

Universal Immunization programme

- Immunization Programme is one of the key interventions for protection of children from life threatening conditions, which are preventable. It is one of the largest immunization programme in the world and a major public health intervention in the country.
- Immunization Programme in India was introduced in 1978 as Expanded Programme of Immunization (EPI). The programme gained momentum in 1985 and was expanded as Universal Immunization Programme (UIP) to be implemented in phased manner to cover all districts in the country by 1989-90.
- UIP become a part of Child Survival and Safe Motherhood Programme in 1992. Since, 1997, immunization activities have been an important component of National Reproductive and Child Health Programme and is currently one of the key areas under National Health Mission (NHM) since 2005.
- It targets to vaccinate 2.6 crore new born and 3 crore pregnant mothers annually for vaccines under UIP. More than 90 lakh Immunization sessions are conducted annually with nearly 27,000 cold chain points across the country.
- Under the Universal Immunization Programme, Government of India is providing vaccination to prevent 11 vaccine preventable diseases nationally, i.e. Diphtheria, Pertussis, Tetanus, Polio, Measles, severe form of Childhood Tuberculosis and Hepatitis B and meningitis & pneumonia caused by Haemophilus influenza type B; and against Rubella & Rotavirus Diarrhea in selected states and Japanese Encephalitis in endemic districts.
- **Polio:** India reported its last case of polio on 13th January 2011. South East Asia Region (SEAR) has been certified Polio free on 27th March, 2014. As a part of Polio end game strategy, Inactivated Polio Vaccine (IPV) vaccine has been introduced across all the states of the country. IPV is provided either as single dose at 14 weeks of age or as two fractional doses at 6 weeks and 14 weeks of age.
- **Measles:** Nationwide coverage of Measles first dose was started in 1985 in Routine immunization (RI). 2nd dose of Measles was introduced in 2010; in 22 states immediately in RI and in remaining 14 states in RI after campaign (Measles Supplementary Immunization Activity) covering ~12 crore children. As on date, the entire country is providing two dose measles vaccine schedule under routine immunization.

- **Hepatitis B:** Hepatitis B vaccine was piloted in 2002-03 and then scaled up in entire country in 2010 to protect children from liver diseases such as Jaundice and Cancer. Now it is provided as part of pentavalent vaccine at 6, 10 & 14 weeks apart from birth dose of hepatitis B vaccine.
- **Pentavalent vaccine:** Pentavalent vaccine contains five antigens i.e. Hepatitis B, Diphtheria+Pertussis+Tetanus (DPT – current trivalent vaccine) and Haemophilus influenza b (Hib) vaccine. Pentavalent vaccination is provided to the children at the age of 6, 10 and 14 weeks as primary dose. The vaccine has replaced DPT and Hep B vaccine in the immunization schedule. However, birth dose of Hep B and two booster doses of DTP (at 16-24 month and 5 years of age) will continue to be given. India introduced Pentavalent vaccine initially in two states viz. Kerala and Tamil Nadu in December 2011. At present, pentavalent vaccine has been expanded to all 36 States/UTs.
- **Rotavirus Vaccine:** Rotavirus vaccine is given under UIP as a 3 dose vaccine along with Pentavalent 1st, 2nd and 3rd dose. The vaccine was launched on 26th March 2016 and has been introduced in four states i.e. Andhra Pradesh, Odisha, Haryana and Himachal Pradesh. Rotavirus vaccine expansion to four more States (Madhya Pradesh, Assam, Rajasthan and Tripura) has been done on 18th February 2017 and planned in Tamil Nadu and Uttar Pradesh in 2017-18.
- **Japanese encephalitis:** Japanese Encephalitis (JE) is an acute viral illness with high case fatality and long term complications. JE vaccination program started in 2006 in JE endemic areas with strategy to cover all children of 1-15 years of age in mass vaccination drive (campaign mode) and subsequent integration into routine immunization. Out of total 215 identified JE endemic districts, campaign activity has been completed in 206 districts. JE vaccine has been introduced as a part of RI in these 206 districts (two doses, first at 9-12 months and second at 16-24 months).
- **t OPV to b OPV switch:** As part of Polio Endgame Strategy, India has switched from trivalent Oral Polio Vaccine (tOPV) to Bivalent Oral Polio Vaccine (bOPV) on 25th April, 2016 both in polio campaigns and routine immunization. The country has been validated free of tOPV after the switch. As a risk mitigation measure, country has introduced Inactivated Polio Vaccine across the country in all states.

- **Adult JE vaccination:** NVBDCP has identified 31 high burden districts from Assam, Uttar Pradesh and West Bengal for adult JE vaccination. Adult vaccination campaign (15-65 years age group) with JE has been carried out in 21 districts. The remaining 10 districts will be covered in last quarter of 2016-17.
- **Rubella vaccine** to be initiated as **Measles Rubella (MR) campaign** targeting children aged 9 months to 15 years of age has been launched on 5th February 2017 in five states/UTs (Karnataka, Tamil Nadu, Goa, Lakshadweep & Puducherry). All the states will be covered in a phased manner over a period of 3 years. Subsequent to the completion of the campaign, the Rubella vaccine will be introduced as MR vaccine as two doses in the place of measles containing vaccine 1 & 2 at 9-12 months and 16-24 months as part of Routine Immunization.
- **Pneumococcal Conjugate Vaccine (PCV):** To protect the children from Pneumonia caused by Pnuemococcal bacteria, PCV will be introduced in the state of Himachal Pradesh & parts of Uttar Pradesh & Bihar in 2017. The vaccine will be given as two primary doses at 6 & 14 weeks of age followed by a booster dose at 9 months of age.
- **MNTE validation:** Maternal and Neonatal Tetanus Elimination has been validated in all 36 state/UTs of the country (2001-15) with support from partners (WHO & UNICEF). India validated MNTE by May 2015, well before the global target date set by W.H.O. of December 2015.
- **Mission Indradhanush:** Launched on 25th December, 2014, this seeks to drive towards 90% full immunization coverage of India and sustain the same by year 2020. Vaccination is being provided against prevent eight vaccine preventable diseases nationally, i.e. Diphtheria, Pertussis, Tetanus, Polio, Measles, severe form of Childhood Tuberculosis and Hepatitis B and meningitis & pneumonia caused by Haemophilus influenza type B; and against Rotavirus Diarrhea and Japanese Encephalitis in selected states and districts respectively. During each phase of Mission Indradhanush, four intensified drives of 7 days each were held every month to cover left-out and missed-out children in the high focus districts. **During the three phases of Mission Indradhanush, 497 districts across 35 states/UTs were covered.** During these phases, more than 2.1 crore children were reached of which 55 lakh children were fully immunized. In addition, 55.9 lakh pregnant women were also vaccinated with Tetanus toxoid. The platform of Mission Indradhanush was also utilized for distributing 52.2 lakh ORS packets and 183.1 lakh Zinc

tablets to children. 4th phase of Mission Indradhanush commenced on 7th February' 2017 in 8 North eastern states and will commence from 7th April in rest of the country.

- The Full Immunization coverage as assessed by various surveys is as below:

| | Evaluated Coverage (%) | | |
|------------------------------------|---------------------------------------|---|---|
| | Coverage Evaluation Survey (CES 2009) | Rapid Survey on Children (RSOC 2013-14) | National Family Health Survey (2015-16) |
| Full Immunization | 61.0 | 65.3 | 62.0 |
| BCG | 86.9 | - | 91.9 |
| OPV3 | 70.4 | - | 72.8 |
| DPT3 | 71.5 | 74.7 | 78.4 |
| Measles 1st dose | 74.1 | 78.8 | 81.1 |
| No Immunization | 7.6 | 6.7 | - |