

Table 1: EPI History

| Year    | Milestone   |
|---------|---|
| 1978    | EPI launched with DTP, OPV, BCG and typhoid vaccines  |
| 1983    | TT immunization of pregnant women introduced  |
| 1985    | MCV (measles vaccine-standalone) introduced   |
| 2002-11 | HepB piloted in 2002 and made universal in 2011   |
| 2010    | MCV2 introduced   |
| 2011-15 | Pentavalent (introduced in two states in 2011 and gradually expanded to all states by 2015)   |
| 2006-13 | First dose of JE vaccine introduced in 2006 and second dose introduced in 2013 in JE endemic districts  |
| 2013    | Multi-dose vial policy for vaccines introduced  |
| 2015-16 | IPV introduced in six states in 2015 and expanded to all states in 2016   |
| 2016    | tOPV to bOPV switched on 25 April   |
| 2016-19 | Rotavirus vaccine introduced in four states in 2016, nationwide expansion in 2019   |
| 2017-19 | Rubella containing Vaccine (RCV) introduced through Measles-Rubella vaccine (MR Vaccine) at subnational level from February 2017 and expanded to all states by 2019 |
| 2017    | PCV introduced, now expanded to Bihar, Himachal Pradesh, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh   |
| 2019    | TT replaced by Td   |

Source: cMYP 2018-2022 and EPI/MoHFW

**Disclaimer:** The boundaries and names shown and the designations used on all the maps do not imply 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 or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Table 2: Basic information, 2022

|  |                      |
|--|----------------------|
| Total population <sup>1</sup>  | 1,379,752,250        |
| Live births <sup>1</sup>   | 20,987,726           |
| Children <1 year <sup>1</sup>  | 26,403,088           |
| Children <5 years <sup>1</sup>   | ND                   |
| Children <15 years <sup>1</sup>  | ND                   |
| Pregnant women <sup>1</sup>  | 29,939,610           |
| Women of child bearing age <sup>1</sup> (15-49 years)                            | ND                   |
| Neonatal mortality rate <sup>2</sup>   | 19.12 (per 1,000 LB) |
| Infant mortality rate <sup>2</sup>   | 25.49 (per 1,000 LB) |
| Under-five mortality rate <sup>2</sup>   | 30.62 (per 1,000 LB) |
| Maternal mortality ratio <sup>2</sup>  | 103 (per 100,000 LB) |
| Division/Province/State/Region   | 36                   |
| District   | 757                  |
| Block  | 7,636                |
| Population density <sup>1</sup> (per sq. km)                                     | 382                  |
| Population living in urban areas <sup>2</sup>                                    | 34.80%               |
| Population using at least basic drinking-water services <sup>2</sup>             | 93%                  |
| Population using at least basic sanitation services <sup>2</sup>                 | 78%                  |
| Total expenditure on health as % of GDP <sup>2</sup>                             | 1.08%                |
| Births attended by skilled health personnel <sup>2</sup>                         | 89%                  |
| Neonates protected at birth against NT <sup>2</sup>                              | 90%                  |
| Children not covered by immunization programme (zero dose children) <sup>3</sup> | 1,125,995            |

<sup>1</sup> SEAR annual EPI reporting form, 2022

<sup>2</sup> WHO, Global Health Observatory (GHO) data <http://apps.who.int/gho/data> accessed on 03 August 2023

<sup>3</sup> DTP1 coverage from WHO and UNICEF estimates of immunization coverage and UN estimated under one population

Table 3: Immunization schedule, 2022

| Vaccine      | Age of administration  |
|--------------|--|
| BCG          | 0-1 year   |
| HepB         | Birth  |
| OPV          | Birth, 6 weeks, 10 weeks, 14 weeks and 16 to 24 months             |
| IPV          | 6 weeks and 14 weeks   |
| DTP-Hib-HepB | 6 weeks, 10 weeks and 14 weeks                                     |
| DTP          | 16 to 24 months and 5-6 years                                      |
| MR           | 9 to 12 months and 16 to 24 months                                 |
| JE_live_Atd  | 9 to 12 months and 16 to 24 months (select JE endemic districts)   |
| JE_Inactd    | 9 to 12 months and 16 to 24 months (select JE endemic districts)   |
| Td           | 10 years, 16 years and 2 doses/booster for pregnant women          |
| Vitamin A    | 9 months, 18 months, 24 months, 30 months, 36 months and 42 months |
| PCV          | 6 weeks, 14 weeks and 9 months                                     |
| Rotavirus    | 6 weeks, 10 weeks and 14 weeks                                     |

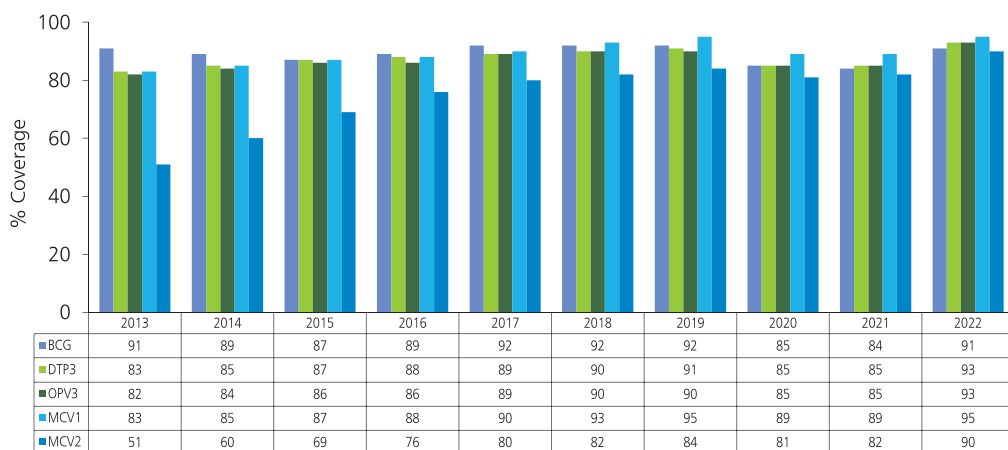
Source: WHO/UNICEF JRF, 2022

Table 4: Immunization system highlights

|  |                                      |
|--|--------------------------------------|
| cMYP for immunization  | 2018-2022                            |
| NTAGI  | fully functional                     |
| Spending on vaccines financed by the government  | 100%                                 |
| Spending on routine immunization programme financed by the government                          | 100%                                 |
| Updated micro-plans that include activities to improve immunization coverage                   | 757 (100%)                           |
| National policy for health care waste management including waste from immunization activities  | in place                             |
| National system to monitor AEFI  | in place                             |
| Most recent EPI CES  | National Family Health Survey-5 2021 |
| ≥80% coverage for DTP-Hib-HepB3  | 608 districts (80%)                  |
| ≥90% coverage for MCV1   | 444 districts (59%)                  |
| ≥90% coverage for MCV2   | 350 districts (46%)                  |
| ≥10% drop-out rate for DTP-Hib-HepB1 to DTP-Hib-HepB3  | 38 districts (5%)                    |
| Polio vaccination policy for travelers to and from polio endemic/infected countries introduced | 2014                                 |
| Mission Indradhanush to immunize all children against eleven VPDs ongoing since                | Dec-14                               |

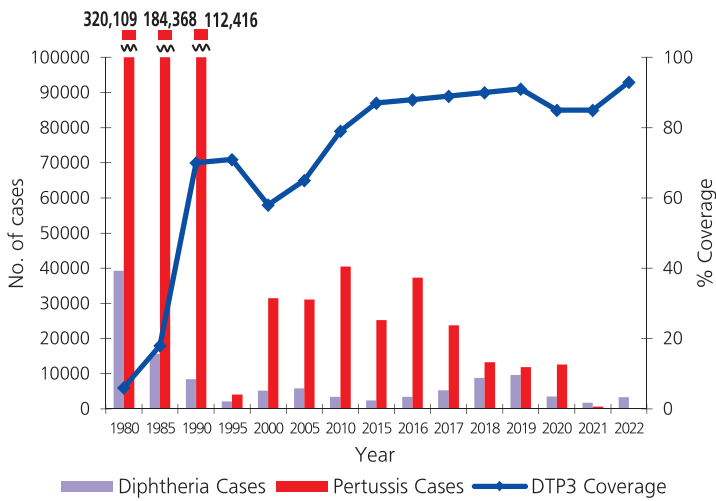
Source: WHO/UNICEF JRF, 2022

Figure 1: National immunization coverage, 2013-2022



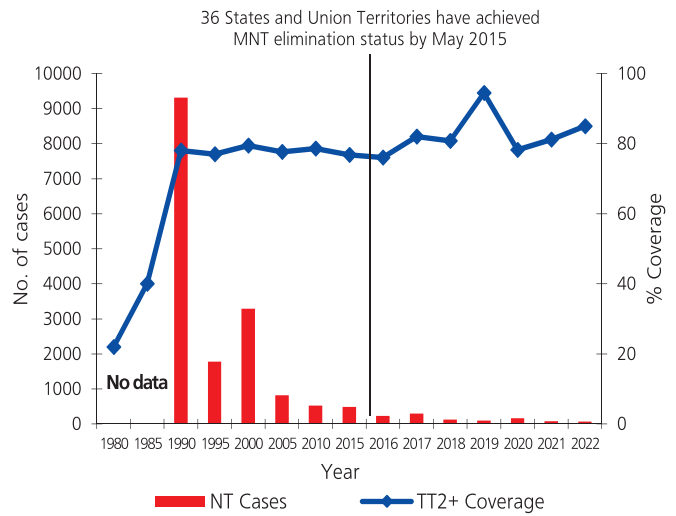
Source: WHO and UNICEF estimates of immunization coverage

Figure 2: DTP3 coverage<sup>1</sup>, diphtheria and pertussis cases<sup>2</sup>, 1980-2022



<sup>1</sup> WHO and UNICEF estimates of immunization coverage  
<sup>2</sup> WHO vaccine-preventable diseases: monitoring system 2022

Figure 3: TT2+ coverage<sup>1</sup> and NT cases<sup>2</sup>, 1980-2022



<sup>1</sup> Country official estimates, 1980-2022  
<sup>2</sup> WHO vaccine-preventable diseases: monitoring system 2022

DTP-Hib-HepB3 coverage by district

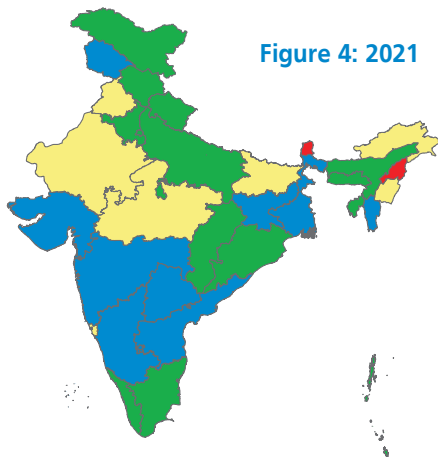


Figure 4: 2021

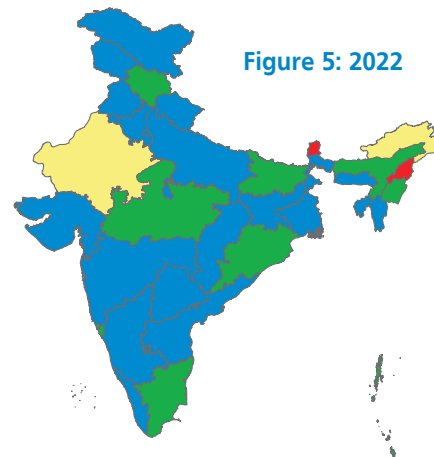


Figure 5: 2022

Legend: <70% (red), 70 - 79% (yellow), 80 - 89% (green), ≥90% (blue)

Source: SEAR annual EPI reporting form, 2021 and 2022 (administrative data)

Table 5: Reported cases of vaccine preventable diseases, 2016-2022

| Year | Polio          | Diphtheria | Pertussis | NT (% of all tetanus) | Measles | Rubella | Mumps | JE    | CRS |
|------|----------------|------------|-----------|-----------------------|---------|---------|-------|-------|-----|
| 2016 | 0 <sup>a</sup> | 3,380      | 37,274    | 227 (6%)              | 18,663  | 11,027  | ND    | 1,627 | 25  |
| 2017 | 0              | 5,293      | 23,766    | 295 (6%)              | 13,401  | 2,856   | ND    | 2,043 | 76  |
| 2018 | 0              | 8,788      | 13,208    | 129 (2%)              | 19,474  | 2,328   | ND    | 1,707 | ND  |
| 2019 | 0              | 9,622      | 11,875    | 95 (1.3%)             | 10,544  | 3,466   | ND    | 2,496 | 237 |
| 2020 | 0              | 3,485      | 12,566    | 162 (13.5%)           | 5,511   | 1,398   | ND    | 718   | ND  |
| 2021 | 0              | 1,768      | 593       | 81 (6.5%)             | 5,700   | 1,675   | 758   | 489   | ND  |
| 2022 | 0              | 3,286      | 4,362     | 65 (100%)             | 43,410  | 2,554   | 6     | 1,271 | 210 |

<sup>a</sup> Excludes one type 2 VDPV

Source: WHO/UNICEF JRF (multiple years)

ND=No data

**Table 6: AFP surveillance performance indicators, 2016-2022**

• The last polio case due to WPV was reported on 13 January 2011 from West Bengal

| Indicator  | 2016   | 2017   | 2018   | 2019   | 2020   | 2021   | 2022   |
|--|--------|--------|--------|--------|--------|--------|--------|
| AFP cases  | 46,499 | 39,127 | 35,990 | 40,613 | 21,164 | 25,422 | 30,225 |
| Wild poliovirus confirmed cases                            | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| Compatible cases   | 15     | 37     | 16     | 22     | 11     | 10     | 13     |
| Non-polio AFP rate <sup>1</sup>                            | 10.6   | 8.92   | 8.11   | 9.1    | 4.6    | 5.6    | 6.58   |
| Adequate stool specimen collection percentage <sup>2</sup> | 87%    | 86%    | 86%    | 87%    | 82%    | 86%    | 88%    |
| Total stool samples collected                              | 91,031 | 72,555 | 70,510 | 79,041 | 40,298 | 49,279 | 59,102 |
| % NPEV isolation   | 15     | 16     | 15     | 13     | 11     | 9      | 13     |
| % Timeliness of primary result reported <sup>3</sup>       | 97     | 94     | 98     | 93     | 94     | 96     | 97     |

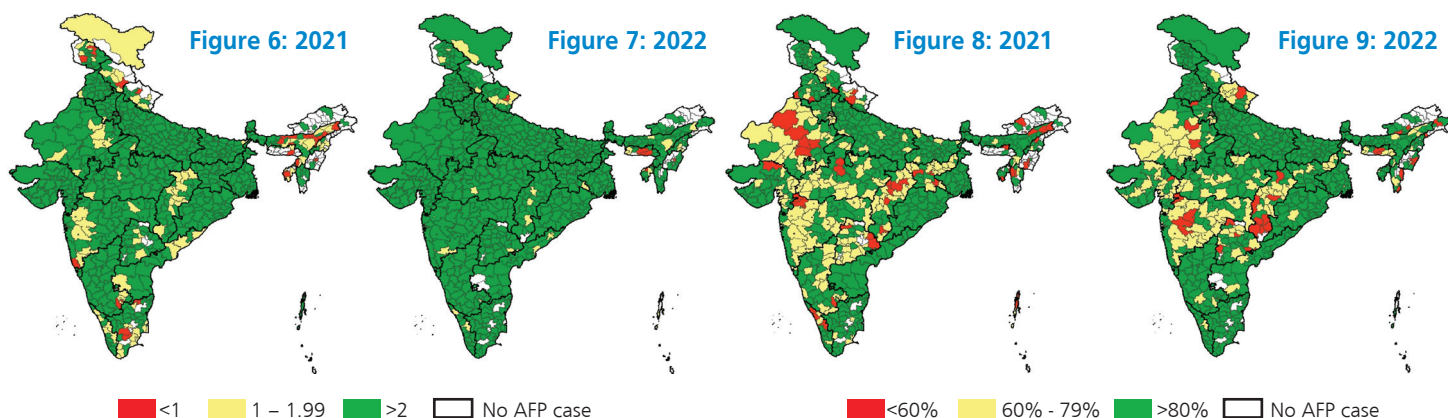
<sup>1</sup> Number of discarded AFP cases per 100,000 children under 15 years of age.

<sup>2</sup> Percent with 2 specimens, 24 hours apart and within 14 days of paralysis onset.

<sup>3</sup> Results reported within 14 days of sample received at laboratory.

**Non-polio AFP rate by district**

**Adequate stool specimen collection % by district**



**Table 7: Environmental surveillance sites for polio detection, 2019 - 2022**

| Year | # Provinces | # sites | # samples tested | Isolation |     |         |     |         |             |         |      |      |
|------|-------------|---------|------------------|-----------|-----|---------|-----|---------|-------------|---------|------|------|
|      |             |         |                  | SL1       | SL3 | SL1+SL3 | SL2 | SL1+SL2 | SL1+SL2+SL3 | SL2+SL3 | VDPV | NPEV |
| 2019 | 9           | 52      | 1,607            | 98        | 480 | 318     | 0   | 0       | 0           | 0       | 0    | 540  |
| 2020 | 11          | 56      | 1,258            | 59        | 328 | 285     | 0   | 0       | 0           | 0       | 0    | 415  |
| 2021 | 13          | 58      | 1,533            | 87        | 336 | 206     | 0   | 0       | 0           | 0       | 0    | 683  |
| 2022 | 14          | 63      | 1,739            | 81        | 373 | 224     | 0   | 0       | 0           | 0       | 1    | 803  |

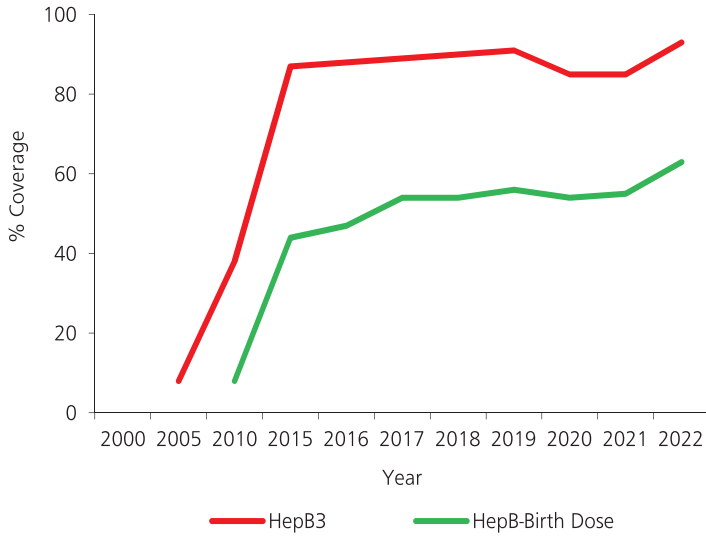
Note: SL1: Sabin like type 1; SL2: Sabin like type 2; SL3: Sabin like type 3; VDPV: Vaccine Derived Polio Virus; NPEV: Non Polio Enterovirus; SL2 was isolated due to contamination of bOPV

**Table 8: OPV SIAs**

| Year | Antigen | Geographic coverage | Target age | Target population |             | Coverage (%) |         |
|------|---------|---------------------|------------|-------------------|-------------|--------------|---------|
|      |         |                     |            | Round 1           | Round 2     | Round 1      | Round 2 |
| 2017 | bOPV    | NID                 | <5 years   | 170,000,000       | 170,000,000 | 97           | 97      |
| 2017 | bOPV    | SNID                | <5 years   | 70,600,000        | 70,600,000  | 98           | 98      |
| 2018 | bOPV    | NID                 | <5 years   | 164,333,904       | 166,963,605 | 98           | 98      |
| 2018 | bOPV    | SNID                | <5 years   | 69,984,609        | 30,640,071  | 98           | 98      |
| 2019 | bOPV    | NID                 | <5 years   | 165,000,000       | -           | 97           | -       |
| 2019 | bOPV    | SNID                | <5 years   | 71,000,000        | 71,000,000  | 98           | 98      |
| 2020 | bOPV    | NID                 | <5 years   | 165,000,000       | -           | 98           | -       |
| 2020 | bOPV    | SNID                | <5 years   | 32,800,000        | 33,570,000  | 97           | 98      |
| 2021 | bOPV    | NID                 | <5 years   | 163,700,000       | 168,041,923 | 97.2         | -       |
| 2021 | bOPV    | SNID                | <5 years   | 71,249,633        | 33,146,000  | 97.4         | -       |
| 2021 | bOPV    | SNID                | <5 years   | 22,481,343        | 35,338,000  | 97.5         | -       |
| 2022 | bOPV    | NID                 | <5 years   | 163,695,998       | -           | 96.8         | -       |
| 2022 | bOPV    | SNID                | <5 years   | 35,361,794        | -           | 97.1         | -       |
| 2022 | bOPV    | SNID                | <5 years   | 71,924,126        | -           | 96.7         | -       |

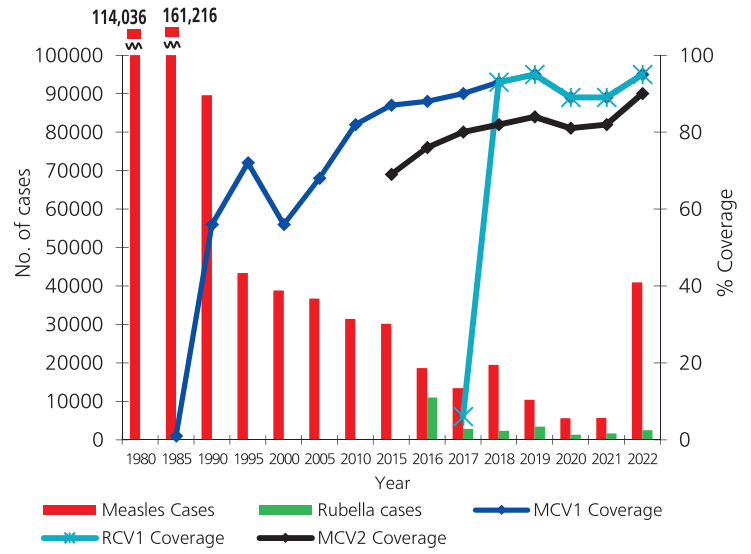
Source: WHO/UNICEF JRF (multiple years)

**Figure 10: HepB3 and HepB birth dose immunization coverage<sup>1</sup>, 2000-2022**



<sup>1</sup> WHO and UNICEF estimates of immunization coverage

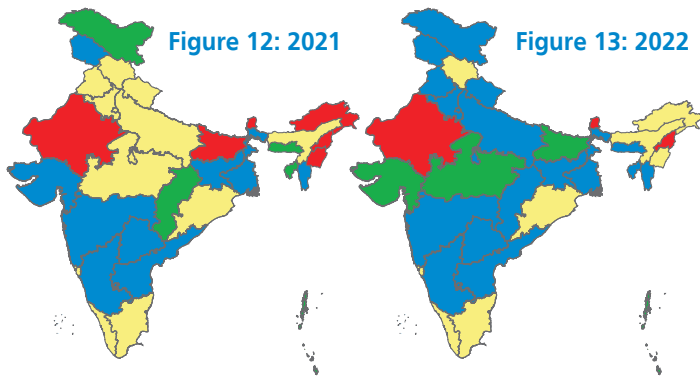
**Figure 11: MCV1 & MCV2 coverage<sup>1</sup> and measles, rubella cases<sup>2</sup>, 1980-2022**



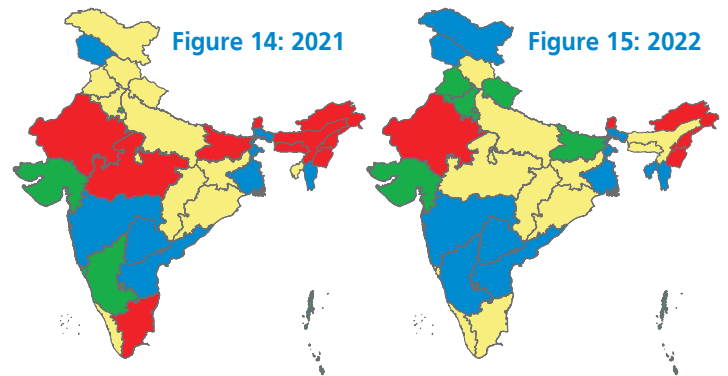
<sup>1</sup> WHO and UNICEF estimates of immunization coverage

<sup>2</sup> WHO vaccine-preventable diseases: monitoring system 2022

**MR1 coverage by province**



**MR2 coverage by province**



Legend: <80% (red), 80% - 89% (yellow), 90% - 94% (green), ≥ 95% (blue)

Source: SEAR annual EPI reporting form, 2021 and 2022 (administrative data)

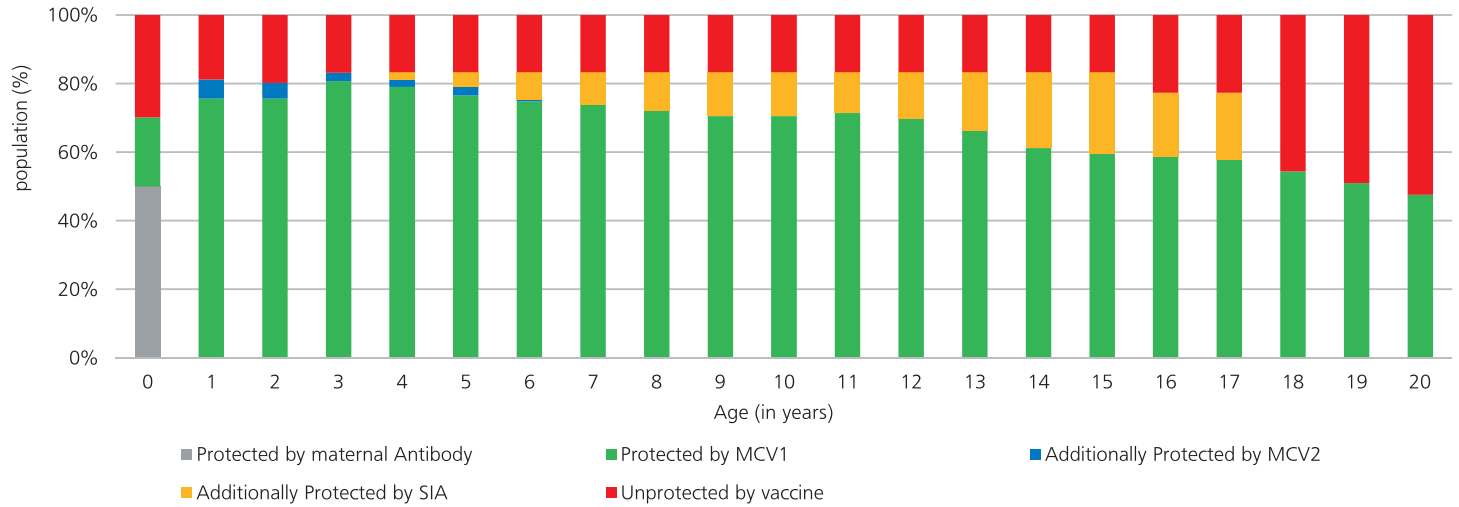
**Table 9: MCV/MR SIAs**

| Year  | Antigen | Geographic Coverage | Target group         | Target      | Coverage (%) |
|-------|---------|---------------------|----------------------|-------------|--------------|
| 2010  | MCV     | subnational         | 9 months to 10 years | 13,845,686  | 87%          |
| 2011  | MCV     | subnational         | 9 months to 10 years | 40,167,580  | 90%          |
| 2012  | MCV     | subnational         | 9 months to 10 years | 76,730,639  | 92%          |
| 2015* | MCV     | subnational         | 1 to 15 years        | 890,070     | -            |
| 2017  | MCV     | subnational         | 9 months to 15 years | 60,223,836  | 98%          |
| 2018  | MR      | subnational         | 9 months to 15 years | 183,848,000 | 96%          |
| 2019  | MR      | subnational         | 9 months to 15 years | 196,350,491 | 99%          |

\*as a part of emergency health response to floods in Tamil Nadu

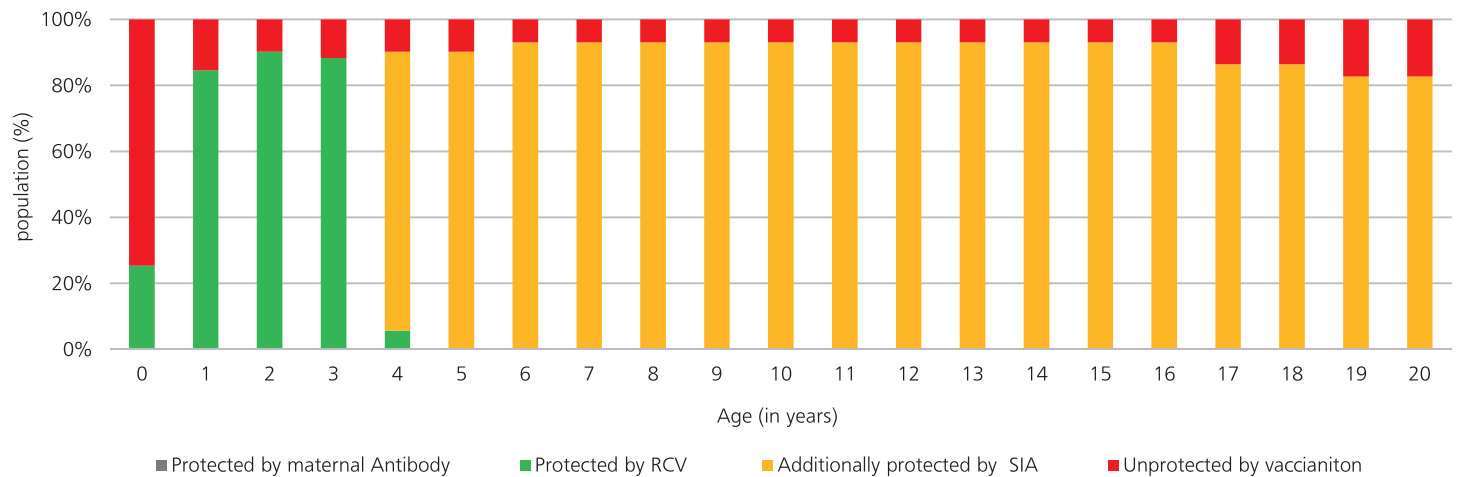
Source: WHO/UNICEF JRF (multiple years)

**Figure 16: Immunity against measles - immunity profile by age in 2022\***



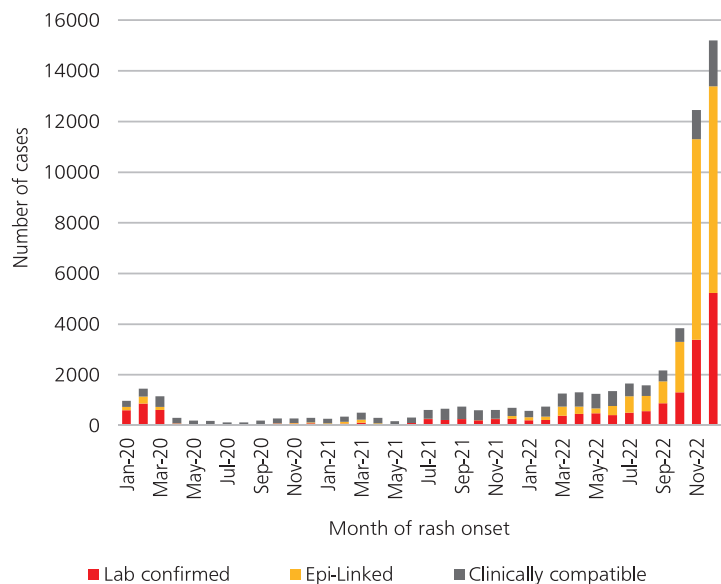
\*Modelled using MSP tool ver 2

**Figure 17: Immunity against rubella through vaccination - immunity profile by age in 2022\***



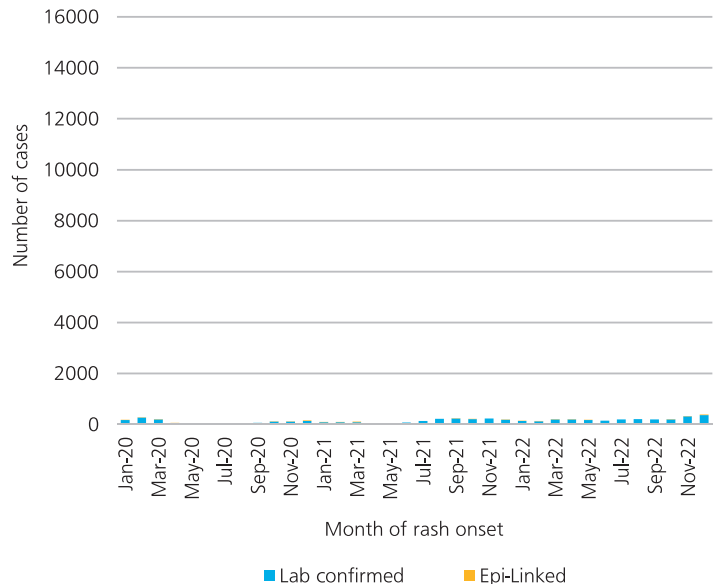
\*Modelled using WHO and UNICEF estimates and JRF (multiple years) and does not include immunity due to natural infection

**Figure 18: Confirmed measles cases\* by month 2020-2022**



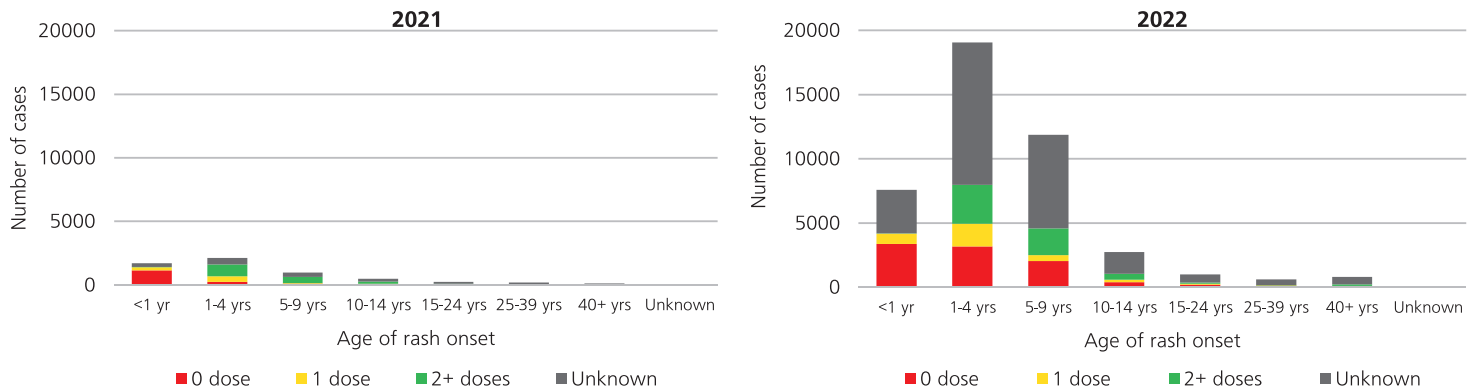
\*Includes laboratory confirmed, epidemiologically linked and clinically compatible cases  
Source: SEAR measles case-based data

**Figure 19: Confirmed rubella cases\* by month 2020-2022**



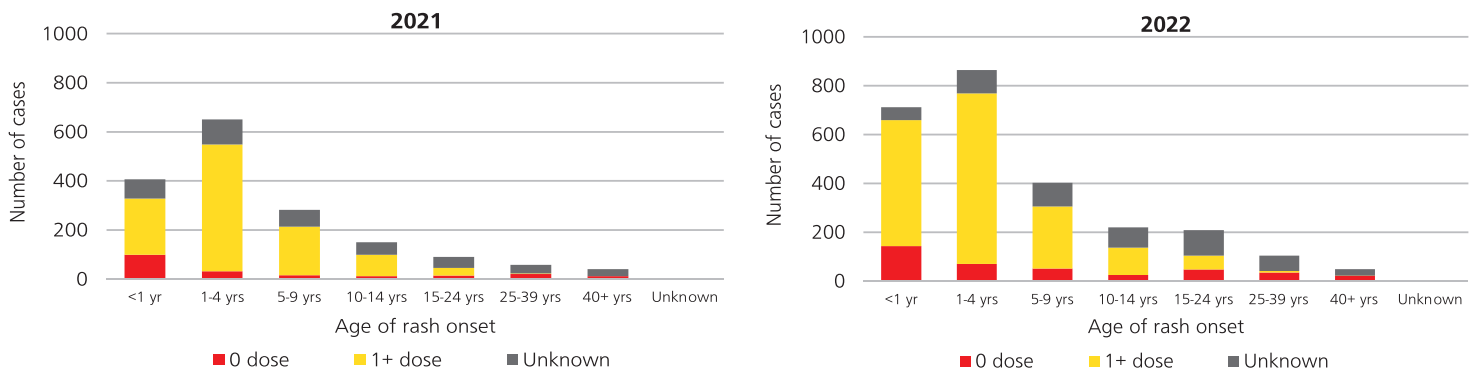
\*Includes laboratory confirmed and epidemiologically linked cases  
Source: SEAR measles case-based data

**Figure 20: Vaccination status of confirmed (laboratory, Epi linked and clinically compatible) measles cases, by age in 2021 and 2022**



Source: SEAR measles case-based data

**Figure 21: Vaccination status of confirmed (laboratory and Epi linked) rubella cases, by age in 2021 and 2022**



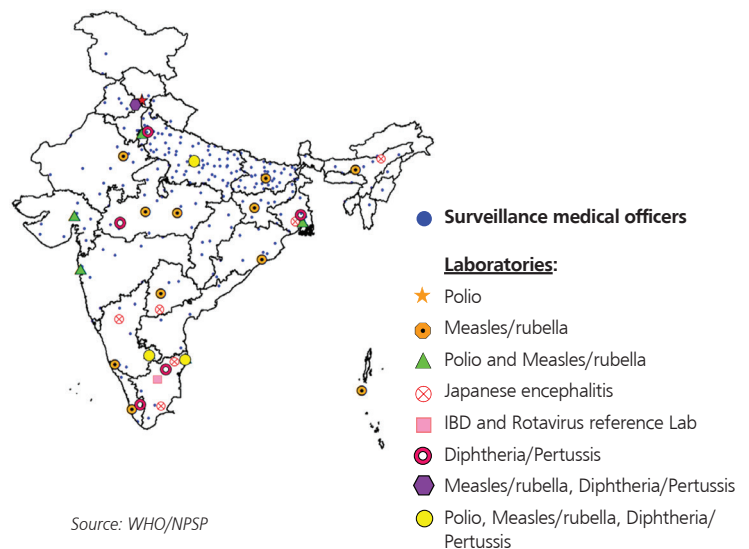
Source: SEAR measles case-based data

**Table 10: Summary of measles surveillance indicators, 2020-2022**

| Indicator  | Target | 2020      | 2021   | 2022    |
|--|--------|-----------|--------|---------|
| Number of suspected measles cases  |        | 17,949    | 33,436 | 112,185 |
| Confirmed measles cases  | 0      | 5,511     | 5,903  | 43,410  |
| Lab confirmed  | 0      | 2,565     | 1,872  | 14,017  |
| Epi-Linked   | 0      | 630       | 451    | 21,670  |
| Clinically-compatible  | 0      | 2,316     | 3,580  | 7,723   |
| Confirmed rubella cases  | 0      | 1,398     | 1,681  | 2,554   |
| Lab confirmed  | 0      | 1,295     | 1,637  | 2,474   |
| Epi-Linked   | 0      | 102       | 44     | 80      |
| Discarded non-measles non-rubella cases  |        | 11,019    | 25,851 | 65,926  |
| Percentage of suspected cases with adequate investigation initiated within 48 hours of notification                                  | ≥ 80%  | 88.7      | 92     | 94      |
| Reporting rate of non-measles non-rubella cases to national level per 100,000 population   | ≥ 2    | 0.79      | 1.81   | 4.63    |
| Percentage of second-level administrative units reporting at least 2 non-measles non-rubella cases per 100,000 population            | ≥ 80%  | 11        | 42     | 87      |
| Percentage of surveillance units reporting measles and rubella data to the national level on time, even in the absence of cases      | ≥ 80%  | 94        | 93     | 94      |
| Percentage of specimens received at the laboratory within 5 days of collection   | ≥ 80%  | 66        | 81     | 87      |
| Percentage of IgM results reported to the national public health authorities by the laboratory within 4 days of receipt of specimens | ≥ 80%  | 66        | 94     | 87      |
| Genotypes detected   |        |           |        |         |
| Measles  |        | B3,D4, D8 | D8     | D8      |
| Rubella  |        |           |        |         |

Source: SEAR Annual EPI Reporting Form (multiple years) ND=No data

**Figure 22: Network of WHO supported surveillance medical officers and laboratories**



Source: WHO/NPSP

For contact or feedback:

**Expanded Programme on Immunization**

Ministry of Health and Family Welfare (MOHFW), New Delhi, India  
Tel/Fax : +91-11-23062728, Email: pradeepaldar@yahoo.co.in  
www.mohfw.nic.in

**Immunization and Vaccine Development (IVD)**

WHO-SEARO, IP Estate, MG Marg, New Delhi 110002, India  
Tel: +91 11 23370804, Fax: +91 11 23370251  
Email: SearEpidata@who.int  
www.who.int/southeastasia/health-topics/immunization