



St. Elizabeth
HEALTHCARE

Infection Control

Definitions

Infection control – the set of methods used to control and prevent the spread of disease

- **Infections** - are caused by pathogens (germs)
- **Communicable disease** – disease spread from one person to another
- **Infectious disease** – disease caused by germ or bacteria

Definitions

- **Contaminated** – means dirty, soiled, unclean
- **Decontamination** – removing disease-producing microorganisms and making the object safe for handling
- **Cleaning** – the process of removing visible soil and foreign matter
- **Disinfection** – eliminating many or all pathogens except bacterial spores from inanimate objects
- **Mode of transmission** – the way germs are passed from one person to another – examples include surfaces in the room, body fluids, respiratory secretions, water supply, insect bites, etc.

What is a Hospital Acquired Infection?

- Hospital acquired infections (HAI) are infections that are **not present** at the time a patient is admitted to the hospital.
- Examples of Hospital acquired infections include: Catheter associated urinary tract infection, Central line associated bloodstream infections, and Clostridium difficile.

Resistant or Changing Bacteria

These are resistant germs which are not easily treated by the usual antibiotics:

- MRSA (*Methicillin Resistant Staphylococcus Aureus*)
- VRE (*Vancomycin Resistant Enterococcus*)
- ESBL (Extended Spectrum Beta-Lactamases)



These resistant germs are known as Multi-Drug Resistant Organisms (MDRO)

- This means we have reduced options for treatment

MDRO

- **MDROs are increasing in the community and in healthcare settings.**
- **Spread of these germs can be controlled through use of:**
 - Contact Precautions (Isolation)
 - Standard Precautions
 - Consistent Hand Hygiene
 - Disinfection of equipment
 - Good housekeeping practices

What is the Best Way to Prevent Infection Transmission??

Hand Hygiene!

- Before any patient contact
- After any patient contact

No matter your
Volunteer position

- Protect yourself and others and perform hand hygiene often



Hand Hygiene



- It is the simplest way to prevent the spread of infection
- Most protective practice can use at work or at home
 - Protects you, patients, co-workers and family
- Hand hygiene can be performed using soap and water or a waterless alcohol antiseptic.

Hand Hygiene Options

Soap and Water

- Wash with soap and water when hands are:
 - visibly dirty
 - soiled with body substances
 - and **always after using the restroom**
- When washing with soap and water:
 - wet hands first
 - apply soap and **rub hands together vigorously** for at least **15 seconds** covering all surfaces,
 - rinse
 - dry with disposable towel - using towel to turn off faucet
 - dispose of towel



Hand Hygiene Options

Waterless Alcohol Antiseptic

- If hands are not visibly soiled, use an alcohol-based gel or foam for routine hand decontamination.
 - **It is 99.9% effective on unsoiled hands!**
- When using the gel or foam, apply to palm of one hand and rub hands together, covering all surfaces until hands are dry.
 - This takes about 10 seconds
- Use before and after contact with a patient
- **Not effective** on hands soiled with organic material (such as grease, blood, body fluids, food residue).

Available in every patient room and many public areas

Clean Your Hands

The World Health Organization's "Five Moments of Hand Hygiene" with patients:

Hand hygiene should always be performed:

1. Before touching a patient
2. After contact with body fluids
3. After touching a patient
4. After touching a patient's surroundings
5. Before procedures, like changing a patient's dressing



Gloves

The use of gloves does not replace the need for hand hygiene!

- Avoid contaminating clean surfaces with soiled gloves
- Remove gloves before leaving the room or area
- Perform hand hygiene after removal of gloves
- Report any glove sensitivities or problems to your manager or Volunteer Services

Cough Etiquette

To control the spread of respiratory infections:

1. Cough into your elbow or sleeve.
2. Cough into a tissue.
3. Turn your head away from others.
4. Throw tissues in trash.
5. Wash your hands.



Standard Precautions

- Provides the most consistent protection for all associates.
- All blood and body fluids are considered potentially infectious, regardless of the diagnosis.
- Involves the consistent use of hand hygiene and appropriate Personal Protective Equipment (PPE) when coming into contact with blood or body fluids.

Personal Protective Equipment

Volunteers are **NOT to enter a room or assist a patient when PPE is needed.**

- PPE is specialized clothing and equipment that provides protection against contact with blood or other potentially infectious materials.
- It includes:
 - Gloves
 - Fluid resistant gowns, aprons
 - Protective eyewear
 - Masks
 - Respirator devices

Transmission-Based Precautions

- **Additional** precautions are necessary to protect both patients and hospital personnel from certain disease causing germs and infections.
- These patients rooms are marked by an “Airborne Precautions” sign posted outside the room or on the door

Sample Isolation Sign



AIRBORNE PRECAUTIONS



Patient should *not* visit public areas: cafeteria, gift shop, smoking area.

MASK: *Staff* wears an N95 Respirator, PAPR, or Surgical mask dependent on the specific disease.



EQUIPMENT: Clean and disinfect reusable equipment upon removal from room or send to Central Supply for processing.

VISITORS: Wash hands or use hand sanitizer upon entering and leaving the room. Wear surgical mask to enter the room.

TRANSPORT: Patient wears surgical mask for transport.

Isolation Precautions

Airborne Infection Isolation:

Requires a specially ventilated isolation room for patients suspected of diseases such as TB. **The door must be kept closed and staff must wear a N95 mask to enter.**

Droplet Precaution Isolation:

For patients with infections such as influenza and certain types of meningitis, which spread through respiratory droplets such as coughing and sneezing. **Staff must wear a surgical mask when entering the patient room.**

Isolation Precautions

Contact Isolation:

For those with infections spread through direct contact with the patient or germs in the immediate environment. Examples are MRSA or C-difficile or wound drainage that cannot be contained by dressings.

Volunteers should NEVER enter a patient room marked “Precautions” or “Isolation”

Biohazard Symbol



Biohazard signs are always **red** or **orange** and have the biohazard symbol.

The biohazard symbol is a universal symbol placed on any container or area that may contain infectious waste or potentially infectious material, e.g. soiled utility room doors, laboratory specimen transport devices, linen bags.

General Housekeeping

- Cleaning schedules vary according to the
 - ✓ Area of the hospital
 - ✓ Type of surface to be cleaned
 - ✓ Type of soil present
- Disinfectant wipes are available for cleaning of small surfaces.
- Clean and disinfect all reusable patient care equipment.



What To Do If You Have an Exposure to Any Type of Body Fluids

- Treat all body fluids (blood and unknown) as if infectious
- First *flush/wash* the affected areas with soap and water
- Notify your supervisor and the Volunteer Office
- Promptly Notify Employee Health
- *Report to the ED* if HIV exposure is suspected or wound care is needed.
- Complete a *Patient/Visitor Incident Report*

Bed Bugs

- Beginning in the 1990's, bed bugs began reappearing in the U.S. Now widespread in the region.
- Typically found in luggage, clothing, bedding and furniture. Leave rusty or red spots on bed sheets, mattresses or walls.
- Can live in almost any crevice – can live for a year without feeding.
- They are:
 - Small, flat, blood sucking insects
 - Usually brown or reddish in color
 - Typically about 1/4 inch long
 - Do NOT fly, but can move quickly
 - Nocturnal – active at night



Bed Bugs

- Usually bite people at night when they are sleeping, on any area of exposed skin
- Amount of blood taken is minimal
- Bites do not hurt... so the person usually does not know that he/she has been bitten
- Bites can irritate the skin
 - ✓ small, hard, swollen white welt at the site of the bite
 - ✓ severe itching that usually lasts a couple of days



Bed Bugs Control Measures

- If a patient has bite marks, staff should inspect personal belongings and clothing for evidence of insects.
- Visitors/family members are NOT to bring unnecessary personal belongings in for a patient. This includes bedding, linens, and pillows.
- If insects are present or suspected, all personal items are to be immediately bag and securely closed.
- Maintain precautions (wear gloves, etc.) while caring for a patient with suspected exposure
- Contact Environmental Services for area disinfection

AIDS/HIV

- AIDS (Acquired Immune Deficiency Syndrome) is a blood borne viral illness caused by the Human Immunodeficiency Virus (HIV).
- AIDS is spread by exposure to infected blood or other certain blood derived body fluids that may contain the HIV virus.

AIDS/HIV

- HIV and Blood borne Diseases are **NOT** spread through:
 - ✓ Casual contact , e.g. sharing food, hugging or shaking hands, using public restrooms, etc.
 - ✓ Donating blood
 - ✓ Being bitten by mosquitoes or other insects.

Local AIDS Services Offered By The Northern KY Independent District Health Department

- Free, anonymous, or confidential HIV antibody testing and counseling in several locations
- Case management and resource referrals for HIV positive persons and AIDS educational services

Other Services Available

- AIDS Volunteers of Northern Kentucky (AVNK)
 - ✓ Offers support groups, volunteer opportunities, and support services
- AIDS Information, referrals, and anonymous HIV testing is available at the Cincinnati Health Department

Other Services Available

- The CDC (National Center for Disease Control) has a 24 hour, toll-free service that provides confidential information, referrals, and educational materials to the public
- CDC web addresses:
 - ✓ www.cdc.gov/hiv
- Northern Kentucky District Health Department

Infection Control Review

1. Prevention of healthcare-associated infections is best accomplished by performing hand hygiene **before** and **after** patient contact.

A. True

B. False

Infection Control Review

2. Alcohol antiseptic hand rubs may be used instead of soap and water when hands are visibly soiled with blood/body fluids or other material.

A. True

B. False

Infection Control Review

3. The best protection for staff, volunteers and patients against the spread of respiratory infections such as influenza, is to practice “Cough Etiquette” and hand hygiene.

A. True

B. False

Infection Control Review

4. The World Health Organization has identified “Five Moments of hand Hygiene” with patients.

A. True

B. False

Infection Control Review

5. Using gloves does NOT replace the need for hand hygiene when removing.

A. True

B. False

Infection Control Review

6. A red or orange biohazard symbol is used to identify infections waste or a container that may contain infectious waste, such as a laboratory specimen transport devise.

A. True

B. False

Infection Control Review

7. Examples of personal protective equipment (PPE) are gloves, masks and protective eyewear.

A. True

B. False

Infection Control Review

8. Volunteers should not enter the room of a patient marked “Isolation” or “Precautions”.

A. True

B. False

Infection Control Review

9. Local AIDS serviced offered by the Northern KY Independent District Health Department include free, anonymous, confidential testing and counseling.

A. True

B. False

Infection Control Review

10. HIV and other blood borne diseases are not spread through casual contact such as:
- A. Sharing food**
 - B. Hugging**
 - C. Shaking hands**
 - D. All of the above**

Infection Control Review

11. We should treat all body fluids, including blood, as if they are infectious.

A. True

B. False