Key Messages on Routine Immunization

1. To have lifelong protection against deadly diseases, newborns should begin receiving immunization immediately after birth.
2. All children should be taken for routine immunization four times before their first birthday in addition to birth dose and according to the given schedule.
3. Parents should carry the routine immunization cards with them at all times during visits to doctors, and especially during travel.
4. Vaccines are available FREE OF COST at the nearest sub-centre/anganwadi centre and at all government health facilities.
5. A child who is suffering from minor ailments such as fever, cough, cold, diarrhoea on the day of immunization can still be immunized.
6. It is common to observe some adverse effects following immunization such as fever or pain. These will subside in due time and should not be a cause of concern.

Blessings for a healthy life

The Right Vaccine at the Right Time
Blessings for a Healthy Life

Guide for Health Workers
with Answers to Frequently Asked Questions
Immunization is one of the most well-known and effective methods of preventing childhood diseases. With the implementation of the Universal Immunization Programme (UIP) by the Government of India, significant achievements have been made in preventing and controlling vaccine-preventable diseases (VPDs). Sustained immunization will further reduce the incidence of all VPDs, control measles, eliminate tetanus, and eradicate poliomyelitis.

This guide contains two parts: Part 1 focuses on key operational aspects on RI; Part 2 gives answers to frequently asked questions on RI. Key messages on RI are listed on the back cover.

Part 1

Why immunization?
Immunization is a key strategy to child survival. By protecting infants from VPDs, immunization significantly lowers morbidity and mortality rates in children. Preventing a disease before it occurs saves money, energy, and lives. The sense of security gained by a family that their child has a higher chance of survival can lead to lower birth rates. Immunization is an indicator of a strong primary health care system.

Full immunization (i.e. received one dose of BCG, three doses of DPT and OPV each, and one dose of Measles before one year of age) gives a child the best chance for a healthy life. Full immunization is attainable.

As a health worker, you play a very important role in improving immunization coverage among mothers and children. You are expected to immunize all eligible infants and pregnant mothers in your area, using safe injection practices. You should involve the community through panchayat members and school teachers, etc., in improving the immunization coverage by reducing left-outs and dropouts.

Key operational points for conducting immunization sessions

Selecting safe and potent vaccines
Check the following before beginning your immunization session, and before giving each vaccine:

- Regular consumption of dark green leafy vegetables or yellow and orange fruits and vegetables such as pumpkin, carrots, papayas, mango, and oranges along with cereals and pulses. Give these to a weaning child.
- Consumption of milk, cheese, curd, ghee, eggs, liver, etc.

ALL VACCINES

A child who has never been vaccinated is brought to the PHC/vaccination site at 9 months of age. Can all the due vaccines be given to a child on the same day?

Yes, all the due vaccines can be given during the same session. But each vaccine must be given at different injection sites using separate AD syringes. It is safe and effective to give BCG, DPT, Hepatitis B, OPV, and Measles vaccines along with Vitamin A at the same time to a 9-month old child who has never been vaccinated.

If a mother/caregiver allows only one injection be given to the child at 9 months of age, which injection should it be? At 9 months of age, the priority is to give Measles vaccine along with OPV and Vitamin A.

Which vaccines can be given to a child between 1 and 2 years of age who has never been vaccinated?
A child who is between 1 and 2 years of age and has never been vaccinated can be given DPT-1, OPV-1, Measles, and 2ml of Vitamin A solution. This child should then be given DPT-2, OPV-2 and MCV-2 after one month, followed by DPT-3 and OPV-3 after one month till 2 years of age. The booster doses can be given after a minimum gap of 6 months after giving DPT-3 and OPV-3.

Which vaccines should one give to a child who is brought after 7 years of age and who has never been vaccinated?
Give the child only 2 doses of TT (Tetanus) one month apart.
**VITAMIN A**

How many prophylactic doses of Vitamin A should be given and till what age?
A total of 9 prophylactic doses of vitamin A should be given till 5 years of age.

What should be the minimum gap between two doses of Vitamin A?
The minimum gap between any two doses of Vitamin A should be 6 months.

How should Vitamin A syrup be given?
Vitamin A syrup should be given using only the spoon/dispenser provided with each bottle. The half mark in the spoon indicates 100,000 International Units (IU) — recommended dose below 1 year and a level-full spoon contains 200,000 IU of Vitamin A.

What is the treatment schedule for children with clinical signs of Vitamin A deficiency?
Give 200,000 IU of Vitamin A immediately after diagnosis, followed by another dose of 200,000 IU, after 1 to 4 weeks.

What are the storage guidelines for un-opened bottles of Vitamin A syrup?
Vitamin A syrup must be kept away from direct sunlight and can be used until the expiry date.

How long can a bottle of Vitamin A be used, once opened?
A Vitamin A bottle, once opened, should be used within 8 weeks. Write the date of opening on the bottle.

Other than Vitamin A supplementation, what are the other policy guidelines to prevent Vitamin A deficiency?
These are promotion of:
• Early and exclusive breastfeeding, including feeding of colostrum rich in Vitamin A.

- Check label: Make sure the label on the vaccine vial is attached and clear enough to read. If you find that the label is not clear enough to read or has come off, discard the vial.
- Check vaccine and diluent: Check that the vaccine and diluent being given are correct from the same manufacturer.
- Check expiry: Look for the expiry date on the vial. If the expiry date has passed, do not use the vial. Discard it.
- Check the vaccine vial monitor (VVM) on vaccine vials to make sure that the vaccine is in the usable stage.

![VVM Image]

**Usable VVM** – the colour of the square is lighter than the circle.
**Unusable VVM** – the colour of the square matches or is darker than the circle.

**Contraindications to immunization**
All infants should be immunized except in these rare situations:
1. Anaphylaxis or a severe allergic reaction is an absolute contraindication to subsequent doses of a vaccine. Persons with a known allergy to a vaccine component should not be vaccinated.
2. Any serious AEFI reported during previous vaccination to the child with the same vaccine is also a contraindication. e.g. convulsions and encephalitis with a previous dose of DPT.
3. High fever.

*Remember: Mild fever, diarrhoea, and cough are not contraindications for vaccination.*

**Steps in conducting the immunization session**
Follow the steps given below while conducting an immunization session:
Welcome beneficiaries and verify their records and age. Check that the
If a child received one dose of Measles vaccine during an SIA (Supplementary Immunization Activity) campaign, should it receive the routine dose of Measles vaccine?
Yes, the child should receive the routine dose of Measles vaccine after a gap of four weeks.

If a child receives the first dose of Measles after 16 months of age, when can the second dose be given?
All efforts should be made to immunize children at the right age, that is the first dose at completed 9 months and second dose at 16–24 months. However, if a child comes late then give two doses of Measles vaccine at four weeks interval until 5 years of age.

JE Vaccine
Who should receive the JE vaccine?
Currently, JE vaccine is recommended for children living in JE-affected districts of India.

What should be the ideal age for JE vaccination in RI?
Ideally, the JE vaccine should be given when the child is between 16 and 24 months of age. The JE vaccine can also be safely given with the DPT first booster dose.

If a child between 16 and 24 months of age has been immunized with the JE vaccine during an SIA, can it receive the JE vaccine again, as part of RI?
No. The JE is a single dose vaccine and should not be repeated.

If a child above 2 years (24 months) of age has not received the JE vaccine through either RI or an SIA, should s/he be given the JE vaccine?
Yes, any child above 2 years of age who has never received a dose of the JE vaccine can get the vaccine through RI till the age of 15 years.
Why is the second dose of Measles vaccine introduced in the national immunization programme?
Measles is a highly infectious disease causing illness and death due to complications such as diarrhea, pneumonia or brain infection. One dose of measles vaccine at 9 months of age protects 85% of infants. With the 2nd dose, all children who remain unprotected after the first dose will get protection.

How will the second dose of Measles be introduced in the national immunization programme?
The Government of India has decided to introduce a second dose of Measles vaccine in the national immunisation programme (RI).
• The following 14 states, with the Measles vaccine coverage below 80%, will have catch-up campaigns in different phases for the second dose: Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Madhya Pradesh, Manipur, Meghalaya, Nagaland, Rajasthan, Tripura and Uttar Pradesh.
• Remaining states and UTs with Measles vaccine coverage more than 80% will have the second dose of Measles in the RI programme at 16-24 months of age.

What is a Measles catch-up campaign?
A Measles catch-up campaign is a special campaign to vaccinate all children between 9 months to 10 years of age with one dose of measles vaccine. The catch-up campaign dose is given to all children, both immunized and un-immunized, who belong to the target age group. The goal of a catch-up campaign is to quickly make the population immune from measles and reduce deaths from measles. A catch-up campaign must immunize nearly 100% of target age group children.

Part 2
Frequently asked questions on routine immunization

How does immunization protect against diseases?
Immunization protects against diseases through vaccines. Vaccines create antibodies in the body which protect the body from infections.

Can we prevent all diseases through immunization?
We can protect children from many infectious diseases though immunization. Smallpox has been eradicated. Polio is on the verge of eradication. Diseases for which effective vaccines are available can be prevented through immunization. Examples are severe form of tuberculosis, poliomyelitis, diphtheria, pertussis, measles, some types of diarrhoea and pneumonia, hepatitis B, Japanese encephalitis, etc.

When does RI begin?
According to India’s national immunization schedule, infants should start getting vaccinations immediately at birth. BCG (opercal polio vaccine), and Hep-B are given at birth. The recommended childhood vaccination schedule under RI is given below.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG, OPV,0, HepB,0</td>
<td>At birth</td>
</tr>
<tr>
<td>Hepatitis-1,2,3, DPT-1,2,3 and OPV-1,2,3</td>
<td>9-12 months</td>
</tr>
<tr>
<td>Measles and Vitamin A</td>
<td>5 weeks, 10 weeks and 14 weeks</td>
</tr>
<tr>
<td>Vitamin A (total 9 doses)*</td>
<td>1st dose with measles vaccine at 9 months, subsequently, every six months if 5 years of age</td>
</tr>
<tr>
<td>DPT booster, OPV booster, Measles-2**, JE***</td>
<td>16-24 months</td>
</tr>
<tr>
<td>DPT booster</td>
<td>5-8 years</td>
</tr>
<tr>
<td>TT</td>
<td>10 years and 16 years</td>
</tr>
</tbody>
</table>

*The 2nd to 9th doses of Vitamin A can be administered to children 1-5 years old during biannual rounds.
**Measles 2nd dose or Measles-Rubella(MR) or Measles-Mumps-Rubella (MMR). In some states
***JE vaccine, in select endemic districts after the campaign.

* In pregnancy, TT vaccine is recommended. 1st dose to be given soon after confirmation of pregnancy, and 2nd dose four weeks later. Only TT booster dose is required, if received 2 doses of TT in a pregnancy with last three years.
BCG Vaccine

What is BCG?
The BCG (Bacillus Calmette Guerin) vaccine is given to a child at birth or within one year of birth if the birth dose is missed. BCG is given to protect children against childhood tuberculosis (TB).

Why is BCG given to children of only up to one year of age?
Most children acquire natural clinical/sub-clinical tuberculosis infection by the age of one year, BCG also protects against severe forms of childhood TB, such as TB-meningitis and miliary disease.

If a scar does not appear after giving BCG, should one re-vaccinate the child?
No there is no need to revaccinate the child even if there is no scar.

DPT Vaccine

Why should DPT be given in early childhood?
Unless immunized, children can get repeated attack of diphtheria or pertussis infections, which can be serious and life-threatening. DPT also protects against infection from tetanus for specific periods.

If a child could not receive DPT 1, 2, 3 according to the schedule, till what age can the vaccine be given?
The DPT vaccine can be administered till 7 years of age. Give 3 doses of DPT at 1 month interval and give booster dose after 6 months of last dose. The last dose should be given to a child less than 7 years of age.

If a child received one or two doses of DPT according to schedule but discontinued after that, should the doses be repeated?
No, do not re-start the schedule. Instead, give only the remaining doses to complete the series. The child should not be more than 7 years of age.

Why should there be a minimum gap of 1 month between two doses of DPT?
The gap of one month will allow the antibodies to respond effectively and ensure the necessary protection. Decreasing the interval between two doses may interfere with the antibody response and protection.

Why should the DPT vaccine be given in the antero-lateral (mid-thigh) and not in the gluteal region (buttocks)?
DPT is given in the antero-lateral (mid-thigh) and not in the gluteal region (buttocks) to prevent damage to the sciatic nerve. In addition, the vaccine deposited in the fat of gluteal region may affect the starting of appropriate immune response.

What should one do if the child is found allergic to DPT or develops encephalopathy after DPT?
A child who is allergic to DPT or develops encephalopathy after DPT should be given the DTaP/D vaccine instead of DPT for the remaining doses. It is usually the P (whole-cell Pertussis) component of the vaccine which causes the allergy/encephalopathy.

What are the side effects, complications of DPT vaccine?
Fever and local pain are the common side effects of DPT vaccine. Complications such as convulsions, shock, and encephalitis may also occur rarely.

Measles Vaccine

If a child has received the Measles vaccine before 9 months of age, is it necessary to repeat the vaccine later?
Yes. The child should receive Measles vaccine after completion of 9 months.