipate sudden movement of child

• Practice safe storage and disposal of waste
  • Cut all used syringes with hub cutter immediately after use
  • Store all infected sharps in hub cutter at the session site
  • Return all immunization waste at the end of session to health facility for proper disinfection and disposal.
## Planning for Service Delivery

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>List all the villages (and hamlets) included under the sub centre area.</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>Mention the total population against each village (and hamlet) based on actual head count.</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>Estimate and mention annual target of beneficiaries (pregnant women and infants)</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td>Write monthly target of beneficiaries (pregnant women and infants)</td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td>Calculate total number of beneficiaries per month for each vaccine and vitamin A</td>
</tr>
<tr>
<td><strong>Step 6</strong></td>
<td>Based on the number of beneficiaries calculate the monthly requirement of vaccine vials and vitamin A</td>
</tr>
<tr>
<td><strong>Step 7</strong></td>
<td>Prepare a sub centre workplan (roster) mentioning names of villages and days when session are to be organized</td>
</tr>
<tr>
<td><strong>Step 8</strong></td>
<td>Prepare a map of sub centre, mentioning distance from PHC (cold chain point), different villages (and hamlets) included under the sub centre, days of immunization, population and number of target beneficiaries in each respective village.</td>
</tr>
</tbody>
</table>

### Remember

- Sessions in villages (and hamlets) are to be planned on the basis of injection load:
  - 25-50 injections – one session/month
  - >50 injections – 2 sessions/month
  - <25 injections – every alternate month
- For hard to reach areas or those with population less than 1000, minimum 4 sessions should be held in a year (once every quarter).
Organizing Session

- Organize session at a proper location easily accessible to the beneficiaries.
- Prepare due list of beneficiaries in discussion with ASHA and Anganwadi workers. Share due list with ASHA for mobilizing the identified beneficiaries to the session site.
- Welcome the beneficiaries and care-takers. Check the age and verify the records (immunization card, counterfoils and MCH register) for due vaccinations.

Before immunizing ASK for...

- Age of beneficiary, card and last vaccine given
- Any current illness
- Any AEFI from last vaccine
- Any history of allergic reaction to any vaccine

Contraindications to immunization

- History of anaphylaxis or severe allergic reaction from any vaccine
- History of serious AEFI from any vaccine during previous vaccination
- High fever

Mild fever, diarrhea & cough are not contraindications for immunization

- Before preparing injection, check the vaccine vial for VVM, expiry date and freezing of freeze sensitive vaccines (DPT, TT and Hepatitis B).
- Only the diluents provided by the manufacturer with the vaccine, should be used to reconstitute the vaccine
- Use the entire quantity of diluent supplied with the vaccines for reconstitution.
- Use new disposable syringe for each reconstitution.
- Mention date and time of reconstitution on the vaccine vial and use this reconstituted vaccine within the recommended time (4 hours for BCG and Measles, and 2 hours for JE vaccine). Discard any vaccine remaining after this time.
Adverse Events Following Immunization (AEFI)

An AEFI is a medical incident that takes place after an immunization, causes concern and is believed to be caused by immunization.

AEFI may occur due to program error or sensitivity to vaccine or it may occur coincidentally.

**Events to be reported immediately and investigated**

1. Death, hospitalization, disability or other serious and unusual event that are thought by health worker or the public to be related to immunization.
2. Event occurring in cluster
3. Anaphylaxis
4. Toxic shock syndrome
5. Anaphylactoid or acute hypersensitivity reaction
6. Encephalopathy
7. Sepsis
8. Any event where vaccine quality is suspected
9. Acute flaccid paralysis (AFP)

**Minor reactions due to vaccines which are not to be reported**

<table>
<thead>
<tr>
<th>Mild reaction</th>
<th>Treatment</th>
<th>When to report</th>
</tr>
</thead>
</table>
| Local reaction (pain, swelling, redness)        | • Cold cloth at injection site  
                                                                 • Give paracetamol       | In case of an abscess   |
| Fever > 38.5 ºC                                  | • Give extra fluids  
                                                                 • Tepid sponging         
                                                                 • Give paracetamol       | When accompanied by other symptoms |
| Irritability, malaise and systemic symptoms      | • Give extra fluids  
                                                                 • Give paracetamol       | When severe or unusual   |
Preventing AEFIs’

Check
- Expiry date & VVM of vaccines
- Expiry date of diluents
- Expiry date & packaging of syringes

Use
- Correct diluents
- New disposable syringes for each reconstitution
- New AD syringes for each vaccine

Mention
- Date and time of reconstitution on vials

Maintain
- Cold chain at session site

Discard
- Frozen ‘T’ series vaccines
- Reconstituted BCG & Measles after 4 hours and JE after 2 hours
- Vaccine with VVM in unusable stage
- Needles touched by finger

REMEMBER
(1) Ask beneficiaries to wait for half an hour after vaccination to observe for any AEFI
(2) Ask parents about the history of any adverse reaction following earlier vaccinations.
(3) Inform care givers about minor adverse events and how to deal with them.
(4) Report deaths, injection site abscesses and other complications in monthly report. Nil report is also important.
(5) Report all serious AEFIs immediately to medical officer in-charge or supervisor.
Maintaining Records & Reports

- Record each immunization correctly and completely in the immunization card, counterfoil, tally sheet and tracking register.
- Complete all entries in village wise mother and child tracking register. Before each immunization session update the register to include new pregnancies and births from the records of ASHA and Anganwadi workers.
- NEVER create a new entry in the register each time the beneficiary returns for subsequent vaccination.
- Issue a new immunization card to beneficiary coming for the first time. Update the card of beneficiaries coming for subsequent vaccinations. Always keep updated counterfoils for record. Arrange the counterfoils in tracking bag.
- Update the tracking register at the end of session on the basis of counterfoils. Prepare a due list of beneficiaries for the next session. Give a copy of the due list to ASHA before leaving the village.
- Leave the list of children vaccinated during the session with ASHA and anganwadi worker along with your contact details. Ask them to be alert and inform in case of any AEFI.
- At the end of session send back the day’s report to health facility through alternate vaccine delivery.
- Always report VPDs’ and AEFIs’ in the monthly performance report. Write zero (0) in case there is none.

Records to be maintained
- Counterfoils of immunization cards
- Mother and child tracking register
- Name based due list
- Tally sheets
- Coverage monitoring chart
- Monthly progress report

Benefits of counterfoils
- Preparing session wise name based due list of beneficiaries
- Estimating the vaccine and logistics requirement for next session
- Tracking the drop outs
- Providing correct information, in case immunization card of beneficiary is lost
**Interpersonal Communication**

**Remind parents of 4 key messages ...**

- What vaccine was given and what disease it prevents
- When to come for next visit
- What are the minor side effects and how to deal with them
- To keep immunization card safe and to bring it along for the next visit

**Fully immunize each child before its first birthday**
(i.e. one dose of BCG, 3 doses of DPT, OPV and Hepatitis B and one dose of Measles)

**REMEMBER**

- Act respectfully towards the beneficiaries and care takers
- Praise care takers for bringing their children for immunization
- Keep information simple and clear
- Encourage parents and community members to ask questions
- Encourage parents to bring their children until fully vaccinated
- Inform and motivate community members about immunization
- Involve community members in deciding the place for session, identification of new beneficiaries and tracking of left outs and drop outs.
Instructions for using the tool:

- Names of all the infants of a village are written on a chart paper in the form of bricks of a house.
- Start with oldest infant as number 1, second oldest as number 2 and so on. Likewise keep on adding the names of newborns in subsequent upper rows.
- Write the name of the village, the year of head count and number of infants counted.
- As the infant completes the immunization, put colour in the related row with the name.
- Prepare this chart every year and hang it on the wall of AWC/Panchayat Bhawan in each village.
# Common Errors

## At the session sites

<table>
<thead>
<tr>
<th>Program management:</th>
<th>Vaccine handling &amp; administration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Not conducting the session on day and site as per microplan</td>
<td>• Using the same disposable syringe to reconstitute more than one vial</td>
</tr>
<tr>
<td>• Not vaccinating the beneficiary in case of minor illness e.g. cold, cough, diarrhoea or mild fever</td>
<td>• Not checking the expiry date of diluents and whether they are from the same manufacturer</td>
</tr>
<tr>
<td>• Turning away the beneficiaries for not bringing immunization card</td>
<td>• Not mentioning the date and time of reconstitution on vaccine vials</td>
</tr>
<tr>
<td>• Not filling the immunization card completely and correctly</td>
<td>• Using reconstituted BCG and measles vaccine after 4 hours and JE after 2 hours of reconstitution</td>
</tr>
<tr>
<td>• Not filing the counterfoils properly</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cold chain management:</th>
<th>Injection safety &amp; waste disposal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Collecting vaccines one or two days before the scheduled session</td>
<td>• Touching the needle while drawing or injecting vaccine</td>
</tr>
<tr>
<td>• Carrying vaccines in handbag or in carrier with less than 4 ice packs</td>
<td>• Recapping or bending the needle</td>
</tr>
<tr>
<td>• Leaving vaccine carrier in sunlight, sitting on the carrier or leaving its lid open while conducting session</td>
<td>• Not injecting DPT &amp; Hep B vaccines in anterolateral aspect of mid thigh</td>
</tr>
<tr>
<td>• Keeping DPT, TT and Hepatitis B on the ice pack during session</td>
<td>• Rubbing the injection site</td>
</tr>
<tr>
<td>• Keeping the ice pack taken out for keeping reconstituted vials back in the carrier before end of session</td>
<td>• Not using hub cutter to cut used syringes and for storing sharps</td>
</tr>
<tr>
<td>• Using vaccine not within the expiry date or with usable VVM</td>
<td>• Not using red and black bags for segregation and storing of waste</td>
</tr>
<tr>
<td></td>
<td>• Leaving syringes and vaccine vials at the session site and not returning back to the facility</td>
</tr>
</tbody>
</table>

## For health workers engaged in cold chain management at facility

| Keeping medicines or vaccines other than UIP in cold chain equipment |
| Not storing vaccines in recommended order from top to bottom |
| Not monitoring storage temperature twice every day |
| Not keeping diluents for at least 24 hours before distribution |
| Not keeping the record of vaccine and diluents in stock and distribution register |
| Not recording batch number and expiry date of vaccine and diluents in stock and distribution register |
Ready Reference Guide for Health Workers

Year of Intensification of Routine Immunization (2012-13)

Immunization Division
Department of Family Welfare
Ministry of Health & Family Welfare
Government of India, New Delhi