

Rise in pertussis-like infection

Prelims: Current events of national and international importance | Health

Why in news?

A team of researchers at PGIMER, Chandigarh, has reported a significant rise in infections caused by a lesser-known bacterium (*Bordetella Holmesii*) that mimics whooping cough in north India.

Bordetella holmesii

- *Bordetella holmesii* is a **Gram-negative bacterium**.
- **1st described in** – 1995.
- It can cause **pertussis-like (whooping cough) symptoms**, as well as invasive infections like bacteremia, pneumonia, and endocarditis.
- It is often difficult to distinguish from *Bordetella pertussis* using common diagnostic tests, which can lead to misdiagnosis and mask the prevalence of *B. holmesii*.
- The bacterium can infect both healthy individuals and those with compromised immune systems, particularly those who are asplenic (lack a spleen).

Key Findings of the study

- **Surpassing B pertussis** - Nearly **37%** of infections were caused by *Bordetella holmesii*, while only around **13%** were linked to *B. pertussis*.
- The prevalence of *B pertussis* declined **from 15-20% to just 2-5%**, while infections from *B holmesii* rose markedly since 2015.
- The year **2023** was recorded most significant increase, predominantly among **children aged 5-10 years** in **northern India**.

Quick Fact

Pertussis

- It is a **highly contagious bacterial respiratory illness**, commonly known as whooping cough.
- **Caused by** - Bordetella pertussis.
- Historically, it has been a major cause of childhood mortality, with fatality rates reaching 10% in the early 20th century.
- **Transmission** - Spread through coughing and sneezing.
- **Risk** - The disease is most dangerous in infants, and is a significant cause of disease and death in this age group.
- **Symptoms** -
 - **Early symptoms (1-2 weeks)** - Runny nose, mild cough, fever, and sneezing.
 - **Later symptoms** - Severe, uncontrollable coughing fits that can lead to difficulty breathing.
 - The characteristic "whoop" sound may or may not occur, particularly in infants who may just gasp for air and turn blue.
- **Prevention - Vaccination** - *DTaP vaccine* - to young children & *Tdap vaccine* for adolescents, adults (including a dose during each pregnancy), and those who will have close contact with infants.
- **Potential complications** - Pneumonia, seizures, brain damage from lack of oxygen, in severe cases it may lead to death.
- **Prevalence** - Pertussis continues to pose a significant public health burden, **particularly in India and China**, primarily affecting young infants and children.

References

1. [The Hindu | Rise in chest infections due to lesser-known bacterium](#)
2. [The New Indian Express | Surge in whooping cough like infection](#)
3. [WHO | Pertussis](#)