



# CD Info



Richard M. Daley, Mayor

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**CDInfo** is a surveillance newsletter intended to promote prevention of morbidity and mortality by providing useful data and practical recommendations for clinicians, laboratories, and infection control personnel who diagnose, treat or report infectious diseases in Chicago.

## Pertussis Update, 2010

Pertussis is a highly contagious vaccine-preventable disease caused by the bacteria *Bordetella pertussis*.<sup>1</sup> The incidence of pertussis is cyclical, peaking every 3-5 years in the U.S. The last peak was in 2005 when approximately 25,000 cases were reported nationally. According to the National Notifiable Diseases Surveillance System (NNDSS), as of October 16, 2010, 14,429 cases had been reported nationally. Some states have reported an increase in the number of pertussis cases in 2010; however, others are reporting less pertussis activity compared to similar times in 2009. California continues to experience an epidemic of pertussis this year with 5,900 cases reported as of October 19, 2010, including ten infant deaths. Multiple factors likely have contributed to the increase, including waning immunity from childhood pertussis vaccines, increased recognition, better diagnostic testing, and increased reporting.

### Chicago Pertussis Activity

From January 1-October 26, 2010, 59 cases of pertussis among Chicago residents have been reported to the Chicago Department of Public Health (CDPH); 95% of these cases have been confirmed by PCR testing and 17 (29%) were hospitalized. Although the total number of cases in 2010 is not significantly higher than previous years, infants under 1 year of age continue to be the most affected, accounting for nearly 50% of cases reported to date (figure) with 52% requiring hospitalization. Infants under one year of age and immunocompromised individuals are most at risk for complications due to pertussis. No pertussis-related deaths have been reported.

### Vaccination

Pertussis infections can be prevented by safe and effective vaccines. Unfortunately, many infants who get pertussis are too young to be fully vaccinated and are usually infected by older siblings, parents, or other caregivers. There are two combination vaccines used to prevent pertussis: DTaP is given to children younger than 7 years of age, and Tdap is given to older children and adults. Children should get DTaP vaccinations at 2, 4, 6, and 15-18 months and 4-6 years of age. A single dose of Tdap is recommended for adolescents 11 or 12 years of age, or in place of one Td booster in adults age 19-64 years. Healthcare providers (HCPs) should consult CDC [immunization schedules](#)<sup>2</sup> for current, detailed vaccination recommendations. However, HCPs should be aware that the Advisory Committee on Immunization Practices (ACIP) will be posting [updated recommendations](#)<sup>3</sup> regarding the use of Tdap in persons 7-10 years of age and 65 years and older within the next few weeks. HCPs should review the vaccination status of patients (regardless of age) at all visits and administer DTaP or Tdap if patients are incompletely vaccinated.

### Treatment and Testing

Healthcare providers should consider the diagnosis of pertussis in patients presenting with a paroxysmal and/or prolonged cough illness and should [test patients with suspected pertussis](#)<sup>4</sup> by obtaining a nasopharyngeal swab for PCR and/or culture. Free pertussis specimen collection kits can be obtained by calling the Illinois Department of Public Health at **1-800-526-4372**. Patients with confirmed or suspected pertussis should be treated promptly with azithromycin, or an [appropriate macrolide](#),<sup>5</sup> and should remain home from school, day care, work, and public gatherings for at least 5 days after the start of appropriate antibiotic therapy in order to limit further transmission.

### Reporting

Pertussis is a [reportable disease](#),<sup>6</sup> and mandated reporters, such as health care providers, hospitals and laboratories, must report any suspected or confirmed cases of pertussis to CDPH within 24 hours via [INEDSS](#).<sup>7</sup> If you have any questions about pertussis, please contact CDPH's Vaccine-Preventable Disease Surveillance at 312-746-5911.

**Figure. Reported number of probable and confirmed pertussis cases, by age group, Chicago, 2005-2010\***

