

# CHILD HEALTH PROGRAMME

## 4.1 INTRODUCTION

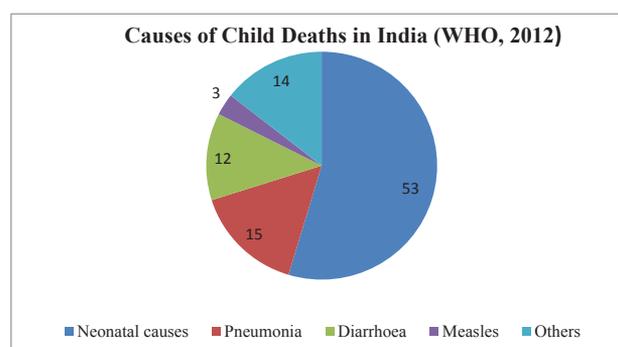
India is committed to reduce child deaths by two-thirds between 1990 and 2015 as pledged in the Millennium Development Goals (MDG). This implies a reduction of Under Five Mortality Rate (U-5MR) from 125/1000 live births in 1990 to 42/1000 live births by 2015. This commitment is also reflected under the National Health Mission (NHM).

### 4.1.1 Situation of Child Mortality in India

At present, as per SRS 2013, the Under Five Mortality Rate in India is 49/1000 live births, Infant Mortality Rate (IMR) is 40/1000 live births and Neo-natal Mortality Rate is 28/1000 live births. This translates into an estimated 12.7 lakh under-5 child deaths annually. The U-5MR has declined at a faster pace in the period 2008-2013, registering a compound annual decline of 6.6% per year, compared to 3.3% compound annual decline observed over 1990-2007. However, the efforts need to be intensified to attain the MDG of 42/1000 live births by 2015. Four States together contribute to 58% of all child deaths in the country, namely- Uttar Pradesh (3.5 lakhs), Bihar (1.5 lakhs), Madhya Pradesh (1.3 lakhs) and Rajasthan (1.0 lakh). About 45% of under-five deaths take place within the first 7 days of birth, about 57% of within first one month of birth and approximately 81% within one year of the birth.

### 4.1.2 Causes of Child Mortality in India

The major causes of child mortality in India (as per WHO, 2012) are - Neonatal causes (53%), Pneumonia (15%), Diarrhoeal diseases (12%), Measles (3%) and others. Besides these, malnutrition is a contributory factor in 33% child deaths.



### 4.1.3 Interventions under Child Health

Based on the identified causes of mortality, five major strategic areas have been identified to improve child health outcomes. These are :

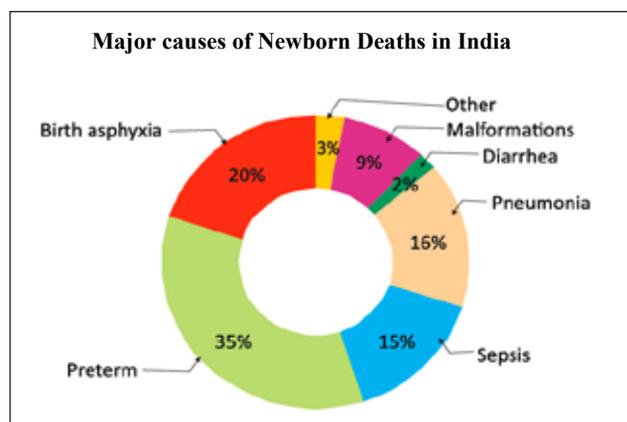


Besides the above, maternal health and family planning interventions are also linked inextricably

to child health outcomes. Therefore, the RMNCH+A approach strategises continuum of care across life stages as the over-arching umbrella under which these child health interventions have been built in.

## 4.2 NEWBORN HEALTH

- The Newborn Mortality Rate in India is 28/1000 live births (SRS 2013) which translates into approximately 7.3 lakhs deaths, annually.
- Newborn deaths contribute to 57% of the Under-5 deaths in the country.
- After a period of stagnation (from 2003 to 2007), the decline in neo-natal mortality gained pace with a 17% decline been recorded in the last 5 years from (2008 to 2012). More importantly, 6% fall occurred in the each of the last two consecutive years (highest so far).
- The major causes of newborn deaths in India are: Infections (31%), Prematurity (35%), Asphyxia (20%), Congenital (9%) and Diarrhoea (2%).



**4.2.1 India Newborn Action Plan (INAP)** was launched in 2014 to make concerted efforts towards attainment of the goals of “Single Digit Neo-natal Mortality Rate” and “Single Digit Stillbirth Rate”, by 2030.

### 4.2.2 Strategic interventions under newborn health are as under:

- **Promotion of Institutional Deliveries and Essential Newborn Care:** Since antenatal and intra-partum events have a bearing on newborn health, institutional deliveries are being promoted with cash incentives in the form of Janani Suraksha Yojana (JSY). Newborn Care Corners (NBCCs) have been operationalized at delivery points to provide essential newborn care at the time of birth. In order to reduce out of pocket expenses, Janani Shishu Swasthya Karyakram (JSSK) entitlements have been provided to ensure cashless treatment of pregnant woman and her child till one year of age in public health facilities. This also includes free referral transport.
- **Home Based Newborn Care (HBNC)** has been initiated by ASHAs for promotion of essential newborn care including breastfeeding practices, early identification and referral of neo-natal illnesses. Where ASHAs are paid an incentive for visiting each newborn and post-partum mother in the first six weeks of life as per the schedule. More than 58 lakh newborn have been visited by ASHAs in 2014-15, whereas in first quarter (April-June, 2015) of 2015-16, around 18 lakh newborn visited by ASHAs.
- **Facility Based Newborn Care (FBNC)** is being scaled up for care of small or sick newborns. 602 Special Newborn Care Units (SNCUs) have been setup in district hospitals and medical colleges to provide round the clock services for sick newborns. More than 7.5 lakh newborn babies were treated at SNCUs in 2014-15. 2,228 Newborn Stabilization Units (NBSUs) at the level of FRUs and 16,968 Newborn Care Corners (NBCCs) at delivery points have been

operationalized in the continuum of care. SNCU Online Reporting System (ORS) has been established in 16 States and more than 400 facilities are reporting online.

- **Newer interventions to reduce newborn mortality** have also been implemented, including Vitamin K injection at birth, Antenatal corticosteroids in preterm labour, Kangaroo Mother Care (KMC) and empowering ANMs to provide injection Gentamycin to young infants for possible serious bacterial infection.

### 4.3 NUTRITION RELATED INTERVENTIONS

- Malnutrition is considered to be the underlying cause of 33% of child deaths.
- 29.4% of under-5 children are underweight, 38.7% are stunted and 15.1% are acutely malnourished (wasted). More importantly, 4.6% of children are suffering from severe acute malnutrition, as per the last available national survey.
- Most recent survey in 100 worst districts (according to child development index) showed 20.3% decrease in prevalence of underweight during the seven year period (2004-2011) with an annual rate of reduction of 2.9%. The prevalence of severe acute malnutrition has also reduced to 3.4% in these 100 worst districts.
- Only 44.6% newborns initiated on breastfeed within one hour of birth while, 64.9% children breastfeed exclusively till 6 months of age.
- Complimentary feeding started for only 50.5% children on time (more than 6 months of age).
- 69.5% of children in age group 6 months-5

years and 2.9% are severely anaemic.

#### 4.3.1 The strategic nutrition related interventions are as under:

- **Promotion of Infant and Young Child Feeding practices (IYCF):** Exclusive breastfeeding for first six months, complementary feeding beginning at six months and appropriate Infant and Young Child Feeding practices (IYCF) are being promoted in convergence with the Ministry of Woman and Child Development.
- **Establishment of Nutritional Rehabilitation Centres (NRCs):** 891 NRCs have been set up at facility level to provide medical and nutritional care to Severe Acute Malnourished (SAM) children under 5 years of age who have medical complications. In addition, the mothers are also imparted skills on child care and feeding practices so that the child continues to receive adequate care at home.
- **National Iron Plus Initiative (NIPI) - Child health components:** To address anaemia, NIPI has been launched, which includes provision of supervised bi-weekly Iron Folic Acid (IFA) supplementation by ASHA for children aged 6 to 59 months and Weekly Iron Folic Acid Supplementation (WIFS) for children 5 to 10 years (known as WIFS-junior). Thirteen States have initiated bi-weekly IFA supplementation for children 6 to 59 months and ten States have initiated WIFS junior for children 5 to 10 years.
- **National Deworming Day (NDD):** *National Deworming Day, February, 2015:* A fixed day strategy was implemented in 277 districts out of 303 districts across 11 States/UTs, excluding the Lymphatic Filariasis endemic districts. Against a target of 10.31 crore children between ages of

1–19 years (with some of States not covering the total range of age groups), a total of 8.98 crore children received deworming tablet (Albendazole) during the National Deworming Day. National coverage achievement for deworming intervention was 85 percent. The percent coverage ranged from a maximum of 95 percent in Dadra Nagar Haveli & Maharashtra to lowest in Assam (58 %). Except the States of Assam & Tripura, rest all States/UTs reported a coverage of more than 80 percent. NDD was implemented across 4.70 lakh schools and 3.67 lakh Anganwadi centers.

It is decided to conduct National Deworming Day in February, 2016 and guidelines for NDD are being updated.

STH prevalence survey has already been initiated by NCDC in collaboration with other technical agencies.

- **Bi-annual Vitamin-A Supplementation** is being provided to all children aged 9 to 59 months of age. Bi-annual Vitamin-A supplementation rounds are conducted in 15 States.
- **Village Health and Nutrition Days (VHNDs)** are also being organized for imparting nutritional counselling to mothers and to improve child care practices.

#### 4.4 PNEUMONIA & DIARRHOEA RELATED INTERVENTIONS

- Pneumonia and diarrhoea are leading childhood killers, responsible for 15% and 12% of child (0-5 years) deaths, respectively;
- As per available survey data, only 54.4% children with diarrhoea episode in preceding 2 weeks received ORS and
- As per available survey data, 8.6% children

reportedly suffered from an episode of Acute Respiratory Illness (ARI) in preceding two weeks and only 76.9% sought treatment for this.

- **Integrated Action Plan for Pneumonia and Diarrhoea (IAPPD)** has been formulated for four states with highest child mortality (Uttar Pradesh, Madhya Pradesh, Bihar and Rajasthan) to address the two biggest killers of children, namely - Pneumonia and Diarrhoea.

##### 4.4.1 The strategic interventions targeting pneumonia and diarrhoea are as below:

- **Promotion of Integrated Management of Neo-natal and Childhood Illnesses (IMNCI)** for early diagnosis and case management of common ailments of children with special emphasis on pneumonia, diarrhoea and malnutrition is being promoted for care of children at community as well as facility level.
- **Promotion of early detection and prompt referral of children with common ailments like pneumonia and diarrhoea by ASHA:** ASHAs are being trained in Modules 6 & 7 to aid in identifying common childhood illnesses like diarrhoea, pneumonia and provide first level of care and refer baby to an appropriate health facility.
- **Increase awareness about use of ORS and Zinc in diarrhoea:** In order to increase awareness about the use of ORS and Zinc in diarrhoea, an Intensified Diarrhoea Control Fortnight (IDCF) was observed during July-August, 2014 with the ultimate aim of 'zero child deaths due to childhood diarrhoea'. During fortnight health workers visited the households of under five children, conducted community level awareness generation activities and distributed ORS packets to the

families with children under five years of age.

#### 4.5 INTERVENTIONS TO ADDRESS BIRTH DEFECTS, DISABILITIES, DELAYS AND DEFICIENCIES

Birth defects account for 9.6% of all newborn deaths and 4% of under-five mortality. Development delays affect at least 10% children and these delays if not intercepted timely may lead to permanent disabilities.

**4.5.1 Rashtriya Bal Swasthya Karyakram (RBSK)** has been launched to provide child health screening and early interventions services by expanding the reach of mobile health teams at block level. These teams will also carry out screening of all the children in the age group 0–6 years enrolled at Anganwadi Centres at least twice a year. RBSK covers 30 common health conditions. States/UTs may incorporate a few more conditions based on high prevalence/endemicity. An estimated 27 crore children in the age group of zero to eighteen (0-18) years are expected to be covered in a phased manner.

#### 4.5.2 The strategic interventions to address birth defects, disabilities, delays and deficiencies are:

- **Screening of children under RBSK:** Child health screening and early intervention services through early detection of birth defects, diseases, deficiencies, development delays including disability (4 Ds) and reduce out of pocket expenditure for the families. Dedicated mobile medical health teams (for screening purpose) at block level, comprising of four health personnel viz. two AYUSH doctors (One Male, One Female), ANM/SN and a Pharmacist. Under this intervention, 10.66 crore children have been screened (FY 2014-15), so far by the 9774 teams and 51.78 lakh children have

been referred for management of 4 Ds, 22.18 lakh children have been managed for the 30 health conditions.

- **Establishment of District Early Intervention Centres (DEICs)** in the districts of the country for providing management of cases referred from the blocks and link these children with tertiary level health services in case surgical management is required. 92 DEICs have been established till date.
- **Birth Defects Surveillance System (BDSS)** is being established to serve as a tool for identifying congenital anomalies. It is as a collaborative effort between the Ministry of Health and Family Welfare (MoHFW), Government of India (GoI), World Health Organization (WHO) and CDC. It is envisaged to establish at least one surveillance centre per state, preferably in medical college. At present, 41 colleges have been trained to handle birth defects surveillance.

#### 4.6 IMMUNIZATION ACTIVITIES

- Government of India is providing vaccination free of cost against nine vaccine preventable diseases i.e. Diphtheria, Pertussis, Tetanus, Polio, Measles, severe form of Childhood Tuberculosis, Hepatitis B across the country and Japanese Encephalitis in selected districts and Meningitis & Pneumonia caused by Hemophilus Influenza type B in selected states/districts.
- All cold chain equipment and their functionality are managed through web enabled software to capture real time data, National Cold Chain Management Information System (NCCMIS).
- Full Immunization (FI) evaluated coverage is 65.3 %.

#### 4.6.1 Major interventions under immunization are:

- **Strengthening the Routine Immunization Programme (RIP):** More than 9 million Immunization sessions conducted annually. In order to drive toward 90% full immunization coverage of India by year 2020, **Mission Indradhanush** has been launched. It aims to ensure high coverage of children with all vaccines in the entire country with a high focus on the 201 identified districts.
- **Polio Eradication Activities:** India along with South East Asia Region (SEAR) of WHO has been certified polio free by regional certification commission of polio eradication on 27 March 2014. Regular Sub National Immunization Days (SNIDs) are being conducted. Injectable Inactivated Polio Vaccine (IPV) has been introduced as an additional dose along with 3rd dose of DPT in the entire country in November 2015 as a part of polio endgame strategy.
- **Introduction of New Vaccines:** Pentavalent Vaccine (PV) has been introduced in eight (8) States (Kerala, Tamil Nadu, Haryana, Goa, Puducherry, Jammu & Kashmir, Gujarat and Karnataka) and expanded to 12 additional States from October 2014 (Andhra Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Punjab, Telangana, Rajasthan, West Bengal, Delhi and Uttarakhand). Rubella Vaccine (RV) will be initiated as Measles Rubella (MR) campaign targeting 9 months to 15 years of age in a phased manner over a period of three years. Rotavirus vaccine is proposed to be given under UIP as a 3 dose vaccine

along with DPT 1st, 2nd and 3rd dose in a phased manner in few States.

#### 4.7 UNIVERSAL IMMUNIZATION PROGRAMME (UIP)

Immunization Programme is one of the key interventions for protection of children from life threatening conditions, which are preventable. Immunization Programme in India was introduced in 1978 as Expanded Programme of Immunization. This gained momentum in 1985 as Universal Immunization Programme (UIP) and was implemented in a 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 the National Reproductive and Child Health Programme. Immunization is one of the key areas under National Rural Health Mission (NRHM) launched in 2005 and is now under the umbrella of National Health Mission (NHM).

Under the Universal Immunization Programme, Government of India is providing vaccination to prevent nine vaccine preventable diseases as below:

- Diphtheria, Pertussis, Tetanus, Polio, Measles, severe form of Childhood Tuberculosis and Hepatitis B. In addition, vaccination to prevent Hib infection is also provided in the country. Pentavalent vaccine has been expanded to almost whole nation except three States (Uttar Pradesh, Maharashtra and Arunachal Pradesh). Pentavalent Vaccine will be introduced in these States by the end of December 2015.
- Vaccination against Japanese Encephalitis (JE) is provided in selected endemic districts.

## 4.7.1 Immunization Schedule

Sl. No.	Vaccine	Protection	Number of doses	Vaccination Schedule
1	<b>BCG (Bacillus Calmette Guerin)</b>	Tuberculosis	1	At birth (upto 1 year, if not given earlier)
2	<b>OPV (Oral Polio Vaccine)</b>	Polio	5	Birth dose for institutional deliveries within 15 days, Primary three doses at 6, 10 & 14 week and one booster dose at 16-24 months of age. Given orally.
3	<b>Hepatitis B</b>	Hepatitis	4	Birth doses for institutional deliveries within 24 hour, Primary three doses at 6, 10 & 14 weeks
4	<b>DPT (Diphtheria, Pertussis and Tetanus Toxoid)</b>	Diphtheria, Pertussis and Tetanus	5	Three doses at 6, 10 & 14 weeks and two booster dose at 16-24 months and 5 years of age
5	<b>Hib containing Pentavalent vaccine (Hib+DPT+Hep B)</b>	Diphtheria, Pertussis, Tetanus, Hepatitis B and Haemophilus Influenza type B associated Pneumonia and Meningitis	3	6, 10 & 14 weeks of age
6	<b>Measles</b>	Measles	2	9-12 months of age and 2nd dose at 16-24 months.
7	<b>TT (Tetanus Toxoid)</b>	Tetanus	2	<i>Children:</i> 10 years and 16 years of age
			2	<i>Pregnant women:</i> Two doses given (one dose, if previously vaccinated within 3 Year)
8	<b>JE vaccination (in selected JE endemic districts)</b>	Japanese Encephalitis (Brain disease)	2	1st dose at 9-12 months of age & 2nd dose at 16-24 months of age in JE endemic districts immediately after completion of campaign.

#### 4.7.2 Status of Universal Immunization Programme

The achievements in terms of immunization coverage is improving over the years, however

there is a need for further improvement especially in DPT3 and OPV3 coverage and reducing the drop outs. The following table outlines the achievements as per evaluated coverage:

(Figures are in %)

Source	Rapid Survey On Children (RSOC)	Coverage Evaluation Survey (CES)		District Level Household Survey (DLHS)	
		2006	2009	DLHS 2 (2002-04)	DLHS3 (2007-08)
Time Period	2013-14	2006	2009	DLHS 2 (2002-04)	DLHS3 (2007-08)
Full Immunization	65.2	62.4	61.0	45.8	54.0
BCG	NA	87.4	86.9	75.0	86.7
OPV3	NA	67.5	70.4	57.7	66.0
DPT3	74.7	68.4	71.5	58.2	63.5
Measles	78.8	70.9	74.1	56.1	69.5
No Immunization	6.7	-	7.6	19.8	4.5

Immunization coverage in India has increased to 65.2% as per Rapid Survey on Children (RSOC), 2013-14 from 35.5% as per National Family Health Survey (NFHS), 92-93 in the last 21 years.

The recent Annual Health Survey (AHS 2012-13) conducted in 9 States documented improvement in immunization coverage in all the 9 States.

#### Annual Health Survey-3 (2012-2013)

States	BCG	OPV 3	DPT3	Measles	FI	Polio (Birth dose)	No Immunization
Uttarakhand	93.3	85.8	85.2	85.2	79.6	76.1	4.9
Chhattisgarh	96.6	83.3	81.8	90.0	74.9	87.8	2.9
Rajasthan	91.5	80.8	79.6	83.5	74.2	80.9	5.8
Bihar	94.7	82.7	81.6	80.3	69.9	69.0	3.7
Jharkhand	94.8	80.0	80.0	82.9	69.9	77.2	3.1
Assam	93.8	78.1	77.6	80.9	64.4	79.3	3.4
Odisha	98.2	82.0	82.8	89.2	68.8	83.6	0.8
Madhya Pradesh	95.7	77.1	76.3	85.4	66.4	87.1	3.6
Uttar Pradesh	86.3	64.1	63.2	65.8	52.7	70.7	7.6

All the States/UTs prepare their own State Programme Implementation Plan (PIP) for Immunization as part 'C' of NRHM (now NHM) from the year 2005-06 to address specific needs.

#### 4.7.3 Mission Indradhanush

The Ministry of Health & Family Welfare has launched "*Mission Indradhanush*", depicting seven colours of the rainbow in December 2014, to fully immunize more than 89 lakh children who are either unvaccinated or partially vaccinated; those that have not been covered during the rounds of routine immunization for various reasons. They will be fully immunized against seven life-threatening vaccine preventable diseases which include diphtheria, whooping cough, tetanus, polio, tuberculosis, measles and hepatitis-B. In addition, vaccination against Japanese Encephalitis and Haemophilus influenza type B will be provided in selected districts/states of the country. Pregnant women will also be immunized against tetanus.

The first round of first phase started from 7th April, 2015, World Health Day - in 201 high focus districts in 28 States and carried on for more than a week. This was followed by three rounds of more than a week in the months of April, May, June and July 2015, starting from 7th of each month. 201 high focus districts account for nearly 25% of all unvaccinated or partially vaccinated children of the country.

The second phase was launched on 7th October 2015 in selected 352 districts across the country (279 medium priority districts and 33 districts from North Eastern States and 40 districts from Phase-I districts where large number of missed out children were detected during monitoring of Phase-I of Mission Indradhanush). During the second phase, four special intensified immunization drives have been conducted for 7 days starting from 7th October and repeated drives on the same date planned for four consecutive months i.e. 7th

November, 7th December and 7th January, 2016 covering all children under two years of age and pregnant women for tetanus toxoid vaccine.

#### 4.7.4 Achievements

- **Phase-I:** During the four rounds of Mission Indradhanush of Phase-I, 9.4 lakh sessions were held, during which 1.89 crore vaccines (antigens) were administered to the children and pregnant women. During these immunization rounds, 75.5 lakh children were vaccinated and about 20 lakh children were fully vaccinated. Also, a total of 20.8 lakh pregnant women were vaccinated with tetanus toxoid vaccine during these four rounds. In addition, a total of 16.7 lakh ORS packets and 56.8 lakh zinc tablets were distributed to the children.
- **Phase-II:** Round 1 has been completed and as per the provisional data available, 15.7 lakh children were vaccinated, of which 4.9 lakh children were fully vaccinated and a total of 3.6 lakh pregnant women were vaccinated for tetanus toxoid.

#### 4.7.5 Hepatitis B Vaccine

In 2010-11, Government of India universalized Hepatitis B vaccination to all States/UTs in the country. Monovalent Hepatitis B vaccine is given as Intra-Muscular (IM) injections to the infants at 6th, 10th and 14th weeks along with primary series of DPT & Polio vaccines. In addition, one dose of Hepatitis B is given at birth for institutional deliveries within 24 hours of birth. Hepatitis B vaccine has been replaced by Pentavalent vaccine in the immunization schedule. However, birth dose of Hepatitis B will continue to be given.

#### 4.7.6 Introduction of Pentavalent Vaccine (DPT+Hep-B+Hib)

The 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 Hepatitis B vaccine in the immunization schedule. However, birth dose of Hepatitis B and two booster doses of DPT (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 under Routine Immunization Programme in December 2011 as a pilot project. Six more States also started Pentavalent vaccination in 2012-13 i.e. Puducherry, Gujarat, Jammu & Kashmir, Haryana, Karnataka and Goa. Delhi started Pentavalent vaccine out of its own budget.

Pentavalent vaccine has been expanded to almost the whole nation except three States (Uttar Pradesh, Maharashtra and Arunachal Pradesh). Pentavalent vaccine will be introduced in these states by the end of December 2015. Till October 2015, 513.7 lakh doses of Pentavalent vaccine have been given in the country.

#### 4.7.7 Measles

Measles immunization directly contributes to the reduction of under-five child mortality and hence to the achievement of Millennium Development Goal number 4. Measles vaccine was first introduced under the Immunization Programme in 1978 as a single dose administration. In order to accelerate the reduction of measles related morbidity and mortality, second opportunity for measles vaccination was introduced w.e.f 2010-11 as per the recommendation made by National Technical Advisory Group on Immunization (NTAGI).

The strategy was to provide second dose of measles vaccine through measles Supplementary Immunization Activity (SIA) in 14 States, where evaluated coverage for measles vaccine was less than 80%, covering children in the age group of

9 months - 10 years in a phased manner, followed 6 months later by integration into Routine Immunization Programme. For the remaining 21 States, where evaluated coverage was more than equal to 80%, second dose of measles vaccine was introduced directly in their routine immunization, at 16-24 months of age, except States/UTs of Delhi, Puducherry, Sikkim and Goa where the second dose of measles containing vaccine was introduced (as mumps-measles-rubella vaccine) on their own as a State initiative.

#### 4.7.8 Measles Supplementary Immunization Activity (Measles SIA 2010-13)

- SIA carried out in fourteen States in 3 phases, vaccinating more than 11.88 crore children in the age group of 9 months -10 years, reaching a coverage level of 90.89%.

In 2013, Government of India, along with the 11 SEAR countries, resolved to eliminate Measles and control Rubella/congenital rubella syndrome in the South East Asia Region (SEAR) of WHO by the end of 2020.

#### 4.7.9 Measles-Rubella Surveillance

WHO accredited, AFP-linked laboratory based measles-rubella surveillance system was initiated in 2005 and has been scaled up across all 36 States/



Primary School, Jhapdia



UTs with the support of WHO-National Polio Surveillance Project (NPSP). This ‘suspected measles case with fever and rash’ surveillance is an outbreak based surveillance with 13 WHO accredited laboratories in its network. Based on the serological confirmation, it classifies outbreaks and cases as ‘measles’, ‘rubella’, ‘mixed’ and ‘non-measles, non-rubella’.



Children vaccinated during Measles SIA

#### 4.7.10 Introduction of Japanese Encephalitis (JE) Vaccine

Japanese Encephalitis (JE) is an acute viral illness with high case fatality and long term complications. JE vaccination was started in 2006. Due to limited availability of vaccines, initially 113 endemic districts were identified across 15 States by the

National Vector Borne Disease Control Programme (NVBDCP). JE campaigns were then planned in a phased manner in identified 113 districts from 2006 to 2011. Later on, 204 districts were identified in 20 States across the country for the JE campaign.

Strategy for JE campaign: It is one time campaign with a single dose of live attenuated JE vaccine for children aged 1-15 year age group in endemic districts of the country. Immediately following the campaigns, integration into the Routine Immunization in the district - 1st dose in the target group of infants aged 9-12 months and 2nd dose – in infants aged between 16-24 months.

So far, 184 out of 204 JE endemic districts as identified by NVBDCP, have been covered under Japanese Encephalitis campaign with a single dose of JE vaccine (SA 14 14 2) manufactured by Chengdu, China. Till now, more than 11 crore vaccine doses of JE have been administered.

#### Coverage Data JE second dose (16-24 months dose) under RI

Year	Target (in lakhs)	Total children vaccinated (in lakhs)	Total coverage %
2014-15	95.06 lakhs	48.33 lakhs	50.84 %
2015-16	41.81 lakhs	31.01 lakh (as on Nov. 2015)	74.17 %

(Proportionate target and coverage from April to September 2015)

## 4.8 PULSE POLIO IMMUNIZATION (PPI)

With the global initiative of eradication of polio following World Health Assembly (WHA) resolution in 1988, Pulse Polio Immunization Programme was launched in India in 1995. Children in the age group of 0-5 years were administered polio drops during National and Sub-national Immunization Rounds (in high risk areas) every

year. About 172 million children are immunized during each National Immunization Day (NID).

#### 4.8.1 Progress

South-East Asia Region of WHO has been certified as polio free. WHO on 24<sup>th</sup> February 2012 removed India from the list of countries with active endemic wild polio virus transmission. The Regional Certification Commission (RCC) on 27<sup>th</sup> March 2014 issued a certificate which States that “The Commission concludes, from the evidence provided by the National Certificate Committees of the 11 Member States, that the transmission of indigenous wild polio virus has been interrupted in all the countries of the Region.

India has achieved the goal of polio eradication as no polio case has been reported for more than 5 years after the last case reported on 13<sup>th</sup> January, 2011.

Last Reported Polio Case		
Polio Virus Type	Date of last case	Location
P1	13 January 2011	Howrah (Panchla), West Bengal
P2	24 October 1999	Aligarh, Uttar Pradesh
P3	22 October 2010	Pakur (Pakur), Jharkhand

There are 24 lakh vaccinators and 1.5 lakh supervisors involved in the successful implementation of the Pulse Polio Programme.

The total number of cases and number of affected districts during past 9 years is as below:

Year	Cases of Polio	Number of districts
2005	66	35
2006	676	114
2007	874	99

2008	559	90
2009	741	56
2010	42	17
2011	01	1
2012	00	00
2013	00	00
2014	00	00
2015	00	00*

\*As on 9<sup>th</sup> Nov 2015



High risk areas identified during Polio vaccination

#### 4.8.2 Steps taken by the Government to achieve the target of polio eradication

- All States and Union Territories in the country have developed a Rapid Response Team (RRT) to respond to any polio outbreak in the country. An Emergency Preparedness and Response Plan (EPRP) have also been developed by all States indicating steps to be undertaken in case of detection of a polio case.
- Special booths are established in areas

bordering neighbouring countries like Wagah border and Attari train station in Punjab and Munabo train stations in Barmer district of Rajasthan, to ensure that all children under 5 years of age coming from across the border are given polio drops

- As a preventive measure, to stop polio virus from coming into India, Government of India has issued guidelines for mandatory requirement of Oral Polio Vaccination (OPV) to travellers travelling between India and polio affected countries namely Afghanistan, Nigeria, Pakistan, Ethiopia, Kenya, Somalia, Syria and Cameroon. The mandatory requirement is effective for travellers from 1st March 2014.
- To reduce the risk of import along international border vaccination is being provided to all the eligible children round the clock. These are provided through special booths set up at the international borders that India shares with Pakistan, Bangladesh, Bhutan, Nepal and Myanmar.
- Environmental surveillance is established in Mumbai, Delhi, Patna, Kolkata, Punjab and Gujarat which acts as surrogate indicator for polio virus transmission and is sensitive indicator for early detection of polio virus in the environment.
- An extremely high level of vigilance through surveillance across the country for any importation or circulation of polio virus and Vaccine Derived Polio Virus (VDPV) is being maintained.
- The last global case due to WPV type-2 was last reported at Aligarh in India in 1999 while most of the global cases due to VDPVs (97%) as well as VAPP (40%) are due to type-2 virus. This necessitates the discontinuation of the use of type-

2 component from OPV. Polio Endgame Strategic plan thus recommends replacing tOPV with bOPV. However, this puts the recent birth cohort at the time of switch at risk of VDPV and Wild Polio Virus (WPV) due to silent/ongoing transmission of VDPV type-2 and also to potential leakage of Wild Polio Virus type-2 in case of accidental/intended leakage of the virus from the laboratory. To mitigate this risk, inactivated polio virus vaccine is being introduced prior to the tOPV-bOPV switch in April 2016. As part of this Polio Endgame Strategy, India has introduced Inactivated Polio Vaccine (IPV) from 30 November 2015.

- The National Task Force with ICMR as the nodal agency have been constituted to guide and oversee the safe containment of Wild Polio Virus/Polio Infectious material in line with sequential withdrawal of polio vaccine as part of preparations to Global Polio Eradication by 2018.
- The lessons learnt from the polio programme is being implemented for strengthening of Routine Immunization by carrying out Immunization weeks and also the same learning will be used for implementing “*Mission Indradhanush*”– A drive toward 90% full immunization coverage of India by year 2020.
- The next National Immunization Days of year 2016 are planned on 17<sup>th</sup> January and 21<sup>st</sup> February, 2016.

**4.8.3 Maternal and Neonatal Tetanus Elimination (MNTE):** WHO had set the global target date of December, 2015 for MNTE validation. However, India has been validated for Maternal & Neonatal tetanus elimination in May 2015, well before the target date.

**4.8.4 National Cold Chain Management Information System** is a web enabled system developed in 2011-13 to track the status of cold

chain equipment at the national level. It is aimed to capture real time data of functionality of cold chain equipment at all levels across the country and to make policy level decisions at the central level.

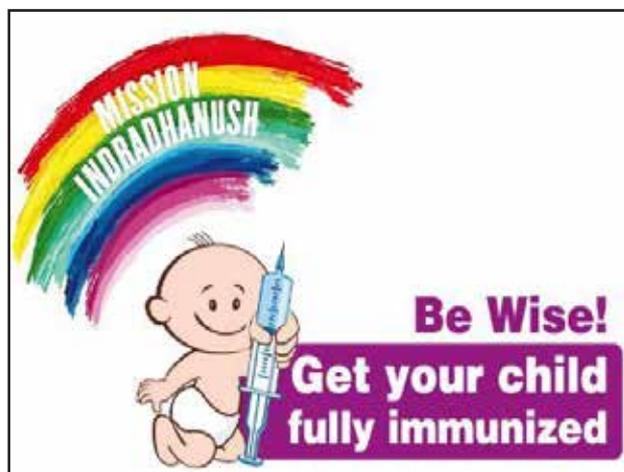
**4.8.5 National Cold Chain Assessment (NCCA)** was carried out in the year 2014-15 focusing on gaps in the cold chain system considering introduction of newer vaccines as well.

**4.8.6 National Effective Vaccine Management (EVM) Assessment** was conducted in ten States and 4 GMSDs in the year 2013. The assessment is a guiding tool for developing effective vaccine management plan for corrective actions and future planning for effective vaccine and cold chain management.

#### 4.8.7 IEC/BCC Strengthening

- New Mission Indradhanush logo and tag-line developed and launched in 2015.
- Radio spots and TV commercial developed
- Print prototypes for banners and posters created.

Government of India is introducing four new vaccines as per recommendations of National Technical Advisory Group of Immunization (NTAGI) and the strategy of introduction is as under:



#### 1. Injectable Inactivated Polio Vaccine (IPV)

- Participating in Global polio Endgame strategy, by introducing Inactivated Polio Vaccine (IPV) in addition to oral polio drops in RI in last quarter of 2015 and switch from tOPV to bOPV both under RI and polio campaigns in a globally synchronized manner by early 2016.
- As part of this Polio Endgame Strategy, India has introduced Inactivated Polio Vaccine (IPV) from 30th November, 2015, with Gavi support.

#### 2. Rubella vaccine

- To be initiated as Measles Rubella (MR) campaign targeting 9 months to 15 years of age in a phased manner over a period of three years. Subsequently, the Rubella vaccine will be introduced as MR vaccine as two doses in the place of measles containing vaccine 1 and 2 at 9-12 months and 16-24 months as per NTAGI recommendations.

#### 3. Rota virus vaccine

- To be given under UIP as a 3 dose vaccine along with DPT 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> dose in a phased manner in few states as per NTAGI recommendation and vaccine availability. Subsequently, the vaccine will be scaled up in the entire country.
- Rota virus vaccine introduction is planned in the 1<sup>st</sup> quarter of 2016 initially in 4 States- Odisha, Himachal Pradesh, Haryana and Andhra Pradesh and will be expanded in the entire country shortly.

#### 4. Adult Japanese Encephalitis Vaccine

- NVBDCP has also identified 20 high burden districts for Adult JE vaccination from Assam-5, Uttar Pradesh-7 & West Bengal-8. Among these, campaign activity has been completed in 3 districts of Assam and selected blocks of 3 districts of West Bengal and the campaign is ongoing in 6 districts of Uttar Pradesh.