Infection Prevention & Control Practices

City Wide Orientation
Standard Precautions

- Used for all patients, regardless of their diagnosis
- Applies for all blood & body fluids (except sweat).
- Use the correct PPE (personal protective equipment)
  - Gloves
  - Face/eye protection
  - Gowns/protective apparel

Use respiratory Etiquette and cough hygiene

Wear a surgical mask when entering the epidural canal to prevent spread of meningococcal meningitis

Injection safety - one needle, one syringe, one time only

Clean & disinfect the environment; use appropriate PPE during cleaning
Standard Precautions/Guidelines

- Bloodborne pathogen concerns-HIV, HBV, HVC
  - Handling blood and body fluids with care to avoid exposure to bloodborne pathogens
  - Cover your “portals of entry” (eyes, nose, mouth non-intact skin) when potential exposure is possible
  - Choose the right gown to protect clothing (paper vs fluid-resistant)
  - Use safety devices to reduce risk of needlesticks
  - No two-handed recapping of needles
  - Annual review of safety devices to mitigate risk
  - Always use safe injection practices
Hand Hygiene Protocol

- Good hand hygiene practices are the single most effective means of preventing the spread of infection.
  - Remember to wash your hands before and after coming in contact with a patient or the patient’s environment, whether gloves are worn or not.
  - Fingernails should be kept short ¼ inch
  - No artificial nails in patient care areas
Proper Hand Washing & Alcohol Gel/Foam Use

Hand washing:

- Use tepid water, wet hands and apply soap
- Use good friction cleaning front and back of hand, paying attention to the nails and between the fingers for at least 20 seconds.
- Pat hands dry with paper towels and turn off faucet with a paper towel.
- Always use hand washing when hands are visibly soiled.

Using alcohol gel/foam:

- Apply appropriate amount of foam/gel into palm of hand
- Rub hands together using good friction to all surfaces, paying attention to nails and in between fingers
- Rub hands together until product is evaporated and hands are completely dry.
- Wash with soap & water if hands feel tacky or dirty from hand gel.
It is important to use the appropriate personal protective equipment (PPE) for the job to be done.

- Wear PPE when in contact with blood or body fluid.
- When removing PPE, avoid exposure by removing most contaminated PPE to least contaminated PPE.
- Dispose of PPE properly and always wash/decontaminate hands after removing PPE.
- Protect clothing, skin and especially mucous membranes of the eyes, nose, and mouth, and open wounds from bloodborne pathogens.
Bloodborne Pathogen (BBP) Exposure Control Plan

- OSHA (occupational Safety & Health Administration) requires hospitals to have BBP Plan to mitigate the risk associated with BBP; of particular concern are HIV, Hepatitis B (HBV) & Hepatitis C (HCV)

- Considerations in BBP Plan include:
  - Routine disinfection and cleaning
  - Proper body substance & sharps handling
  - Safety Devices
  - Safe Injection practices
  - Proper Management of Occupational Exposures
Routine disinfection and cleaning of environmental surfaces with hospital approved disinfectants is crucial in preventing spread of contaminants and pathogens.

- Staff who do environmental cleaning should wear the appropriate PPE during cleaning.
- It is not just the Housekeeper’s responsibility.
• Dispose of contaminated items into appropriate containers, avoiding contact with clothing and environmental surfaces
• Dispose of all used and unused needles into red rigid biohazard sharps containers; empty container when the content reaches the “fill“ line marked on the container
Safe Injection Practices

- Do not use common flush bags
- Use disposable single use syringes; never re-use or recap
- Use single dose vials
- Decontaminate ports/vials with 70% alcohol solution before use
- Observe and monitor injection practices of others.
Respiratory Etiquette & Cough Hygiene

- In waiting areas, signage should be posted requesting patients to inform caregivers of respiratory signs/symptoms
- It is recommended that asymptomatic visitors not stay in the same area and that symptomatic patients be at least 6 Feet from patients without respiratory symptoms
- Patients with symptoms should be provided a mask, tissues, and alcohol hand gel and be asked to cover mouth when coughing and dispose of tissues properly
- Healthcare workers should use mask/eye protection to care for respiratory patients that cannot tolerate a mask. Perform hand hygiene before and after
Proper Management of Occupation BBP Exposures

- OSHA required all healthcare facilities to provide care and follow-up in the event of exposure or sharp injuries involving bloodborne pathogens.

- In the Event of a needle stick/sharps injury and/or exposure:
  - Clean the area well with soap and water.
  - Seek the necessary medical attention according to the institution’s policy & procedure; you may receive counseling and prophylactic treatment might be offered if indicated.
  - Complete the proper documentation according to the facility and/or your school’s policy & procedure; all facilities require some sort of an “occurrence report” or “incident report or notification” to be completed at the time of the event.
  - Follow-up according to the appropriate policy & procedure; these will vary by facility and by school; it is important to make yourself familiar with the process at your clinical location.
Use Transmission-Based Precautions for Bad Bugs
Contact Transmission

• Person to person touch
• Direct or Indirect contact with the patient or patient’s environment
• Transmitted by inanimate objects, needles, unwashed hands, gloves that were not changed between contact
Contact Precautions

- Examples: MRSA, VRE, Herpes, Impetigo, Scabies, RSV, and C-Diff
- Use on patients known or suspected to be “infected” or colonized.
- Personal Protective Equipment (PPE) is worn to prevent contact (i.e., gloves & gown)
- Place in a private room or cohort cases of “same” organism
- Dedicated patient care equipment
- Precautions on transport
- HAND WASHING with soap and water REQUIRED with C-Diff patient-alcohol gel is not effective
Droplet Transmission

- Droplets carry infectious organism – propelled through the air (In COVID for example, less than 6 feet).
- Through coughing, sneezing, talking, suctioning, singing
- Can involve direct contact or indirect contact
Droplet Precautions

- Examples: Influenza, Meningitis, Pneumonia
- Use on patients known or suspected to have infection caused by microorganisms transmitted in “droplets” (large particles >5 microns)
- Droplets are propelled approximately 6 Feet or less—mask should be worn if within 6 Ft of the patient
- Dedicated Patient Care Equipment
- Precautions on transport
- Special Ventilation is NOT required
- Place in private room or cohort infections of ‘same’ organism
Airborne Transmission

- Tiny particles (>5 Microns) evaporated in air or on dust particles
- Can stay suspended in air for long periods of time
- Can be inhaled by susceptible host and cause infection
Airborne Precautions

- Examples: Tuberculosis, Varicella Zoster, Measles, SARS
- Requires placement in a negative pressure room; door must remain closed
- Must wear an N-95 mask
- User must do “Fit Check” of mask before entering the room; if seal is NOT obtained, the room should NOT be entered
- Signs/Symptoms of TB can appear months or years after initial exposure
Recognizing Tuberculosis

CDC - an estimated 10-15 millions people are infected in the US – 10% will develop the disease at some point in their lifetime and active T.B. is more common in patients 35-60.

Symptoms - Cough lasting more than 3 weeks, loss of appetite, unexplained persistent weight loss, coughing up blood, profound fatigue & weakness, night sweats

OSHA Requires – TB skin testing in all health care facilities
Frequency based on facility risk assessment for TB
N-95 Mask Fit Testing
Follow up testing on anyone who is exposed
Multi-Drug Resistant Organisms

Important Considerations

- MDRO - Multi Drug Resistant Organisms
- Includes:
  - MRSA – Methicillin Resistant Staph Aureus
  - VRE – Vancomycin Resistant Enterococcus
  - MDR – GNR – Multi-Drug Resistant Gram-Negative Rod
  - C-Diff – Epidemic strain Clostridium Difficile resistant to Fluoroquinolones
About MRSA & VRE

- Staph Aureus and Enterococcus are bacteria that are normal flora in/on the body.
- These bacteria have developed resistance to antibiotics.
- People with MRSA or VRE are considered “colonized” even in the absence of infection, and can pass the organism on to others.
- MRSA/VRE require special isolation precautions which vary depending on where the organism is isolated.
MDRO’s

- MDRO’s
- Increase the length of stay; increased cost and mortality
- Limit treatment options
- Alter resistance patterns of other organisms
- Encourage development of colonization in those exposed to these pathogens
Pandemic Influenza Considerations

- Pandemic Influenza is a global concern
- All health care organizations are required to include pandemic planning in the disaster management plan
- The proper application of Respiratory Etiquette and appropriate use of PPE are considered the best means of mitigating the negative effects of pandemic influenza by limiting transmission
Summary

- Wash your hands properly (20 sec) and frequently
- Always observe Standard Precautions
- Wear the correct PPE
- Observe Transmission based Precautions
- Know where to look for additional infection control information