

Pertussis Disease

Definition:

Pertussis or whooping cough is caused by bacteria called *Bordetella pertussis*.

Signs and symptoms:

The first signs of pertussis are similar to a cold (sneezing, runny nose, low-grade fever, and a cough). After one or two weeks, the cough gets worse. The paroxysmal cough occurs in sudden, uncontrollable bursts where one cough follows the next without a break for breath and may lead to post-tussive vomiting. The person may look blue in the face and have a hard time breathing. Many children will make a high-pitched whooping sound when breathing in after a coughing episode. Over time, coughing spells become less frequent, but may continue for several weeks or months.

Transmission:

Pertussis is spread from person to person through the air. A person may catch pertussis by standing close (less than 3 feet away) to an infected person who is coughing or sneezing. A person has to breathe in droplets from an infected person to get sick. People are contagious for 21 days.

Diagnosis:

A specimen is collected for testing from a nasopharyngeal swab. Laboratory criteria for diagnosis are isolation of *Bordetella pertussis* from clinical specimen or polymerase chain reaction (PCR) for pertussis.

Role of the School Nurse:

Prevention:

- Update and maintain vaccine records.
- There are two pertussis vaccines (Dtap and Tdap). They are both given in combination with tetanus and diphtheria. Children under age 7 should get 5 Dtap shots. They are given at ages 2, 4, 6, 12-15 months and 4-6 years.
- Adolescents should get 1 shot of Tdap at 11-12 years of age.
- Adolescents 13-18 years old should receive Tdap if they have not received a tetanus booster within the last 5 years.
- Teach students and staff to cover their noses and mouths when sneezing or coughing.
- Promote proper hand washing particularly after using facial tissues or having contact with respiratory secretions to prevent the spread of disease.

Treatment Recommendations:

- Pertussis can be treated with antibiotics, but treatment may not cure the coughing right away. Pertussis bacteria die off naturally after 21 days of coughing and if antibiotics are not started within that time, they are no longer recommended.
- Antibiotics can also be given to close contacts of persons with pertussis to prevent them from getting sick.

Exclusions:

Persons still within the infectious period (<21 days after symptom onset) should be excluded from work, school, daycare and social activity for 5 days after starting antibiotics. If the case is untreated it is recommended that s/he be excluded for 21 days after the onset of symptoms. If it

has been >21 days since symptom onset, the case is no longer infectious and no exclusions are recommended. Parents and employees should be notified of possible pertussis exposures.

Reporting Requirements:

Pertussis is a reportable condition and should be reported immediately to Maine CDC at 1-800-821-5821.

Resources:

- Maine CDC pertussis disease website (including fact sheet and FAQ for school nurses)
<http://www.maine.gov/dhhs/boh/ddc/epi/vaccine/pertussis.shtml>
- Federal CDC pertussis disease website
<http://www.cdc.gov/pertussis/>
- Maine Immunization Program website
<http://www.maine.gov/dhhs/boh/ddc/immunization/>