

Pulse Polio Programme: Eradication Efforts

India committed to resolution passed by World Health Assembly for global polio eradication in 1988. National Immunization Day (NID) commonly known as Pulse Polio Immunization programme was launched in India in 1995, and till 2017, it was being conducted twice in early part of each year. As recommended by India Expert Advisory Group (IEAG) for Polio, since 2018 it is being conducted once in early part of each year. Additionally multiple rounds of sub national immunization day (SNID) have been conducted over the years in high-risk states/areas. Since 2017, country is conducting two rounds of SNID during June-Nov months of the year in the high risk states/areas of the country. In these campaigns, children in the age group of 0-5 years are administered oral polio drops. Over 160 million children are immunized during each NID and 70 million in SNID.

Surveillance for detection of poliovirus transmission is being done through acute flaccid paralysis (AFP) Surveillance with laboratory network since 1997. There are ~50,000 reporting sites in the country which report 30,000 – 40,000 AFP cases each year. Oral polio vaccine drops are being provided to all children less than five years of age in routine immunization programme along with the fractional dose of Inactivated Poliovirus Vaccine (fIPV).

Progress

1. South-East Asia Region of WHO including India was certified polio free by World Health Organization on 27 March 2014.

2. WHO on 24 February 2012 removed India from the list of “endemic countries with active poliovirus transmission”

3. India reported its last polio case from district Howrah, West Bengal on 13 January, 2011. India continues to maintain the polio-free status for >11 years.

Last reported Wild Poliovirus (WPV) case in the country

Wild Poliovirus 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

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

5. The total number of WPV cases and number of affected districts during past 16 years is as below:

Year	Cases of Wild Poliovirus	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 – 2022*	00	00*

*Data as on 27 August 2022

Steps taken by the Government to maintain polio free status in India

- Maintaining community immunity through high quality National and Sub National polio rounds each year.
- An extremely high level of vigilance through AFP surveillance across the country for any importation or circulation of wild poliovirus and vaccine derived poliovirus (VDPV) is being maintained. Even during the ongoing Covid-19 pandemic, the AFP surveillance sensitivity remained above the global recommended levels.
- Environmental surveillance (sewage sampling) has been established to detect poliovirus transmission and as a surrogate indicator of the progress as well for any programmatic interventions. There are 60 environmental surveillance sites in the country located strategically in 13 states – Assam, Bihar, Delhi, Gujarat, Jammu and Kashmir, Karnataka, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.
- Country has eight WHO accredited laboratories located at Kasauli, Delhi, Lucknow, Kolkata, Ahmedabad, Mumbai, Bengaluru, and Chennai. All these labs' performance exceeds the globally recommended targets. These labs process 60,000 to 80,000 stool samples and ~1500 sewage samples annually to detect transmission of wild poliovirus or VDPV in the country.
- All States and Union Territories in the country have developed a Rapid Response Team (RRT) to respond to any polio outbreak in the country. Emergency Preparedness and Response Plans (EPRP) has also been developed by the country indicating steps to be undertaken in case of detection of a polio case.
- To reduce risk of importation from neighbouring countries, international border vaccination is being provided through continuous vaccination teams (CVT) to all 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. Nearly 15 million children have been vaccinated with OPV as on 31st August 2022.
- Government of India has issued guidelines effective since March 2014, for mandatory requirement of polio vaccination to all international travellers for travel to India and other affected countries namely Afghanistan, Nigeria, Pakistan, Ethiopia, Kenya, Somalia, Syria and Cameroon.
- A rolling emergency stock of OPV is being maintained to respond to detection/importation of wild poliovirus (WPV) or emergence of circulating vaccine derived poliovirus (cVDPV).
- As recommended by National Technical Advisory Group on Immunization (NTAGI), country introduced injectable Inactivated Poliovirus Vaccine (IPV) as an additional dose along with 3rd dose of pentavalent vaccine in the last quarter of 2015 as a part of polio endgame strategy and tOPV-bOPV switch.
- On 25 April 2016, country successfully switched from tOPV vaccine to bOPV vaccine. This was done in view of the WHO declaration of eradication of type 2 WPV and to minimize the risk of VDPV due to type 2 component of OPV.
- In 2017, India introduced the fractional dose of Inactivated Poliovirus Vaccine (IPV) into routine immunization. Two doses of fIPV were introduced along with first and third dose of oral polio vaccine (OPV) at 6 weeks and 14 weeks of age of the child.

- Covid-19 pandemic impacted the immunization coverage as well as the AFP surveillance sensitivity. To address this, detailed guidelines on routine immunization, pulse polio rounds and surveillance activities were issued by MoHFW. The concept of telephonic sensitization of health facilities to report the AFP cases was introduced in 2020. Audiovisuals on AFP surveillance and sample collection have been developed for wider dissemination of information through social media platforms.

NUMBER OF POLIO CASES FOR 2001-2022 (upto 27 August 2022)

Wild Poliovirus Case													
State/UT's	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012 - 2021	2022*
West Bengal	1	49	28	2	0	1	2	2	0	8	1	0	0
Uttar Pradesh	216	1242	88	82	29	548	341	305	602	10	0	0	0
Bihar	27	121	18	39	30	61	503	233	117	9	0	0	0
Jharkhand	2	12	1	0	2	1	0	0	2	8	0	0	0
Maharashtra	4	6	3	3	0	5	2	2	0	5	0	0	0
Haryana	5	37	3	2	1	19	6	2	4	1	0	0	0
Jammu & Kashmir	0	1	0	0	0	1	0	0	0	1	0	0	0
Delhi	3	24	3	2	1	7	2	5	4	0	0	0	0
Punjab	5	2	1	0	1	8	1	2	4	0	0	0	0
Uttarakhand	3	14	0	1	1	13	6	1	4	0	0	0	0
Rajasthan	0	41	4	0	0	1	3	2	3	0	0	0	0
Himachal Pradesh	0	0	0	0	0	1	0	0	1	0	0	0	0
Odisha	0	4	2	0	0	0	1	2	0	0	0	0	0
Andhra Pradesh	0	0	19	1	0	0	4	1	0	0	0	0	0
Telangana	0	0	2	0	0	0	1	0	0	0	0	0	0
Madhya Pradesh	0	21	11	0	0	3	0	1	0	0	0	0	0
Assam	1	0	1	0	0	2	0	1	0	0	0	0	0
Gujarat	1	24	3	0	1	4	1	0	0	0	0	0	0
Karnataka	0	0	36	1	0	0	1	0	0	0	0	0	0
Chandigarh	0	1	0	0	0	1	0	0	0	0	0	0	0
Tamil Nadu	0	0	2	1	0	0	0	0	0	0	0	0	0
Chhattisgarh	0	1	0	0	0	0	0	0	0	0	0	0	0
Kerala	0	0	0	0	0	0	0	0	0	0	0	0	0
Daman & Diu	0	0	0	0	0	0	0	0	0	0	0	0	0
D & N Haveli	0	0	0	0	0	0	0	0	0	0	0	0	0
Goa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pondicherry	0	0	0	0	0	0	0	0	0	0	0	0	0
Andaman & Nicobar	0	0	0	0	0	0	0	0	0	0	0	0	0
Arunachal Pradesh	0	0	0	0	0	0	0	0	0	0	0	0	0
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0	0	0
Manipur	0	0	0	0	0	0	0	0	0	0	0	0	0
Meghalaya	0	0	0	0	0	0	0	0	0	0	0	0	0
Mizoram	0	0	0	0	0	0	0	0	0	0	0	0	0
Nagaland	0	0	0	0	0	0	0	0	0	0	0	0	0
Sikkim	0	0	0	0	0	0	0	0	0	0	0	0	0
Tripura	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	268	1600	225	134	66	676	874	559	741	42	1	0	0