

## Health Advisory

### Increase in Pertussis Cases

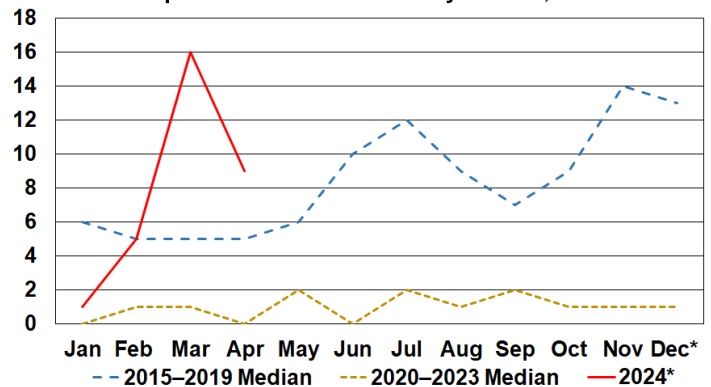
May 1, 2024

#### SUMMARY POINTS

- Pertussis is a highly contagious disease that usually causes mild respiratory symptoms in vaccinated people, but can cause more severe illness in unvaccinated individuals, and can be life-threatening in young infants.
- After a few years of low-level activity likely due to COVID-19 pandemic mitigation strategies, pertussis transmission has increased to levels consistent with pre-pandemic peak activity in Philadelphia and other areas of PA.
- [PCR testing](#) via NP swab is recommended within 3 weeks of cough onset, but treatment should not be delayed for those with a high index of suspicion for illness.
- PEP with antibiotics is routinely indicated for close contacts of a case (e.g., household members) along with those at high risk for severe pertussis and their contacts following an exposure.

Pertussis is a highly contagious bacterial disease caused by *Bordetella pertussis*. The incubation period is typically 7-10 days but can range from 5-21 days. People are infectious from the beginning of symptoms until 3 weeks after the start of the paroxysmal cough, or until 5 days after treatment with an appropriate antibiotic. Pertussis typically begins with nonspecific upper respiratory symptoms lasting 7-10 days, which are followed by a cough. The cough typically includes paroxysms with an inspiratory whoop, apnea, 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. Vaccinated people may have milder symptoms.

**Philadelphia Pertussis Cases by Month, 2015–2024**



\*Data for 2024 are preliminary.

#### **Epidemiology:**

Over the past few years, pertussis levels in Philadelphia and elsewhere have been extremely low, likely as a result of COVID-19 pandemic mitigation strategies. In 2024, there has been an increase in pertussis in Philadelphia and surrounding areas (Figure). [Pennsylvania saw an increase since October 2023](#), primarily in high school students and their close contacts. Similarly, recent cases in Philadelphia have been seen primarily among children and teens aged 10 years and older.

#### **Testing:**

- Suspect pertussis in patients who present with prolonged cough illness without fever, regardless of immunization status. Young infants and previously vaccinated persons may not present with typical paroxysmal cough or whoop.
- Polymerase Chain Reaction (PCR) testing of a nasopharyngeal (NP) swab is the most specific assay for pertussis infection, especially when collected within 3 weeks of cough onset. Many commercial laboratories offer pertussis PCR alone or as part of multiplex respiratory virus panel testing. Please refer to specific laboratory's specimen requirements for appropriate collection materials and storage instructions.
- Culture may be sent in addition to, but not instead of, PCR. Culture must be sent in special medium. Refer to specific laboratory's specimen requirements for appropriate collection materials and storage instructions.

- Serologic testing is NOT recommended for pertussis infection.

#### **Treatment:**

Antibiotic treatment is recommended for all patients suspected of having pertussis within 3 weeks of cough onset 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 from school or work for 5 days from initiation of appropriate antibiotics or 21 days for untreated infections.

Persons one year of age or older should be treated if they are within 3 weeks of symptom onset. Infants and pregnant individuals should be treated if they are within 6 weeks of symptom onset. For most people one month of age and older, macrolides are the preferred treatment. [Alternatives](#) are available for those who cannot take macrolides. Individuals should stay home until they have completed five days of antibiotic treatment for pertussis, or until pertussis testing returns negative.

#### **Prevention:**

To protect newborns, pregnant people in the third trimester of **every pregnancy** and other adult caretakers without current vaccination should receive Tdap vaccine. Infants can start the DTaP vaccine series as early as 6 weeks of age. Even one dose of DTaP may offer some protection against fatal whooping cough disease in infants. Children should receive 4 doses of DTaP by age 15-18 months, and adults and children should receive appropriate DTaP and Tdap boosters as [recommended by ACIP](#).

#### **Post Exposure Prophylaxis (PEP):**

CDC recommends postexposure antibiotic prophylaxis for people at high risk of developing severe pertussis, as well as people who will have close contact with others at high risk of developing severe pertussis. This includes household members of individuals at high risk of disease and healthcare workers. Pertussis prophylactic antibiotic courses are the same regimens as treatment.

People at high risk of severe disease include:

- Infants less than 12 months
- People in their third trimester of pregnancy
- People with moderate to severe asthma, COPD, or with immunocompromising conditions
- Everyone who works or volunteers in settings with infants under 1 year and/or pregnant people in the third trimester (e.g. childcare, postpartum and infant units, etc.) should receive prophylaxis. Prophylaxis is typically recommended for entire daycare classes given the high rate of high-risk household contacts in daycare attendees.

Close contacts who are unimmunized or underimmunized should have pertussis immunization initiated or continued as soon as possible using age-appropriate products.

#### **Reporting:**

Pertussis is reportable in Philadelphia. Laboratories typically report via electronic reporting. Report cases in a school, daycare, university or non-healthcare congregate setting by calling the Division of Disease Control at (215) 685-6748 during business hours.

#### **Resources:**

- CDC Pertussis Information for clinicians: <https://www.cdc.gov/pertussis/clinical/index.html>