

## **Delaware Health Advisory #516: Increase in Pertussis Cases, Including Among Vaccinated Delaware Adolescents**

The Delaware Division of Public Health (DPH) is sending this health advisory to alert clinicians and health care partners about increased numbers of pertussis cases.

### **Summary**

Clinicians and health care partners should be aware of the increased numbers of pertussis (whooping cough) cases in Delaware and regions around Delaware, with the increase being primarily driven by adolescents, including some who are fully vaccinated. The best way to prevent pertussis is through vaccination, although breakthrough cases can occasionally happen, as the protection from the vaccine wanes over time.. For people who have been vaccinated but still get whooping cough, their illness is generally milder. The Centers for Disease Control and Prevention (CDC) recommends different vaccines against pertussis for different age groups. Age and timing interval recommendation for the childhood vaccine (DTap) and the adolescent/adult vaccine (Tdap) may be found [at this link](#). All infected individuals should receive antibiotic treatment, and post-exposure prophylaxis using antibiotics is recommended for all household contacts, close contacts, and contacts who have a high risk of developing severe pertussis.

### **Background**

After a few years of low-level activity, pertussis cases are increasing in Delaware and rising quickly in neighboring states. As of May 20, 2024, Delaware has seen a 66% increase in confirmed pertussis cases compared to 2022 and 2023 annual confirmed case totals combined. Pertussis is a highly contagious bacterial disease caused by *Bordetella pertussis*. The incubation period is typically seven to 10 days but can range from five to 21 days. People are infectious from the beginning of symptoms until three weeks after the start of the paroxysmal cough, or until five days after treatment with an appropriate antibiotic. Pertussis typically begins with nonspecific upper respiratory symptoms including nasal congestion or a runny nose with or without a low grade fever. These early symptoms may last between 1 and 2 weeks and may include a cough. The cough initially starts mild but may progress to paroxysms with an inspiratory

whoop, difficulty breathing, and post-tussive vomiting. Severe coughing attacks can last for months. Infants too young for vaccination are at greatest risk for life-threatening cases of pertussis and may not have a cough. Instead of a cough, some infants may present with apnea.

#### Diagnostic testing

Pertussis should be considered on the differential diagnosis for patients who present with a prolonged cough illness regardless of immunization status.

Nasopharyngeal samples should be sent for polymerase chain reaction (PCR) testing. Guidance on sample collection may be found at the CDC pertussis website: [Laboratory Testing for Pertussis | Pertussis \(Whooping Cough\) | CDC](#)

#### Reporting

Pertussis is a reportable disease in Delaware. It is imperative that pertussis cases are reported in a timely manner because of the need for time-sensitive administration of postexposure prophylaxis (PEP) to those exposed. All confirmed and suspected pertussis cases should be reported to the Delaware Office of Infectious Disease Epidemiology at 302-744-4990 (Monday to Friday, 8:00 a.m. to 4:30 p.m.), 1-888-295- 5156 (24/7) or at email at [reportdisease@delaware.gov](mailto:reportdisease@delaware.gov).

#### Recommendations for Health Care Providers

##### **Encourage vaccination for children, pregnant people, adults and adolescents**

Schools, early childhood education providers, and health care providers should work to ensure children are current with Pertussis vaccines following current [CDC vaccination guidelines](#).

- Health care providers should ensure pregnant people get a dose Tdap during each pregnancy preferably during the early part of gestation weeks 27 to 36.
  - By getting Tdap during pregnancy, maternal pertussis antibodies transfer to the newborn, providing protection against pertussis in early life before the baby

starts getting DTaP vaccines. Tdap will also help protect the mother at time of delivery, making her less likely to transmit pertussis to her infant.

- Adolescents should receive a dose of Tdap preferably between 11-12yr. Adults who have not previously received Tdap should be given a dose.

### **Treatment of pertussis cases and Post-exposure prophylaxis**

EarlyAntibiotic treatment is recommended for all patients suspected of having pertussis both to decrease symptoms and decrease transmission. If there is a high index of suspicion for pertussis, or if the individual or their household members have risk factors for severe disease, treatment should be started prior to receiving test results. Advise patients with pertussis to remain home. The CDC provides guidance for pertussis treatment and post-exposure prophylaxis on their website: [“Treatment of Pertussis | Pertussis \(Whooping Cough\) | CDC”](#)

Post-Exposure Prophylaxis (PEP) for pertussis should be provided to:

- All household contacts of a pertussis case as early as possible
- High risk people within 21 days of exposure to an infectious pertussis case. High risk people include:
  - Infants and women in their third trimester of pregnancy.
  - All people with pre-existing health conditions that may be exacerbated by a pertussis infection. These people include, but are not limited to, immunocompromised people and those with moderate to severe medically treated asthma.
  - People who have close contact with people who are at high risk. These people include infants under 12 months of age, pregnant women, or people with pre-existing health conditions at risk of severe illness or complications.

Guidance on post-exposure prophylaxis for pertussis may be found at the CDC website:

[“Postexposure Antimicrobial Prophylaxis | Pertussis \(Whooping Cough\) | CDC”](#)

### **Additional Resources**

- [Pertussis | CDC](#)
- [Clinical Overview of Pertussis | CDC](#)
- [Clinical Features of Pertussis | CDC](#)
- [Treatment of Pertussis | CDC](#)
- [Laboratory Testing for Pertussis | CDC](#)

## References

Centers for Disease Control and Prevention. (2022, September 6). *About diphtheria, tetanus, and pertussis vaccination*. Centers for Disease Control and Prevention.

<https://www.cdc.gov/vaccines/vpd/dtap-tdap-td/hcp/about-vaccine.html#:~:text=In%20studies%20demonstrating%20the%20efficacy,the%20last%20dose%20of%20DTaP>

Centers for Disease Control and Prevention. (2020, January 22). *Summary of pertussis vaccination recommendations*. Centers for Disease Control and Prevention.

<https://www.cdc.gov/vaccines/vpd/pertussis/recs-summary.html#:~:text=Any%20adult%2019%20years%20of,Tdap%20shot%20every%2010%20years>