Protecting Yourself (and others) from Infection

2007
This Educational Program Includes the Following:

- How YOU can prevent the spread of infections
- Disinfection of the Environment
- Hand Hygiene & Respiratory Hygiene
- Use of Masks & PAPRs
- UWMC Infection Control Precautions
- UWMC Exposure Management Program
- Where to get more information about the UWMC Infection Control Program
Preventing the Transmission and Acquisition of Infection

Protecting Patients

- 2,000,000 healthcare-associated infections per year in the US with 90,000 deaths
  - Mortality per infection: 12-25%
    - Cost: $3,7000-$28,000 per episode
  - 500,000 surgical site infections per year with doubles the mortality risk

Protecting Healthcare Workers

- 21% of the 8,096 cases of SARS occurred in Healthcare Worker

Protecting the Regional Global Community
Infections Readily Transmitted to HCWs

- **Bloodborne Pathogen Transmission**
  - HIV, HBV, HCV

- **Contact Transmission**:
  - Group A Streptococcus, scabies, HSV

- **Droplet Transmission**
  - Meningococcus, pertussis, influenza

- **Airborne Transmission**
  - Tuberculosis, measles

- **Contact Droplet Transmission**
  - RSV

- **Contact/Airborne Transmission**
  - SARS, varicella, smallpox, monkeypox, avian influenza, viral hemorrhagic fevers
Pulmonary Tuberculosis, HIV, and Hepatitis B & C are diseases that you can catch. There are regulations to protect healthcare workers from acquiring these diseases. Refer to the Healthcare Epidemiology and Infection Control (HEIC) website for the OSHA/WISHA regulations or call the Department of Healthcare Epidemiology and Infection Control at 598-6122 for a personal copy.
Epidemiology of Bloodborne and Airborne Diseases

Bacteria and viruses can be found in any body fluid, on mucous membranes (e.g., the mouth, nose or lungs), and on non-intact skin (e.g., rashes) of any person at any time, and on environmental surfaces.

They may also be found in blood or body fluids, including those in laboratory specimens.

Bloodborne viruses - HIV (the virus that causes AIDS), hepatitis B, and hepatitis C may be acquired at work through exposure to blood or bloody fluids or other high-risk body substances. And in some circumstances, on environmental surfaces.
Methods by Which Pathogenic Organisms Spread

- **Airborne (floating in the air)**
  
  *Breathing the air of coughing patients, for example Pulmonary Tuberculosis*

- **Contact or Droplet (via direct touch)**
  
  - Needle sticks
  - *Splash contact to mucous membranes (eyes, nose, mouth).*
    
    - Ungloved contact or splatters to unprotected or broken skin.
How YOU Control the Spread of Bloodborne and Airborne Pathogens

- Use and practice *Standard Precautions* and transmission-based *Expanded Precautions* (the UWMC precautions system)
  - Wear a barrier (PPE = personal protective equipment) to protect yourself from possible exposure to organisms
  - Clean and disinfect surfaces and equipment used when providing care to multiple patients (e.g., scales, Dynamap cuffs, keyboards, wireless phones, pulse oximeters, stethoscopes, etc.).
Disinfection is a *Two-Step* Process

Remove soilage from surfaces and equipment and **Disinfect** with one of the following disinfectants:

- #1 Sani-Cloth™
- #2 CaviCide™
- #3 Alcohol
- #4 Clorox Wipes

The object must be thoroughly cleaned before using the disinfectant. Apply the disinfectant, then *leave it wet*.

There must be sufficient contact time on all surfaces of the object for disinfection to occur. (See instructions on bottle or container for cleaning information and contact times.)
Which Barriers Do I Use?

- **GLOVES** when your hands might come in contact with body substances

- **FACE MASKS with EYE PROTECTION** if your face is at risk of exposure through cough, sneeze, splash or splatter.
Which Barriers Do I Use?

- **GOWNS** when your clothing or body might come in contact with body substances or contaminated surfaces.
- **HAIR COVERS, SHOE and/or LEG COVERS** when blood or body fluids might get on your hair, shoes or legs.
- **POWERED AIR PURIFYING RESPIRATOR (PAPR)** or well-fitted N-95 Respirator whenever a patient is placed in Special Airborne Precautions (Blue Sign), PAPRs or fitted N-95 respirators are required for room entry. (currently only specified HCW’s have been fit tested for OK’d to wear an N95 for protection from airborne diseases).
Hand sanitizing is done by using antiseptic hand gels.

Hand sanitizing technique focuses the gel on the finger tips and cuticles and then to the fingers and hand. Use enough gel to keep your hands wet for at least **10 seconds**.

Hand sanitizing is as good or better than a **15 second handwash** in reducing the germ load.
Handwashing**

- **Handwashing** must be done for at least 15 seconds with soap and running water.

- **Handwashing** is done after contact with body fluids, mucous membranes, or open skin lesions/wounds. Handwashing is BEST when hands are visibly dirty or contaminated with blood or body fluids, or when caring for a patient in Contact (Orange) Precautions for *C. difficile* and norovirus.*

- **Handwashing** is also done before you touch your face, before you eat, and after you use the restroom.

Happy Birthday to me…..
Happy Birthday to me…..
“Partners in Your Care”
*New Hand Hygiene Program*

Many strategies have been used to help healthcare workers remember to perform hand hygiene...

- Between each patient
- Before and after glove use
- Between soiled and dirty processes

...to prevent healthcare-associated infections.
“Partners in Your Care”

New Hand Hygiene Program

One program that has proven successful over time has been “Partners in Your Care”

In this program the patient asks each caregiver, “Have you washed your hands?”

Healthcare workers answer politely in one of two ways…

“Thanks, I just did”

Or

“Thanks, I will now”
Respiratory Etiquette
Respiratory Hygiene Program

Patients admitted with respiratory symptoms or pneumonia must be placed in Droplet Precautions until an infectious entity is ruled out.

*NEW –Gowns are worn when providing direct care. The only exception is if no direct contact with the patient, their respiratory secretions or immediate environment is anticipated.

“Cover your Cough Kits” are obtained through Materials Management. (ESI#180266)

Contact HEIC at 598-6122 for more information.

Patients:

PLEASE ask for a **Cover Your Cough Kit** if you have any of the following symptoms:
- Fever
- Coughing
- Sneezing
- Runny nose
- Watery eyes
- Headache with cold symptoms

**Remember to always:**

- Wear your mask if you are coughing or sneezing
- Cover your cough or sneeze then
- Clean your hands with an alcohol hand gel or an antiseptic towelette or soap and water
- Throw away used tissues and masks in a waste basket

VISITORS with a respiratory illness or fever should not remain in waiting rooms or have close contact with sick patients.
We practice *Standard Precautions* for all patients at all times, since we don’t always know who has a transmissible or contagious disease. Hand Hygiene and Respiratory Hygiene are components of Standard Precautions.

The Enhanced Precautions categories are:

- **Contact**
- *Special* **Contact** (*C. difficile* and *Norovirus*)
- **Droplet**
- **Airborne**
- *Special* **Airborne**

Isolation signs are posted on the patient door and in the front of the patient chart.

Notify the receiving department when patient leaves room for required procedures. Do not leave patient in hallways or waiting rooms.

Contact Transport Team for advice regarding the safe transport of patients with airborne diseases.
CONTACT Precautions:

Required for

- Anthrax
- Avian Influenza
- C. difficile
- Chicken pox
- Localized herpes zoster
- Monkey pox
- Multi-resistant organisms (CR, ESBL, MRSA, VRE)
- SARS
- Small pox
- Uncontrolled body substances
- Vaccinia
- Viral Hemorrhagic Fevers

Contact Precautions

In Addition to Standard Precautions

- Door May Remain Open

**Before You Enter the Room:**

- Hand hygiene is required
- Put on gown

**Exception:** If direct physical contact with the patient or environment is not anticipated, gown is not required.
- Put on gloves

**Before You Leave the Room:**

- Remove gloves, discard in trash
- Remove gown, dispose in hamper
- Hand hygiene is required

**Patient Transport:**

- Consult with a Nurse before Transporting Patient
- Notify receiving department that patient is in Contact Precautions
- Patient washes hands, wears gloves, gown and mask (if pathogen is isolated from respiratory secretions) before transport

Refer to back of sign for more information

---

Orange CONTACT Precautions:

Required for

- Clostridium difficile colitis
- Norovirus

Hand washing is more effective than using an alcohol hand gel for cleansing away C. difficile. D/C when the patient is no longer taking medication nor symptomatic. A negative toxin test may be requested.

The CDC recommends that a chlorine based product be used to clean rooms contaminated with these organisms.
Droplet Precautions

Required for
- Group A beta Strepococcal Pneumonia/Pharyngitis
- Influenza and other respiratory viruses
- Meningococcal meningitis
- Mumps
- Pertussis
- Plague
- Rabies
- Rubella

Airborne Precautions

Required for
- Chicken pox (Varicella) + Contact Precautions
- Disseminated herpes zoster on more than one dermatome + Contact Precautions
- Localized herpes zoster in immunocompromised patient + Contact Precautions
- Measles (rubeola)
- Diphtheria (pharyngeal)
**SPECIAL AIRBORNE PRECAUTIONS:**

*Special* Airborne Precautions

In addition to Standard Precautions

- Negative Pressure All Room Required
- Both Doors Are to Remain Closed

**Before You Enter the All Room:**
- Hand hygiene is required
- PAPR or fitted N 95 respirator is required
- Put on gown
- Put on gloves

**Before You Leave the All Room:**
- Remove gloves, discard in trash
- Remove gown, dispose in hamper
- Hand hygiene is required

**After You Leave the All Room:**
- Remove PAPR hood and disinfect hose and battery pack or if wearing a N 95 mask, discard in trash

**DO NOT ENTER** this room if your immune system is suppressed

**Patient Transport:**
- Consult with a Nurse before transporting Patient
- Notify receiving department that patient is in “Special” Airborne Precautions
- Patient washes hands, wears gloves, surgical mask, and gown before transport

Refer to back of sign for more information.

Required for

- *Pulmonary tuberculosis*
- Avian Influenza
- Monkeypox
- SARS
- Smallpox
- Viral Hemorrhagic Fevers

⇒ *Contact Precautions*
How and When to Put Barriers ON

**How**

- 1st – Gown –
  - Ties at neck and waist
- 2nd – Mask –
  - Shape mask over nose and mouth, pinch nose piece
- 3rd – Gloves –
  - Pull cuff over sleeve of gown

**When**

- Just before anticipated contact with mucous membranes, non-intact skin, blood and/or body substances
- Don (put on) at the door to patient’s room
**How and When to Take Barriers OFF**

**How**

- **1st – Gloves –**
  - Pinch outer glove at wrist with other gloved hand, pull glove off over fingers
  - Reach under cuff of remaining glove with bare hand and pull glove off over fingers - dispose

- **2nd – Gown –**
  - Do not contaminate your back while untying

- **3rd – Mask –**
  - Do not touch front of mask when removing

**When**

- As soon as risk is over of contact with mucous membranes, non-intact skin, blood and/or body substances
- Doff (take off) at the door to patient’s room and place in an appropriate container.
- For your protection, masks/respirators worn for airborne diseases are removed outside the patient room.
UWMC Exposure Control Plan includes COMMON SENSE practices, such as…

“Eating, drinking, smoking, applying cosmetics or lip balm, and handling of contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.”

[Washington Administrative Code: 296-62-08001(4)(x)]

Please ask your manager where it is acceptable to eat or drink in your particular work unit.
What do I do if I get exposed/splashed/splattered with blood or other high risk body fluids?

Wash  Wash!!  WASH!!!

For several minutes

1. Wash skin with soap and water
2. Flush mouth or eyes with water for at least 10 minutes.
3. Change contaminated clothing- notify your manager for a hospital provided replacement. Bagged labeled contaminated clothing will be laundered by UWMC.

then....
If you are exposed to a high risk body substance:

Immediately contact or go to:

Employee Health Services
NE210 598-4848
OR
Emergency Room 598-4000
(evenings, nights and weekends)

REMEMBER: the BEST time to start taking medication to prevent HIV is within 2 hours of the exposure

- Counseling and testing for Hepatitis B, Hepatitis C, and HIV for both the exposed health care worker and the source patient is included in the follow-up protocol. Other health needs or immunizations will also be evaluated.
CONTROL METHODS FOR AIRBORNE DISEASES

- Negative Pressure Patient Isolation Rooms (AII Rooms) keep the disease contained by pulling air into the room when the door is closed. The rooms do not work if the doors are left open!
  - Patient negative pressure rooms with automatic monitors will alarm if the negative pressure is not working properly.
  - Powered Air Purifying Respirators (PAPRs) must be worn when entering the room of a patient with Pulmonary Tuberculosis, Avian Influenza, Monkeypox, Smallpox, SARS, or Viral Hemorrhagic Fever.
Questions?

A Healthcare Epidemiologist is available to answer any questions you may have at any time about our Infection Control Program.

Contact:

Nancy Whittington
Voice Mail: 598-4306
Email: npw@u.washington.edu

Robin Olsen
Voice Mail: 598-3306
Email: olsentr@u.washington.edu

Diana Villaflor-Camagong
Voice Mail: 598-8701
Email: dianavc@u.washington.edu

or

Page the Infection Control Professional-on-call through the paging operator

Or

Send an email to uwmcic@u.washington