



IPC Topic: Healthcare Associated Infections (HAIs)- A Review

Intro: Healthcare-associated infections (HAIs) are infections that patients can get in a healthcare facility while receiving medical care. No matter where you are—a hospital, a long-term care facility, outpatient surgery center, dialysis center, doctor’s office—the infection risk is greater in a healthcare setting.^{1,2}

What is the Risk? To develop an infection, germs (example: bacteria or viruses) must enter your body and get past the body’s natural defenses. This can happen through a wound, a device such as a catheter, or even by way of the lungs. Germs often spread from surfaces to the hands of healthcare workers, patients, or visitors.

Why are Healthcare-Associated Infections Important?^{1,2}

- Cause additional health complications and can be transmitted between different healthcare facilities.
- According to the Centers for Disease Control and Prevention (CDC), 1 in 34 hospitalized patients will get an infection as a result of the care they receive. ^{1,2}
- 1 in 9 people who get an HAI will die²
- Studies suggest that good infection control practices can reduce HAIs by 70 percent.²

What are the most common Healthcare-Associated Infections?^{2,6}

1. Catheter-associated urinary tract infections
2. Surgical site infections
3. Bloodstream infections
4. Pneumonia
5. *Clostridioides difficile* (also known as deadly diarrhea) is another harmful illness that can develop from antibiotics.

Some specific examples include:

- A central line-associated bloodstream infection (CLABSI) is a serious HAI that occurs when germs (e.g., bacteria) enter the bloodstream through the central line (a long flexible tube placed in a large vein that empties out near the heart).
- Methicillin-resistant Staphylococcus aureus (MRSA) is a type of bacteria that is resistant to many antibiotics. In medical facilities, MRSA causes life-threatening bloodstream infections, pneumonia, and surgical site infections.

What you can do:

1. Speak up and ask. Discuss your concerns. When a treatment is recommended that increases a risk, determine why it is necessary and what are the associated risks.
2. Participate in education and training in infection control.^{2,6} Examples of best practices by a health care provider include evaluating the need for a catheter, observing careful insertion, providing maintenance, and prompt removal of catheters, as well as the careful use of antibiotics.

3. Clean your hands often-the right way at the right time. Hand hygiene is the best way to prevent the spread of infection. Everyone should be doing hand hygiene including all staff, clients, and visitors.
4. Antibiotics can work great on infections caused by bacteria. They do not work on viruses, or fungus or other organisms. It is important to use the right antibiotic for the right illness otherwise the infection will continue.
5. Report any signs of infection to the nurse. Some signs and symptoms of an infection include redness, pain, and drainage at the incision site or the site of the catheter/ drainage tube. Many times, these symptoms are accompanied by fever.
6. Stay up to date on your vaccines. To prevent illness and avoid complications associated with vaccine-preventable illnesses. Everyone—patients, families, and healthcare personnel—has an important role to play in keeping patients safe from infection. ¹

Summary: HAIs are a threat to patient safety. You can take action to prevent, reduce, and ultimately eliminate healthcare-associated infections (HAIs).¹

References:

1. Patient Safety: What You Can Do to Be a Safe Patient | HAI | CDC; <https://www.cdc.gov/hai/patientsafety/patient-safety.html>
2. Healthcare-Associated Infections in the United States - YouTube; <https://www.youtube.com/watch?v=-FfMCv8FUXI>
3. What are healthcare-associated infections? - APIC; https://apic.org/monthly_alerts/what-are-healthcare-associated-infections/
4. APIC; IPandYou Bulletin Whats an HAI 2018.pdf (apic.org); [https://apic.org/Resource_/TinyMceFileManager/for_consumers/IPandYou_Bulletin_Whats an HAI 2018.pdf#:~:text=Healthcare-associated%20infections%20%28HAIs%29%20are%20infections%20that%20patients%20can,center%2C%20doctor%E2%80%99s%20office%E2%80%94you%20are%20at%20risk%20for%20infections.](https://apic.org/Resource_/TinyMceFileManager/for_consumers/IPandYou_Bulletin_Whats_an_HAI_2018.pdf#:~:text=Healthcare-associated%20infections%20%28HAIs%29%20are%20infections%20that%20patients%20can,center%2C%20doctor%E2%80%99s%20office%E2%80%94you%20are%20at%20risk%20for%20infections.)
5. Germs Can Live on Dry Surfaces. Project Firstline. CDC. <https://www.cdc.gov/infectioncontrol/pdf/projectfirstline/Healthcare-Germs-Environment-DrySurfaces-508.pdf>
6. Germs live in water and on wet surfaces. Project Firstline. CDC. <https://www.cdc.gov/infectioncontrol/pdf/projectfirstline/Healthcare-Germs-Environment-WaterAndWetSurfaces-508.pdf>
7. Agency for Healthcare Research and Quality (AHRQ). Patient safety and quality: An evidence-based handbook for nurses. AHRQ Publication No. 08-0043. Rockville, MD: AHRQ; 2008 Apr. Available from: <http://archive.ahrq.gov/professionals/clinicians-providers/resources/nursing/resources/nursesfdbk/index.html>
8. Scott RD. The direct medical costs of healthcare-associated infections in US hospitals and the benefits of prevention. Atlanta: Centers for Disease Control and Prevention; 2009; https://www.cdc.gov/HAI/pdfs/hai/Scott_CostPaper.pdf
9. Septimus E, Kleinman K, et al. Targeted versus universal decolonization to prevent ICU infection. N Engl J Med. 2013;368:2255-2265; <https://pubmed.ncbi.nlm.nih.gov/23718152>

Additional Resources:

- Fight Antimicrobial Resistance with Infection Control (cdc.gov); <https://www.cdc.gov/infectioncontrol/pdf/projectfirstline/Fight-AR-with-IC-508.pdf>
- CDC: Environmental Infection Control Guidelines: <https://www.cdc.gov/infectioncontrol/guidelines/environmental/index.html#d>
- CDC: Project Firstline; Training Resources: <https://www.cdc.gov/infectioncontrol/projectfirstline>
- Project Firstline | Health and Human Services North Dakota; <https://www.hhs.nd.gov/health/project-firstline>: has additional topics; training resources including additional topics including CAUTIs, C. diff; Bloodborne Pathogens.
- Guidelines on Core Components of Infection Prevention and Control Programmes at the National and Acute Health Care Facility Level; World Health Organization 2016; Creative Commons Attribution-Noncommercial-ShareAlike 3.0 IGO license (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).
- APIC—Infection Prevention and You; <https://infectionpreventionandyou.org/>
- Patient Safety: What You Can Do to Be a Safe Patient; <https://www.cdc.gov/hai/patientsafety/patient-safety.html>