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HAI-Lights Newsletter

An infection prevention and control resource for academic partners

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HAI-Lights Refresher Question – The Winter 2025 newsletter discussed transmission-based infection control precautions. Answer this question to test your memory; find the **solution on page three**.

True or **False:** Before implementing transmission-based precautions, you must wait for test results to confirm a diagnosis.

Contents

Bloodborne Pathogens

Healthcare workers must be careful to avoid diseases spread through contact with blood and other bodily fluids. Infectious microorganisms in human blood, called bloodborne pathogens, cause over 20 known diseases (e.g., human immunodeficiency virus, hepatitis B, and hepatitis C) (Beltrami et al., 2000; OSHA, n.d.).

Bloodborne pathogens spread through direct contact (i.e., patient blood or bodily fluid splashing onto a mucous membrane or a correct entry site, such as a healthcare worker's eye), indirect contact (e.g., touching soiled dressings without gloves), and respiratory droplets (i.e., fluid from a cough or sneeze that contains blood) (American Red Cross, 2011).

Healthcare workers are at increased risk of exposure to bloodborne pathogens due to workplace hazards; exposures are typically caused by accidental needle sticks and sharps injuries (OSHA, n.d.). This newsletter covers best practices to prevent and respond to bloodborne pathogen exposures in healthcare settings.

Transmission Prevention

CDC's hierarchy of controls identifies methods to improve workplace safety, ranked by implementation efficacy (based on simplicity, cost, potential impact). The hierarchy of controls features three methods to prevent bloodborne pathogen transmission: 1) elimination or substitution of risk, 2) engineering controls, and 3) administrative policies and procedures.

Elimination or substitution of risk is the most effective method of control (CDC, 2024). Reducing the presence of sharps in the healthcare environment (e.g., needle-free medication delivery systems) and using machinery and tools with blunt ends (e.g., blunt surgical suture needles) drastically decreases exposure risk (CDC, 2024).

The next best prevention method is **engineering controls**. Certain equipment contains technological features to prevent injuries that transmit bloodborne pathogens. Utilizing devices such as sharps containers, retracting needles, and hinged needles reduces risk even when devices are not in use (CDC, 2024).

The final method of protection is creating **administrative policies and procedures**, which include:

- Exposure control plan – identifies workplace risks and should be updated annually (review a template, model example, and tips and tricks)
- Preventive policies – e.g., labeling and properly disposing of hazardous waste and full sharps containers
- Protocols for exposures – ensures steps can be quickly followed to mitigate subsequent negative outcomes

Additionally, healthcare workers should **follow standard precautions** by wearing proper personal protective equipment (e.g., gowns, gloves, and masks). Standard precautions are an important barrier to prevent the transfer of blood and other bodily fluids between patients and caretakers (CDC, 2024).

Emergency Sharps Information

Preventive measures are the best way to mitigate the spread of bloodborne infections (CDC, 2024). However, if exposure to blood or bodily fluids occurs:

- Wash needlesticks and cuts with soap and water for at least 15 minutes
- Flush nose or mouth exposures with water several times
- Irrigate eye exposures with clean water or saline for at least 15 minutes
- Report the incident to a designated supervisor
- Immediately seek medical treatment

Call the Clinicians' Post-Exposure Prophylaxis (PEP) Line at 1-888-448-4911 for questions about proper workplace exposure medical treatment (CDC, 2024).

CDC Project Firstline

When we practice consistent infection control–every person, every action, every day–lives are saved. The Healthcare Safety Unit joins Project Firstline, a CDC-led **infection control training collaborative for healthcare workers**. Explore these resources and share them with peers: 1) Recognizing Risks in Health Care and 2) Learn Where Germs Live in Health Care.

PROJECT FIRSTLINE

Project Firstline offers resources for public health and healthcare workers to learn **what to do when they encounter blood** and how to avoid needlestick injuries in the workplace. Visit CDC's "Blood Micro-Learn Discussion Guide" to discover more.

Antimicrobial Stewardship

Sepsis is one of the most common healthcare-associated adverse events, affecting millions of patients each year (CDC, 2025). Bloodstream infections occur when bloodborne pathogens enter the bloodstream; sepsis is an inappropriate immune response triggered by these infections, potentially leading to severe organ damage and even death.

Providers are encouraged to treat infections quickly to prevent the spread of pathogens and negative outcomes, such as sepsis. However, improper treatment of infections (e.g., prescribing a broad-spectrum antibiotic when a narrow-spectrum option is available, or treating a virus with antibiotics), including those caused by bloodborne pathogens, can result in antimicrobial-resistant organisms that no longer respond to the medications meant to kill them.

Antimicrobial stewardship promotes responsible antimicrobial use and proper infection control precautions prevent the spread of organisms; **combined efforts reduce antimicrobial-resistant infections**. It is critical for providers to follow prescribing guidelines to balance both priorities: antimicrobial stewardship and sepsis management.

Read more on this complex issue: CDC Hospital Sepsis Program Core Elements, CDC Core Elements of Hospital Antimicrobial Stewardship Programs, CDC Protect Your Patients From Sepsis Factsheet

Healthcare Safety Unit

The Healthcare Safety Unit at the Department of State Health Services promotes **safe and quality healthcare through awareness, education, transparency, monitoring, and response**, improving the well-being of all Texans. The Unit has two multidisciplinary groups: 1) Epidemiologic Investigations and 2) Data and Training.

Additional Resources

- Subscribe to the HAI-Lights Newsletter and provide feedback to help us improve
- CDC Infection Control Basics
- Association for Professionals in Infection Control and Epidemiology
- Texas Society of Infection Control and Prevention

HAI-Lights Refresher Answer – True or False: Before implementing transmission-based precautions, you must wait for test results to confirm a diagnosis.

False – You do not need to wait for test results to confirm a diagnosis before implementing transmission-based precautions.

References

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