

Supplemental Information



Table 1. Suggest work restrictions for healthcare personnel infested with or exposed to major infectious diseases in healthcare settings, in the absence of state and local regulations.*

Disease/ Problem	Work Restriction	Duration
Conjunctivitis	Restrict from patient contact and contact with patient's environment. No restriction	Until discharge ceases
virus infection Diarrheal disease Acute stage (diarrhea with other symptoms)	Restrict from patient contact, contact with patient's environment, and food-handling.	Until symptoms resolve
Convalescent stage, Salmonella species	Restrict from care of patients at high risk.	Until symptoms resolve; consult with local & state health authorities regarding need for negative stool cultures
Enteroviral infection	Restrict from care of infants, neonates, and immunocompromised patients and their environments.	Until symptoms resolve
Hepatitis A	Restrict from patient contact, contact with patient's environment, and food-handling.	Until 7 days after onset of jaundice
Hepatitis B Personnel with acute or chronic hepatitis B surface antigenemia who do not perform exposure-prone procedures	No restriction†; refer to state regulations. Standard precautions should always be followed.	
Personnel with acute or chronic hepatitis B e antigenemia who perform exposure-prone procedures	Do not perform exposure-prone invasive procedures until counsel from a review panel has been sought; panel should review and recommend procedures that personnel can perform, taking into account specific procedures as well as skill and technique. Standard precautions should always be observed. Refer to state and local regulations or recommendations.	Until hepatitis B e antigen is negative
Hepatitis C	No restrictions on professional activity.† HCV-positive health-care personnel should follow aseptic technique and standard precautions.	
Herpes simplex Genital Hands (herpetic whitlow) Oral facial	No restriction Restrict from patient contact and contact with patient's environment. Evaluate need to restrict from care of patients at high risk.	Until lesions heal
Human immunodeficiency virus; personnel who perform exposure-prone procedures	Do not perform exposure-prone invasive procedures until counsel from an expert review panel has been sought; panel should review and recommend procedures that personnel can perform, taking into account specific procedures as well as skill and technique. Standard precautions should always be observed. Refer to state and local regulations or recommendations.	
Measles Active Postexposure (susceptible personnel)	Exclude from duty Exclude from duty	Until 7 days after the rash appears From fifth day after first exposure through twenty-first day after last exposure, or 4 days after rash appears
Meningococcal infection	Exclude from duty	Until 24 hours after start of effective therapy
Mumps Active Postexposure (susceptible personnel)	Exclude from duty Exclude from duty	Until 9 days after onset of parotitis From twelfth day after first exposure through twenty-sixth day after last exposure, or until 9 days after onset of parotitis

*Source: Adapted from Bolyard EA, Hospital Infection Control Practices Advisory Committee. Guidelines for infection control in health care personnel, 1998. Am J Infect Control Committee on Immunization Practices (ACIP). † Unless epidemiologically linked to transmission of infection. §1998;26:289–354.

*Modified from recommendations of the Advisory Com

Table 1. (Continued) Suggest work restrictions for healthcare personnel infested with or exposed to major infectious diseases in healthcare settings, in the absence of state and local regulations.*

Disease/ Problem	Work Restriction	Duration
Pediculosis	Restrict from patient contact	Until treated and observed to be free of adult and immature lice
Pertussis Active	Exclude from duty	From beginning of catarrhal stage through third week after onset of paroxysms, or until 5 days after start of effective antibiotic therapy
Postexposure (asymptomatic personnel)	No restriction, prophylaxis recommended	Until 5 days after start of effective antibiotic therapy
Postexposure (symptomatic personnel)	Exclude from duty	
Rubella Active	Exclude from duty	Until 5 days after rash appears
Postexposure (susceptible personnel)	Exclude from duty	From seventh day after first exposure through twenty-first day after last exposure
Staphylococcus aureus infection Active, draining skin lesions	Restrict from contact with patients and patient's environment or food handling. No restriction unless personnel are epidemiologically linked to transmission of the organism	Until lesions have resolved
Carrier state		
Streptococcal infection, group A	Restrict from patient care, contact with patient's environment, and food-handling.	Until 24 hours after adequate treatment started
Tuberculosis Active disease	Exclude from duty	Until proved noninfectious
PPD converter	No restriction	
Varicella (chicken pox) Active	Exclude from duty	Until all lesions dry and crust
Post-exposure (susceptible personnel)	Exclude from duty	From tenth day after first exposure through twenty-first day (twenty-eighth day if varicella-zoster immune globulin [VZIG] administered) after last exposure.
Zoster (shingles) Localized, in healthy person	Cover lesions, restrict from care of patients§ at high risk	Until all lesions dry and crust
Generalized or localized in immuno-suppressed person	Restrict from patient contact	Until all lesions dry and crust
Postexposure (susceptible personnel)	Restrict from patient contact	From tenth day after first exposure through twenty-first day (twenty-eighth day if VZIG administered) after last exposure; or, if varicella occurs, when lesions crust and dry
Viral respiratory infection, acute febril	Consider excluding from the care of patients at high risk or contact with such patients' environments during community outbreak of respiratory syncytial virus and influenza	Until acute symptoms resolve

Source: Adapted from Bolyard EA, Hospital Infection Control Practices Advisory Committee. Guidelines for infection control in health care personnel, 1998. Am J Infect Control 1998;26:289–354.

*Modified from recommendations of the Advisory Committee on Immunization Practices (ACIP).

†Unless epidemiologically linked to transmission of infection.

§Those susceptible to varicella and who are at increased risk of complications of varicella (e.g., neonates and immunocompromised persons of any age).

Patients at high risk as defined by ACIP for complications of influenza.

Appendix B

Immunizations Strongly Recommended for Health-Care Personnel (HCP)

Vaccine	Dose schedule	Indications	Major precautions and contraindications	Special considerations
Hepatitis B recombinant vaccine*	Three-dose schedule administered intramuscularly (IM) in the deltoid; 0,1,6 - second dose administered 1 month after first dose; third dose administered 4 months after second. Booster doses are not necessary for persons who have developed adequate antibodies to hepatitis B surface antigen (anti-HBs).	Health-care personnel (HCP) at risk for exposure to blood and body fluids.	History of anaphylactic reaction to common baker's yeast. Pregnancy is not a contraindication.	No therapeutic or adverse effects on hepatitis B virus (HBV)-infected persons; cost-effectiveness of prevaccination screening for susceptibility to HBV depends on costs of vaccination and antibody testing and prevalence of immunity in the group of potential vaccinees; health-care personnel who have ongoing contact with patients or blood should be tested 1–2 months after completing the vaccination series to determine serologic response. If vaccination does not induce adequate anti-HBs (>10 mIU/mL), a second vaccine series should be administered.
Influenza vaccine (inactivated)	Annual single-dose vaccination IM with current vaccine.	HCP who have contact with patients at high risk or who work in chronic-care facilities; HCP aged >50 years or who have high-risk medical conditions.	History of anaphylactic hypersensitivity to eggs or to other components of the vaccine.	Recommended for women who will be in the second or third trimesters of pregnancy during the influenza season and women in any stage of pregnancy who have chronic medical conditions that are associated with an increased risk of influenza.§
Measles live-virus vaccine	One dose administered subcutaneously (SC); second dose >4 weeks later.	HCP who were born during or after 1957 without documentation of 1) receipt of 2 doses of live vaccine on or after their first birthday, 2) physician-diagnosed measles, or 3) laboratory evidence of immunity. Vaccine should also be considered for all HCP who have no proof of immunity, including those born before 1957.	Pregnancy; immunocompromised† state (including human immunodeficiency virus [HIV]-infected persons with severe immunosuppression); history of anaphylactic reactions after gelatin ingestion or receipt of neomycin; or recent receipt of antibody-containing blood products.	Measles, mumps, rubella (MMR) is the recommended vaccine, if recipients are also likely to be susceptible to rubella or mumps; persons vaccinated during 1963–1967 with 1) measles killed-virus vaccine alone, 2) killed-virus vaccine followed by live-virus vaccine, or 3) a vaccine of unknown type, should be revaccinated with two doses of live-virus measles vaccine.
Mumps live-virus vaccine	One dose SC; no booster.	HCP believed susceptible can be vaccinated; adults born before 1957 can be considered immune.	Pregnancy; immunocompromised† state; history of anaphylactic reaction after gelatin ingestion or receipt of neomycin.	MMR is the recommended vaccine.
Rubella live-virus vaccine	One dose SC; no booster.	HCP, both male and female, who lack documentation of receipt of live vaccine on or after their first birthday, or lack of laboratory evidence of immunity can be vaccinated. Adults born before 1957 can be considered immune, except women of childbearing age.	Pregnancy; immunocompromised† state; history of anaphylactic reaction after receipt of neomycin.	Women pregnant when vaccinated or who become pregnant within 4 weeks of vaccination should be counseled regarding theoretic risks to the fetus; however, the risk of rubella vaccine-associated malformations among these women is negligible. MMR is the recommended vaccine.
Varicella-zoster live-virus vaccine	Two 0.5 mL doses SC 4–8 weeks apart if aged >13 years.	HCP without reliable history of varicella or laboratory evidence of varicella immunity.	Pregnancy; immunocompromised† state; history of anaphylactic reaction after receipt of neomycin or gelatin; recent receipt of antibody-containing blood products; salicylate use should be avoided for 6 weeks after vaccination.	Because 71%–93% of U.S.-born persons without a history of varicella are immune, serologic testing before vaccination might be cost-effective.

Sources: Adapted from Bolyard EA, Hospital Infection Control Practices Advisory Committee. Guidelines for infection control in health care personnel, 1998. Am J Infect Control 1998;26:289–354. CDC. Immunization of health-care workers: recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC). MMWR 1997;46(No. RR-18).

CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2003;52:1–34.

CDC. Using live, attenuated influenza vaccine for prevention and control of influenza: supplemental recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2003;52(No. RR-13).

* A federal standard issued in December 1991 under the Occupational Safety and Health Act mandates that hepatitis B vaccine be made available at the employer's expense to all HCP occupationally exposed to blood or other potentially infectious materials. The Occupational Safety and Health Administration requires that employers make available hepatitis B vaccinations, evaluations, and follow-up procedures in accordance with current CDC recommendations.

† Persons immunocompromised because of immune deficiencies, HIV infection, leukemia, lymphoma, generalized malignancy; or persons receiving immunosuppressive therapy with corticosteroids, alkylating drugs, antimetabolites; or persons receiving radiation.

§ Vaccination of pregnant women after the first trimester might be preferred to avoid coincidental association with spontaneous abortions, which are most common during the first trimester. However, no adverse fetal effects have been associated with influenza vaccination.

¶ A live attenuated influenza vaccine (LAIV) is FDA-approved for healthy persons aged 5–49 years. Because of the possibility of transmission of vaccine viruses from recipients of LAIV to other persons and in the absence of data on the risk of illness and among immunocompromised persons infected with LAIV viruses, the inactivated influenza vaccine is preferred for HCP who have close contact with immunocompromised persons.

Active Shooter Supplemental Information

There are several things a healthcare facility can do to ensure safety for their employees. Practices will want to ensure the following:

1. Organizational Preparedness

a. Emergency Action Plan

Preparing an emergency action plan helps employees know and understand proper procedures. A successful plan should include:

- How to report emergencies to authorities
- Evacuation policies and escape procedures
- Contact information for area hospitals and individual who perform specific tasks during emergencies

b. Training Exercises

- Develop training exercises that simulate active shooter situations
- Contact local law enforcement and emergency response agencies for their assistance
- Training includes the following
 - Recognizing the sound of gunfire
 - When to dial 911
 - What to do when law enforcement arrives
 - Understanding a “survival mindset”

*see training exercise

c. Preventative Measures

- Cultivate a respectful environment in the workplace
- Watch for signs of workplace violence and take necessary corrective actions

d. Organizational Responsibilities

- Perform background checks for all new employees
- Implement a workplace violence reporting system
- Provide resources

e. Warning Signs

- Before an incident, active shooters usually exhibit traits of potentially violent behavior over an extended period of time
- Know the warning signs and train employees
- Report signs of potentially violent behavior to a manager

- Common traits that may be indicative of potentially violent behavior:
 - Resistance to policy or procedural changes
 - Increased mood swings
 - Unprovoked outbursts of rage or anger
 - Increased talk of personal, financial or domestic issues
 - Increased absences
 - Talk of suicide or preparing for death
- Shooter Statistics
 - Usually associated with the location of the incident
 - May be current employees or friends or relations of employees

2. Active Shooter Response

a. What to Expect

- Active shooter incidents are rarely prolonged
 - Many are over in a matter of minutes
 - Often end before law enforcement can arrive
 - End when the active shooter stops shooting and flee or take their own lives

b. Evacuation

- First plan is to evacuate
- Have an escape route in mind
- Evacuate regardless of whether others agree to follow
- Leave your belongings behind
- If possible, help others to escape
- Prevent individuals from entering an area where the shooter might be
- Keep your hands visible
- Do not move wounded individuals
- Call 911 when you are safe

c. Hiding

- If you are not able to evacuate, find a safe place to hide
- A safe hiding place should:
 - Be out of view from the shooter
 - Provide protection if shots are fired in your direction
 - Allow safe access to possible evacuation routes
- If the shooter approaches your hiding place
 - Lock and barricade the door, if possible
 - Set any mobile devices to silent and turn off any other sources of noise
 - Hide behind a large item
 - Stay quiet

d. If Unable to Evacuate or Hide

- Keep call
- Dial 911 to notify police of the shooter's location

e. The Last Resort

- Attempting to incapacitate an active shooter is strictly a last resort. Never attempt to confront a shooter unless your life is in immediate danger and there are not safe evacuation routes or hiding places
- Strategies recommended:
 - Acting as aggressively as possible against him/her
 - Throwing items and improvising weapons
 - Yelling
 - Committing to your actions

f. When Law Enforcement Arrives

- Police officers may be outfitted with tactical equipment and high-powered firearms
- Officers will proceed directly to the shooter's last known location and will not stop to tend to wounded individuals
- If you encounter police officers:
 - Officers may shout or push individuals to make sure they are out of harm's way.
 - Keep calm and obey orders
 - Put down any items you may be carrying and raise your hands and spread your fingers
 - Do not make any sudden or quick movements in the direction of the officers
 - Avoid screaming, yelling or pointing
 - Continue in the direction from which the officers are coming from and do not ask them for help

3. Post-Incident Actions

a. Immediate Response

- Take a count of personnel to determine if anyone is missing and/or wounded.
- Contact families of those involved
- Implement plans to provide counseling or psychological care for employees

b. Analyzing the Incident

- Thoroughly document the incident
- Document response activities
- Identify successful actions and procedures that took place
- Identify areas where stronger preventative measures or more training is required
- Evaluate the existing emergency action plan's effectiveness. Make recommendations for improvement as needed

Active Shooter and Workplace Violence Training Exercises

The scenario below looks at the incident from the perspective of first responders and the private sector owner/operators. As the scenario develops, the reader should identify actions relevant to their company and position within the company. The scenarios only look at the incident and do not take into consideration recovery, business continuity planning, or after-event considerations.

Dental Office

Date: Friday, February 19

Time: 11:00am EST

A member of your dental team, who has been with your company for eight years, has just had his employment terminated. As he is escorted out of the building by security, he tells them they will regret treating him like this.

- Who should be informed of this behavior?
- What concerns might you have?
- What actions would you consider taking, if any, at this stage?

Date: Monday, April 5 Time: 9:15 am EST A popping sound is heard within the building. An employee runs into your office shouting that there is a man firing a gun in the waiting area.

- What actions should you take?
- How are you communicating with employees? Who is communicating?
- Who is in charge of the situation?

Update:

You decide to shelter in place in an office and secure the immediate area.

The popping noises seems to be close. There is yelling and screaming outside your door.

- What actions are taken to secure the area?
- Who is responsible for contacting law enforcement?
 - What information do you relay to them?
- What are you telling your employees?

Update: A woman knocks frantically on your door pleading to be let in.

- What action will you take to ensure your office remains secure?
 - o What will you do about the woman outside your door?
- What additional concerns do you have at this time?

Update: You hear someone attempting to open the door, then several loud shots. After a few minutes of silence, it appears that the shooter may have moved on.

- What are your immediate concerns at this time?
- What do you tell coworkers sheltering in place with you?

Update: For nearly an hour there is no sound from outside your door. Employees are receiving calls from family members who have learned of the active shooter in your building. Emergency personnel can be seen outside. Several employees express interest in leaving.

- Who is responsible for deciding when it is safe to leave the secure area?
- How will family members be contacted?

Update: Law enforcement personnel arrive outside your office door and direct you to evacuate the building.

- How do you prepare your employees for the disturbing scenes they may encounter as they evacuate?
- Who is responsible for communicating with law enforcement?
- What concerns do you have leaving your office unsecure?

Update: Upon evacuation, your employees are cornered by news reporters asking about the experience. Some employees do not have their car or house keys and are concerned about getting home.

- Who is responsible for communicating with news media?
 - o What information will you give them?
 - o Can you control who else the media approaches? If not, what can you do?
- How will your employees get home?
 - o Will you request access back into the building? Who would go in?

Update: The building is designated a crime scene and is closed for a week.

- Who initiates business continuity plans?
- What else needs to be considered?
- How is information disseminated to employees?

Update: Date: Monday, April 12 You can get back into the building and resume normal business operations. Several employees ask for more time to emotionally recover from the event.

- Are you able to continue normal business operations using fewer staff?
- How will you accommodate individuals who have been emotionally traumatized by the event?
- What resources will you make available to all staff?
- How will you communicate your company's resilience to concerned clients? Additional considerations:
- Upon arriving on scene, law enforcement officials will remove the threat before treating victims and evacuating survivors. It is important to be patient and stay in the secure area until you are instructed to evacuate
- Because some employees may not feel comfortable returning to work right away, be prepared to work with a dispersed or smaller work force following an active shooter event.
- Ensure mental health professionals are available for employees.