



DEPARTMENT OF
HEALTH AND HUMAN SERVICES

Promoting and protecting health, well-being, self-sufficiency, and safety of all in Marin County.



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PUBLIC HEALTH ADVISORY

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Pertussis Outbreak

Dear Colleagues:

This update provides information about recent pertussis activity in Marin County, disease recognition, testing, reporting procedures, and additional resources for clinicians. Marin County Health and Human Services' Communicable Disease Prevention and Control (CDPC) unit is closely monitoring the situation.

Current Situation

Pertussis is cyclic in nature, with peaks in disease every 3 to 5 years. The last pertussis epidemic in California occurred in 2014. In February 2018 there was an increase in pertussis cases reported to CDPC. As of March 26, 2018, CDPC has investigated 65 cases of pertussis, primarily among adolescents, in Marin County. Marin had a total of 44 cases in 2017, and 30 cases in 2016. Most pertussis deaths occur in infants less than 3 months old; therefore, vaccinating pregnant women, cocooning newborn infants, and early identification and treatment of individuals who may expose infants and pregnant women are CDPC's infection control priorities.

Actions Requested of Providers

- Stock Tdap (or DTaP for pediatric patients) vaccine in your office.
- Recommend Tdap to all pregnant women with each pregnancy, preferably as early as possible between 27 and 36 weeks of gestation.
- Vaccinate infants, children, adolescents, and adults according to the [ACIP schedule](#) and implement [cocooning](#) around infants.
- Think pertussis. Enquire if other household members are or have been recently sick with a respiratory illness, particularly characterized by paroxysmal coughing and post-tussive emesis.
- [Test for pertussis](#). People who have been vaccinated for pertussis often present with mild symptoms. Have a high index of suspicion and a low threshold for testing and evaluating individuals for pertussis.
- [Treat pertussis](#) cases with a course of appropriate antimicrobial therapy. The recommended antimicrobial agents for treatment or chemoprophylaxis of pertussis are azithromycin, clarithromycin, and erythromycin.

Background Information

Pertussis, also known as whooping cough, is an acute bacterial infection of the respiratory tract caused by *Bordetella pertussis*. The initial catarrhal stage (1 – 2 weeks) presents with nonspecific symptoms of fatigue, runny nose, sneezing, and mild cough. Fever is usually absent or minimal. During the paroxysmal stage, in children severe fits of coughing often lead to the classic high-pitched whooping sound upon inspiration. Adolescents and adults typically do not produce this sound. Post-tussive vomiting is common in all ages. The paroxysmal stage is followed by the convalescent stage and resolution of symptoms. Illness may be milder in previously vaccinated people. Left untreated, pertussis can last 6-10 weeks in duration, but cough may last longer in some people. Complications vary by age, with infants more likely to experience severe complications such as apnea, pneumonia, seizures, or death.

Pertussis is highly contagious. Transmission typically occurs when a susceptible person inhales droplets aerosolized from the respiratory tract of an infected person. Persons one year of age and older are considered infectious from the onset of cold-like symptoms until completion of three days of treatment, or until 21 days after cough onset if no or partial treatment is given. Infants less than one year are considered infectious for six weeks without treatment. The incubation period is typically 7 – 10 days.

Clinical Presentation

Consider the diagnosis of pertussis in the following situations, even if the patient has been immunized:

- Persistent or worsening cough, with no fever or a low-grade fever, in an infant ≤ 3 months, or in an older infant without other explanation.
- Persistent or paroxysmal cough with no or low-grade fever accompanied by gagging, post-tussive emesis, or inspiratory whoop in patients of any age.
- Cough illness > 2 weeks duration and no alternative diagnosis.

Diagnosis and Treatment

Testing is appropriate until at least three weeks after the onset of paroxysmal coughing. After three weeks of coughing, infectiousness and test accuracy decrease significantly. If multiple members of a household present at the same time with symptoms, it is sufficient to test one person, preferably the person with the most recent onset of symptoms. Whenever possible, clinicians should obtain a nasopharyngeal (NP) swab or aspirate. Culture is the gold standard, but after two weeks of cough, PCR is the preferred diagnostic test.

Testing is most critical for symptomatic persons who are either high risk or may expose someone who is high risk. Persons considered at “high risk” of pertussis include:

- Infants (< 1 year old)
- Pregnant women (especially in the third trimester)
- Anyone who may expose infants or pregnant women

If you strongly suspect pertussis:

1. Treat the patient. Do not wait for test results. Negative test results do not rule out pertussis.
2. Isolate known or suspected pertussis cases and symptomatic close contacts until three full days of antibiotics have been completed and until the cough is manageable.
3. Give preventive antibiotics to the entire household and to any high-risk close contacts (see high-risk definition above).

Infection Prevention and Control

Vaccination is the best tool we have for preventing pertussis. The most effective strategy to protect infants who are most at risk for severe pertussis disease is to vaccinate all pregnant women during each pregnancy, preferably between 27 and 36 weeks of gestation. It is also important to vaccinate all children with the DTaP series on time and give a Tdap dose to adolescents and adults. Although most children have been vaccinated for pertussis, protection from the vaccine wanes over time, so some who are fully vaccinated may still become infected. During pertussis outbreaks infants may begin the pertussis vaccination series at 6 weeks old.

In addition to vaccination, rapid identification of pertussis cases, appropriate treatment, isolation, and educating patients about good respiratory etiquette helps prevent ongoing transmission. Children may return to school after completing three days of antibiotic treatment.

Reporting

To report pertussis cases, please contact Marin County Communicable Disease Prevention and Control:

Monday through Friday 8:30 a.m. through 5:00 p.m.

P 415 473 4163

F 415 473 6002

MarinCD@marincounty.org

CDPC contacts cases to determine if there are high risk individuals who need chemoprophylaxis. High risk household contacts will be referred to their usual source of care for chemoprophylaxis.

Additional Information

Centers for Disease Control and Prevention (CDC). [Pertussis \(Whooping Cough\)](#)
California Department of Public Health (CDPH). [Pertussis \(Whooping Cough\)](#)

Sincerely,

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