

STATE OF COLORADO

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Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
of Public Health
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Pertussis Information and Guidelines for Schools and Child Care Settings

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The state of Colorado is experiencing a record number of cases of pertussis (also known as whooping cough). During 2012, 1505 cases of pertussis were reported in Colorado, with a rate of 29.4/100,000 population. In comparison, an average of 324 cases a year was reported during 2007-2011. The most recent year during which Colorado experienced a similar increase in numbers of pertussis cases was 2005; during which there was a total of 1383 cases with a rate of 29.7/100,000 population. There was one pertussis fatality in 2012 which was the first since 2005, when 2 infants died of the disease. So far in 2013, there have been 664 cases of pertussis reported through June 22 with a rate of 13.0/100,000, and are distributed throughout 31 Colorado counties. Most cases are reported from Jefferson County, (n=120), Boulder County (n=107), Arapahoe County (n= 68), Denver (n=63), Adams County (n=61), El Paso County (n=45), Weld County (n=39), Douglas County (n=35) and Larimer County (n=31). Rates of pertussis continue to be highest among infants < 6 months of age, followed by children 11-14 years and infants 6-11 months of age. Of the 32 cases < 6 months of age reported since January 1, 2013, 9 cases (28%) were hospitalized.

For more information on pertussis, please go to:

<http://www.colorado.gov/cs/Satellite/CDPHE-DCEED/CBON/1251611026285>

Colorado Immunization Law requires schools and child cares to review and collect up-to-date immunization records for children and adolescents, and it is strongly recommended that staff is up-to-date on their immunizations as well. Immunizations offer protection for students and others in the community, particularly infants, who are most at risk of hospitalization and death from pertussis. It is extremely important to assure persons who have contact with infants are vaccinated against pertussis to protect infants who have not yet received the vaccine series. Because of the epidemic levels of pertussis, the Colorado Department of Public Health and Environment (CDPHE) is strongly recommending child care providers, school health officials and health care providers pay special attention to pertussis immunization status in addition to routine immunizations.

Clinical Pertussis Information

- Incubation period: after exposure to pertussis, symptoms typically begin in 7-10 days.
- The illness typically progresses as follows:
 - Initial symptoms can include a runny nose, sneezing, low-grade fever, and mild cough which gradually become more severe over a period of 1-2 weeks.
 - The cough is characterized by coughing fits which may be followed by a high-pitched inspiratory whoop, vomiting, and/or a pause in breathing. This severe cough usually lasts 1-6 weeks and then gradually improves over a few weeks.
 - Note that young infants can present without classic cough symptoms and may present with gasping or apnea only.

- Infectious period: individuals with pertussis are contagious as soon as symptoms begin through the first 3 weeks of cough or until 5 full days of antibiotic treatment are completed.
- Testing and treatment: special testing is available through a health care provider to diagnose pertussis. The most common antibiotic used to treat pertussis is azithromycin, but several others are also effective.

The role of schools and child care centers in preventing pertussis:
Review, Evaluate, Exclude, and Distance (REED)

1. **Review** immunization records to assure that your **students and teachers are appropriately vaccinated and meet state immunization requirements**. Strongly encourage parents of infants, child care workers, and others who have contact with infants, receive the Tdap booster vaccine if they have not done so. Students and staff can be directed to their health care provider, local drugstore, or local health department to receive immunizations.
 - Colorado school and child care immunization requirements are available at: <http://www.colorado.gov/cs/Satellite/CDPHE-DCEED/CBON/1251609960682>
 - Vaccination recommendations follow the Center for Disease control and Prevention guidelines:
 - DTaP vaccination of all infants at 2, 4 and 6 months (primary series)
 - DTaP booster for all children at age 12-15 months
 - DTaP booster for all children at age 4-6 years
 - Tdap booster for all adolescents at age 11-12 years
 - Tdap booster for adolescents 13-18 years who have never had a Tdap
 - Tdap booster for all adults one time (including those 65 years and older)
 - Tdap booster for all pregnant women with each pregnancy to increase protection for infants who are too young for vaccination
2. Fully vaccinated children and adults can still get pertussis. However, symptoms appear to be much less severe in fully vaccinated children. **Evaluate** students for pertussis if they have any of the following symptoms:
 - Severe cough – often accompanied by gagging, coughing fits, and/or vomiting
 - Persistent cough lasting longer than 14 days
 - Apnea (a pause in breathing) or gasping in infants

Children and staff with these symptoms should be evaluated by a health care provider who can determine whether testing and treatment is appropriate.
3. **Exclude:**
 - **Any child or adult diagnosed with pertussis must be excluded from school, child care, and extracurricular activities until they have completed 5 full days of antibiotics** (return on 6th day after antibiotics were started) or until 21 days after the cough began if antibiotics are not taken.
 - **Siblings of pertussis cases who also have a cough should stay home until they have completed 5 full days of antibiotics** (return on 6th day after antibiotics were started).
 - If your school or child care has multiple cases of pertussis, this might represent an **outbreak**. Please consult your local health department or CDPHE to help determine if the following additional measures might be needed:
 - **Exclusion of children with symptoms consistent with pertussis until the child is evaluated by a health care provider for appropriate testing and/or treatment.** A note from a provider might be required to return to school.
 - **Offering children and staff with immune system compromising conditions or who are pregnant alternative assignments** (distance learning, duty reassignment).
 - These guidelines are especially important for employees in high-risk occupations (e.g. school teacher, school health care worker, child care center staff).
4. Encourage social **Distancing** in staff and students:

- Frequent hand-washing.
- Covering the mouth and nose with the inner elbow (“Dracula Cough”) and not hands when sneezing and coughing.
- Increasing distance between desks in the classroom.
- Staying home from work, school, or daycare when ill.
- Avoiding close contact with sick people.

Additional Recommendations

1. **School and child care personnel should recommend Tdap vaccination for all staff who have not previously received it.**
 - **Consider adopting and enforcing a Tdap vaccination policy for your personnel.**
 - Most school and child care workers with health insurance can receive a Tdap immunization at their provider's office with no out-of-pocket cost. Some Local Public Health Agencies (LPHAs) in Colorado are holding special Tdap immunization clinics for high risk clients, regardless of insurance status. Contact your LPHA for eligibility requirements and clinic times.
2. **Educate yourself and school and child care staff on the signs and symptoms of pertussis.**
 - Request that teachers help identify students exhibiting symptoms and send them to the school nurse or child's health care provider for evaluation.

For More Information

For more information, please see the following websites or contact your local public health agency or CDPHE at 303-692-2700:

- **Pertussis outbreak and immunization informational posters are available free for schools and child cares. To order, please call the CDPHE Immunization Section at: 303-692-2650**
- Infectious disease guidance for schools and child cares:
<http://www.colorado.gov/cs/Satellite/CDPHE-DCEED/CBON/1251607755294>
- General pertussis information: fact sheets, sample contact notification letters and more:
<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=CDPHE-DCEED%2FCBONLayout&cid=1251611026285&pagename=CBONWrapper>
- Additional information on immunization schedules: <http://www.cdc.gov/vaccines/schedules/>

Suspected and known pertussis cases and pertussis outbreaks should be reported to public health. To report, please contact your local public health agency, or contact CDPHE at 303-692-2700.