



August 18, 2014

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Update on California's Pertussis Epidemic

Pertussis activity continues at epidemic levels in Orange County and statewide. As of 8/16/2014, 250 pertussis cases have been reported in Orange County, compared with 43 cases at this time last year. Pertussis peaks in incidence every 3-5 years as the number of susceptible people in the population increases; the last epidemic in California was in 2010.

Infants <12 months of age are at highest risk for severe infection and death. To protect this vulnerable population the following is recommended:

- Immunize pregnant women with Tdap during every pregnancy at 27-36 weeks gestation. This dose protects mom and provides the infant with high levels of protective transplacental antibodies.
- Encourage close contacts of infants to be up-to-date with their pertussis vaccine (cocooning).
- Vaccinate infants and children with DTaP followed by Tdap according to the childhood immunization schedule: <http://www.cdc.gov/vaccines/vpd-vac/pertussis/recs-summary.htm>

Diagnostic Testing: Suspect pertussis cases should be tested by nasopharyngeal PCR. PCR is most sensitive within 3 weeks of the onset of the cough (up to 6 weeks for infants). Consider obtaining a CBC: a WBC count that is $\geq 20,000/\text{mm}^3$ with $\geq 10,000$ lymphocytes/ mm^3 in a young infant with a cough illness is strongly suggestive of pertussis infection.

Management of Cases:

- **Treatment:** Antimicrobial treatment should begin as soon as possible after diagnosis, particularly in infants. Treatment may lessen symptoms if begun early during illness and will shorten the period of infectivity.
- **Prophylaxis:** The CDC and AAP recommend post-exposure prophylaxis for all close contacts of a pertussis case. However, during widespread community outbreaks, OCHCA will focus its efforts on postexposure prophylaxis for high-risk contacts, including infants <1 year of age, pregnant women, and their contacts.
 - Recommended Antimicrobial Agents for the Treatment and Postexposure Prophylaxis of Pertussis: <http://www.cdc.gov/mmwr/PDF/rr/rr5414.pdf>
- **Infection control:** Health care workers should use standard and droplet precautions, including a surgical or procedure mask and eye protection when evaluating suspect pertussis patients. Droplet precautions should be maintained until 5 days after the patient is placed on effective therapy, or if no treatment until 21 days after cough onset.
- **Management of cases in school settings:** Cases should be excluded from childcare settings until completion of 5 days of antibiotic treatment, from K-12 grade schools until completion of 3 days of antibiotics, and for 21 days if no antibiotic treatment.

Resources: General pertussis info for clinicians: <http://www.cdc.gov/pertussis/>
Tdap for pregnant women: <http://www.cdc.gov/vaccines/vpd-vac/pertussis/tdap-pregnancy-hcp.htm>

For comments or suggestions on this newsletter, please contact Sandra Okubo, MPH or Matt Zahn, MD at (714) 834-8180. To receive this newsletter by email, please contact us at epi@ochca.com.

When to Consider Pertussis

Infants < 12 months are at highest risk of severe disease.

- Pertussis should be considered in any infant with persistent or paroxysmal cough.
- In infants cough may be minimal or absent, and apnea may be the only symptom.

For children ≥ 12 months & adults, consider pertussis with:

- Cough > 7 days in persons with no or low-grade fever and any of the following: cough paroxysms, post-tussive vomiting, or inspiratory whoop
- Cough > 14 days with no or low-grade fever and no alternative diagnosis
- Suspicious cough of any duration with no alternative diagnosis and any of the following:
 - Close contact with a pertussis case
 - Patient is a pregnant woman in the 3rd trimester
 - Patient is a close contact of an infant or pregnant woman

Pertussis is a reportable disease. Call OCHCA at 714-834-8180 or fax 714-834-8196 to report a case.