



## CHILDREN VACCINE – SCIENCE

**News:** In absolute terms, 2.04 million children remained under-vaccinated in 2023, slightly lower than the 2.11 million children in 2019.

### What's in the News

- WHO and UNICEF estimates show a slight dip in global childhood immunisation coverage in 2023 compared to 2022.
- DPT vaccine coverage dropped from 95% in 2022 to 93% in 2023.
- The 2023 global average for DPT coverage was 89%.

### Comparison with Previous Years:

- DPT coverage in 2023 (93%) was higher than in 2020 (87%) and 2021 (88%).
- Immunisation levels in 2023 were still higher than during the peak of the COVID-19 pandemic.

### Impact on Children:

- In 2023, 2.7 million additional children were either unvaccinated or under-vaccinated compared to 2019.

### India-specific Data:

- India had 1.6 million zero-dose children in 2023, an increase from 1.1 million in 2022, but a decrease from 2.73 million in 2021.
- The number of zero-dose children in India in 2019 was 1.4 million.
- The coverage of the third dose of the DPT vaccine in India was 91% in 2023, down from 93% in 2022, but higher than the global average of 84%.
- In 2023, 2.04 million children in India were under-vaccinated, slightly lower than the 2.11 million in 2019.

<b>Diphtheria:</b>	<b>Tetanus:</b>	<b>Pertussis:</b>
<b>Caused by:</b> <ul style="list-style-type: none"><li>• Diphtheria is primarily caused by the <b>bacterium Corynebacterium diphtheriae</b>.</li></ul>	<b>Caused by:</b> <ul style="list-style-type: none"><li>• Tetanus is acquired through infection of a cut or wound with the spores of the bacterium <i>Clostridium tetani</i>, and most cases occur within 14 days of infection. Tetanus cannot be transmitted from person to person.</li></ul>	<b>Caused by:</b> <ul style="list-style-type: none"><li>• Pertussis, also known as <b>whooping cough</b>, is a highly contagious respiratory infection caused by the <b>bacterium <i>Bordetella pertussis</i></b>. In 2018, there were more than 151 000 cases of pertussis globally.</li></ul>
<b>Symptoms:</b> <ul style="list-style-type: none"><li>• Common cold, fever, chills, swollen gland in neck, sore throat, bluish skin etc.</li></ul>		
<b>Spread:</b>		



<ul style="list-style-type: none"><li>It is mainly spread by coughs and sneezes, or through close contact with someone infected.</li></ul> <p><b>Target Population:</b></p> <ul style="list-style-type: none"><li>Diphtheria particularly affects children <b>aged 1 to 5 years</b>.</li><li>Occurrence of diphtheria cases in under-five children reflects <b>low coverage</b> of primary diphtheria vaccination.</li></ul>	<p><b>Prevention:</b></p> <ul style="list-style-type: none"><li>Tetanus can be prevented through immunization with Tetanus-Toxoid-Containing Vaccines (TTCV). However, people who recover from tetanus do not have natural immunity and can be infected again.</li></ul> <p><b>Symptoms:</b></p> <ul style="list-style-type: none"><li>Jaw cramping or the inability to open the mouth.</li><li>muscle spasms often in the back, abdomen and extremities.</li><li>sudden painful muscle spasms often triggered by sudden noises.</li><li>Seizures.</li></ul>	<ul style="list-style-type: none"><li>The disease is most dangerous in infants, and is a significant cause of disease and death in this age group.</li></ul> <p><b>Spread:</b></p> <ul style="list-style-type: none"><li>Pertussis spreads <b>easily from person to person mainly through droplets</b> produced by coughing or sneezing.</li></ul>
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## Expert Opinion:

- The slight drop in vaccination numbers is not considered a major concern but a call to intensify efforts.
- Reaching beyond 90% coverage requires strategic changes and more focused efforts, particularly considering migratory populations and seasonal challenges.
- India's large population means that even a small percentage change can translate to a significant number of children.

## Steps taken for Vaccination

### Mission Indradhanush

- Mission Indradhanush was **launched in 2014** as a special drive to expand full immunisation coverage in India.
- To expand immunisation coverage to all children across India. It aims to cover all those children who are either unvaccinated or partially vaccinated against vaccine-preventable diseases.
- Children across **socio-economic, cultural and geographical spectrums** in India are being immunised under this program.



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- **Also pregnant women** are administered the tetanus vaccine, ORS packets and zinc tablets are distributed for use in the event of severe diarrhoea or dehydration and vitamin A doses are administered to boost child immunity.

## Universal Immunisation Programme (UIP)

- India's Universal Immunisation Programme (UIP) provides free vaccines against 12 life threatening diseases.
- It provides **life-saving vaccines** to all children across the country free of cost to protect them against Tuberculosis, Diphtheria, Pertussis, Tetanus, Polio, Hepatitis B, Pneumonia and Meningitis due to Haemophilus Influenzae type b (Hib), Measles, Rubella, Japanese Encephalitis (JE) and Rotavirus diarrhoea. (Rubella, JE and Rotavirus vaccine in select states and districts)

**Sources:** <https://indianexpress.com/article/explained/explained-health/what-indias-vaccine-numbers-say-9459946/>

