



Communicable Disease Case Reporting and Investigation Protocol **PARAPERTUSSIS**

I. IDENTIFICATION AND DEFINITION OF CASES

A. **Clinical Description:** Parapertussis is a bacterial illness that is similar to pertussis (whooping cough) but is typically milder and infection may be asymptomatic. Parapertussis is caused by the bacterium *Bordetella parapertussis* (pertussis is caused by *Bordetella pertussis*). Patients infected by *B. parapertussis* may have prolonged cough, paroxysmal cough, whoop, and vomiting, however, these symptoms occur less frequently and for shorter duration than is typically seen with pertussis. Young infants may have a more severe course of parapertussis than older persons. Rarely, death can occur in infants with underlying health problems or in infants with *B. pertussis* coinfections (patients may be infected with *B. pertussis* and *B. parapertussis* at the same time).

B. **Laboratory Criteria:** Laboratory confirmed infection is defined by:

- Detection of *B. parapertussis* nucleic acid by polymerase chain reaction (PCR) from an adequate nasopharyngeal specimen, or
- Isolation of *B. parapertussis* by culture from clinical specimen (nasopharyngeal specimen is preferred).

Note: All test requests sent to the Wisconsin State Laboratory of Hygiene (WSLH) for *B. pertussis* include testing for *B. parapertussis*.

C. **Wisconsin Surveillance Case Definition:**

Confirmed: A positive PCR or culture laboratory result.

II. REPORTING

A. **Wisconsin Notifiable Disease Category I – Methods for Reporting:** Parapertussis is a Category I disease per Wis. Admin. Code § [DHS 145.04 \(3\) \(a\)](#) but will only be reportable through laboratory testing done for pertussis (pertussis lab testing includes parapertussis). As the symptoms for parapertussis are similar to pertussis, in most situations a provider will suspect pertussis and obtain testing which may result in a positive lab result for parapertussis.

B. **Clinical Criteria for Reporting:** None.

C. **Laboratory Criteria for Reporting:** Laboratory evidence of infection (e.g., PCR or culture).

III. CASE INVESTIGATION

Responsibility for case investigation and required documentation: Each patient with *B. parapertussis* infection should have a Parapertussis incident created in the Wisconsin Electronic Disease Surveillance System (WEDSS). The Department of Public Health (DPH) does not require thorough documentation of parapertussis incidents in WEDSS, but local health departments (LHDs) are encouraged to enter as much clinical information as is readily available in the Parapertussis incident. After documenting the *B. parapertussis* infection in the Parapertussis incident, set the process status to “Sent to State.” If the patient has an acute cough illness and a positive laboratory test result, the Resolution Status will be set to “Confirmed.”

IV. PUBLIC HEALTH INTERVENTIONS AND PREVENTION MEASURES

A. There are no national guidelines for the treatment or public health management of *B. parapertussis* infection. However, DPH recommends the following steps be taken to stop parapertussis from spreading to young infants.

B. Treatment of cases

- All persons, particularly infants, with parapertussis should promptly receive treatment with an appropriate antibiotic. Limited data suggest *B. parapertussis* is susceptible to both macrolides and trimethoprim-sulfamethoxazole (TMP-SMX). The dosing and dose schedule is the same as for *B. pertussis* infection.
- Observations from the extensive investigation of Wisconsin’s 2011-2012 parapertussis outbreak suggest that patients who receive antibiotic treatment early during the course of illness have shorter durations of cough

illness than patients who are not treated or are treated later (>14 days after cough onset) in the course of illness.

C. Prophylaxis of contacts

- If a case of paraptussis occurs in a household with an infant aged <6 months, prophylaxis of all household members with an appropriate antibiotic should be strongly considered.
- All infants aged <6 months should receive antibiotic prophylaxis if they have been in contact with a person who has paraptussis.
- Prophylaxis of asymptomatic contacts (except in the case of household member when there is an infant aged <6 months in the same household) is not recommended.

D. Isolation and exclusion

- Persons with B. paraptussis infection should avoid contact with infants aged <6 months until they have received five days of appropriate antibiotic treatment or 21 days have passed since cough onset.
- Persons with B. paraptussis infection are not recommended to be isolated or furloughed from school or work.

V. CONTACTS FOR CONSULTATION

- A. Local health departments and tribal health agencies: <https://www.dhs.wisconsin.gov/lh-depts/index.htm>
- B. Regional Immunization Program representatives: <https://www.dhs.wisconsin.gov/lh-depts/counties.htm>
- C. Bureau of Communicable Diseases (BCD), Immunization Program: 608-267-9959. BCD after-hours number: 608-258-0099.
- D. Wisconsin State Laboratory of Hygiene: 1-800-862-1013. After-hours emergency number: 608-263-3280.

VI. RELATED REFERENCES

- A. Heymann DL, ed. Pertussis. In: *Control of Communicable Diseases Manual*. 20th ed. Washington, DC: American Public Health Association, 2015: 389-397.
- B. Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. Pertussis. In: *Red Book: 2018 Report of the Committee on Infectious Diseases*. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics, 2018: 620-634.
- C. Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Hamborsky J, Kroger A, Wolfe S, eds. 13th ed. Washington D.C. Public Health Foundation, 2015.
- D. Centers for Disease Control and Prevention. Manual for the Surveillance of Vaccine-Preventable Diseases Pertussis website: <https://www.cdc.gov/vaccines/pubs/surv-manual/chpt10-pertussis.html>
- E. Wisconsin Immunization Program Pertussis webpage: <https://www.dhs.wisconsin.gov/immunization/pertussis.htm>
- F. Koepke R, Bartholomew ML, Eickhoff JC, Ayele RA, Rodd D, Kuennen J, *et al.* (2015). Widespread Bordetella paraptussis Infections-Wisconsin, 2011-2012: Clinical and Epidemiologic Features and Antibiotic Use for Treatment and Prevention. *Clin Infect Dis*. 61(9). 1421-31. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/26113655>.