



CONTRA COSTA HEALTH

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Provider Health Advisory

April 18, 2024

Pertussis Cases on the Rise in Contra Costa County

SUMMARY

A recent increase in pertussis (whooping cough) cases has been reported to Contra Costa Health (CCH). Pertussis is highly-contagious and transmission occurs via inhalation of aerosolized droplets from the respiratory tract of an infected person. The incubation period is 4-21 days (typically 7-10 days). Persons ≥ 1 year of age are considered infectious from the onset of cold-like symptoms until after 5 days of treatment or until 21 days after cough onset if no treatment is given. Infants ≤ 1 year are considered infectious for 6 weeks if no treatment is given.

CURRENT SITUATION

Fifteen lab-confirmed cases of pertussis have been reported in April 2024. The ages range from 6 months to 50 years, with a median age of 16 years as many cases are of high school age. There has been one hospitalization in the <1 year age group and no deaths have been reported.

Actions Requested of Healthcare Professionals:

1. **Submit specimens for laboratory confirmation.** The preferred method of laboratory diagnosis of pertussis is polymerase chain reaction (PCR). Culture is less sensitive than PCR and results can take several days. Serologic assays are not recommended.
2. **Begin treatment** of patients regardless of age or vaccination status. Early recognition and treatment of pertussis in infants less than 6 months is important to prevent poor outcomes including death. Students with pertussis should not return to school until 5 days of treatment. Consultation regarding additional control measures is available through Contra Costa Public Health at 925-313-6740.
3. **Consider post-exposure prophylaxis (PEP) of high-risk close contacts.** High-risk close contact definition and PEP options are on page 2-3. Please contact Public Health if a high-risk contact needs assistance with obtaining PEP.
4. **Review immunization records** and stress the importance of up-to-date vaccination. The most important strategy to prevent infection in vulnerable infants is Tdap vaccination of the mother. All pregnant people should receive Tdap vaccine during each pregnancy, any trimester but preferably between 27-36 weeks gestation, regardless of their vaccination history.
5. **Report laboratory-confirmed pertussis cases** within one working day of identification and report suspected pertussis clusters immediately to Contra Costa Health by phone 925-313-6740 or fax 925-313-6465.

CURRENT RECOMMENDATIONS:

CLINICAL

- **The most severe cases of pertussis occur in young infants.** Infants <6 months of age are most likely to be hospitalized and infants <3 months of age are most likely to die from pertussis infection.
- Pertussis disease has three stages of illness:
 - 1) *Catarrhal stage* (early symptoms): onset of cold-like symptoms (coryza, sneezing and occasional cough) and fever is typically absent or low-grade.
 - 2) *Paroxysmal stage* (later symptoms) spasms of severe cough are followed by sudden deep inspirations, resulting in “whooping” sounds; post-tussive vomiting is common in all ages. Illness may be milder in previously vaccinated people. This stage usually lasts 1-6 weeks but may persist up to 10 weeks.

Important Note: Infants (<6 months of age) may present differently:

 - **May have a shorter catarrhal stage;**
 - **May gag, gasp or stop breathing (apnea);**
 - **May have facial color changes (turn blue, purple or red);**
 - **May not have noticeable cough or “whoop”; and**
 - **Likely to have leukocytosis with an increased absolute lymphocyte count.**
 - 3) *Convalescent stage* (recovery): decreasing frequency and severity of coughing, whooping, and vomiting. Classic pertussis is 6-10 weeks in duration but cough may last longer in some people.

TESTING

- Isolation/culture of *B. pertussis* from clinical specimen or positive polymerase chain reaction (PCR) test for *B. pertussis*. Serological assays are not recommended.
- Specimens for PCR should be obtained by aspiration or swabbing of the posterior nasopharynx ([Specimen Collection and Diagnostic Testing | CDC](#)).

TREATMENT

- Treat patients using the appropriate antimicrobial agent (see table below)
- Consider post-exposure prophylaxis of close contacts who are at the highest risk of experiencing severe illness or of transmitting pertussis to high-risk people:
 - Infants <1 year of age, particularly, infants <4 months of age who have not yet received any doses of pertussis vaccine (DTaP)
 - Pregnant people in their third trimester
 - Caregivers and household contacts of infants (family members, friends, or babysitters)
 - Anyone who attends or works in a childcare or healthcare setting
- Lower risk close contacts should self-monitor for symptoms for 21 days after last exposure and seek care if symptoms develop.

Recommended Treatment and Postexposure Prophylaxis, by Age Group[‡]

Age group	Azithromycin	Erythromycin	Clarithromycin	Alternate agent: TMP-SMX
Younger than 1 month	10 mg/kg/day as a single dose daily for 5 days ^{§, **}	40 mg/kg/day in 4 divided doses for 14 days	Not recommended	Contraindicated at younger than 2 months
1 through 5 months	10 mg/kg/day as a single dose daily for 5 days [§]	40 mg/kg/day in 4 divided doses for 14 days	15 mg/kg/day in 2 divided doses for 7 days	2 months or older: TMP, 8 mg/kg/day; SMX, 40 mg/kg/day in 2 doses for 14 days
6 months or older and children	10 mg/kg as a single dose on day 1 (maximum 500 mg), then 5 mg/kg per day as a single dose on days 2 through 5 (maximum 250 mg/day) ^{§, ††}	40 mg/kg/day in 4 divided doses for 7-14 days (maximum 1-2 g per day)	15 mg/kg/day in 2 divided doses for 7 days (maximum 1 g/day)	2 months or older: TMP, 8 mg/kg/day; SMX, 40 mg/kg/day in 2 doses for 14 days
Adolescents and adults	500 mg as a single dose on day 1, then 250 mg as a single dose on days 2 through 5 ^{§, ††}	2g/day in 4 divided for 7-14 days	1g/day in 2 divided doses for 7 days	TMP 320 mg/day; SMX, 1600 mg/day in 2 divided doses for 14 days.

Source: Red Book 2021-2024

[‡] Centers for Disease Control and Prevention. [Recommended antimicrobial agents for the treatment and postexposure prophylaxis of pertussis: 2005 CDC guidelines](#). MMWR Recomm Rep. 2005;54(RR-14):1–16

[§] Azithromycin should be used with caution in people with prolonged QT interval and certain proarrhythmic conditions.

^{**} Preferred macrolide for this age because of risk of idiopathic hypertrophic pyloric stenosis associated with erythromycin.

^{††} A 3-day course of azithromycin for PEP or treatment has not been validated and is not recommended.