UNIVERSAL IMMUNIZATION PROGRAMME WITH RECENT ADVANCES

PRESENTED BY–
DR. GRISHMA CHAUHAN
PROFESSOR
DEPT. OFCOMMUNITY MEDICINE
SBKS MI&RC, PIPARIA
SUMANDEEP PIPARIA

Universal Immunization Programme
(Scope and Scale)

Annual target

2.67 crore newborns;

2.9 crore pregnant women

Vaccine against VPDs

9 nation wide;

3 sub-nationally (JE, Rota, PCV)

One of the largest Public Health Programmes

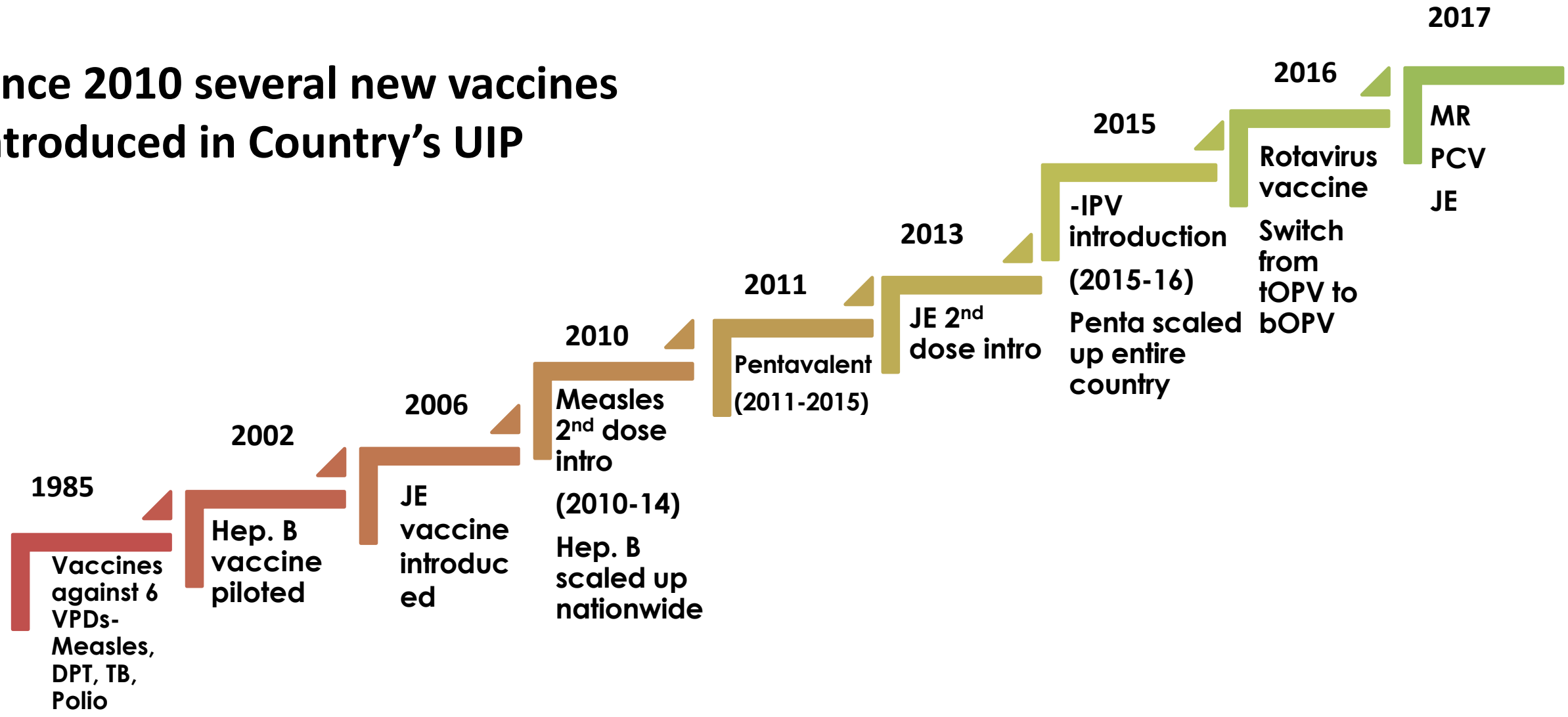
≈1.2 crore sessions planned per year

~29,000 cold chain points for storage and distribution of vaccines

***Make in India*: Largest vaccine manufacturing capacity in the world**

Roadmap of vaccine Introduction

Since 2010 several new vaccines introduced in Country's UIP



Rapidly changing landscape of Universal Immunization Programme

Milestones	• 2014: India declared Polio free • 2015: Maternal & Neonatal Tetanus Elimination validation
Improving Coverage	• 2015: Mission Indradhanush • 2017: Intensified Mission Indradhanush • 2018: Gram Swaraj Abhiyan (GSA)/Extended GSA
Improving Quality	• NCCRC / NCCTC • EVM assessment • eVIN expansion • Capacity building of HR
New vaccines introduced	•2015: Inactivated Polio Vaccine (IPV) •2016: Rotavirus Vaccine (RVV) •2017: Measles-Rubella (MR) Vaccine and Pneumococcal Conjugate Vaccine (PCV)

Two milestones achieved

On 27th March 2014, South-East Asia Region of WHO, including India, certified POLIO-FREE

On 14th July 2016, WHO certified India for eliminating maternal and neonatal tetanus

Why an Immunization program?

While a health worker giving a vaccine in a clinic to one child may seem a simple procedure, a well organized public health program is needed to ensure vaccines are given to several thousands of children. The Immunization program is an important public health program of most government health departments and other health agencies.

Features of the program:

- It is based on scientific evidence and rationale.
- It needs an effective management system to ensure vaccine quality and consistent delivery.
- It requires well trained and motivated personnel to provide regular dependable services.
- It requires reach and continued acceptance among beneficiaries
- With adequate coverage and quality it results in prevention of the diseases in the community.

Effective management systems for the immunization program need to consider aspects of

- resource management including human, infrastructure and financial resources
- supply chain management,
- personnel management including capacity building,
- social mobilization including effective community participation and
- data review mechanisms such as authentic reporting and surveillance.

Health programs such as the Immunization program also needs to be linked to other health and development programs that use the same health systems, infrastructure and personnel.

What are various immunization related programs in India?

UIP: The Universal Immunization Programme (UIP), launched in 1985 to progressively cover the country, aimed to reduce mortality and morbidity from the six vaccine preventable diseases (measles vaccine was added in 1985). Under the program, indigenous vaccine production capacity was enhanced and a national cold chain established.

Vitamin A supplementation was included in 1990.Within the Universal Immunization program, newer vaccines such as Hepatitis B are being introduced country-wide from 2011. Japanese Encephalitis vaccine is a part of the routine immunization package in endemic districts while Penta-valent vaccine is being introduced in the states of Kerala and Tamil Nadu.

NRHM: Launched in 2005, the National Rural Health Mission has made way for a comprehensive and effective integration of health programs including Immunization. It also provides for resources, mechanisms and flexibility for effective program management. Additional manpower for management and linkages with the villages called ASHA (Accredited Social Health Activist) has helped boost health program implementation and acceptance. As a part of the integrated approach, immunization sessions are being used as a platform to provide other health, nutrition and sanitation related services and these special days are called Village Health and Nutrition Days (VHNDs).

Polio NIDs and SNIDs: With Polio eradication as a goal, states in India have few to several rounds of Polio supplementary Immunization activities. These are called National (NID) and sub-national

Immunization days (SNID) and consist of booth based and house-to-house vaccination activities lasting several days.

Measles catch-up and second opportunity: Measles Mortality reduction is the goal of this activity where a second opportunity for measles vaccination is being given to children either through a catch-up activity or through introduction in the regular immunization schedule.

What are vaccine preventable diseases?

Vaccines are now available to prevent certain diseases. In most cases if a potent vaccine is given correctly, that is at appropriate time, dosage and technique, it can prevent the disease from occurring in a vaccinated individual despite his exposure to the disease. Diseases for which an effective vaccine has been made and is available for use are known as a Vaccine Preventable Disease (VPDs).

What diseases are prevented through vaccines used in the Universal Immunization Program (UIP)?

Presently, the Universal Immunization Program in India provides vaccines mainly to children below 5 years of age and pregnant women for the following vaccine preventable diseases:

1. Tuberculosis
2. Poliomyelitis
3. Diphtheria
4. Pertussis (whooping cough)
5. Measles
6. Tetanus
7. Hepatitis B
8. Japanese encephalitis (in endemic districts)

Vitamin A is not a vaccine, but a nutritional supplement which prevents many deficiency related conditions. However administration of Vitamin A is also a part of the Universal Immunization Program.

Some other diseases have combined vaccines so as to avoid multiple shots, for example DPT for Diphtheria, Pertussis and Tetanus. This is also called a triple antigen. A penta-valent vaccine (5 vaccines together) is also being considered for introduction in the UIP. This will include DPT+ Hepatitis B vaccine+ vaccine for Haemophilus B.

1. Tetanus:

Vaccine: *Tetanus toxoid:* *packaged as liquid in 10 dose vial. (The vaccines DT, DPT, DTaP also protect against tetanus but here tetanus toxoid is in combination with other antigens)*

Disease:

Tetanus

Suck & cry in first 2 days of life, illness between 3-28 days of life, inability to suck followed by stiffness of neck & body &/or jerking of muscles

Schedule:

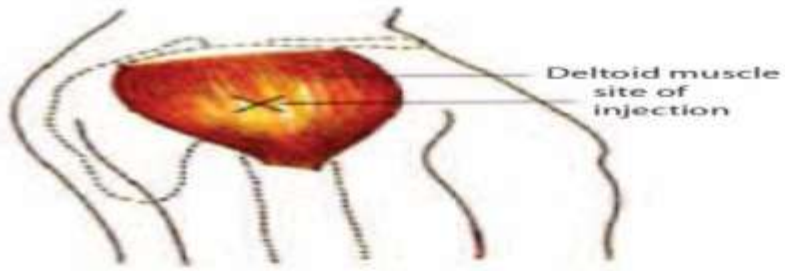
Early in pregnancy and at least 4 weeks later

For subsequent pregnancy within 3 years of last where 2 doses of TT were given, here only 1 booster shot required.

Dose:

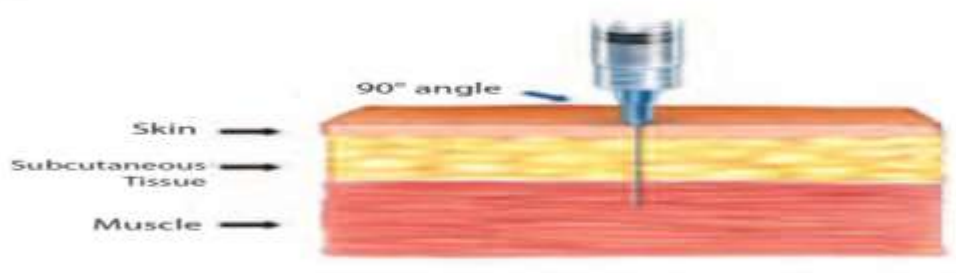
Dose: 0.5 ml; Vial: 10 doses

Site:



Deltoid Muscle

Route:



Intramuscular Injection

Method:

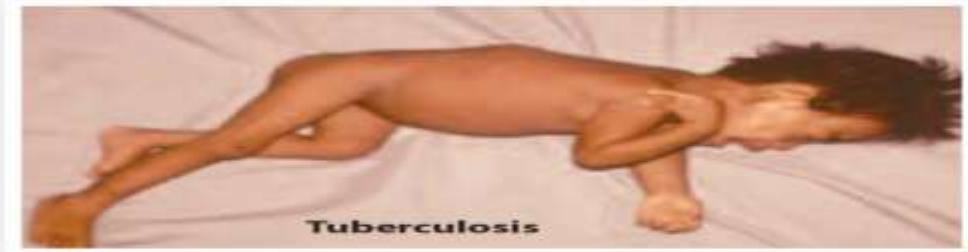
Stretch skin flat between finger and thumb on either side of injection site

Remember: T series vaccines are destroyed if frozen and should be stored and transported in temperatures between 2 and 8 degrees Celsius.

2. Tuberculosis:

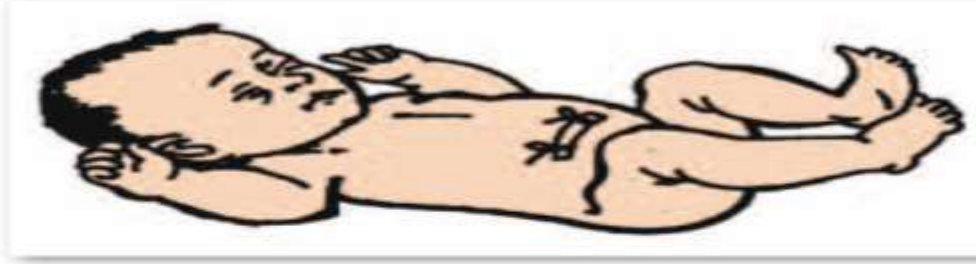
Vaccine: *BGC (Bacillus Calmette-Guérin) powder in a 10 dose amber vial reconstituted with Normal saline*

Disease:



***history of contact with suspected/confirmed case of pulmonary TB**
***Weight loss, cough and wheeze not responding to ARI antibiotics**

Schedule:

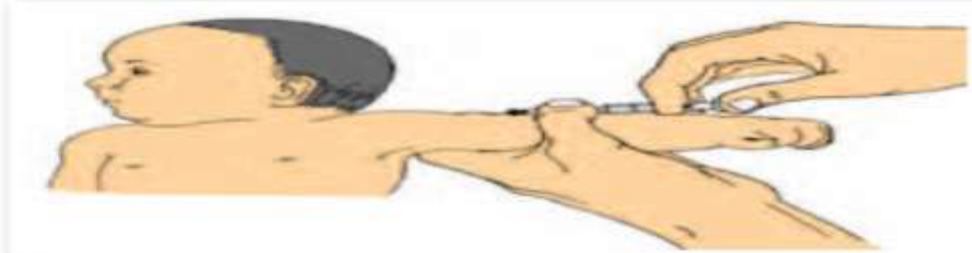


Give at birth or as early as possible in the first 12 months.

Dose:

Dose: 0.1 ml (0.05ml for less than 1 month);
Diluent: 1 ml sodium chloride; Vial: 10 doses

Site:



Left Upper Arm

Route:

Intra-dermal Injection

Method:

Gently pull skin under arm to stretch skin at injection site

Remember: after BCG vaccination, the skin gets raised and later a scar will form.

However, BCG vaccination is not to be repeated even if the scar does not form. BCG if missed earlier can be given till 1yr of age of the child. After reconstitution, BCG should be used within 4 hours.

3. Poliomyelitis:

Vaccine: *Oral Polio vaccine (Trivalent: Sabin) liquid in a 20 dose vial with dropper*

Disease:

"Sudden weakness & paralysis of leg(s), &/or arm(s) &/or trunk
"Paralysis not present at birth or due to serious injury/mental retardation

Schedule:

Zero Polio dose at birth till 15 days, 11/2 months....(14 weeks) and at 16 to 24 months with DPT booster"

Dose:

Dose: 2 drops; Vial: 20 doses

Site:

Mouth

Route:

Put two drops directly in mouth of child

Method:

Oral administration

Remember: During Polio supplementary rounds, other types of Polio vaccines may be used.
These may be mono-valent OPV, bivalent OPV or even Injectable Polio Vaccine (IPV)
These should be distinguished from the trivalent OPV to be used during UIP sessions.

4. Diphtheria, Pertussis and Tetanus:

Vaccine: *DPT (Trivalent) liquid in a 10 dose vial for injection*

Disease:

Diphtheria: Sore throat with gray patch(es) in throat
Pertussis (whooping cough): repeated & violent coughing, with: cough persisting for 2+ weeks, fits of coughing, cough followed by vomiting, typical whoop in older infants.
Tetanus: suck & cry in first 2 days of life,
Illness between 3-28 days of life,
Inability to suck followed by stiffness of neck & body &/ or muscle jerking

Schedule:

Birth 24 hours of following delivery, 1½ mths (6 wks), 2½ mths (10 wks), 3½ mths (14 wks)
Booster at 16-24 months and at 5 years

Dose:

Dose: 0.5 ml; Vial: 10 doses

Site:

Outer Mid-thgh (Antero-lateral side of mid-thigh)

Route:

Intramuscular Injection

Method:

Stretch skin flat between finger & thumb on both sides of injection site

Remember: Giving DPT in buttocks may injure the sciatic nerve and cause paralysis. It should never be given there. Instead, it should be given in the outer mid-thigh. Between two doses of DPT there should be a gap of at least 4 weeks. DPT boosters are to be given at 16-24 months and in the 5th year.

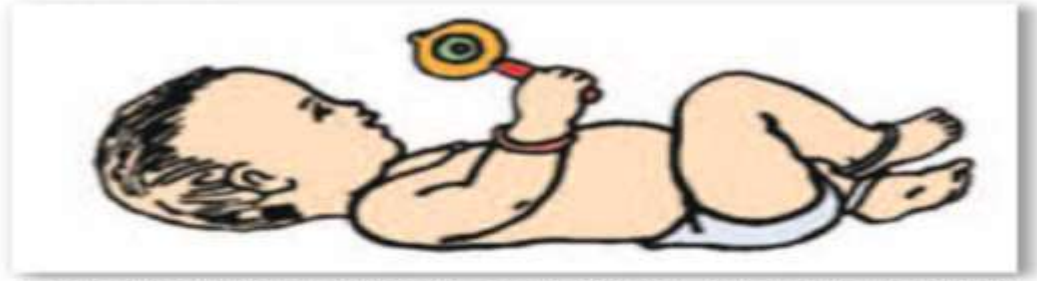
5. Hepatitis B vaccine

Vaccine: *Hepatitis B vaccines: packaged as liquid in 10 dose vial.*

Disease:

Infection of the liver causing yellow discolouration of skin and mucous membrane, sometimes lead to severe complications like liver failure or chronic disease carrier.

Schedule:



at birth within 24 hours of delivery, 1½ mths (6 wks), 2½ mths (10 wks), 3½ mths (14 wks)

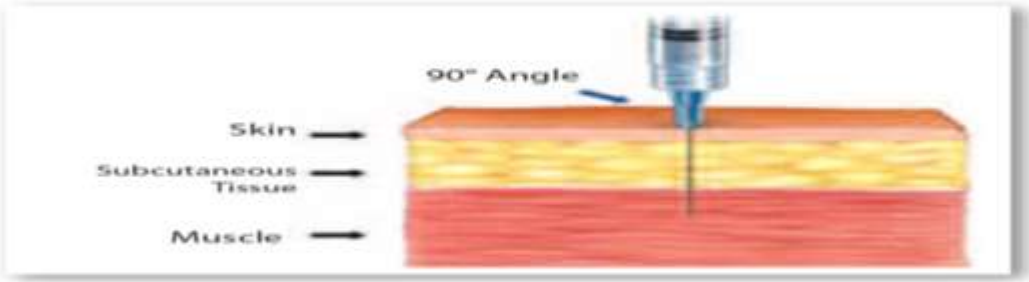
Dose:

Dose: 0.5 ml; Vial: 10 doses

Site:

Outer mid-thigh (Antero-lateral side of mid-thigh)

Route:



Intramuscular Injection

Method:

Stretch skin flat between finger & thumb on both sides of injection site

Remember: Hepatitis B vaccines are very cold sensitive and are destroyed if frozen and should be stored and transported in temperatures between 2 and 8 degrees Celsius.

6. Measles:

Vaccine: *Measles containing vaccine: packaged as powder in 5 dose amber colored vial. Needs reconstitution with a diluent which is: pyrogen free double distilled water.*

Disease:

Measles: fever with rash with cough or running nose or red eyes.

Schedule:

9 months completed - 12 months (39 – 52 weeks).

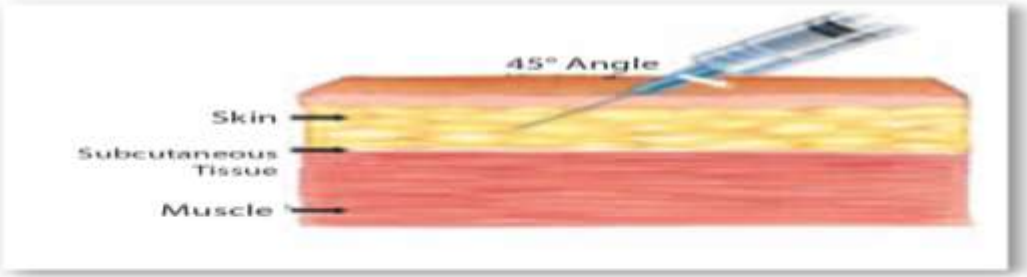
If a child does not receive Measles before the 12th month, give a dose as soon as possible before 5 years of age.

Dose:

Dose: 0.5 ml; Diluent: 2.5 ml double distilled water; Vial: 5 doses

Site:

Right Upper Arm



Subcutaneous Injection

Pinch skin through left index finger & thumb

Remember: Following reconstitution the measles vaccine has to be used within 4 hrs.
A second dose of measles is to be given with DPT booster at 16-24 months of age initially in select states of India and soon (following Supplementary Immunization campaigns) throughout the country.

7. Vitamin A:

Vitamin A is not a vaccine but an important micronutrient for maintaining normal growth, regulating cellular proliferation and differentiation, controlling development, and maintaining visual and reproductive functions. However, it is included in the Universal Immunization schedule.

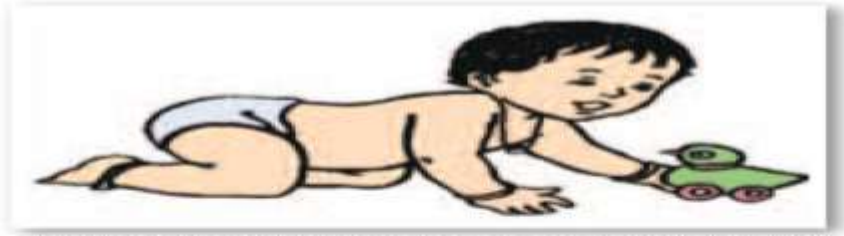
Vitamin A deficiency (VAD) increases the risk of disease and death from severe infections such as measles and diarrhoea. In young children VAD can also cause growth retardation. VAD affects many tissues in the body; however its effect is most apparent on the eye. Children with clinical VAD face difficulty in seeing in the night termed as 'night blindness'. At a more severe stage, it results in Bitot's spots, Corneal Xerosis/ ulceration, Keratomalacia and Corneal scar.

Keratomalacia, Bitol Sports, Night Blindness.
Other sub-clinical symptoms leading to increased severity of disease and mortality

100,00IU/1 ml (9 months completed to 12 mths)
200,000IU/2 ml (Over 1 year). Give correct doses

Preparation and dose: Vitamin A is usually packaged in amber colored bottles of 100 ml as a solution with oil base. It is also supplied with a 2 ml spoon with a marking in the middle indicating 1 ml. The dose of Vitamin A is 1ml (half spoon) containing 1,00,000 International units of Vitamin A when administered between 9 -12 months and 2 ml (1 spoon) containing 2,00,000 IU when administered beyond 1 year.

Schedule: The first dose of Vitamin A is administered at 9-12 months along with measles. The second dose is scheduled with DPT booster at 16 months. Thereafter, 1 dose is to be given every six months till the age of 5 years, that is, a total of 9 doses till the age of 5 years. In many states Vitamin A is also given through Bi-annual campaigns, in which case, the same dose need not be repeated in the routine immunization sessions.



At 9 months with measles, 16 months with DPT booster, then one dose every 5 months up to the age of 5 years

Oral Administration
(use only spoon provided observing marks for 1 ml and 2ml)

Route of administration: Orally, always using the spoon supplied with the Vitamin A bottle.

8. Japanese Encephalitis:

Vaccine: *live attenuated SA 14-14-2 JE vaccine.*

Multi-dose vials with 5 doses, supplied with the diluent vial of 2.5 ml which contains Phosphate Buffer solution.

The vaccine should be reconstituted with the supplied diluent only. After reconstitution it turns into a transparent orange red or light pink liquid. After reconstituting the time of reconstitution should be noted on the vial. The reconstituted vaccine *should be used within two hours of reconstitution*, beyond which the vaccine should be discarded.

Disease: a person of any age, at any time of the year with sudden onset of fever and a change in mental status (drowsy, confusion, inability totalk, disoriented or coma) and /or convulsions. This usually follows infection by the Japaenese Encephalitis virus introduced through a mosquito bite.

Schedule In UIP schedule, following campaigns in an endemic district, JE vaccine should be introduced to new cohorts (children who were underage/not born during the campaign) at 16 to 24 months along with DPT Booster.

Dose: 0.5 ml

Site: left upper arm

Route: subcutaneous

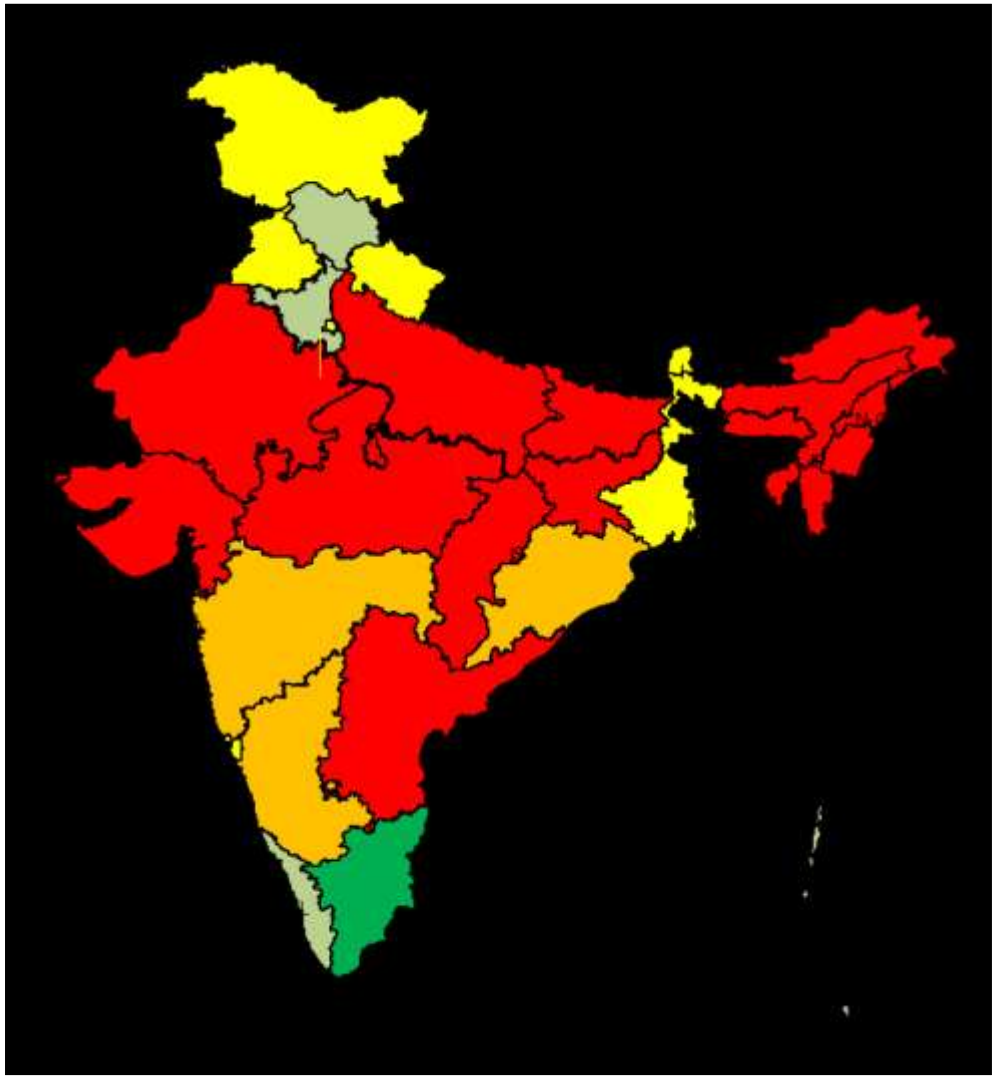
Method: pinch skin of left upper arm between thumb and index finger and give at 45 degrees

Contraindications (situations when not to give vaccine): High Fever (Vaccination to be done only after advise from a Medical officer), Severe malnourishment, Acute infectious disease , Ear infection, Tuberculosis, Heart, liver and kidney problems, Pregnancy , Allergy , Convulsions, Person treated with any immunosuppressive therapy , Person with a proven or suspected hypersensitivity to Kanamycin or Gentamicin.

Japanese Encephalitis vaccination is administered under Universal Immunization Program only in selected endemic districts following large scale vaccination campaigns

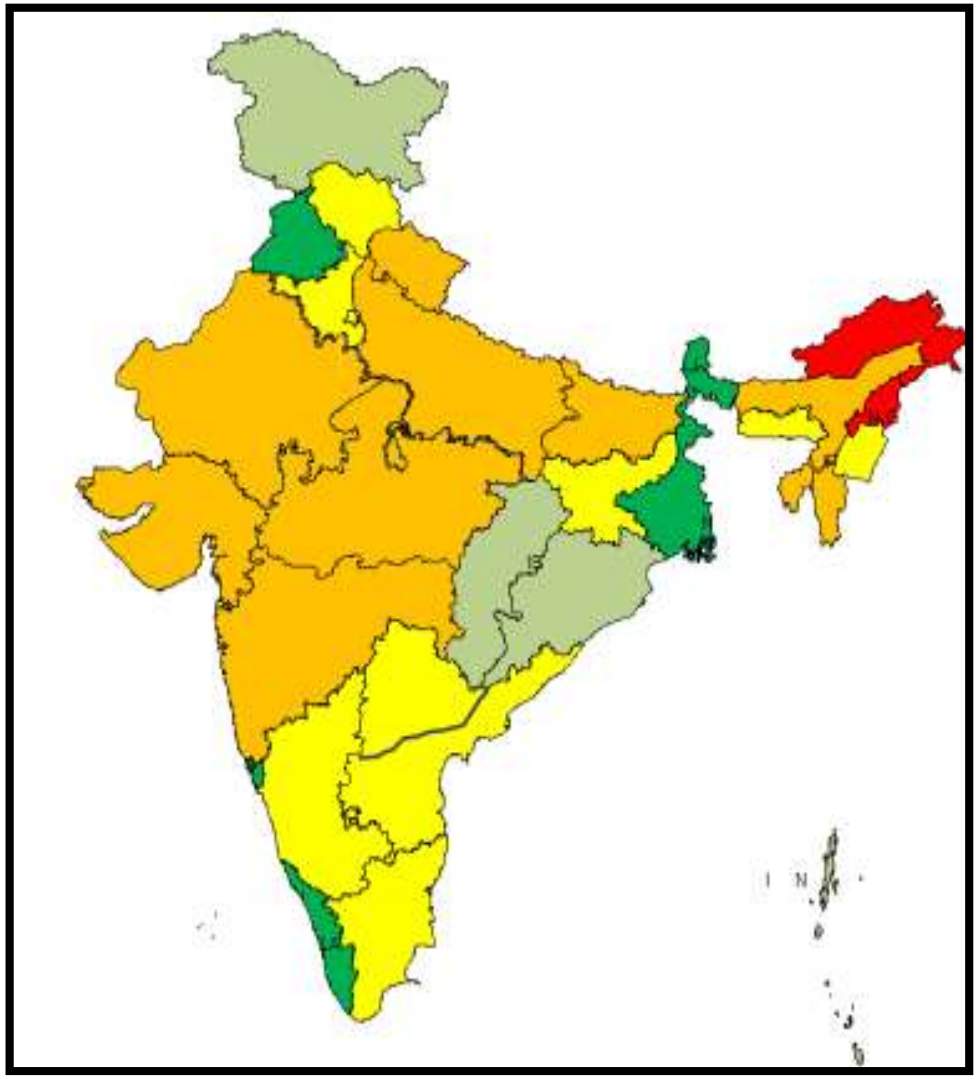
Immunization coverage Trends

Immunization Coverage (FIC)



< 50%
50% to 60%
60% to 70%
70% to 80%
> = 80%

India: 43.5% ranging from 21% to 81%, NFHS-3, 2005-06



India: 62% ranging from 36% to 91%, NFHS-4, 2015-16

Mission Indradhanush (MI)

Launched on 25th December 2014

- **Increasing full immunization coverage to 90% and sustain it through RI**
- **554 districts covered in six phases – including Intensified MI**
- **One of the flagship schemes under Gram Swaraj Abhiyan (GSA) & Extended GSA**

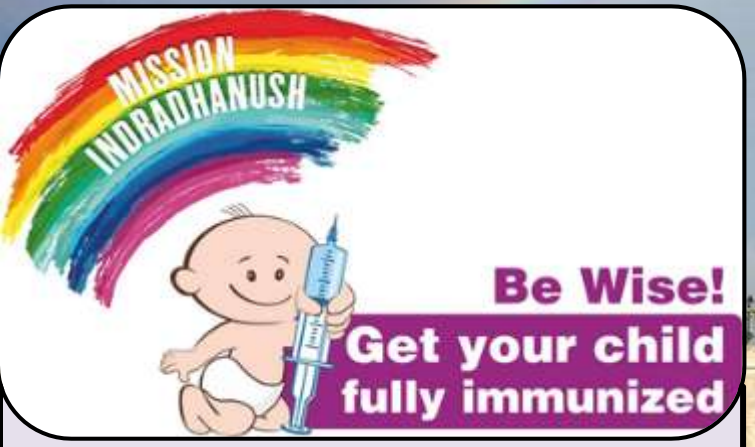
Mission Indradhanush included under PRAGATI

Reviewed by Hon'ble Prime Minister of India

Impact of MI in improving immunization coverage acknowledged

However, national coverage target of 90% not achieved

Sluggish pace of improvement in urban areas



11 ministries supporting the program

Sustainability of achievements not planned

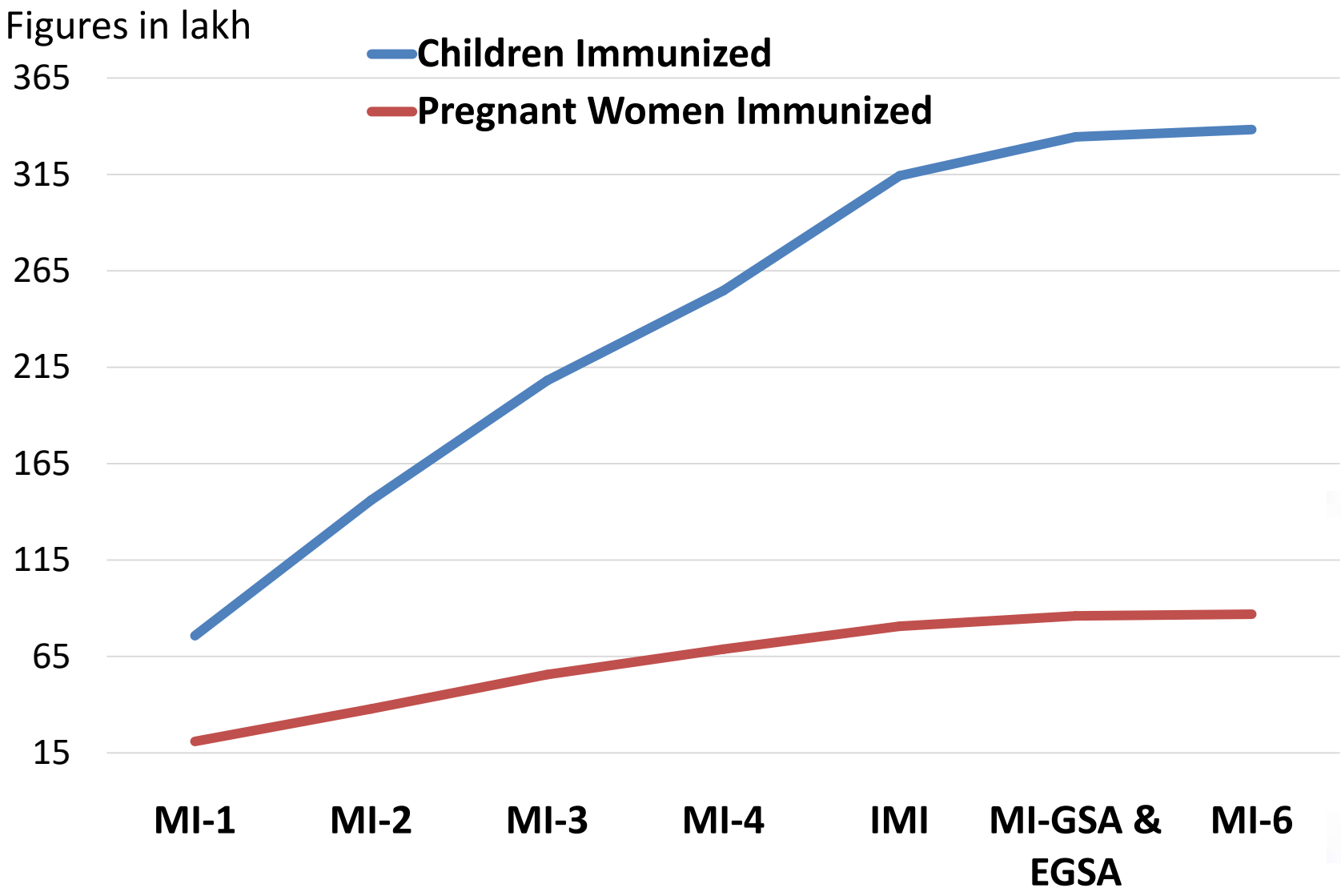
Target shifted from 2020 to 2018

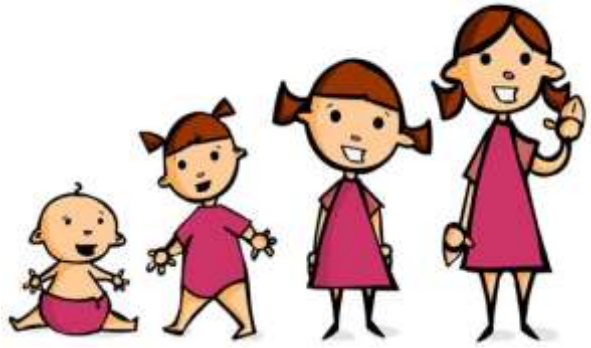
Mission Indradhanush: PM Modi calls for aggressive action plan to cover all children for immunization in a specific time-frame

Intensified Mission Indradhanush

Hon'ble Prime Minister launched Intensified Mission Indradhanush on 8th October 2017

Performance: Mission Indradhanush

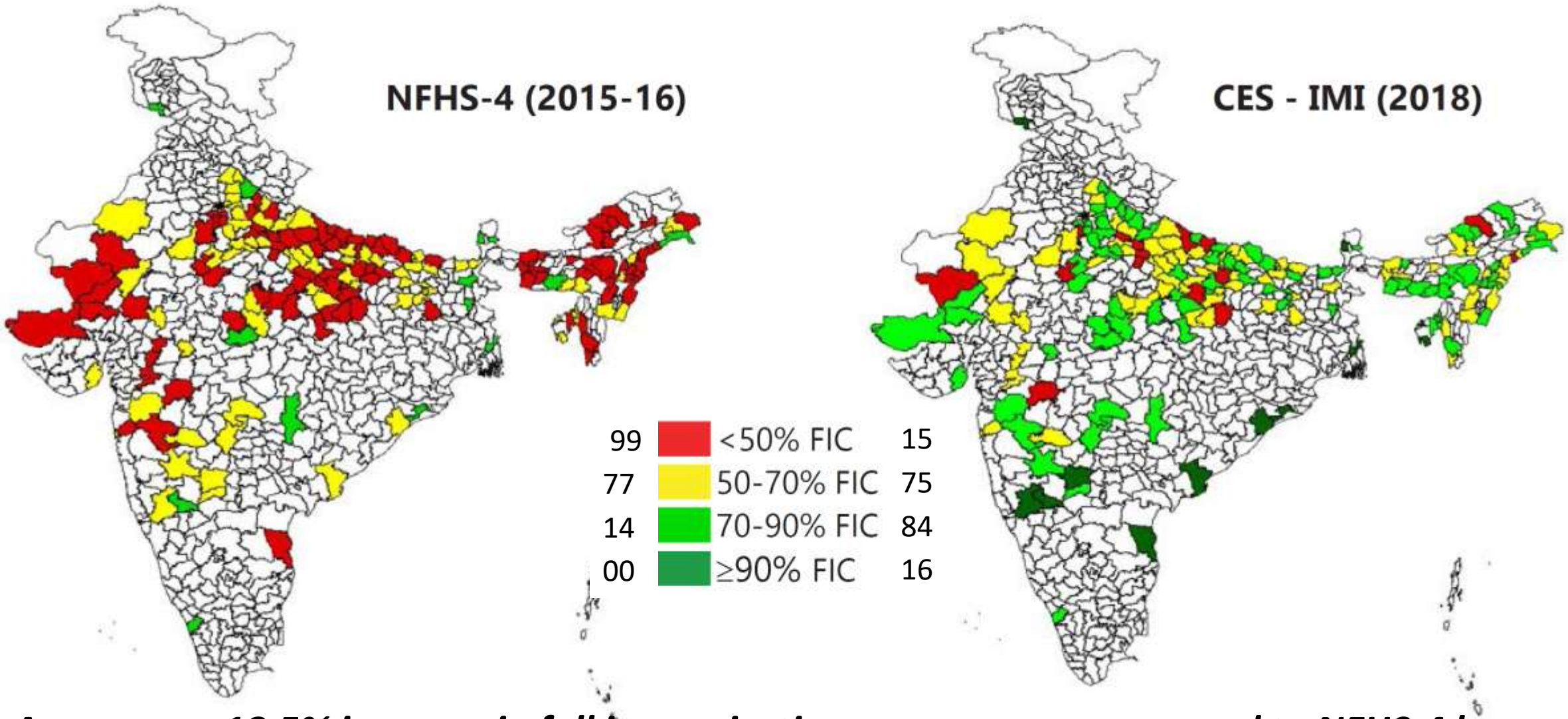




3.39 crore children immunized

87.18 lakh pregnant women vaccinated

Impact of IMI in identified districts



An average 18.5% increase in full immunization coverage as compared to NFHS-4 has been reported in 190 districts covered under IMI

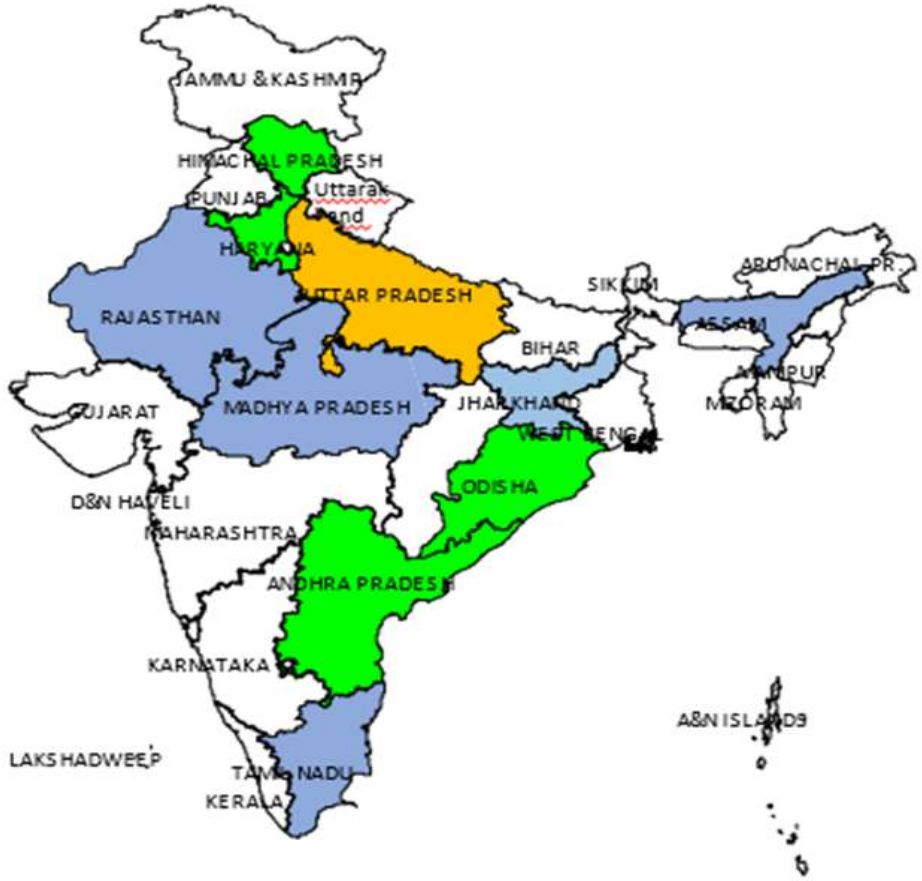
MI under Gram Swaraj Abhiyan (GSA)/Extended GSA (EGSA)

- MI under GSA - 16,850 villages across 25 states; and all UTs from Apr’18 to Jun’18
- MI – EGSA covered 48,929 villages across 117 aspirational districts. (7,408 villages in West Bengal did not participate).
- During MI in GSA/EGSA :
  - Children vaccinated: 20.22 lakh
  - Pregnant women vaccinated: 5.41 lakh

New Vaccine Introduction

Rotavirus vaccine Expansion Plan in India

- Criteria for State selection for RVV introduction
  - ✓ Diarrheal disease burden
  - ✓ AEFI preparedness
  - ✓ Routine immunization coverage and system preparedness
  - ✓ State willingness to introduce RVV
- Till March' 19, around 6.49 crore doses of Rotavirus vaccine have been administered to children.
- Expansion of Rotavirus vaccine under 'POSHAN Abhiyaan' to be done in all states in 2019-20 as per the directions of PMO

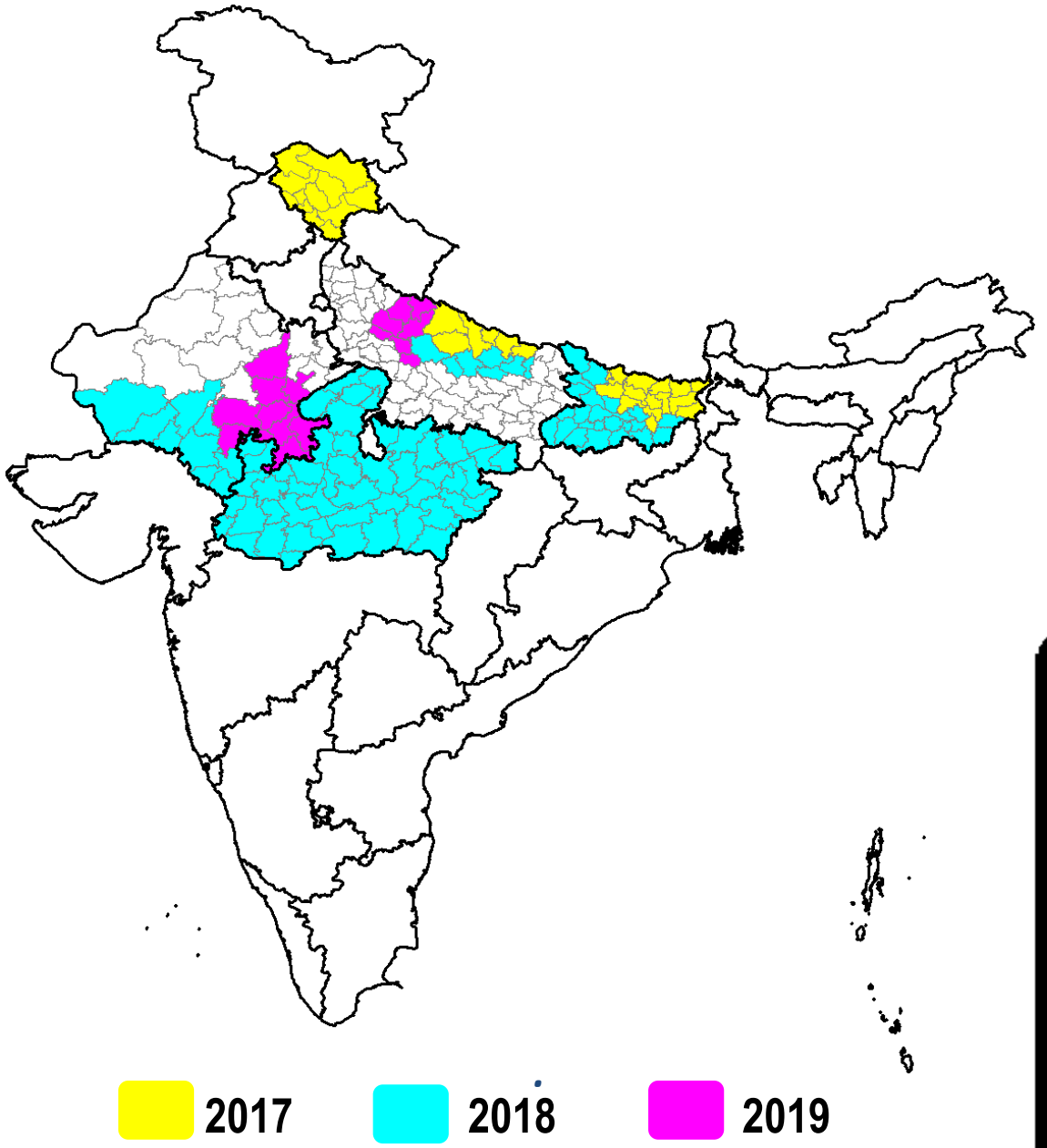


Phase-1: Introduced in 2016

Phase 2: Introduced in 2017

Phase 3: Ongoing in 2018

Pneumococcal Conjugate Vaccine (PCV) Expansion Plan, India



- PCV has been introduced in Bihar, Himachal Pradesh, Madhya Pradesh, 19 districts of Uttar Pradesh and 18 districts of Rajasthan and Haryana (state initiative).
- Till March ’19, around 116.89 lakh doses of PCV have been administered to children across above mentioned areas.
- In 2019, it will be further expanded to cover 9 and 7 additional districts in Rajasthan and Uttar Pradesh respectively.

Percent birth cohort covered:

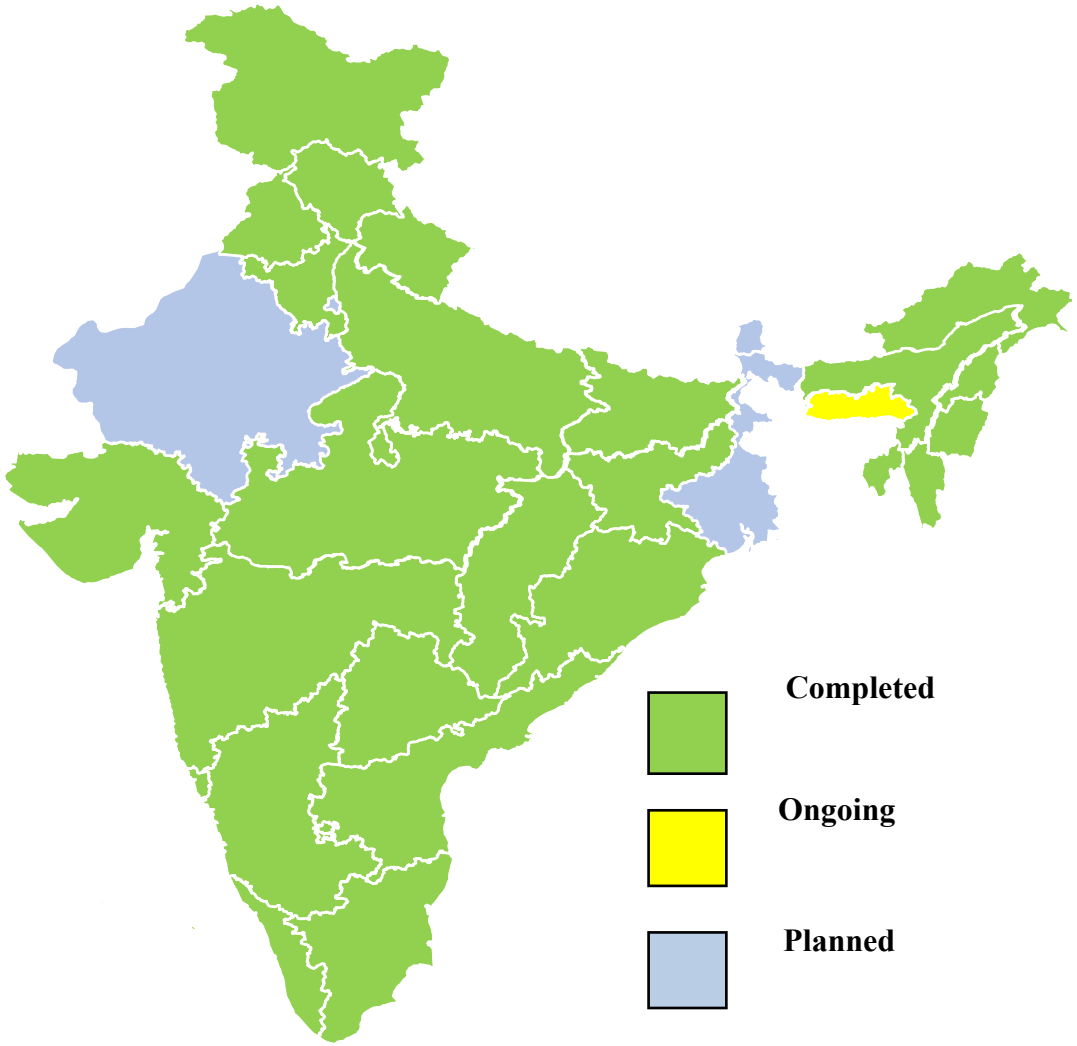
Year-1 (2017): Himachal Pradesh (100%), Bihar (50%), Uttar Pradesh (10%)

Year-2 (2018): Bihar (100%), Madhya Pradesh (100%), Rajasthan (25%) and Uttar Pradesh (20%)

Year-3 (2019): Rajasthan (50%) and Uttar Pradesh (30%)

Measles Rubella (MR) Campaign

- WHO-SEARO goal of achieving Measles elimination by 2020, also reiterated by Hon'ble Finance Minister in the budget speech of 2017.
- Measles-Rubella vaccination campaign launched in Feb'17 targeting approx. 41 crore children aged 9 months-15 years across the country.
- Campaign has been completed in 31 states/UTs and ongoing in 1 state (Meghalaya).
- Subsequent to the completion of campaign, MR vaccine introduced in Routine Immunization replacing Measles vaccine at 9-12 months and 16-24 months of age.



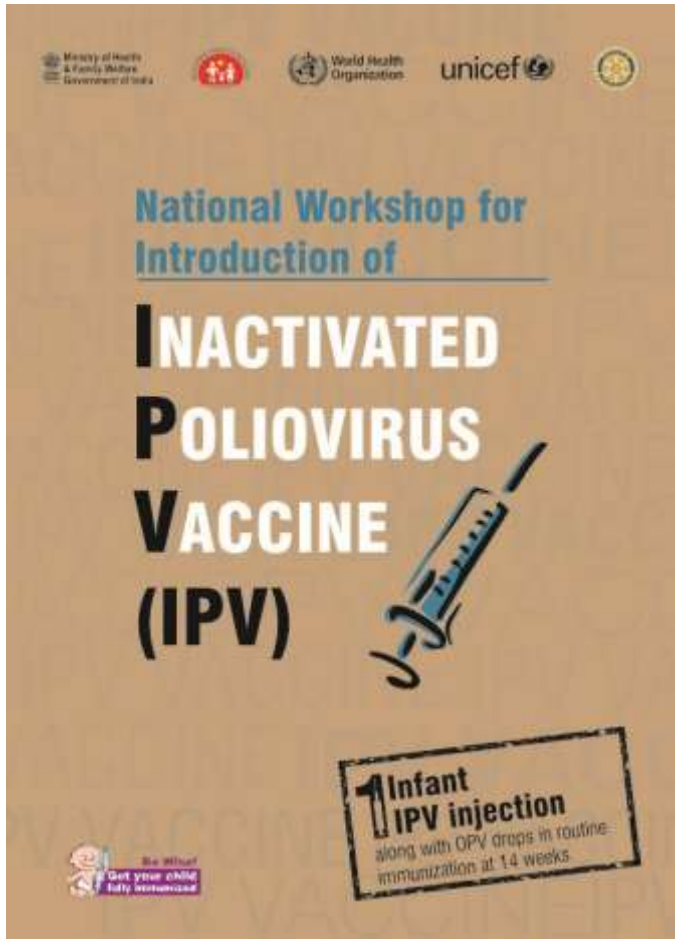
>30.50 crore children vaccinated till date

Data as on 6th May'19

MR Campaign Timelines – Remaining States

S. No	State/UT	Proposed Timeline
1.	West Bengal	-
2.	Rajasthan	July 2019
3.	Sikkim	August 2019
4.	Delhi	-

Inactivated Polio Vaccine



- Launched on 30th November 2015, initially in 6 states
- Expanded to all states by April 2016
- 2 doses of fractional IPV (fIPV) given at 6 and 14 weeks of age of child
- Till March ’19, around 8.89 crore doses of IPV vaccine have been administered to children across country

Japanese Encephalitis(JE)

- JE vaccination: One time campaign strategy → single dose JE vaccine targeting **all** children from 1 to <15 years of age →JE vaccination is included into RI in endemic districts.
- **268 JE endemic districts** (including 37 identified in April'18) identified across **21 states** – campaigns completed in 230 districts → JE now part of RI.
- **Around 15.5 crore children** immunized during the campaign
- **35 high burden districts** (including 4 identified in April'18) identified in **3 states** for **Adult JE** vaccination in endemic blocks (Assam, UP, West Bengal).
- **Adult JE vaccination campaign** completed in 31 districts; **more than 3.3 crore beneficiaries** aged 15-65 years were vaccinated.

Tetanus & adult Diphtheria (Td) vaccine

- Increase in immunization coverage in children led to shift in age-group of diphtheria cases to school going children and adults.
- Tetanus and adult Diphtheria (Td) vaccine has been recommended by National Technical Advisory Group on Immunization (NTAGI) in 2016.
- TT vaccine has been replaced by Td vaccine and will provide protection against both Tetanus and Diphtheria in adults.
- Td vaccine will replace 2 doses of TT or single booster dose of TT given to pregnant woman and booster doses at 10 and 16 years of age.

Revised National Immunization Schedule

Age	Vaccines given
Birth	BCG, OPV-0, Hepatitis B Birth dose
6 Weeks	OPV-1, Pentavalent-1, fIPV-1, Rota-1 & PCV-1
10 weeks	OPV-2, Pentavalent-2 & Rota-2
14 weeks	OPV-3, Pentavalent-3, fIPV-2, Rota-3 & PCV-2
9-12 months	MR-1, JE1*, PCV-Booster
16-24 months	MR-2, JE2*, DPT-Booster 1, OPV- Booster
5-6 years	DPT-Booster 2
10 years	Td
16 years	Td
Pregnant Mother	Td1, 2 or Td Booster**

* *in endemic districts only*

** *one dose if previously vaccinated within 3 years*

Being introduced/scaled up

National Immunization Schedule (NIS) for Infants, Children and Pregnant Women (Vaccine-wise)

Vaccine	When to give	Dose	Route	Site
For Pregnant Women				
Tetanus & adult Diphtheria (Td)-1	Early in pregnancy	0.5 ml	Intra-muscular	Upper Arm
Td-2	4 weeks after Td-1	0.5 ml	Intra-muscular	Upper Arm
Td- Booster	If received 2 TT/Td doses in a pregnancy within the last 3 years*	0.5 ml	Intra-muscular	Upper Arm

For Infants				
Bacillus Calmette Guerin (BCG)	At birth or as early as possible till one year of age	0.1ml (0.05ml until 1 month age)	Intra-dermal	Left Upper Arm
Hepatitis B - Birth dose	At birth or as early as possible within 24 hours	0.5 ml	Intra-muscular	Antero-lateral side of mid-thigh
Oral Polio Vaccine (OPV)-0	At birth or as early as possible within the first 15 days	2 drops	Oral	Oral
OPV 1, 2 & 3	At 6 weeks, 10 weeks & 14 weeks (OPV can be given till 5 years of age)	2 drops	Oral	Oral
Pentavalent 1, 2 & 3	At 6 weeks, 10 weeks & 14 weeks (can be given till one year of age)	0.5 ml	Intra-muscular	Antero-lateral side of mid-thigh
Pneumococcal Conjugate Vaccine(PCV)	Two primary doses at 6 and 14 weeks followed by Booster dose at 9-12 months	0.5 ml	Intra-muscular	Antero-lateral side of mid-thigh
Rotavirus (RVV)	At 6 weeks, 10 weeks & 14 weeks (can be given till one year of age)	5 drops (liquid vaccine) 2.5 ml (lyophilized vaccine)	Oral	Oral

Inactivated Polio Vaccine (IPV)	Two fractional dose at 6 and 14 weeks of age	0.1 ml	Intra dermal two fractional dose	Intra-dermal: Right upper arm
Measles Rubella (MR) 1st dose	9 completed months-12 months. (Measles can be given till 5 years of age)	0.5 ml	Sub-cutaneous	Right upper Arm
Japanese Encephalitis (JE) - 1	9 completed months-12 months.	0.5 ml	Sub-cutaneous (Live attenuated vaccine) Intramuscular(Killed vaccine)	Left upper Arm (Live attenuated vaccine) Anterolateral aspect of mid thigh (Killed vaccine)
Vitamin A (1st dose)	At 9 completed months with measles-Rubella	1 ml (1 lakh IU)	Oral	Oral

For Children				
Diphtheria, Pertussis & Tetanus (DPT) booster-1	16-24 months	0.5 ml	Intra-muscular	Antero-lateral side of mid-thigh
MR 2nd dose	16-24 months	0.5 ml	Sub-cutaneous	Right upper Arm
OPV Booster	16-24 months	2 drops	Oral	Oral
JE-2	16-24 months	0.5 ml	Sub-cutaneous (Live attenuated vaccine) Intramuscular(Killed vaccine)	Left upper Arm (Live attenuated vaccine) Anterolateral aspect of mid thigh (Killed vaccine)
Vitamin A (2nd to 9th dose)	16-18 months. Then one dose every 6 months up to the age of 5 years.	2 ml (2 lakh IU)	Oral	Oral
DPT Booster-2	5-6 years	0.5 ml.	Intra-muscular	Upper Arm
Td	10 years & 16 years	0.5 ml	Intra-muscular	Upper Arm

*One dose if previously vaccinated within 3 years

Note:

- JE Vaccine is introduced in select endemic districts after the campaign.
- The 2nd to 9th doses of Vitamin A can be administered to children 1-5 years old during biannual rounds, in collaboration with ICDS.
- PCV in selected states/districts: Bihar, Himachal Pradesh, Madhya Pradesh, Rajasthan & Uttar Pradesh (selected districts), and in Haryana as state initiative

Improving Quality

Vaccine Logistics & Cold Chain Management

- National Cold Chain Resource Centre (NCCRC), Pune and National Cold Chain & Vaccine Management Resource Centre (NCCVMRC) -NIHFW, New Delhi established to provide technical training to cold chain technicians in repair & maintenance of cold chain equipment.

- National Cold Chain Management Information System (NCCMIS) to track cold chain equipment inventory, availability and functionality.

National Effective Vaccine Management (EVM) Assessment 2018

Diagnostic tool to assess and review three "P"s - Process, Practices and Policies of Efficient Immunization Supply Chain-Cold Chain – Supported by comprehensive Improvement plan

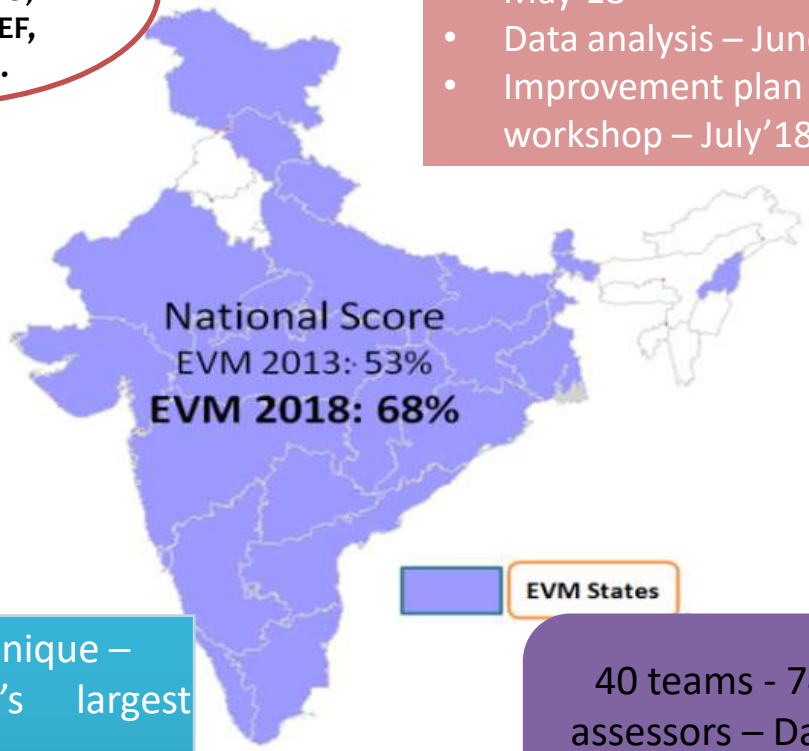
Participation by - MoHFW, Medical Colleges (16), ITSU, NCCVMRC, UNICEF, UNDP, WHO, JSI.

Status –
- Data collection - May'18
- Data analysis – June'18
- Improvement plan workshop – July'18

Under 9 Global Criteria's

1. Vaccine Arrival Process
2. Vaccine Storage Temperature
3. Storage Capacity
4. Building, CCE & Transport
5. Maintenance & Repair
6. Stock Management
7. Distribution
8. Vaccine Management Practices
9. MIS & Supportive Functions

2018 – 23 states



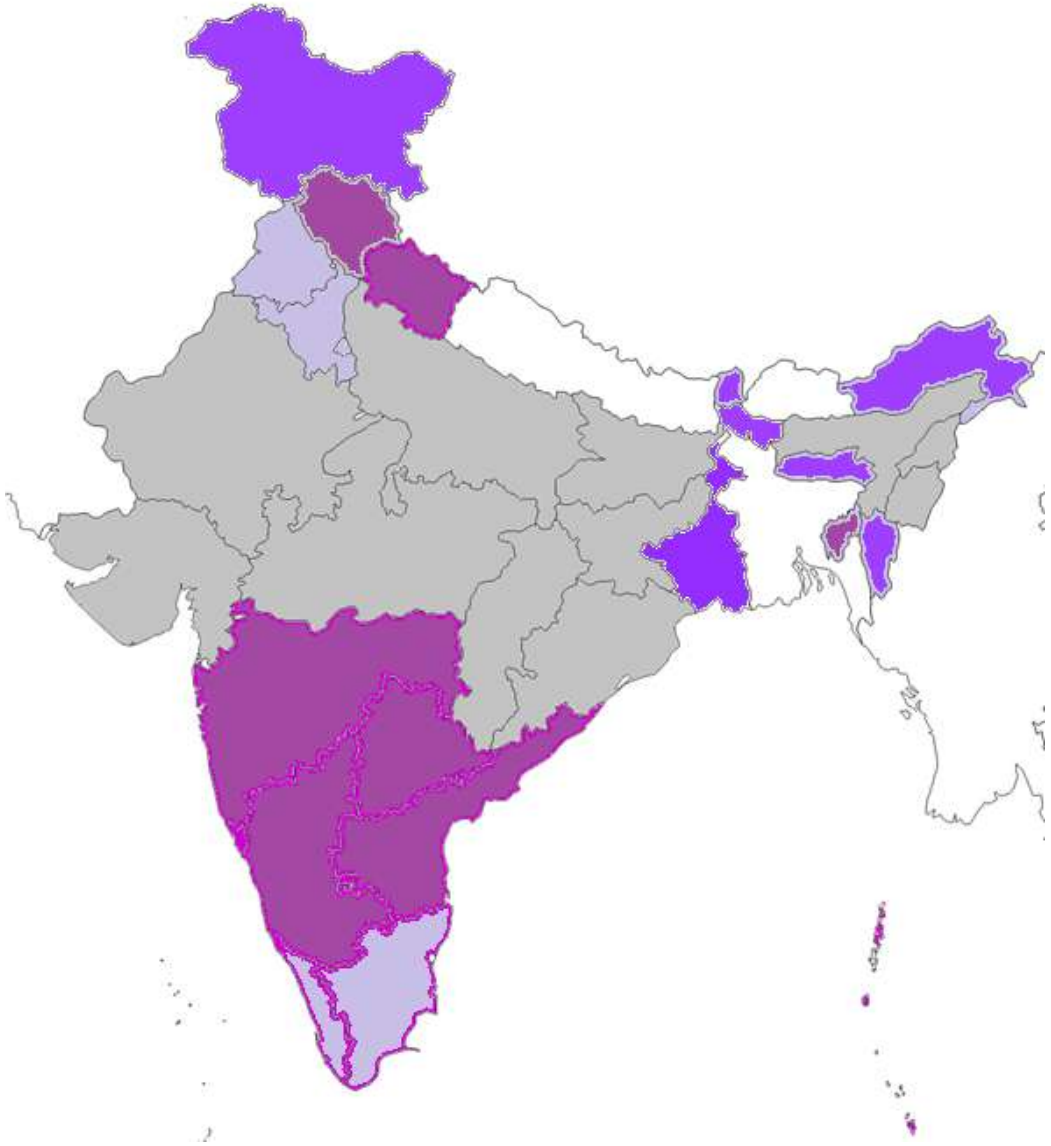
What make this assessment unique –
- EVM 2018 is world's largest assessment
- Participation by players from different domains of public health
- Mobile Based Paper less assessment
- Shortest duration (2 months) – EVM Assessment

40 teams - 74 assessors – Data collection from 145 sites

eVIN status and scale up plan

Electronic Vaccine Intelligence Network (eVIN) rollout for :

Real time stock management and Real time monitoring of cold chain temperature using mobile technology and data logger (sim based)



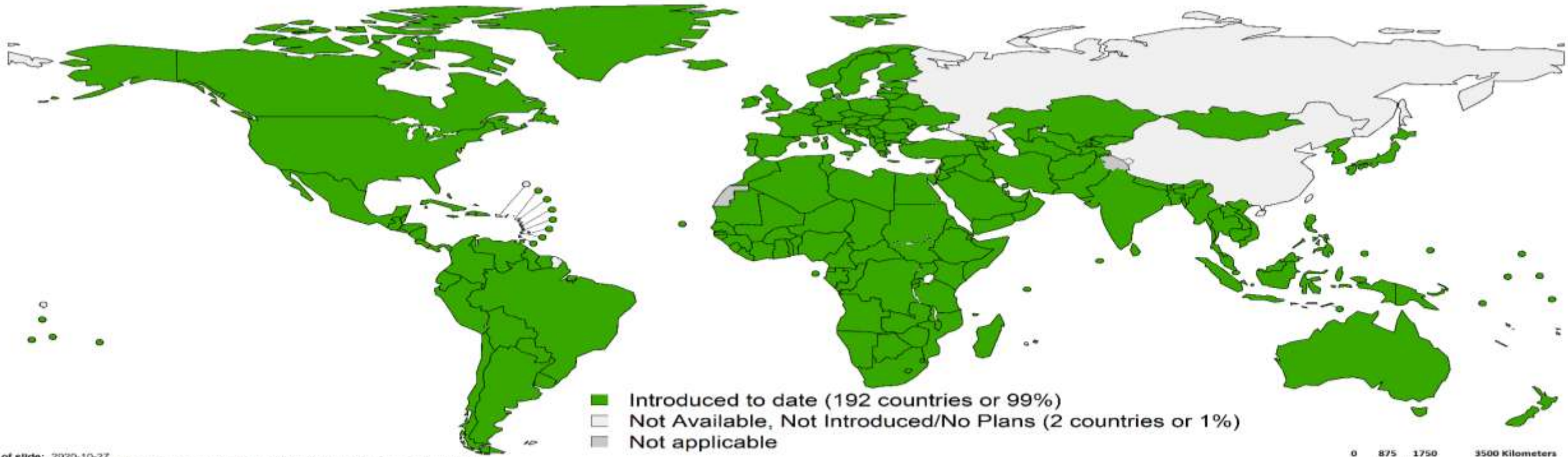
Phase 4, Initiation planned in July 2019

Phase 3 , Initiation planned in October 2018

Phase 2 Implementation initiated. Expected completion by June 2019

Current eVIN States

Countries with Hib vaccine in the national immunization programme



Date of slide: 2020-10-27
Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization(WHO)
Data source: IVB database as at 23th October 2020

Disclaimer:

The boundaries and names shown and the designations used on this map do notimply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Countries with Pneumococcal Conjugate vaccine in the national immunization programme

Date of slide: 2020-10-27
Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization(WHO)
Data source: IVB database as at 23th October 2020

Disclaimer:

The boundaries and names shown and the designations used on this map do notimply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Countries with Rotavirus vaccine in the national immunization programme

Date of slide: 2020-10-27
Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization(WHO)
Data source: IVB database as at 23th October 2020

Disclaimer:

The boundaries and names shown and the designations used on this map do notimply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Countries with HPV vaccine in the national immunization programme

Date of slide: 2020-10-27
Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization(WHO)
Data source: IVB database as at 23th October 2020

Disclaimer:

The boundaries and names shown and the designations used on this map do notimply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Countries with Measles second dose vaccine in the national immunization programme

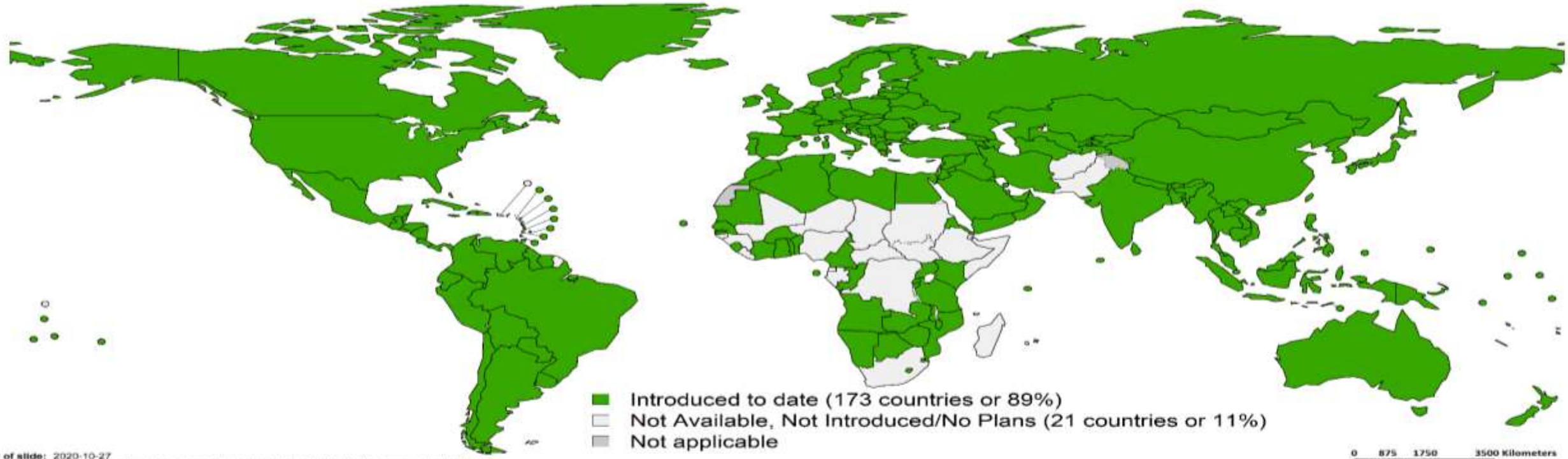
Date of slide: 2020-10-27
Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization(WHO)
Data source: IVB database as at 23th October 2020

Disclaimer:

The boundaries and names shown and the designations used on this map do notimply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Countries with Rubella containing vaccine in the national immunization programme



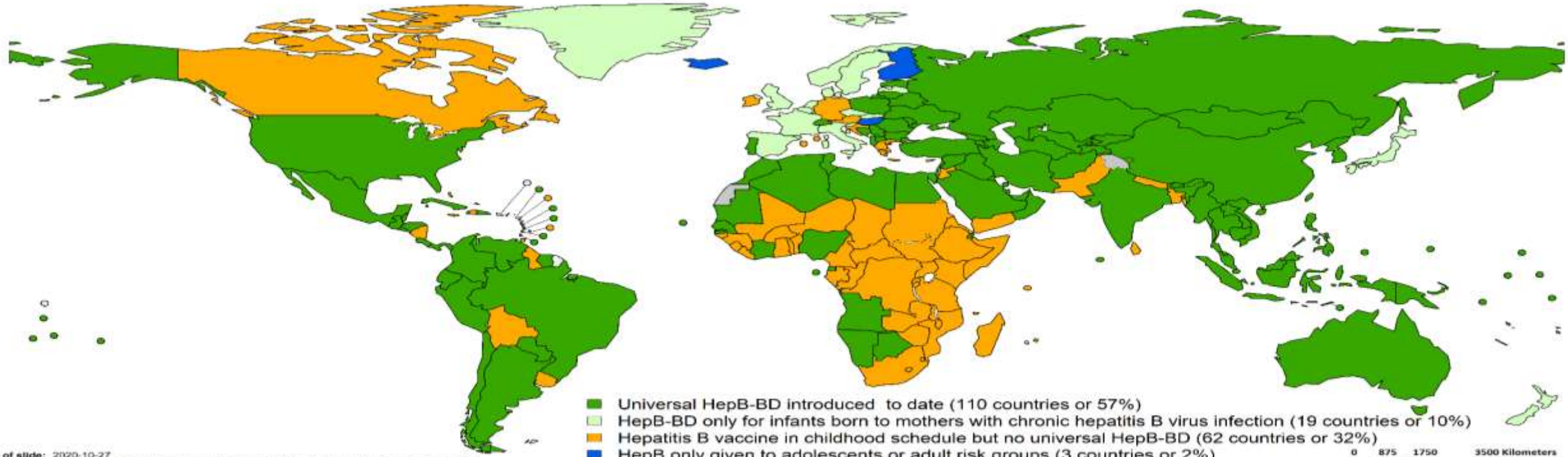
Date of slide: 2020-10-27
Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization(WHO)
Data source: IVB database as at 23th October 2020

Disclaimer:

The boundaries and names shown and the designations used on this map do notimply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Hepatitis B Birth dose (HepB-BD) vaccination strategies in the national immunization programme



Date of slide: 2020-10-27
Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization(WHO)
Data source: IVB database as at 23th October 2020

Disclaimer:

The boundaries and names shown and the designations used on this map do notimply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Countries with Mumps containing vaccine in the national immunization programme

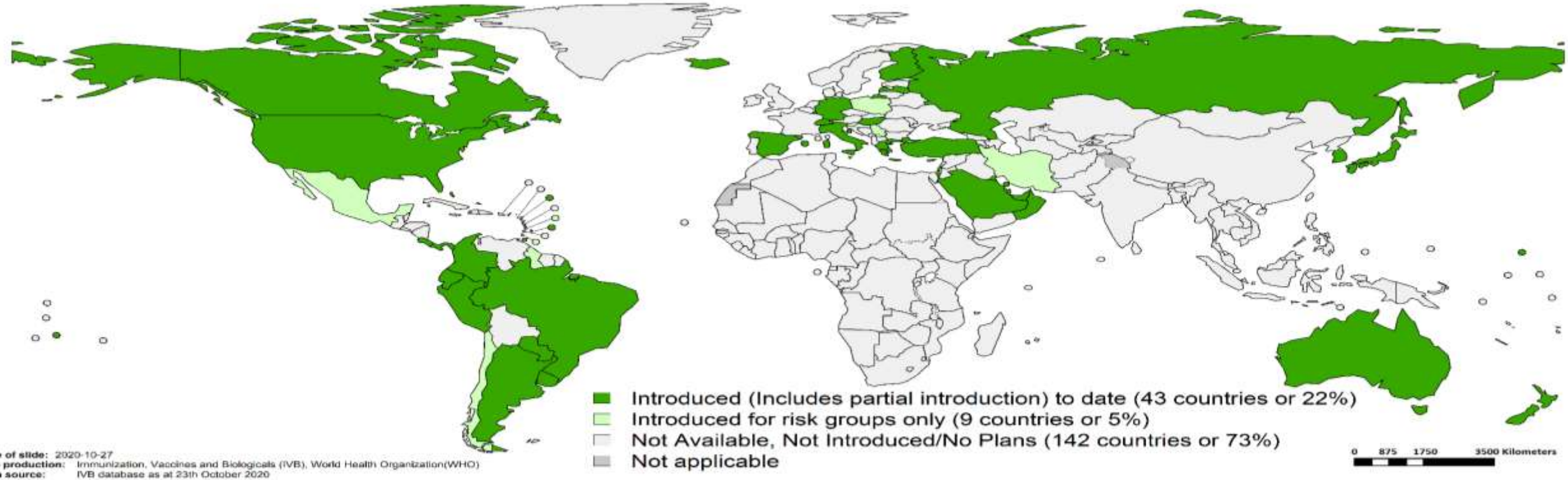
Date of slide: 2020-10-27
Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization(WHO)
Data source: IVB database as at 23th October 2020

Disclaimer:

The boundaries and names shown and the designations used on this map do notimply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Countries with Varicella containing vaccine in the national immunization programme



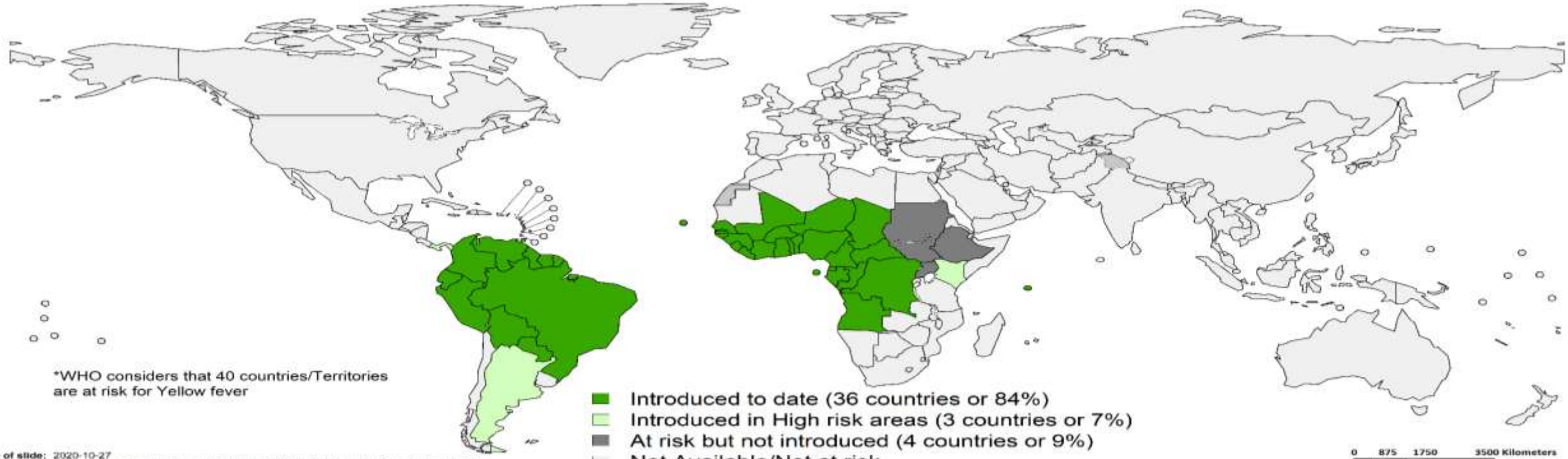
Date of slide: 2020-10-27
Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization(WHO)
Data source: IVB database as at 23th October 2020

Disclaimer:

The boundaries and names shown and the designations used on this map do notimply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Countries and Territories using Yellow fever* vaccine to date



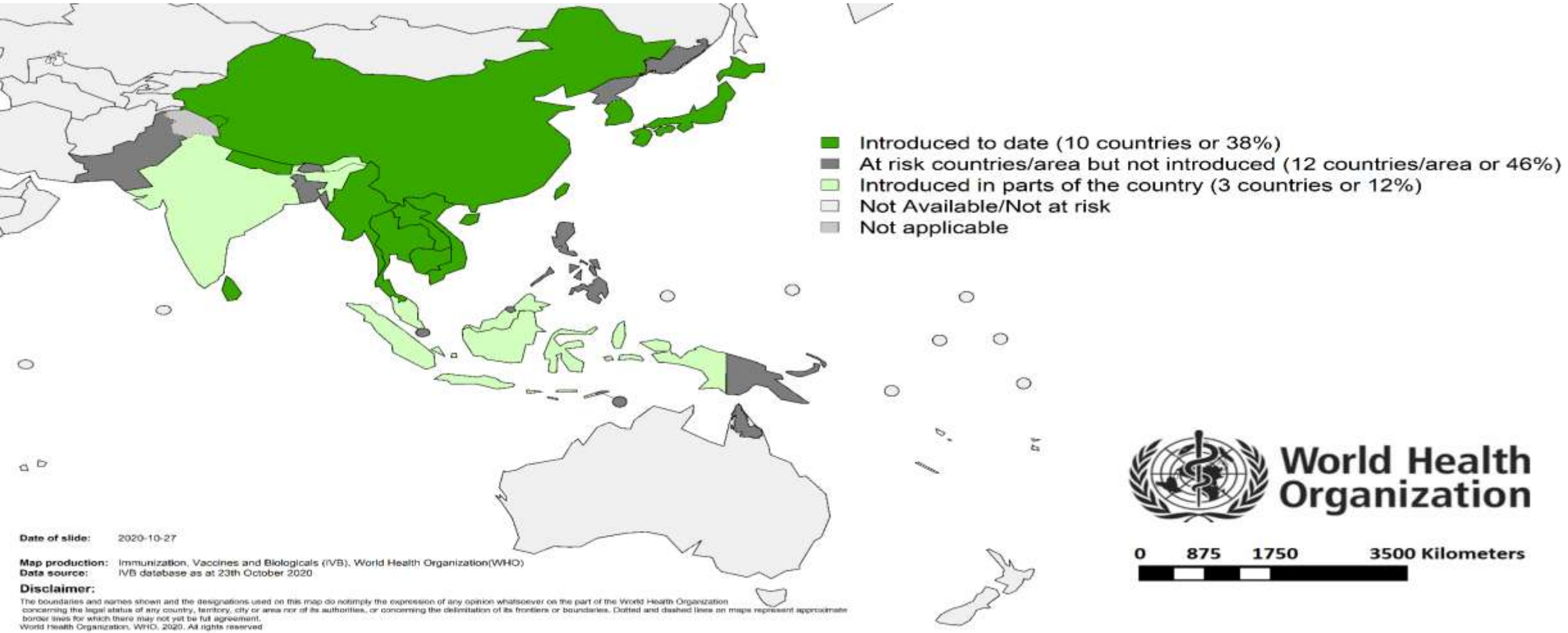
Date of slide: 2020-10-27
Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization(WHO)
Data source: IVB database as at 23th October 2020

Disclaimer:

The boundaries and names shown and the designations used on this map do notimply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Countries and Territories using JE vaccine to date



Do's and Don'ts during immunization sessions

Do's	Don'ts
Vaccination schedule	
– It is safe and effective to give BCG, DPT, OPV and Measles vaccines at the same time to a child who has completed 9 months and never been vaccinated. – Give BCG to infants less than 1 year of age (never give BCG to children above 1 year of age). – If a child is brought late for a dose, pick up where the schedule was left off. For example, if a child left with DPT-2 and comes after 3 months give DPT-3.	– Withhold the vaccine in case of illness such as cold, cough, diarrhoea or fever.
Cold chain	
– Check expiry date and VVM label of vaccine vial before immunizing every child. – Keep the vaccines and diluents in a plastic bag/zipper bag in the centre of vaccine carrier with 4 conditioned ice-packs. Make sure that the diluents are also at +2 to +8 centigrade before reconstitution. – Take one ice pack from vaccine carrier and keep reconstituted BCG & Measles vaccines only on the top of the ice pack.	– Leave vaccine carrier in sunlight: this spoils vaccines that are sensitive to heat and light. – Leave the lid open, this can allow heat and light into the carrier, which can spoil vaccine. – Drop or sit on the vaccine carrier: this can damage the carrier. – Carry vaccines in handbag as this can spoil vaccines that are sensitive to heat. – Keep the DPT, DT, TT and Hep. B vaccines on the ice pack during the session.
Vaccine handling and administration	
– Welcome beneficiaries. – Wash hands before conducting the session. – Verify beneficiary's record and age of the child. – Screen for contraindications. – Check label of the vial and expiry date. – Lightly shake the vial of T-Series Vaccine before drawing the dose. – Use a new AD syringe for each injection and new disposable syringe for each reconstitution. – Use correct diluent for reconstitution of vaccine. – Give appropriate vaccine. – Inject vaccine using the correct site and route for the vaccine e.g. Intradermal in left arm for BCG; subcutaneous in right arm for Measles; intramuscular in anterolateral aspect of mid thigh for DPT and Hepatitis B. – Allow dose to self-disperse instead of massaging. – Explain potential adverse events following immunization and what to do. – Discuss with beneficiaries/parents about next visit.	– Use un-sterile syringe or needle for immunization. – Draw air into AD syringes. – Touch any part of the needle. – Recap the needle. – Leave the needle inside the vial. – Ever inject in the buttock, never do that. – Massage the vaccination site after vaccination. – Use reconstituted measles and BCG vaccine after 4hrs and JE after 2 hrs. – Use vaccine with VVM in unusable stage or with expiry date.
Recording and reporting	
– Fully document each immunization in the immunization card, tally sheet and immunization register. Ask parents/guardians to bring the card on next visit. – Retain the counterfoil.	– Turn away beneficiaries for not bringing the card. – Leave any cell blank in immunization card.
Adverse events following immunization (AEFI)	
– In case of serious AEFI refer the patient to appropriate health facility, inform your supervisor immediately – document the type of vaccine(s), batch number, expiry date, and full address of the child. – Report all serious AEFIs to the MOI/C.	– Report minor reaction following vaccination (mild fever of less than three days, redness and pain).
Social mobilization	
– Use vaccination card to remind parents when to return with their child. – Enlist community team like AWW, ASHA, NGOs and other community-based workers to remind parents of the importance of full immunization.	– Leave any community meeting without communicating about immunization session days.

BIBLIOGRAPHY & REFERENCES

- https://nhm.gov.in/New_Updates_2018/
- http://www.nihfw.org/doc/NCHRC-Publications/
- https://www.who.int/immunization/monitoring_surveillance/VaccineIntroStatus/
- Universal Immunisation Programme | National Health Portal Of India (nhp.gov.in)
- Park's Textbook of Preventive and Social Medicine, 25th Edition


JUST
THANK
YOU!

Author	Study	Method	Result	Conclusion
Latika Nath, Prabhdeep Kaur,[1] and Saurabh Tripathi[2] Indian J Community Med. 2015 Oct-Dec; 40(4): 239–245	cross-sectional survey (low level of evidence)	A facility, session site and cross-sectional survey of 180 children were done and proportions for various indicators were estimated. We determined factors associated with not taking vaccination using multivariate analysis.	The highest prevalent districts in Karnataka are Dakshina Kannada for malaria, Udupi for dengue, Tumakuru for chikungunya and Bidar for lymphatic filariasis. Major factors related to poor outcome in some districts were rigid attitude of the community, poor support of local panchayats and less human resources.	There was low immunization coverage among migrants within adequate supervision, poor cold chain maintenance, and improper tracking of dropouts. Mobile immunization teams, prelisting of migrant children, and change in incentives of ASHAs for child tracking were needed. A monitoring plan for sessions and cold chain needed enforcement.