

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

