

## **Health Advisory: Positive Pertussis (Whooping Cough) in Carson City, Douglas and Lyon Counties**

Carson City Health & Human Services (CCHHS) is reporting an increase of positive pertussis (whooping cough) cases in the Carson City, Douglas, and Lyon County areas. The Disease Control and Prevention Division at CCHHS oversees disease surveillance and investigations in Carson City, Douglas County, and Lyon County and is currently investigating the increase. Eight (8) confirmed cases of pertussis have been identified. These have occurred in partially-immunized children from the ages of 3 months to four years of age and one (1) adult. In addition, there is one (1) additional pending case. A community press release has been issued asking that persons with symptoms of pertussis be examined by their healthcare provider.

### **Pertussis Clinical Features**

- **Incubation period 7-10 days (range 4-21 days)**
- **Insidious onset, similar to the common cold with nonspecific cough**
- **Fever usually minimal throughout course of illness**
- **Catarrhal stage**
  - **1-2 weeks**
- **Paroxysmal cough stage**
  - **1-2 weeks**
- **Convalescence**
  - **Weeks to months**

The incubation period of pertussis is commonly 7–10 days, with a range of 4–21 days, and rarely may be as long as 42 days. The clinical course of the illness is divided into three stages.

The first stage, the catarrhal stage, is characterized by the insidious onset of coryza (runny nose), sneezing, low-grade fever, and a mild, occasional cough, similar to the common cold. The cough gradually becomes more severe, and after 1–2 weeks, the second, or paroxysmal stage, begins. Fever is generally minimal throughout the course of the illness.

It is during the paroxysmal stage that the diagnosis of pertussis is usually suspected. Characteristically, the patient has bursts, or paroxysms, of numerous, rapid coughs, apparently due to difficulty expelling thick mucus from the tracheobronchial tree. At the end of the paroxysm, a long inspiratory effort is usually accompanied by a characteristic high-pitched whoop. During such an attack, the patient may become cyanotic (turn blue). Children and young infants, especially, appear very ill and distressed. Vomiting and exhaustion commonly follow the episode. The person does not appear to be ill between attacks.

Paroxysmal attacks occur more frequently at night, with an average of 15 attacks per 24 hours. During the first 1 or 2 weeks of this stage, the attacks increase in frequency, remain at the same level for 2 to 3 weeks, and then gradually decrease. The paroxysmal stage usually lasts 1 to 6 weeks but may persist for up to 10 weeks. Infants younger than 6 months of age may not have the strength to have a whoop, but they do have paroxysms of coughing.

In the convalescent stage, recovery is gradual. The cough becomes less paroxysmal and disappears in 2 to 3 weeks. However, paroxysms often recur with subsequent respiratory infections for many months after the onset of pertussis.

### Guidance for Clinicians During Pertussis Outbreaks

#### For Exposed Patients without Symptoms:

As a precaution to help protect vulnerable individuals, we are recommending antibiotic prophylaxis for this patient if he or she shares a household with a woman who is pregnant or an infant less than 12 months old. Alternatively, this patient is being referred to you because he or she has an immunodeficiency or lives with a person with an immunodeficiency and may require antibiotic prophylaxis to help prevent pertussis.

#### For Exposed Patients with Symptoms:

Based on resources from the Centers for Disease Control and Prevention (CDC), the Health Department is recommending the following guidelines for assessing and treating patients at this time:

##### For patients coughing <21 days:

1. Collect nasopharyngeal swabs or aspirate for pertussis PCR testing and/or culture.
2. Do not delay treatment with appropriate antibiotics while waiting for laboratory results if there is no alternative diagnosis.
3. Document and communicate all clinical decisions related to pertussis to the school (this includes children for whom pertussis has been ruled out).
4. Strongly consider antibiotic prophylaxis for all household members if a pregnant woman, an infant less than 12 months old, or anyone with a weakened immune system lives in the household.

##### For patients coughing ≥21 days:

1. Testing for pertussis is not recommended. Testing after 3 weeks of cough is of limited benefit since PCR and culture are only sensitive during the first 2 to 3 weeks of cough when bacterial DNA is still present in the nasopharynx.
2. Treatment is no longer necessary after 21 days, with the following exception: infants and pregnant women in their third trimester should be treated up through 6 weeks after cough onset.
3. The patient is no longer infectious and can return to school.

##### For all households:

Administer Tdap to contacts 11 years or older who have not been previously vaccinated with Tdap, DTaP to contacts 2 months through 6 years who are not up-to-date, or refer for vaccination.

#### \*Clarification for Care of Exposed People

Close contacts who are unimmunized or under-immunized should have pertussis immunization initiated or continued using age-appropriate products according to the recommended schedule as soon as possible.

PEP is recommended for all household contacts of the index case and other close contacts, including children in child care, regardless of immunization status. Close contact can be considered as face-to-face exposure within 3 feet of a symptomatic person; direct contact with respiratory, nasal, or oral secretions; or sharing the same confined space in close proximity to an infected person for >hour.

### Immunization Schedules

**Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine.** (Minimum age: 6 weeks. Exception: DTaP-IPV [Kinrix, Quadracel]: 4 years)

#### Routine vaccination:

- Administer a 5-dose series of DTaP vaccine at ages 2, 4, 6, 15 through 18 months, and 4 through 6 years. The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.
- Inadvertent administration of fourth DTaP dose early: If the fourth dose of DTaP was administered at least 4 months after the third dose of DTaP and the child was 12 months of age or older, it does not need to be repeated.

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### Catch-up vaccination:

- The fifth dose of DTaP vaccine is not necessary if the fourth dose was administered at age 4 years or older.

For more information about immunization schedules, visit:

<http://gethealthycarsoncity.org/immunizations/>

### Tdap and DTaP vaccinations are available at:

#### Carson City Health & Human Services

900 East Long Street, Carson City, NV, 89706

Walk-in immunizations are available every Thursday from 8:30-11:30am & 1:00-4:30pm.

Call (775) 887-2195 for more information.

#### Dayton Community Health Clinic

5 Pine Cone Road, Suite 103, Dayton, NV, 89403

Hours: Monday – Friday 8:00am-5:00pm, Closed for Lunch from 12:00-1:00pm.

Call (775) 246-6211 for more information.

#### Douglas County Community Health

1329 Waterloo Lane, Gardnerville, NV, 89410

Walk-in immunizations are available every Monday from 1:00-4:00pm.

Call (775) 782-9038 for more information.

#### Fernley Community Health Clinic

555 E. Main Street, Fernley, NV, 89408

Hours: Monday – Thursday 7:00am-5:30pm, Closed for Lunch from 12:30-1:00pm.

Call (775) 575-3363 for more information.

#### Yerington Community Health Clinic

26 Nevin Way, Yerington, NV, 89447

Hours: Monday – Friday 8:00am-4:30pm

Call (775) 463-6539 for more information.

### Laboratory Diagnosis

#### Quest Diagnostics

Bordetella pertussis and parapertussis DNA, Qualitative, Real-Time PCR |

**Test Code:** 11365X **CPT Code(s):** 87798 (x2)

#### LabCorp

Bordetella pertussis and Bordetella parapertussis, Real-time DNA PCR |

**Test Code:** 138677 **CPT Code:** 87798(x2)

#### Nevada State Public Health Laboratory

Call (775) 688-1335 for testing and coding information.

### Serum testing is not recommended for pertussis.

**Per NAC 441A, positive labs are required to be sent to the Health Department. CCHHS also highly recommends the reporting of suspected cases.**



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### Resources

The 13<sup>th</sup> Edition CDC Epidemiology and Prevention of Vaccine-Preventable Diseases ("Pink Book") – Chapter 16: Pertussis <https://www.cdc.gov/vaccines/pubs/pinkbook/pert.html>