Infection Control & Prevention

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As Healthcare workers, we are exposed to communicable diseases everyday. Knowledge of these diseases and how they are transmitted will keep us healthy.

Prevention is the Key!!!!!
OSHA’s BLOODBORNE PATHOGEN (BBP) STANDARD

- Federally mandated guidelines for employees to follow
- Ensures employees are provided knowledge of BBP and how to prevent the spread
- Hepatitis B vaccine administration
- Body fluid exposure reporting and follow up

Modes of Disease Transmission

- Direct and Indirect Contact
- Droplet Spread
- Vehicle & Vector
- Mucous membrane exposure
Methods of Safety

- Engineering controls – needle boxes, sharp safety devices, needleless IV systems
- Work Practice controls – example: no needle re-capping
- Disposing of bloody/contaminated items properly
- Personal Protective Equipment (PPE)

AND..................

Practicing Good Hand Hygiene  !!!
Hand Hygiene

2013 National Patient Safety Goal – “Reduce the risk of Healthcare Associated Infections” (JCAHO). This can be accomplished by practicing good hand hygiene techniques.

- Before and after ALL patient contact
- After removing gloves
- Between tasks on the same patient, to prevent cross contamination
- After contact with any patient item or the patient’s environment
- After using the rest room
- After blowing your nose
- NO artificial fingernails…….this includes shellacs, gels, tips, acrylics or overlays. Nail polish is acceptable if kept neat. Keep fingernails short (1/4 inch or less).

Use soap & water for hand hygiene when caring for a patient with c. difficile colitis

*Alcohol based hand sanitizers DO NOT kill the C. diff spore
Hand Hygiene Compliance

(this compliance data is reported to the KUH board of directors quarterly)

- Hand hygiene practices are monitored at all KUH hospitals by direct observations. These observations are done by Kennedy staff members.
- Goal is 100% compliance for all staff that have contact with the patient and/or the patient’s environment.
- 2010 compliance rate – 82%
- 2011 compliance rate – 82%
- 2012 compliance rate – 83%
Standard Precautions.....

isolating body fluids from the skin/eyes of the healthcare worker by the use of PPE (gowns, gloves, masks and goggles)

- **Isolation Categories**
  - **Contact Precautions** – gown and gloves (masks or goggles if splashing is anticipated) are required. Example – scabies, lice, resistant bacteria, c. diff
  - **Airborne Precautions** – TB (AFB) isolation requires a special TB mask to enter patient room. Patient is in a private, negative pressure room.
  - **Droplet Precautions** – respiratory droplet spread requires blue surgical mask. Patient is in a private room.
  - **Neutropenia Precautions** – gloves and mask worn when having contact with this patient (cancer, AIDS)
Personal Protective Equipment (PPE)

- Gloves are required for all patient contact
- Gowns (for isolation patient) are required for all patient contact and/or contact with the patient’s environment
- Goggles/eye protection required if splashing is anticipated or possible. Eye glasses are NOT an acceptable form of eye protection
- Masks required as indicated
- PPE is disposed of immediately after use. DO NOT hang masks or gowns on door handles
- Dispose of PPE in the patient’s room. DO NOT walk in the halls with PPE on
- Remove PPE when leaving Operating Rooms and any other restricted area

WASH.....WASH.....WASH  !!!

When using soap and water, 15 seconds is needed for effective hand hygiene
Resistant Organisms

**MRSA – Methicillin Resistant Staph Aureus**
- Staphylococcus Aureus is a common organism, usually found on the skin
- MRSA is more prevalent in the healthcare setting, but community acquisition is rising. I.e.- sibling transmission, high school locker rooms, gym equipment
- Contact precautions required when hospitalized (infection and colonization). MRSA screening as required by NJDHSS. May cohort patients.

**VRE – Vancomycin Resistant Enterococcus**
- Enterococcus is commonly found in the GI tract and perineal area. Common pathogen for urinary tract infections
- Transmission in the community is low, but hospital transmission is common. Found in the environment – patient chairs, bedrails and bathrooms
- Contact precautions required when hospitalized. May cohort patients.

**Clostridium Difficile Diarrhea**
- Infection of intestinal tract by spore forming organism causing profuse watery diarrhea. Risk factors include the elderly, immunocompromised and chronic antibiotic use.
- Contact precautions mandatory, monitor therapy results
- Hand washing..........NO HAND SANITIZER!

**Other**
- Gram negative bacteria – pseudomonas, Klebsiella, acinetobacter
Body Substance Exposures (BSE)

Prevention remains the primary strategy for reducing occupational blood borne exposures

Exposure is defined as a percutaneous injury (cut with a sharp or needle stick), contact of a mucous membrane or non-intact skin with blood, tissue and other body fluids such as: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, peritoneal fluid and amniotic fluid

Feces, nasal secretions, saliva, sweat, tears and vomitus are NOT normally considered potentially infectious unless they contain visible blood.
Body Substance Exposures (cont.)

Most body fluid exposures put healthcare workers at risk of being exposed to the following blood borne viruses:

**Hepatitis B** – transmission is through blood/body fluid exposure, sexual contact and needle sticks
- Risk of developing Hep B in unvaccinated population is **30%**
- Virulent virus – lives well outside the body for up to 7 days
- Hepatitis B vaccine ~ 90-95% effective

**Hepatitis C** – transmission is via blood exposure, needle sharing and needle sticks. Sexual contact transmission is unclear.
- Risk of developing disease is **3-10%**
- No vaccine

**HIV** – transmission is through blood contact, sexually and perinatally. Highest concentration of virus is in the blood, but can be found in semen, breast milk, vaginal fluid, and any other body fluid that is contaminated with blood
- Risk of transmission in occupational exposure is **0.3%**
- Report all needle sticks and BSEs – may need HIV prophylaxis
Body Substance Exposure Protocol

- Wash the exposed area immediately with soap and water. Mucous membranes should be thoroughly flushed with water. Go to the ED for an appropriate eye wash.

- Report the incident immediately to the departmental supervisor.

- Complete the necessary injury report forms.

- Assess the source patient (if known) for risk of blood borne diseases:
  - Known HIV dx
  - History of drug abuse
  - Multiple sex partners
  - Blood transfusions
  - Dialysis

- Source patient should have Hepatitis B & C and HIV blood work drawn immediately (if status is unknown). Unable to request patient’s return back to hospital if discharged.
Body Substance Exposure Protocol (cont.)

- All HIV testing on source patients will be run rapid. The exposed person will have routine HIV antibody testing done.

- IC will obtain results and notify you.
  
  *DO NOT CALL THE LAB FOR HIV RESULTS* – they are prohibited by hospital policy and HIPPA to give HIV results by phone

- Results of labs and copies of paperwork go to UMDNJ IM department. You are responsible to follow up with them.

- If exposure is deemed high risk, appropriate HIV prophylaxis will be offered in consultation with ID.
Sharps Safety

600,000-800,000 reported sharps injuries occur in health care every year. But many more go unreported!

- OSHA mandates healthcare facilities to provide safety devices for all sharp objects to help prevent injuries.
- DO NOT deactivate these safety devices! Learn to use it correctly. If unfamiliar with device, practice with it prior to use on patients.
- Do not save old devices for your ease and comfort.
- Activate the safety mechanism BEFORE disposing of sharps.
- Dispose of your own sharps in the proper sharps container. DO NOT THROW SHARPS IN THE TRASH or LEAVE AT THE BEDSIDE. After using a surgical tray, dispose of your sharps immediately.
- Dispose of sharps in the proper sized container. But DON’T overfill a sharps container. You may sustain an injury by forcing a needle in an already overfull sharps box.
- Long wires used for central line insertions must be coiled up and placed in needle box. Don’t allow wire to hang out.
Thank You and Good Luck!!!