Infection Control

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Infection Control Basics

KEY POINTS

- Infection control prevents or stops the spread of infections in healthcare settings.
- Healthcare workers can reduce the risk of healthcare-associated infections and protect themselves, patients and visitors by following CDC guidelines.

Overview

Germs are a part of everyday life. Germs live in our air, soil, water and in and on our bodies. Some germs are helpful, others are harmful.

An infection occurs when germs enter the body, increase in number and the body reacts. Only a small portion of germs can cause infection.

Terms to know

- **Sources**: places where infectious agents (germs) live (e.g., sinks, surfaces, human skin). Sources are also called reservoirs.
- **Susceptible person:** someone who is not vaccinated or otherwise immune. For example, a person with a weakened immune system who has a way for the germs to enter the body.
- **Transmission:** a way germs move to the susceptible person. Germs depend on people, the environment and/or medical equipment to move in healthcare settings. Transmission is also called a pathway.
- **Colonization:** when someone has germs on or in their body but does not have symptoms of an infection. Colonized people can still transmit the germs they carry.

For an infection to occur, germs must transmit to a person from a source, enter their body, invade tissues, multiply and cause a reaction.

How it works in healthcare settings

Sources can be:

- People such as patients, healthcare workers and visitors.
- Dry surfaces in patient care areas such as bed rails, medical equipment, countertops and tables).
- Wet surfaces, moist environments and biofilms (collections of microorganisms that stick to each other and surfaces in moist environments, like the insides of pipes).
- Cooling towers, faucets and sinks, and equipment such as ventilators.
- Indwelling medical devices such as catheters and IV lines.
- Dust or decaying debris such as construction dust or wet materials from water leaks.

Transmission can happen through activities such as:

- Physical contact, like when a healthcare provider touches medical equipment that has germs on it and then touches a patient before cleaning their hands.
- Sprays and splashes when an infected person coughs or sneezes. This creates droplets containing the germs, and the droplets land on a person's eyes, nose or mouth.
- Inhalation when infected patients cough or talk, or construction zones kick up dirt and dust containing germs, which another person breathes in.

- Sharps injuries such as when someone is accidentally stuck with a used needle.

A person can become more susceptible to infection when:

- They have underlying medical conditions such as diabetes, cancer or organ transplantation. These can decrease the immune system's ability to fight infection.
- They take medications such as antibiotics, steroids and certain cancer fighting medications. These can decrease the body's ability to fight infection.
- They receive treatments or procedures such as urinary catheters, tubes and surgery, which can provide additional ways for germs to enter the body.

Keep Reading:
Infection Control in Health Care: An Overview

Recommendations

Healthcare providers

Healthcare providers can perform basic infection prevention measures to prevent infection.

There are 2 tiers of recommended precautions to prevent the spread of infections in healthcare settings:

1. Standard Precautions, used for all patient care.
2. Transmission-based Precautions, used for patients who may be infected or colonized with certain germs.

There are also transmission- and germ-specific guidelines providers can follow to prevent transmission and healthcare-associated infections from happening.

Keep Reading:
Guidance Library

Patients

Learn more about how to protect yourself from infections in healthcare settings.

Keep Reading:
Tips for Being a Safe Patient

Resources

For healthcare providers and settings

- Project Firstline: infection control education for all frontline healthcare workers.
- Infection prevention, control and response resources for outbreak investigations, the infection control assessment and response (ICAR) tool and more.
- Infection control specifically for surfaces and water management programs in healthcare settings.
- Preventing multi-drug resistant organisms (MDROs).

SOURCES

CONTENT SOURCE:
National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)