



California Pertussis Outbreak

The California Department of Public Health (CDPH) has recently announced a significant increase in the state's pertussis (whooping cough) case rate. As of Aug. 31, 2010 CDPH noted **3,600** confirmed, probable and suspected year-to-date cases of pertussis for a state rate of **9.2 cases/100,000**. This is a **seven-fold increase** from the number of reported cases during the same time period in 2009 when **501** cases were reported. Of all hospitalized cases, 75 percent (132/177) were for infants less than six months of age. There were also eight deaths, all in infants too young to receive the recommended immunization to prevent occurrence. The total of 3,837 cases reported is the highest since 1958. It represents the highest incidence since 1963 with 9.3 cases/100,000 reported. Previously, the peak was in 2005 when there were 3,182 cases reported. Similar concerns are also being raised in other states, such as Michigan (902 cases in 2009 vs. 315 in 2008) where the increase in reported cases has public health officials concerned.

Pertussis, also known as whooping cough, is a highly contagious respiratory tract infection caused by the bacterium *Bordetella pertussis*. In the first half of the 20th century, whooping cough was a leading cause of childhood illness and death in the United States. With the introduction of an effective vaccine, the number of cases gradually declined, reaching a low in the mid-70s. Once infected with whooping cough, it usually takes three to 12 days for symptoms to appear. Initially mild, resembling a common cold, the signs and symptoms usually worsen and may result in severe and prolonged coughing attacks. Common complications include nausea and vomiting, pneumonia, encephalopathy, and seizures. Unfortunately, infections in infants can be particularly severe.

Use of appropriate antibiotics (i.e. azithromycin, clarithromycin, or erythromycin) early in the course of the disease is very important. If treatment for pertussis is started in the first two weeks or prior to the start of coughing paroxysms, symptoms may be lessened. In those patients diagnosed with whooping cough in the later stages, antibiotics have not been shown to be effective in altering the course of the illness. As a consequence, vaccination is the best defense against whooping cough. However, the immunity from vaccines wanes over time and pertussis booster vaccination rates in adolescents and adults continue to be low. There are currently two types of pertussis vaccines: a) DTaP for infants and children and b) Tdap for adolescents and adults. Both vaccines protect against Whooping Cough, tetanus, and diphtheria. Getting vaccinated with Tdap is especially important for family members and/or caregivers of the very young.

Current Vaccination recommendations:

- **Infants** and children are recommended to receive five doses of the DTaP vaccine at 2, 4, and 6 months of age, at 15 through 18 months, and at ages 4 through 6 years. All five doses are needed for maximum protection.
- **Adolescents** are recommended to receive the Tdap vaccine at their regular check-up at age 11 or 12. If teenagers (13 through 18 years) missed getting the Tdap vaccine, parents should ask the doctor about getting it for them now.
- **Adults** who are 19 through 64 years old are recommended to get a one-time dose of Tdap in place of the Td booster they're recommended to receive every 10 years. No need to wait until the patient is due for their Td booster—the dose of Tdap can be given earlier than the 10-year mark since the last Td booster. It's a good idea for adults to talk to a health care provider about what's best for their specific situation.
- **Pregnant women** should ideally receive Tdap before pregnancy. Otherwise, it is recommended that Tdap be given after delivery, before leaving the hospital or birthing center. If a pregnant woman is at increased risk for getting whooping cough, such as during a community outbreak, her doctor may consider giving Tdap during pregnancy. Although pregnancy is not a contraindication for receiving Tdap, a pregnant woman and her doctor should discuss the risks and benefits before choosing to receive Tdap during pregnancy.
- **People 65 years and older** do not currently have a pertussis booster vaccine licensed for their age group. However, people in this age group can talk to their health care provider to see if getting Tdap is a good decision for them. This discussion can include weighing the risks and benefits of receiving Tdap. Receiving Tdap may be especially important during a community outbreak and/or if caring for an infant.

The Centers for Medicare and Medicaid Services (CMS) recently (Aug. 16, 2010) released a memo to all Medicare Part D Plan Sponsors and Medicare Advantage organizations discussing the recent outbreak in California reiterating CDPH's recommendation for broader use of the pertussis booster vaccine (i.e., immunize children as young as 7 years of age as well as older California residents (over 64) for the duration of the epidemic. Vaccination of those over the age of 64 is important because neither prior vaccination nor natural disease confers life-long immunity and those over 64 years of age have increasingly become primary care givers for their grandchildren. Lastly, CMS reminds providers that the Tdap vaccine is a Part D covered drug and is on-compensated for use in patients 65 and older. The Tdap vaccine may be obtained from a network pharmacy and administered by a pharmacist registered for vaccine administration or in a network provider's office. This will benefit members by providing a choice in access and administration to the vaccine.

References:

1. Anon. Number of Cases of Pertussis in California: Pertussis Summary Report (Aug. 31, 2010). California Department of Public Health (CDPH). Accessed on Sept. 7, 2010, at <http://www.cdph.ca.gov/HealthInfo/discond/Pages/Pertussis.aspx>.
2. Anon. Pertussis (Whooping Cough): Outbreaks Questions and Answers. Centers for Disease Control (CDC) website: Accessed on Sept. 7, 2010, at <http://www.cdc.gov/pertussis/outbreaks-faqs.html>.
3. Anon. Pertussis (Whooping Cough) in Michigan. Michigan Department of Community Health: Accessed online on Sept. 7, 2010, at http://www.michigan.gov/mdch/0,1607,7-132-2942_4911_4914-240419--_00.html.
4. Anon. California Pertussis Outbreak. CMS Memo to Part C and Part D Sponsors dated Aug. 16, 2010. Accessed online on Sept. 7, 2010, at http://www.cdph.ca.gov/programs/immunize/documents/memocalifpertussis_08.16.10.pdf.