



Introduction to Infection Control



Contents

This course examines infection control topics including hand hygiene, hospital environmental control, workplace practices, precautions, personal protective equipment, respiratory protection, immunizations, and post-exposure issues. It is intended to give only a brief overview of infection control.

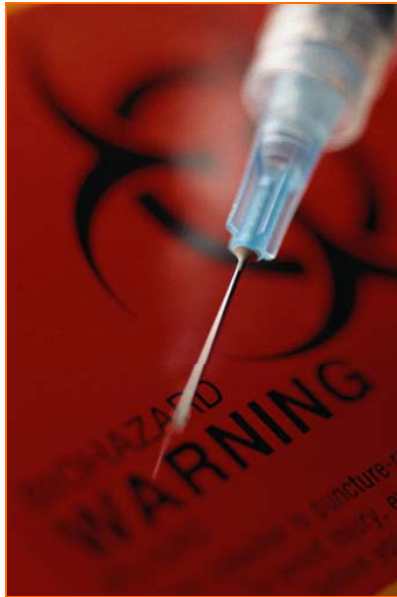


Definitions

Transmissible infections are a major concern among health care workers.

- ✓ **Transmissible infections** - Infections caused by microorganisms that are highly contagious and easily spread to and from health care Team Members.
- ✓ **Health care workers** - All paid or unpaid persons working in health care settings who have the potential for exposure to infectious materials including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or contaminated air. These personnel include both people directly or indirectly involved in patient care.

Introduction



- Remember that you are ultimately responsible for understanding the risk of exposure to blood or **other potentially infectious materials** (OPIM) at Memorial Health.
- The Infection Control program works only if you are committed to following the guidelines described in this course.

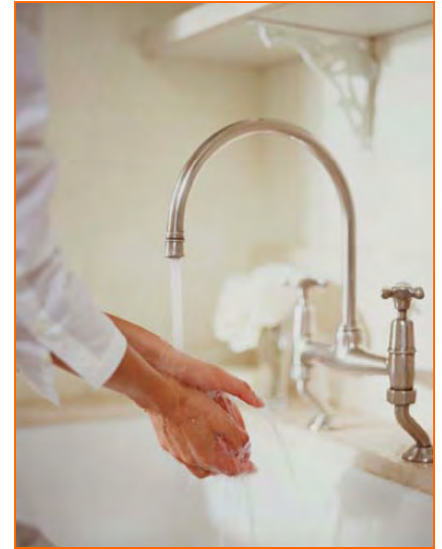
- ✓ **Other potentially infectious materials** - Blood and other materials that can carry pathogens that cause serious diseases. Materials include human body fluids, unfixed tissue or organs, and HIV/HBV/HCV-containing cell or tissue cultures.

Memorial Health

- Takes action to control outbreaks of **health care acquired infections**
 - Reports information about infections internally and to the appropriate public health agencies.
- ✓ **Health care acquired infections** - an infection acquired by an individual while receiving care or services in the health care organization.

Hand Hygiene

- **Frequent hand washing is the foundation of infection control.**
- This single action lowers the risk of transmitting microorganisms from one person or site to another.
- Wearing gloves does not replace hand washing.
- Wash your hands if there is any doubt about the need to do so.
- Alcohol based foam products are available in all patient care areas and should be used to sanitize hands but does not take the place of effective hand washing.
- Use alcohol based foam in between hand washings and when hands are not visibly soiled.



Guidelines

- Use an approved solution and wash for at least 15 seconds in non-critical care areas or at least 30 seconds in critical care areas.
- When hands are visibly soiled, more time may be required.
- Don't forget to scrub your fingernails and in between fingers
- Artificial nail enhancements including acrylic overlay, gels, silk wraps and others are prohibited in direct care givers
- Assemble and inspect all equipment after washing your hands and before touching the patient.

Environmental Control

Guidelines

- Environmental control issues address:
 - potentially infectious waste
 - general housekeeping



Potentially Infectious Material

- Bag **potentially infectious material** to prevent contamination to patients, Team Members, and visitors.
- Place used **sharps** in puncture-resistant containers.



- ✓ **potentially infectious material** - Potentially infectious waste may include used patient care equipment, sharps, and laundry or any other item that may be contaminated with blood and other materials that can carry pathogens that cause serious diseases. Materials include human body fluids, unfixed tissue or organs, and HIV/HBV/HCV-containing cell or tissue cultures.
- ✓ **sharps** - Any object that can cut, puncture, or penetrate the skin. Examples are needles, scalpels, broken glass, knives, and blades.

Biohazard Symbol

- The biohazard symbol is a universal symbol placed on any container or area that may contain regulated waste.
- Biohazard signs are always red or orange and have the biohazard symbol.



General Housekeeping

- Cleaning schedules vary according to the:
 - area of the hospital
 - type of surface to be cleaned
 - type of soil present
- **Microorganisms** on walls, floors, and other surfaces are rarely transmitted to patients or Team Members.
- ✓ **Microorganisms** - A potentially infectious agent that is so small it can only be seen with a microscope.

Workplace Practices



In work areas where exposure is likely, do not:

- Eat, drink, or put objects in your mouth
- Apply cosmetics, lip balm, or contact lenses

Minimize Risk

- Minimize your risk of exposure by containing, removing, and disinfecting all blood or body fluid spills as quickly and effectively as possible.
- Wear gloves and other appropriate personal protective equipment (**PPE**).

- ✓ **PPE** - Personal Protective Equipment. Specialized clothing and equipment meant to provide protection against contact with bloodborne pathogens or other potentially infectious materials.



Standard and Transmission-Based Precautions

- There are two levels of precautions in hospitals: Standard Precautions and Transmission-Based Precautions.
 - Standard Precautions combines **Universal Precautions** and Body Substance Isolation.
 - Standard Precautions apply to blood, all body fluids, secretions, and excretions except sweat, non-intact skin, and mucous membranes.
 - Standard Precautions includes additional measures to protect both patients and Team Members from disease causing germs.
- ✓ Standard Precautions- An approach used in infection control. It treats all blood and other potentially infectious materials as if they were known to be infected with bloodborne diseases.

Transmission-Based Precautions

- Transmission-Based Precautions apply to patients with documented or suspected infections or colonizations that are highly transmissible.
 - Transmission-Based Precautions include
 - Airborne Precautions
 - Droplet Precautions
 - Contact Precautions
 - They are used in addition to Standard Precautions.
- ✓ **Airborne Precautions** - are required with diseases such as tuberculosis, measles, or chicken pox. Wear an approved respirator in the room and place a standard isolation mask on the patient during transport.
 - ✓ **Droplet Precautions** - are required for diseases such as rubella, meningitis, mumps, pertussis, etc. Wear a standard isolation mask in the room, and place a standard isolation mask on the patient during transport.
 - ✓ **Contact Precautions** - are used for multi-drug resistant pathogens such as MRSA, VRE, RSV, chicken pox, shingles, lice, C-diff, etc. Wear gloves to enter the room. Remove gloves and wash hands before leaving the room. Always use dedicated patient equipment (for example, a disposable stethoscope, digital thermometer, etc.).

Guidelines

- Additional preventive measures include the use of:
 - PPE
 - respiratory protection
 - immunizations
- ✓ **PPE** - Personal Protective Equipment. Specialized clothing and equipment meant to provide protection against contact with bloodborne pathogens or other potentially infectious materials.

Personal Protective Equipment

- Always use the required Personal Protective Equipment (PPE).
 - This specialized clothing and equipment provides protection against contact with blood or other potentially infectious materials.
- Major areas to protect with PPE are the:
 - hands
 - face
 - body
- Always check PPE to be sure it is not damaged or worn.

PPE: Gloves

- Gloves are to be worn when conducting patient care or procedures which may expose the care giver to blood or body fluids
- Gloves must be removed and hands washed once the procedure is completed
- DO NOT wear gloves between procedures, while dialing phone or documenting in the medical record.

Respiratory Protection

- By CDC / OSHA Guidelines, all Team Members entering an isolation room for tuberculosis or chicken pox must wear a fitted respirator (N95).
- Fit-test the respirator to the one person for whom it is intended.
- Regular surgical masks **do not** adequately protect Team Members from tuberculosis.



N95 Mask



Regular Mask

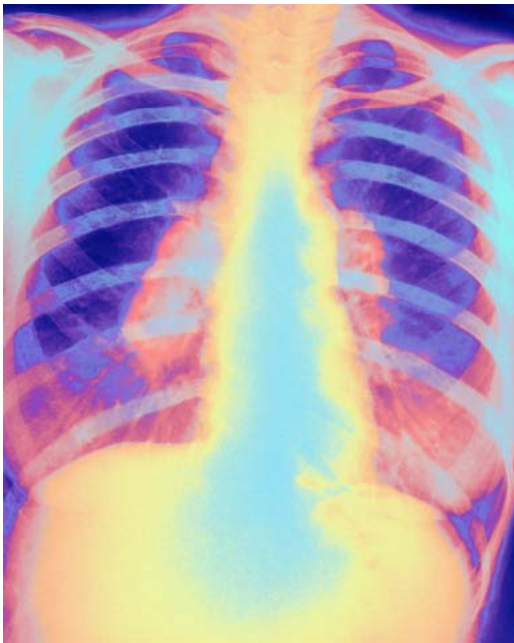
OSHA

- OSHA requires employers to develop an Exposure Control Plan.
 - This plan provides protection for all Team Members who might be exposed to bloodborne diseases.
 - MHUMC's Exposure Control Plan and Employee Health Policies explain how to report an exposure and what medical follow up is available.
 - OSHA requires that a Team Member be notified of the post-exposure evaluation and the follow-up actions taken.

Immediate Response to Blood borne Exposure

- When you have contact with blood or other potentially infectious materials, immediately cleanse the area.
 - Flush mucous membranes with a large amount of water.
 - Wash exposed skin with soap and water.
 - Report the exposure incident to your Team Leader immediately.
 - Go through the evaluation and follow up.

Immediate Response to TB Exposure



- If you are exposed to TB or other diseases, contact your Team Leader immediately.
- Follow recommendations in TB Control plan and have any required treatments and follow-up procedures.

Be familiar with key elements of the infection control program

- Wash your hands frequently.
- Understand MHUMC environmental control issues.
- Use good workplace practices and follow Standard Precautions.
- Wear PPE and use respiratory protection as indicated.
- Receive the hepatitis B vaccination series and other vaccinations when they are offered.
- Contact your Team Leader immediately if you are exposed to blood or other potentially infectious materials.

For more information, contact the Center for Infectious Disease at 350-8109.



References

- Guideline for Hand washing and Hospital Environmental Control, 1985, U.S. Department of Health & Human Services, Public Health Service
- Guidelines for Infection Control in Health Care Personnel, 1998, Centers for Disease Control and Prevention

We hope this course has been both informative and helpful.

Feel free to review this course until you are confident about your knowledge of the material presented.