A .gov website belongs to an official government organization in the United States. A lock ( ) or https:// means you've safely connected to the .gov website. Share sensitive information only on official, secure websites. Pertussis from the Infection Control in Healthcare Personnel: Epidemiology and Control of Selected Infections Transmitted Among Healthcare Personnel and Patients (2024) guideline. Healthcare-associated transmission of Bordetella pertussis (B. pertussis) has involved both patients and healthcare personnel (HCP); nonimmunized infants and children are at greatest risk for severe morbidity and mortality123456789101112. Serologic studies of HCP suggest that they may be infected with pertussis much more frequently than indicated by attack rates of clinical disease1314. Prevention of transmission of B. pertussis in healthcare settings involves: 51315 16 Guidelines for pertussis vaccination of HCP are maintained by ACIP in Prevention of Pertussis, Tetanus, and Diphtheria with Vaccines in the United States: Recommendations of the ACIP (https://www.cdc.gov/mmwr/volumes/67/rr/rr6702a1.htm). 131718In addition, information and recommendations addressing the potential need for revaccination of HCP with Tdap are available from the CDC webpage Evaluating Revaccination of Healthcare Personnel with Tdap: Factors to Consider (https://www.cdc.gov/vaccines/vpd/pertussis/tdap-revac-hcp.html).17 During pertussis outbreaks in healthcare settings, the risk for HCP contracting pertussis is often difficult to quantify because exposure is not well-defined13. Transmission of B. pertussis occurs through deposition of respiratory, oral, or nasal secretions from an infected source person on the mucous membranes of a susceptible host. Unprotected (e.g., not wearing a facemask), close, face-to-face contact with an infectious source person or contact with their secretions may be considered an exposure to pertussis. Close contact may include, but is not limited to, performing a physical examination on, feeding, or bathing a patient; bronchoscopy; intubation; or administration of bronchodilators. Determination of close contact may be more inclusive in settings where interaction with

persons at increased risk for severe pertussis is more likely. Pertussis is highly contagious; secondary attack rates exceed 80% in susceptible household contacts1920. The incubation period is usually 5 to 10 days, but symptoms may develop up to 3 weeks after exposure21. The clinical course of pertussis infection has 3 stages: catarrhal, paroxysmal, and convalescent. Populations at increased risk for serious complications and death from severe pertussis include: Symptomatic persons who receive effective antimicrobial therapy for pertussis are no longer contagious after 5 days of appropriate treatment1323. The period of communicability starts at the onset of the catarrhal stage and extends into the paroxysmal stage, up to 3 weeks after the onset of paroxysms21. Prevention of secondary transmission of pertussis is especially difficult during the early stages of the disease because pertussis is highly communicable in the catarrhal stage, when symptoms are nonspecific and the diagnosis is uncertain. Furthermore, clinical symptoms in adults and adolescents may be less severe than in children and young infants and may not be recognized as pertussis21. Diagnosis of pertussis is typically made based upon compatible clinical history and diagnostic laboratory testing. Although culture is considered the "gold standard" for establishing a diagnosis of pertussis, polymerase chain reaction (PCR) provides sensitive results more rapidly2425. More detailed information regarding testing persons for pertussis is available on the CDC Pertussis (Whooping Cough) Diagnostic Testing website (https://www.cdc.gov/pertussis/clinical/diagnostic-testing/specimen-collection-diagnosis.html).26 Other Bordetella species (e.g., B. parapertussis, B. holmesii) may be detected and can occur alone or simultaneously with B. pertussis infection2728293031. Although the clinical presentation for B. parapertussis is similar to that of B. pertussis, B. parapertussis usually causes less severe disease, which may be related to its lack of production of pertussis toxin27283233. One report from 1971 estimated that 3-4% of patients with parapertussis develop clinical disease, compared to 75% with pertussis33.

The severity of parapertussis illness among special populations, such as infants and immunocompromised persons, is unclear, with few hospitalizations and related deaths reported343536373839. Data on the effectiveness of antibiotics for the treatment or chemoprophylaxis of B. parapertussis are also limited. Some states have parapertussis postexposure and illness management guidance, and some institutions choose to apply pertussis strategies for parapertussis2540. Vaccinated HCP may still be susceptible to pertussis due to waning immunity, lack of response to the vaccine, immunosuppression, or other factors. Because vaccinated HCP may still be at risk for pertussis infection, vaccination does not preclude the need for PEP, when indicated131718. Data on the efficacy of, and need for, PEP in Tetanus, Diphtheria, Pertussis (Tdap)-vaccinated HCP are inconclusive, but studies suggest that it may minimize transmission513414243. The preferred agents for postexposure prophylaxis are azithromycin, erythromycin, and clarithromycin44. Trimethoprim-sulfamethoxazole (TMP-SMZ) may also be used as an alternative agent. Detailed information regarding dosage and administration of PEP is available in the Recommended Antimicrobial Agents for the Treatment and Postexposure Prophylaxis of Pertussis, 2005 CDC Guidelines (https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5414a1.htm).44 Information and recommendations on the potential need for booster doses of vaccine during outbreaks or periods of increased risk for healthcare-associated transmission of pertussis can be found on the CDC Pertussis (Whooping Cough) website (https://www.cdc.gov/pertussis/outbreaks.html).45 CDC provides information on infection control and clinical safety to help reduce the risk of infections among healthcare workers, patients, and visitors. Languages Language Assistance Languages Language Assistance

Source URL:

https://www.cdc.gov/infection-control/hcp/healthcare-personnel-epidemiology-control/pertussis.html