



Philadelphia Department of Public Health  
**Division of Disease Control**

DONALD F. SCHWARZ, MD, MPH  
Deputy Mayor, Health & Opportunity  
Health Commissioner

JOSEPH C. CRONAUER  
Deputy Health Commissioner

Caroline C. Johnson, MD  
Director, Division of Disease Control

## ***Health Notification***

### **Recommendations for Diagnosis and Control of Pertussis**

#### **January 31, 2008**

The Division of Disease Control (DDC), Philadelphia Department of Public Health recently investigated the death of a 3-week-old infant from pertussis. The source of the child's infection was likely the mother who had an undiagnosed illness with protracted cough. Pertussis is a contagious respiratory disease caused by the bacterium *Bordetella pertussis*. Although completion of the primary vaccination series affords protection from pertussis in childhood, immunity wanes after 5-10 years. Currently, pertussis infection in adolescents and young adults is a growing problem. Cases often go unrecognized because symptoms are mild or atypical. Susceptible infants, who are at the highest risk of developing complications, often acquire pertussis through contact with an infected adolescent or young adult living in the household.

- Consider the diagnosis of pertussis in individuals with respiratory illness accompanied by a protracted cough, particularly if the cough is paroxysmal or followed by vomiting. Infants and older persons may have atypical presentations.
- Confirm the diagnosis of pertussis with a nasopharyngeal specimen collected via wash or Dacron swab, even if cough has been present for several weeks. Submit to the laboratory for polymerase chain reaction (PCR) testing and/or culture.
- Antimicrobial therapy is recommended for all cases to limit the spread of disease to others, even if cough has been present for several weeks. Azithromycin, clarithromycin, and erythromycin, are the drugs of first choice; trimethoprim-sulfamethoxazole (TMP-SMX) is an alternative.
- Antibiotic prophylaxis is recommended for all household and close contacts of a pertussis case, regardless of immunization status or age. If 21 days have elapsed since the onset of cough in the index case, chemoprophylaxis has limited value but should be considered for households with high-risk contacts (e.g., young infants, pregnant women and people who have contact with infants). Antibiotic prophylaxis for pertussis is the same as for treatment.
- In addition to the routine childhood series (five doses of DTaP vaccine), a single dose of Tdap (tetanus, reduced diphtheria, and acellular pertussis) vaccine should be given to all people 11-18 years of age, if they have not yet received it and five years have elapsed since their last dose of Td vaccine. A single dose of Tdap should also be given to adults aged 19-64 years if they are anticipated to have close contact with an infant aged < 12 months (e.g., parents, grandparents, childcare providers), or are healthcare personnel with direct patient contact.
- **Because newborns are at high risk from pertussis and complications, vaccination of women of childbearing age is especially important. Optimally, women should receive a dose of Tdap before becoming pregnant. If Tdap was not given before pregnancy, it should be provided in the immediate postpartum period.**