

## Get Smart Colorado:

# Pertussis Information

---

### Background

- Reported pertussis cases in Colorado have substantially increased since August 2004. In contrast to the average of 427 cases reported yearly from 2000-2003, a total of 1185 pertussis cases were reported during 2004. The first half of 2005 continued to show elevated pertussis incidence.
- The incubation period of pertussis is usually 7 to 10 days, with a range of 4 to 21 days.
- The clinical course of pertussis is divided into three stages:
  - *Catarrhal stage* – the onset of runny nose, sneezing, low-grade fever, and mild cough. The cough gradually becomes more severe and after 1 to 2 weeks the next stage develops. Because of its resemblance to common viral upper respiratory infections, the diagnosis of pertussis at this stage is often difficult and limited to close contacts of known cases.
  - *Paroxysmal stage* – coughing fits (paroxysms), which may be followed by a high-pitched inspiratory whoop, vomiting, or apnea. This stage usually lasts 1 to 6 weeks, but may continue for 10 weeks.
  - *Convalescent stage* – fewer paroxysmal coughing episodes and usually disappears in 2 to 3 weeks, but may continue for months.
- Guidelines from the Colorado Department of Public Health and Environment recommend early empiric antibiotic treatment of persons with acute cough illnesses who meet the case definition for pertussis or for persons who are close contacts of known cases or are involved with an epidemic investigation. For additional information, such as case definitions, testing, isolating, treatment, reporting, and pertussis guidelines, visit <http://www.cdphe.state.co.us/dc/Epidemiology/Pertussis/index.html>.
- Clinicians have worked hard to change their prescribing habits and educate patients about the futility of antibiotics in treating acute viral cough illnesses. The increased use of antibiotics caused by the pertussis outbreak may be frustrating for clinicians who desire to both avoid antibiotic use for viral illnesses and appropriately respond to a genuine public health need.

### Judicious Use Issues

- Appropriate diagnosis and treatment of pertussis is entirely consistent with judicious antibiotic use. Pertussis evaluation is recommended for severe or prolonged cough or any acute cough illness in the setting of possible pertussis exposure.
- A thorough history of presenting illness, pertussis contact information, and recent history of acute cough illnesses is essential to determine whether a pertussis diagnosis should be considered.

## **Get Smart Colorado Recommendations**

- **Test** all symptomatic patients you treat for pertussis by collecting a nasal wash for PCR testing. Such patients should be isolated until completing five days of antibiotics. Testing allows an outbreak to be tracked. Report all patients having pertussis to your local public health department.
- If you are unsure of a pertussis diagnosis, collect a nasal wash on the patient for PCR testing. Antibiotic therapy is not necessary unless the person has an acute cough illness that is compatible with pertussis, is a close contact of a known case or is part of an epidemic investigation.
- The following patients are unlikely to have pertussis:
  - Persons with culture or PCR confirmed pertussis in the last 1 to 2 years are unlikely to contract it again this year.
  - Persons with cough as a secondary symptom to congestion, headache, and earache. These persons are more likely to have a viral infection and can be treated symptomatically.
  - Persons with the sudden onset of a cough illness accompanied by fever and malaise. These persons should have an appropriate evaluation for influenza or pneumonia.
- The following persons can have testing without antibiotics:
  - Persons with a mild acute cough illness of less than 7 days and no direct contact to possible pertussis and not part of an epidemic investigation can be tested without treatment or isolation until results are known.
  - Persons who have had a cough for greater than 3 weeks. Use of antibiotics, even if the person has pertussis, is of no benefit as: 1) antibiotics will not help to resolve the patient's symptoms, and 2) after 3 weeks of cough, the patient is no longer infectious. Pertussis may be detected for up to 10 weeks after cough onset using PCR testing. Testing should be done to verify diagnosis and facilitate investigation of close contacts.
- Patient education should continue to include the message that the majority of acute cough illnesses without a specific etiology are usually viral and do not require antibiotics.
- *Get Smart Colorado* strongly supports immunization against pertussis. DTaP (diphtheria, tetanus and pertussis vaccine) is routinely administered at 2 months, 4 months, 6 months, 12 to 18 months, and a booster dose at 4 to 6 years of age. The FDA licensed in 2005 two new pertussis vaccines – one for adolescents 10 through 18 years of age and the second for persons 11 through 64 years of age. The Centers for Disease Control and Prevention now recommends that adolescents 11 and 12 years of age be given Tdap in place of the tetanus-diphtheria booster previously given to adolescents. For additional immunization information, visit <http://www.cdphe.state.co.us/dc/Immunization/index.html>.