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To: California healthcare providers

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Increase in Pertussis (whooping cough) Cases in California - May 2014

1,711 cases of pertussis occurring from January through April 2014 have been reported to the California Department of Public Health. This is more than a threefold increase compared to the same period in 2013. Pertussis peaks in incidence every 3-5 years as the number of susceptible people in the population increases. As the last peak in California was in 2010, the recent increase in reported cases suggests that another cyclical peak is beginning.

Infants too young to be fully immunized remain most vulnerable to severe and fatal pertussis. Most of the 77 hospitalized cases to date in 2014 have been in children 3 months of age or younger. Two pertussis deaths, the first reported in California since 2010, also occurred in infants. The primary [strategy](#) to prevent pertussis in young infants is immunization of pregnant women with Tdap, which provides transplacental immunity to the newborn. The number of women currently receiving Tdap during pregnancy is suboptimal.

Over 90% of reported pertussis cases in 2014 have been in children younger than 18 years of age, including 32% who were 14 through 16 years of age. Outbreaks of pertussis in elementary, middle, and high schools have been reported throughout the state. Immunity from acellular pertussis vaccine wanes more quickly than immunity from the previous whole-cell vaccine. (Whole-cell vaccines were removed from the U.S. childhood vaccine series in 1997.)

Recommendations for clinicians

Vaccinate

- Immunize **all** women, irrespective of their immunization history, with Tdap during **every** pregnancy between 27-36 weeks' gestation to optimize antibody transfer and protection of infants at birth. This is the most important measure to help protect young infants against pertussis. Tdap during pregnancy [has not been found to be associated with an increased risk of adverse events](#) in vaccinated women or their infants. Immunization of pregnant women with Tdap is covered by insurers, including Medi-Cal.
 - Postpartum vaccination does not provide transplacental antibodies to newborns but may prevent maternal acquisition and transmission of pertussis. If the postpartum mother has never received Tdap, promptly administer Tdap before discharge home.

- Advise women during pregnancy and delivery that other adults in contact with the newborn, such as fathers, grandparents, older siblings, and babysitters, should also be up-to-date with their Tdap vaccine.
- Immunize young infants promptly with DTaP. During a community outbreak, the first dose of DTaP can be given as early as 6 weeks of age, especially to infants whose mothers did not receive Tdap during pregnancy. The primary DTaP vaccine series reduces severe disease in young infants, and even the first dose may offer some protection against fatal disease.
- Encourage all persons to be up-to-date with [current pertussis vaccination recommendations](#). As part of the “cocooning” strategy, all close contacts of infants (e.g., parents, siblings, grandparents, child care providers, etc.) and all [healthcare personnel](#) should be immunized against pertussis, particularly those who work with infants or pregnant women.

Test and treat

- [Diagnosing pertussis](#) in [young infants](#) is challenging, as they may have little or no cough, whoop, or fever. Mild illness may quickly progress to respiratory distress, apnea, cyanosis, or seizures. Delays in treatment may increase the risk of a fatal outcome. A white blood cell count of $\geq 20,000$ cells/mm³ with $\geq 50\%$ lymphocytes is a strong indication of pertussis.
- Consider pertussis **even in recently vaccinated people** when evaluating patients with symptoms compatible with pertussis. Immunity after immunization wanes within a few years.
- Consider pertussis **regardless of age** in patients with persistent cough. Symptoms are generally milder in teens and adults, especially in those who have received Tdap. Adults may report sweating episodes or feeling as if they’re choking.
- For [testing](#) by PCR or culture, obtain a nasal aspirate (preferable) or nasopharyngeal swab. Serologic testing for pertussis is not recommended.
- Report all suspected pertussis cases to the local health department.
- Initiate antibiotic [treatment](#) **prior to obtaining test results**, especially in infants and pregnant women or those who are in close contact with them. Azithromycin is preferred because of efficacy and compliance.
- Instruct patients with pertussis to stay home from school or daycare until they have received 5 days of antibiotics and to avoid contact with infants and pregnant women.
- Provide [antibiotic prophylaxis](#) to household contacts, caregivers, and other persons who have had direct contact with respiratory, oral, or nasal secretions and aerosols from a symptomatic case, especially when there is an infant or pregnant woman in the home. The dosage and duration for antibiotic prophylaxis is the same as treatment and should not be shortened.

Additional resources for clinicians include the California Department of Public Health [pertussis website](#) and the Centers for Disease Control and Prevention [pertussis webpage for clinicians](#).