CDPH
Chicago Department of Public Health

Clinical Guidelines for Management of Healthcare Personnel Exposed to Pertussis

Background

Transmission of pertusiss in healthcare settings has been documented and index cases have included healthcare personal (HCP), patients, and visitors. The following groups are at increased risk for serious complications and death from severe pertussis[1]:

- Infants under 12 months of age
- Women in their third trimester of pregnancy
- Persons with pre-existing health conditions that may be exacerbated by pertussis infection. These people include, but are not limited to, immunocompromised people and those with moderate to severe medically treated asthma.

Prevention of pertussis transmission in healthcare settings involves vaccination of HCP against pertussis, diagnosis and early treatment of patients with clinical infection, placing infectious patients on droplet precautions, excluding HCP who are infectious from work, and appropriately administering postexposure prophylaxis (PEP).

Pertussis Vaccination Recommendations for HCP

The Advisory Committee of Immunization Practices (ACIP) recommends that all HCP, regardless of age, should receive a single dose of Tdap as soon as feasible if they have not previously received Tdap and reguardless of the time since their most recent Td vaccination.[2] After receipt of Tdap, a dose of Td or Tdap is recommended every 10 years. See ACIP guidance for factors to consider when evaluating Tdap revaccination of HCP: https://www.cdc.gov/vaccines/vpd/pertussis/tdap-revac-hcp.html. Vaccination status does not alter postexposure prophylaxis or exclusion guidance.

Unprotected Exposures in Healthcare Settings

Exposure to pertussis is not well defined but should be considered among people within range of droplet contamination from an infected person for several minutes or those who had close contact with their saliva.[3] Examples of close contact situations include:

- Having face-to-face contact within 3 feet of the case without wearing a surgical mask or other protection of the face and respiratory tract; this includes performing a medical examination without a mask or obtaining a NP swab specimen or other procedures which generate small aerosols such as open suctioning, intubating or performing bronchoscopy without a surgical mask, eyewear and gloves.
- Conducting any procedure that induces coughing of the case, even if farther from the case-patient than 3 feet, without wearing a surgical mask, eye wear and gloves.

- Coming into direct mucosal contact with respiratory, oral or nasal secretions of the case or via fomites.
- Sharing a room with the case; the degree of contact and risk of infection in such situations should be evaluated on a case-by-case basis.

Please note: If a surgical mask was worn by the case and/or the contact during the entire exam, there is no need for prophylaxis of the contact. In general, individuals who were in waiting rooms or other care areas at the same time as a pertussis case should not be considered close contacts.

Post-Exposure Management of HCP

Risk factors	Postexposure prophylaxis (PEP)*	Work exclusion	Symptom monitoring
HCP who are likely to interact with persons at increased risk for severe pertussis	PEP is recommended.	No restriction from duty is required if antibiotics are taken. If antibiotics are not taken, restrict from contact (e.g., furlough, duty restriction) with patients and other persons at increased risk for severe pertussis for 21 days after the last exposure.	Educate HCP about symptoms of pertussis. All exposed HCP should notify occupational health of any symptoms of illness through 21 days after exposure. Exclude from a work facility immediately if symptoms occur, place on sick leave, and refer for medical evaluation and diagnstoic testing.
HCP who are not likely to interact with persons at increased risk for severe pertussis	PEP is recommended OR implement daily monitoring for 21 days after the last exposure for development of symptoms.	No restriction from duty is required.	
HCP who have preexisting health conditions that may be exacerbated by a pertussis infection	PEP is recommended.	No restriction from duty is required.	

**The preferred agents for postexposure prophylaxis are azithromycin, erythromycin, and clarithromycin. 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.*[4]

CDPH
Chicago Department of Public Health

Management of HCP with Illness due to Pertussis

Cough duration	Diagnostic evaluation	Treatment	Work exclusion
Coughing for ≤ 21 days	Refer for medical evaluation and diagnostic testing.	Begin effective antimicrobial therapy. Treatment is recommended regardless of immunization status.	Exclude from work until the completion of the first 5 days of antibiotic therapy or 21 days from the onset of cough for those who do not receive effective antimicrobial therapy.
Coughing for > 21 days	Refer for medical evaluation and diagnostic testing.	Antibiotic treatment is not recommended, as initiating treatment >21 days after onset of cough is unlikely to be beneficial†.	No restriction from duty.

†Situations in which treatment is recommended >21 days after cough onset: Treatment should be initiated within 42 days (6 weeks) of cough onset in infants aged <1 year and pregnant women (especially those near term).

Reporting Pertussis in Chicago

All cases of pertussis must be reported to CDPH within 24 hours through Illinois' National Electronic Disease Surveillance System (I-NEDSS). Healthcare facilities without access to I-NEDSS may report by using the online case report form: https://redcap.link/ChicagoVPDReport or by calling (312) 743-9000, Monday-Friday between 8:30am-4:30pm. After hours, weekends, and holidays, call 311 and ask for the communicable disease physician on-call.

References

1. Centers for Disease Control and Prevention. Manual for the Surveillance of Vaccine-Preventable Diseases. Chapter 10: Pertussis. http://www.cdc.gov/vaccines/pubs/surv-manual/chpt10-pertussis.html
2. Centers for Disease Control and Prevention. Prevention of Pertussis, Tetanus, and Diphtheria with Vaccines in the United States: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Recomm Rep 2018;67(No. RR-2):1–44. https://www.cdc.gov/mmwr/volumes/67/rr/rr6702a1.htm
3. Centers for Disease Control and Prevention. Infection Control in Healthcare Personnel: Epidemiology and Control of Selected Infections Transmitted Among Healthcare Personnel and Patients. Accessed November 28, 2022 from: https://www.cdc.gov/infectioncontrol/guidelines/healthcare-personnel/selected-infections/index.html.
4. Centers for Disease Control and Prevention. Recommended antimicrobial agents for

the treatment and postexposure prophylaxis of pertussis: 2005 CDC Guidelines. MMWR. 2005;54(RR14):1-16
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5414a1.htm