



Genesee County Health Department

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<http://www.gchd.us>

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PERTUSSIS ALERT

The Genesee County Health Department (GCHD) is alerting health care providers to a local increase in pertussis cases. Transmission of pertussis is being observed locally and clusters of cases have been recently found within Genesee County.

We ask that health care providers help to assure proper diagnosis, treatment, prevention and control of pertussis. Clinicians should consider pertussis in prolonged cough illnesses (greater than 2 weeks). Michigan's public health laws require that health care providers report all suspected and confirmed cases of pertussis to the local health department. Please call the GCHD at (810) 257-1017 as soon as you suspect a case.

The recommended diagnostic tests are culture or PCR of nasopharyngeal (NP) swab (Dacron) or aspirate. Serology and DFA tests are NOT recommended. The Michigan Department of Community Health conducts laboratory testing for pertussis. Clinicians may contact the GCHD at (810) 257-1017 to coordinate testing of specimens.

Recommended treatment is a course of a macrolide antibiotic (5 days azithromycin, or 7 days clarithromycin, or 14 days erythromycin; an alternative is 14 days TMP-SMZ). Household and other close contacts of cases should receive antibiotic prophylaxis within 3 weeks of exposure using the same antibiotics and doses in the treatment recommendations.

Infants are at highest risk of severe disease and death; older siblings and adults often are the source. Infants and children should receive a pertussis vaccine series (DTaP) as per the U.S. recommended childhood immunization schedule. All doses should be given as close to the recommended ages as possible. A routine pertussis vaccine booster dose (Tdap) is recommended for adolescents and adults, and is especially important for those in contact with infants.

BOX 1. Epidemiology, diagnosis, treatment, and prevention of pertussis (whooping cough)

Epidemiology

- 25,827 cases reported in the United States in 2004, the highest number of reported cases since 1959.
- Approximately 60% of cases are in adolescents (aged 11–18 years) and adults (aged >20 years).
- Transmitted person-to-person through aerosolized droplets from cough or sneeze or by direct contact with secretions from the respiratory tract of infectious persons.
- Incubation period 5–21 days; usually 7–10 days.
- Highly contagious; 80% secondary attack rates among susceptible persons.
- Endemic in the United States; epidemic every 3–4 years.

Clinical findings

- Catarrhal period (1–2 weeks): illness onset insidious (coryza, mild fever, and nonproductive cough); infants can have apnea and respiratory distress.
- Paroxysmal period (2–6 weeks): paroxysmal cough, inspiratory “whoop,” posttussive vomiting.
- Convalescent period (≥ 2 weeks): paroxysms gradually decrease in frequency and intensity.

Laboratory testing

- Culture of nasopharyngeal aspirate or Dacron™ swab for *Bordetella pertussis* on Regan Lowe or Bordet-Gengou culture medium.
- Detection of *B. pertussis* DNA by polymerase chain reaction.
- Not helpful to test contacts without respiratory symptoms.

Recommended treatment

- Macrolide antibiotic
 - 5-day course of azithromycin
 - 7-day course of clarithromycin
 - 14-day course of erythromycin.
- Alternative agent
 - 14-day course of trimethoprim-sulfamethoxazole.
- Treat persons aged >1 year within 3 weeks of cough onset.
- Treat infants aged <1 year within 6 weeks of cough onset.

Postexposure prophylaxis

- Administer course of antibiotic to close contacts within 3 weeks of exposure, especially in high-risk settings; same doses as in treatment schedule.

Prevention and surveillance

- Vaccinate children aged 6 weeks–6 years with diphtheria, tetanus toxoids and acellular pertussis vaccine (DTaP). In 2005, The Advisory Committee on Immunization Practices voted to recommend a single dose of Tetanus Toxoid and Reduced Diphtheria and Acellular Pertussis vaccine (Tdap) for adolescents and adults aged <65 years.
- Report all cases to local and state health departments.

Centers for Disease Control and Prevention.

Recommended antimicrobial agents for the treatment and postexposure prophylaxis of pertussis: 2005 CDC guidelines. MMWR2005;54(No. RR-14)