

Date: September 16, 2024

From: Kansas Department of Health and Environment – Division of Public Health

To: Kansas Health Care Providers and Local Health Departments

RE: Increased Pertussis (Whooping Cough) Activity in Kansas

Summary

- An increase in cases of pertussis is being observed in Kansas, as well as the United States.
- Pertussis is a vaccine preventable disease that may be especially severe in infants younger than one year of age.
- Early identification and treatment of cases, chemoprophylaxis of high-risk close contacts, and vaccination are key to preventing and controlling the spread of pertussis.
- Test clinically compatible persons by culture or PCR within the first 2 or 3 weeks after symptom onset, respectively.
- Antibiotic treatment may lessen the duration and severity of illness and reduce the period of communicability, if administered within the first three weeks of illness.
- Vaccination of babies and children, preteens and teens, persons who are pregnant, and adults is recommended.

Overview

During and immediately following the COVID-19 pandemic, the number of pertussis cases reported in the U.S. was lower than the expected approximately 10,000 cases per year. This decrease in cases was likely due to measures utilized to mitigate COVID-19 also being effective at lowering pertussis transmission. In 2024, the U.S. has seen increased case reports. As of August 17, 2024, preliminary data shows **more than four times as many cases** have been reported nationally in 2024 compared to the same time frame in 2023. As of September 13, the Kansas Department of Health and Environment (KDHE) is [reporting](#) 98 cases of pertussis, including 12 in patients younger than 12 months, so far this year compared to 41 cases at this same time in 2023. KDHE is urging providers to maintain vigilance as respiratory illness season approaches, to consider pertussis in clinically compatible persons, and to utilize appropriate testing assays to diagnose cases of pertussis.

Clinicians are required by Kansas Administrative Regulation ([K.A.R. 28-1-2](#)) to report all confirmed and suspected cases of pertussis within 24 hours or, in the case of a weekend or state-approved holiday, the next business day to your local health department or to the KDHE Epidemiology Hotline. Reports may be faxed to 877-427-7318 or sent securely using a HIPAA-compliant email to kdhe.epihotline@ks.gov. Laboratories are required by [K.A.R. 28-1-18](#) to report laboratory reports of pertussis cases to KDHE using an approved electronic method.

Background

Pertussis, also known as whooping cough, is a vaccine-preventable acute infectious disease caused by the bacterium *Bordetella pertussis*. Pertussis usually spreads from person to person through respiratory droplets or contact with airborne droplets. Illness may be mild, especially in

immunized children and adults; however, pertussis is most severe in the first year of life, particularly in preterm and unimmunized infants.

Pertussis has a clinical course that is divided into **three stages**:

1. The **catarrhal stage** is characterized by coryza (runny nose), sneezing, low-grade or no fever, and a mild, occasional cough, indistinguishable from minor respiratory tract infections. This stage usually lasts 7-10 days in length; but can range from 4-21 days.
2. Next, the **paroxysmal stage** begins 1-2 weeks after symptom onset. This is the stage at which pertussis is usually suspected and diagnosed. The difficulty in expelling thick mucus from the tracheo-bronchial tree results in bursts, or paroxysms, of numerous rapid coughs. Paroxysms may be followed by a long inspiratory effort with a whoop. During an attack, patients may become cyanotic and post-tussive vomiting may occur. During the first 1- or 2-weeks, attacks increase in frequency, remain at the same level for 2 to 3 weeks, and then decrease. The paroxysmal stage lasts 1 to 6 weeks but may persist up to 10 weeks.
3. The final stage is the **convalescent stage** which can take weeks to months to resolve. Paroxysmal coughing lessens and disappears in 2 to 3 weeks. Non-paroxysmal cough can continue for 6 weeks or longer.

Disease in infants younger than 6 months of age can be atypical and present with a short catarrhal stage, followed by gagging, gasping, bradycardia or apnea, absence of whoop, and a prolonged recovery period.

Pertussis is endemic worldwide with peaks occurring every 3-5 years. It is highly infectious with secondary attack rates of 70-100% among unimmunized contacts.

Immunization protects against severe disease but begins to wane after about 5 years. Acellular pertussis vaccines are utilized in the U.S., starting with a [primary early childhood series](#) of four doses of DTaP at age two months, four months, six months, and 15-18 months, with a booster at school entry (4-6 years of age). Administration of a single dose of an adolescent and adult formulation (Tdap) is also [recommended](#) for those 11-18 years of age, for children 7-10 years of age who did not complete the full primary series, and for adults 19 years of age and older who did not get Tdap as an adolescent. [Pregnant persons](#) should receive Tdap during each pregnancy, preferably at 27 through 36 weeks.

DTaP for young children	Tdap for preteens	Tdap for pregnant women	Tdap for adults
✓ 2, 4, and 6 months ✓ 15 through 18 months ✓ 4 through 6 years	✓ 11 through 12 years	✓ During the 27-36th week of each pregnancy	✓ Anytime for those who have never received it

www.cdc.gov/whoopingcough

Provider Actions Requested

1. Test symptomatic patients for pertussis by PCR or culture. *Bordetella pertussis* can be reliably detected within 2 weeks of symptom onset with culture testing and 3 weeks with PCR assays. Serology is not recommended for surveillance purposes; it may be used to diagnosis illness in persons whose symptom onset was not recent (i.e., >3 weeks from symptom onset) if they have had no recent vaccination.
 - It is **not** helpful to test contacts without respiratory symptoms.
 - Consider a pertussis diagnosis based on clinical presentation if outside of the window for confirmatory testing.
 - Refer to KDHE [pertussis testing recommendations for providers](#).
2. [Antibiotic treatment](#) with a macrolide (erythromycin, clarithromycin, or azithromycin) will eradicate *B. pertussis* from the nasopharynx of infected persons (symptomatic or asymptomatic). Antibiotics administered early during illness, preferably in the catarrhal stage, can reduce the duration and severity of symptoms. Treatment later in the illness may have little effect on the course of the illness but can reduce the period of communicability. **Antibiotic treatment when persons are no longer infectious (>21 days from symptom onset) is of little benefit.**
3. Provide [postexposure prophylaxis \(PEP\)](#), regardless of age or immunization status to prevent death and serious complications in people at high risk of severe pertussis infections. The Centers for Disease Control and Prevention supports providing PEP especially to:
 - **Household contacts** of a pertussis case within 21 days of **onset of cough** in the index patient.
 - **People at high risk of severe infection** within 21 days of **exposure** to an infectious pertussis case including:
 - Infants under 12 months of age
 - People with pre-existing health conditions that may be exacerbated by a pertussis infection
 - **People in contact with** those at high risk of severe infection within 21 days of **exposure** to an infectious pertussis case including:
 - Pregnant women in their third trimester
 - High risk settings that include infants under 12 months of age or women in their third trimester of pregnancy such as neonatal intensive care units, childcare settings, and maternity wards.
4. Ensure patients are up to date on [pertussis vaccination](#):
 - DTaP for young children at 2, 4, 6 and 15-18 months and 4-6 years of age.
 - Tdap for preteens 11 through 12 years of age.
 - Tdap for pregnant persons during weeks 27-36 of each pregnancy.
 - Tdap for adults who have never received a previous dose.

5. Pertussis is a [reportable condition](#). Report all cases of pertussis within 24 hours of suspicion or detection to your local health department or the KDHE Epidemiology Hotline by fax at 877-427-7318. Any suspected outbreaks should be reported to the KDHE Epidemiology Hotline within 4 hours of suspicion by telephone at 877-427-7317, option 5.

For More Information

[Pertussis \(Whooping Cough\) Overview for Healthcare Providers | CDC](#)

[Pertussis Postexposure Antimicrobial Prophylaxis Guidance | CDC](#)

[Disease Reporting Requirements | KDHE](#)

[Pertussis Case Report Form | KDHE](#)

[Pertussis Testing Recommendations | KDHE](#)

[Reportable Infectious Disease Statistics Dashboard | KDHE](#)