



Kentucky Public Health
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KENTUCKY HEALTH ALERT

Increase in Pertussis in Kentucky Recommendations for Identification and Prevention

July 17, 2024

Cases of pertussis (“whooping cough”) have continued to increase steadily in the Commonwealth. This is consistent with trends both nationally and globally, as many states and countries are reporting the highest number of pertussis cases identified in their jurisdictions in the last several years. Pertussis has a cyclic pattern with peaks occurring approximately every five years. Current case numbers indicate that Kentucky is experiencing an elevated rate of infection not seen in Kentucky since 2016-2017 when 463 and 449 cases were reported, respectively.

To-date in 2024, 130 cases of pertussis have been identified in 34 Kentucky counties in several regions across the state. The Lexington-Fayette County Health Department declared a pertussis outbreak on May 20, 2024 and has identified 44 pertussis cases since mid-April. A [Health Alert](#) was issued by the Kentucky Department for Public Health (KDPH) on June 4, 2024.

A significant number of cases have occurred in school-aged children. Additional cases have been identified in infants/toddlers and adults. Immunity from vaccination or natural infection wanes over time so infections can occur in people who are fully vaccinated. However, the vaccine is known to reduce disease severity, and hospitalization among vaccinated individuals is rare.

Because of the increased likelihood of community spread, we are alerting healthcare providers to do the following:

- **Consider pertussis in children with respiratory infections and adults with persistent or violent coughs.** Collect nasopharyngeal (NP) swab or nasal wash for [pertussis testing via PCR or culture](#).
- **Report suspected or confirmed pertussis cases** within 1 business day to the [local health department](#) of the county in which the patient resides.
- **Ensure patients are up-to-date with [routine pertussis vaccinations](#),** particularly pregnant women and infants starting at 2 months of age.

Background

Pertussis is a highly contagious, respiratory illness caused by the bacterium *Bordetella pertussis*. People of any age can get pertussis, however children who are too young to be fully vaccinated and those who have not received all vaccinations are at highest risk for severe illness and death. Sporadic pertussis cases occur regularly in Kentucky, however an increase beyond the expected background rate has been reported in recent weeks. Though pertussis vaccination (DTaP or Tdap) is available and widely implemented, *B. pertussis* continues to spread in the United States due to lack of vaccination or timely boosters, the lack of lifelong immunity from vaccination or natural infection, and the long duration of infectiousness in untreated cases.

Symptoms of pertussis usually begin with a runny or congested nose, a low-grade fever, and mild coughing; apnea/stopping breathing can also occur in infants. After 1-2 weeks, the cough can progress to rapid, violent (paroxysmal) coughing fits that can cause the “whooping” sound, vomiting, and labored breathing. Most teens and adults will have mild symptoms; young children are the most severely affected.

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Testing for Pertussis:

Pertussis testing is usually performed with nasal pharyngeal (NP) swab or nasal wash via PCR testing or culture. PCR has optimal sensitivity during the first 3 weeks of cough, is widely available at commercial laboratories, and has a fast turnaround time. Culture is considered the gold standard due to excellent specificity but may take longer to complete. Serology for antibodies to *B. pertussis* is available at many commercial laboratories; however, variability and unknown clinical accuracy make serology less useful and not generally recommended for primary diagnostics. The most promising serologic assays are those that measure IgG antibodies against pertussis toxin only and are collected 2-8 weeks following cough onset.

Prevention of Pertussis:

Prevention of pertussis is primarily achieved through routine vaccination with DTaP (ages 0-6 years) and Tdap (ages 7+ years), followed by appropriate booster doses. Vaccination of pregnant people between 27-36 weeks gestation, as well as prompt initiation of the 3-dose primary vaccine series starting at 2 months of age, is most critical for preventing severe pertussis in infants.

There is little evidence demonstrating the effectiveness of contact tracing and post-exposure prophylaxis of all close contacts with antibiotics. However, CDC recommends antimicrobial prophylaxis for:

- 1) All household contacts of a known case, regardless of vaccination status, within 21 days of onset of coughing in the index case, and
- 2) Contacts of any case who are at high risk of developing severe pertussis, and those who will have close contact with others at high risk of developing severe pertussis, including infants <1 year of age, pregnant women, and caregivers or household contacts of infants
(<https://www.cdc.gov/pertussis/php/postexposure-prophylaxis/>).

Other contacts of known cases not described above should monitor for symptoms during the 21 days after exposure. If symptoms develop, they should isolate and inquire with their provider about testing.

Treatment of patients with pertussis (<https://www.cdc.gov/pertussis/hcp/clinical-care/>):

CDC recommends that healthcare providers strongly consider initiating antimicrobial treatment prior to receipt of test results if any of the following are present:

- A clinical history strongly suggestive of pertussis and patient is within 3 weeks of cough onset (or within 6 weeks of cough onset if an infant <1 year of age or a pregnant woman)
- Patient is at risk for severe or complicated disease (e.g., infants)
- Patient has routine contact with people considered at high risk of serious disease (e.g., pregnant woman in 3rd trimester or caregiver of infants)

Thank you for your attention to this alert and guidance. If you have questions regarding reporting, testing, or prevention of pertussis or other infectious diseases, please contact the Kentucky Immunization Branch at (502) 564-4478 or after hours by calling the KDPH Epidemiology On-call Line at 888-9-REPORT (888-973-7678).

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