



To: CAHAN San Diego Participants
Date: February 26, 2015

Pertussis Epidemic Continues in San Diego County and California

This health alert updates the local medical community on the continued pertussis epidemic in San Diego County and California, provides links to prevention and treatment references, and reminds providers about key management issues.

The County of San Diego Health and Human Services Agency (HHS) confirmed 2,072 pertussis cases in San Diego in 2014, a rate of 65.0 cases per 100,000. This greatly surpasses the 1,179 cases reported here during the 2010 pertussis epidemic. The increased number of pertussis reports continues with 157 confirmed cases with symptom onset in 2015 and another 26 cases currently under investigation.

Of the 2,072 local cases reported in 2014, 9% were less than one year of age and 42% were 13 through 18 years of age. Patients ranged in age from 9 days to 96 years, with a median age of 12 years. Forty cases (1.9%) required hospitalization and 65% of those hospitalized were less than one year of age. Eighty-five percent of last year's cases were up-to-date on pertussis vaccinations, with 12% not up-to-date, 1% too young for immunization, and 2% immunization status unknown. There were no deaths.

Clusters of cases have been reported regularly in elementary, middle, and high school settings as well as childcare programs throughout the county. When cases occur in schools, childcare programs, and over-night camps, staff and families are directly notified and urged to seek care promptly for early symptoms or for contact prophylaxis.

As of February 12, 2015, the California Department of Public Health (CDPH) [reported](#) 11,114 cases in California, with symptom onset in 2014, resulting in a statewide rate of 29.1 cases per 100,000. This number will increase due to reporting delays. A total of 441 cases have been reported in the state with symptom onset in 2015.

No San Diego residents have died from pertussis since 2010, but there were four deaths in California in 2014: two infants with disease onset in late 2013 and two infants with disease onset in 2014. Two more infants have died in California in 2015, including an infant with disease onset in December 2014, and a three-week-old who died this month.

A critical strategy to protect infants too young to be vaccinated is to [immunize every pregnant woman during every pregnancy](#). The preferred time for pregnancy immunization is between 27 and 36 weeks of gestation, although immunization during other stages of pregnancy is safe. Women should be immunized irrespective of prior Tdap history. A [recent study](#) in JAMA confirms the safety of Tdap in pregnancy.

Last year in California, only 17% of the 252 pertussis cases in infants less than four months of age had mothers who had received the recommended Tdap booster in pregnancy. [Published data](#) have shown that although Tdap coverage improved with national and CDPH recommendations to administer boosters to pregnant women with every pregnancy, the highest coverage rate in California was 30% in 2012. This represents a [significant opportunity](#) to better protect those at highest risk for morbidity and mortality from pertussis. As part of the "cocooning" strategy, all other close contacts of infants (e.g., parents, siblings, grandparents, child care providers) should also have received one Tdap dose at some time in the past.

CAHAN San Diego Alerts are intended for the use of public health, medical and laboratory professionals in San Diego County. This alert has been approved for reproduction and distribution to interested professionals. An online CAHAN San Diego application is available at <http://www.cahansandiego.com> for appropriate and interested individuals.

Recommendations for clinicians:

- Inquire about recent possible pertussis exposures in schools or community settings and consider pertussis **despite vaccination status** when evaluating patients with respiratory symptoms.
- Consider pertussis **regardless of age** in the differential of patient with unexplained, persistent cough illness. Symptoms of infection are generally milder in teens and adults, especially in those who have been vaccinated.
- Be aware that the [diagnosis of pertussis](#) can be a challenge in [young infants](#). The lack of fever and the mildness of initial symptoms often results in clinicians underestimating the potential severity of the illness. Mild illness may quickly transform into respiratory distress and include apnea, hypoxia or seizures. Treatment delays may increase the risk of death in young infants, especially those less than 3 months of age. A white blood cell count of $\geq 20,000$ cells/mm³ with $\geq 50\%$ lymphocytes is a strong indication of pertussis.
- Obtain a nasal aspirate (preferable) or nasopharyngeal swab for PCR testing and/or culture (available at most reference laboratories) when pertussis is in the differential diagnosis. Serologic tests are not recommended.
- Initiate antibiotic [treatment prior to obtaining test results](#) in patients with a clinical history suggestive of pertussis or with risk factors for severe complications. Azithromycin is the preferred antibiotic because of efficacy and compliance. Azithromycin is [covered by Medi-Cal](#) for both treatment and prevention of pertussis, and suspension may be prescribed regardless of age.
- Instruct all patients diagnosed with pertussis to stay home from school or childcare until they have completed five days of antibiotics and to avoid contact with infants and others susceptible to the disease.
- Provide [post-exposure prophylaxis \(PEP\)](#) to **all** household contacts, caregivers, and other persons who have had direct contact with respiratory, oral, or nasal secretions from a symptomatic case. PEP antibiotic treatment is the same as treatment for disease and should not be shortened.
- Encourage all individuals, especially pregnant women, to be up-to-date with [current pertussis vaccination recommendations](#). All [healthcare workers](#) should be immunized against pertussis with Tdap.

Recommendations for [Exposed Healthcare Workers](#):

- Healthcare workers (HCW) with unprotected (i.e., unmasked) exposure to pertussis cases may be offered PEP, OR they may be monitored for symptoms for 21 days from the time of exposure.
- Decisions on whether to offer PEP or initiate symptom watch should be based upon the population seen by the HCW and the frequency of exposure.
- Symptom watch may be preferred for a HCW in a pediatric clinic where repeated exposures are likely.
- In settings with continued transmission of pertussis, multiple rounds of antibiotics are not recommended.

Useful resources for clinicians include the CDPH [pertussis website](#) and Centers for Disease Control and Prevention [pertussis webpage for clinicians](#).

All suspected or confirmed cases should be promptly reported to the HHSA Immunization Program via [Confidential Morbidity Report \(CMR\)](#) by FAX to 619-692-5677 or by calling at 866-358-2966 (select option #5). Questions about pertussis diagnosis, management, or prevention may also be directed to the [Immunization Program](#).

Thank you for your continued participation.

CAHAN San Diego

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