

B. parapertussis Quicksheet

August 2023



Note:

Infection with *Bordetella parapertussis* is not reportable in California. This guidance is intended to assist with questions that may arise regarding public health management of this condition.

Pathogen

B. parapertussis is a bacterium that is similar to *B. pertussis*. It causes a pertussis-like illness that is generally milder than pertussis and does not produce pertussis toxin.

Clinical Symptoms

The symptoms of *B. parapertussis* infection are similar to those of pertussis (whooping cough) but are typically milder. Infection may be asymptomatic. Studies have shown that persons with *B. parapertussis* infection 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 (e.g., <6 months of age) 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 (persons infected with *B. pertussis* and *B. parapertussis* at the same time).

Incidence of Disease

It is estimated that 1% to 35% of known *Bordetella* infections are caused by *B. parapertussis*. Outbreaks are known to occur and have been reported in California.

Modes of Transmission

Transmission typically occurs when a susceptible person inhales aerosolized droplets from the respiratory tract of an infected person. Transmission via contact with fomites is thought to occur rarely, if ever.

Incubation Period

The incubation period is likely to be similar to that of pertussis: 7-10 days (range 5-21 days).

Period of Communicability

Persons with parapertussis are likely to be most infectious shortly after disease onset and for up to three weeks if no treatment is given. Communicability ends after 5 days of treatment.

Other *Bordetella* Species

B. bronchiseptica and *B. holmesii* can also infect humans. *B. bronchiseptica* primarily affects immunocompromised people and *B. holmesii* can cause chronic cough in healthy people.

Laboratory Diagnosis

B. parapertussis can be distinguished from *B. pertussis* via culture or PCR if a multi-target PCR assay is used that can detect insertion sequence elements (IS1001) specific to parapertussis.

Case Definition

There is no specific case definition for *B. parapertussis* infection because it is not a nationally notifiable disease and is not reportable in California. However, outbreaks of any disease, including *B. parapertussis* infection, should be reported to CDPH.

Case Management

There are no national guidelines for the treatment or public health management of *B. parapertussis* infection. Because data on the clinical effectiveness of antibiotic treatment are limited, treatment decisions should be based on clinical judgment with particular attention towards special populations, including infants, elderly, and immunocompromised persons; treatment may be warranted to prevent severe outcomes and decrease duration of illness. Limited available data suggest that *B. parapertussis* is less susceptible to antimicrobial agents than *B. pertussis*, although some studies indicate that macrolides, trimethoprim-sulfamethoxazole, and ciprofloxacin generally have activity against *B. parapertussis*. See CDC's [Manual for the Surveillance of Vaccine-Preventable Diseases](#).

Post-Exposure Prophylaxis (PEP)

Prophylaxis for people exposed to *B. parapertussis* is not recommended.

Vaccination

There is no vaccine for *B. parapertussis*; *B. pertussis* vaccines are thought to offer little or no protection against *B. parapertussis* infection.