HAI-Lights Newsletter

An infection prevention and control resource for academic partners

Winter 2025
Volume 3 | Issue 1

Texas Department of State Health Services
Healthcare Safety Unit
dshs.texas.gov/healthcare-safety-unit
HAITEXAS@dshs.texas.gov

HAI-Lights Refresher Question: The Fall 2024 newsletter discussed standard infection control precautions. Answer this question to test your memory; find the **solution on page three**.

True or **False:** Soap and water is the preferred method of hand hygiene for healthcare workers.

Contents

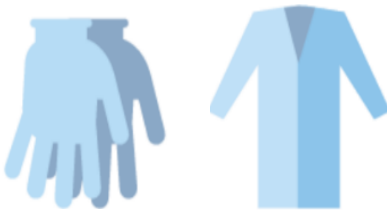
Transmission-Based Infection Control Precautions

This newsletter is part two of a two-part series on how healthcare workers and patients can prevent infection and microorganism spread through infection control precautions. Part one of this series reviewed standard precautions (applied universally in patient care); this newsletter covers transmission-based precautions.

Transmission-based precautions consist of three categories: **contact**, **droplet**, and **airborne** (CDC, 2007). These preventive measures are used in addition to standard precautions for patients with known or suspected infections, or colonization with certain infectious agents (CDC, 2024a). Transmission-based precautions are implemented once a patient presents symptoms or is suspected of infection or colonization; there is no need to wait for test results to confirm a diagnosis.

Transmission-based precautions are also known as "**isolation precautions**" because patients are treated in a single patient room or with others with the same disease. Healthcare workers should use dedicated or disposable equipment when possible. The patient's room, bathroom, and reusable equipment must be cleaned and disinfected with products that have an **effective kill claim and dwell time** for the suspected organism. Kill claims and dwell times are found on product labels. Kill claims identify pathogens eliminated by the disinfectant; dwell times state how long the disinfectant must be wet on the surface to ensure product effectiveness (Texas HHS, 2021).

Contact Precautions



Contact precautions protect against diseases spread by direct or indirect contact with the patient or surrounding environment. **Direct contact** spreads microorganisms from infected to healthy individuals through touch (e.g., blood or bodily fluid contact; CDC, 2022). **Indirect contact** spreads germs through contaminated objects, air particles, or vectors (e.g., fleas, ticks, mosquitoes). Examples of pathogens that spread via contact transmission are vancomycin-resistant *Enterococci* (VRE), methicillin-resistant *Staphylococcus aureus* (MRSA), and *Clostridium difficile* (C. diff).

Healthcare workers treating patients on contact precautions should put on personal protective equipment (PPE, e.g., gowns and gloves) before entering patient rooms and remove them before exiting. The correct contact precaution signage should be placed outside patient rooms.

Droplet Precautions

Droplet precautions prevent the spread of infections transmitted through **respiratory droplets** when someone coughs, sneezes, or talks (CDC, 2007). Droplets are larger than airborne particles and travel short distances (3-6 feet). Pathogens requiring droplet precautions include *Mycoplasma pneumonia*, Pneumonia Adenovirus, and Rhinovirus.

Patients with qualifying infections should be isolated to protect others, and anyone interacting with them must wear proper PPE (e.g., masks, gowns, and gloves). Droplet precaution signage should be placed outside patient rooms.

Airborne Precautions

Airborne precautions prevent the spread of infections that travel through the air and remain suspended for long periods. These infections spread through air particles that can be inhaled by anyone **sharing common airspace**. Conditions requiring airborne precautions include tuberculosis, measles, and chickenpox.

Steps to stop the spread of airborne infections:

- Place patients in an **airborne infection isolation room** (AIIR) to allow for negative pressure ventilation. Negative pressure ventilation pulls air into the room but does not allow it back into shared areas, thus limiting air contamination.
- Use proper PPE (e.g., fit-tested NIOSH-approved N95 or higher-level respirators, gowns, and gloves).
- Place correct airborne precaution signage outside patient rooms.

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; 2) Learn Where Germs Live in Health Care.

Project Firstline offers resources for public health and healthcare workers combatting measles outbreaks. “Think Measles” and follow CDC and American Academy of Pediatrics guidance for patients showing symptoms of a high fever, cough, runny nose, conjunctivitis, and/or maculopapular rash.

Antimicrobial Stewardship

Antimicrobial stewardship promotes responsible antimicrobial use via shared infection control measures and patient safety goals. Proper infection control precautions prevent the spread of **antimicrobial-resistant organisms** like bacteria or fungi that no longer respond to the medications meant to kill them. As a result, infections are reduced. To learn more, visit: Integrating Infection Control with Antimicrobial Stewardship.

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: Soap and water is the preferred method of hand hygiene for healthcare workers.

False - The Centers for Disease Control and Prevention state the preferred and most effective method of hand hygiene is 60%+ alcohol-based hand sanitizer (CDC, 2024b).

References

Centers for Disease Control and Prevention. (2007). Guideline for isolation precautions. https://www.cdc.gov/infection-control/hcp/isolation-precautions/index.html

Centers for Disease Control and Prevention. (2022). Chain of infection components. https://www.cdc.gov/niosh/learning/safetyculturehc/module-2/3.html

Centers for Disease Control and Prevention. (2024a). Transmission-based precautions. https://www.cdc.gov/infection-control/hcp/basics/transmission-based-precautions.html

Centers for Disease Control and Prevention. (2024b). Hand hygiene for healthcare workers. https://www.cdc.gov/clean-hands/hcp/clinical-safety/index.html

Texas Health and Human Services. (2021). Environmental cleaning and disinfecting: Kill claims. https://apps.hhs.texas.gov/providers/NF/credentialing/cna/infection-control/module5/Module_5_Cleaning_and_Disinfecting12.html