

*California Pacific Medical Center*



INFECTION CONTROL **and** PREVENTION

# Hand Hygiene

The most important means to prevent transmission of infection!!!!

- Use soap and water with 15-20 seconds of friction or waterless alcohol-based hand sanitizers (if hands are visibly clean)
- When?
  - Before and after patient contact
  - After contact with contaminated equipment or environment
  - After removing gloves
  - Before you eat or drink



# Standard Precautions & PPE

- Every patient is treated with Standard Precautions at all times!
- Wear gloves if hand contact with blood and body fluids is anticipated
- Wear gowns if clothing contact with blood and body fluids is anticipated
- Wear masks, fluid shields, goggles if a spray to the eyes, nose or mouth is possible
- Utilization of private rooms for infection prevention as appropriate
- Personal Protective Equipment (PPE)
  - Wear gloves, fluid shields, masks, goggles, and gowns when exposure to body fluids is anticipated
  - Gloves: Are not a substitute for hand hygiene; must be changed between patients and tasks

# Precautions

## ■ CONTACT Precautions

- Private room, door may remain open
- Wear gloves and gown for patient contact or contact with the patient's environment, remove before exiting the room
- Wash hands with soap and water before exiting the room
- Dedicated equipment
- **Examples: C. difficile, diarrhea, draining wounds, uncontrolled bleeding**

## ■ DROPLET Precautions

- Private room, door may remain open
- Wear surgical mask if within 3 feet of the patient
- Wear fluid shield for intubation, suctioning
- For H1N1 wear a N95 mask
- **Examples: Influenza, Neisseria meningitidis, Pertussis, RSV**

## ■ AIRBORNE Precautions

- Negative airflow room with the door closed
- Wear N95 mask for patient with TB
- Wear surgical mask for all others
- Mask patient with surgical mask for transport out of their room.
- **Examples: TB, Chicken Pox**

# ATD &BBP

- **Aerosol Transmissible Disease (ATD) and Tuberculosis (TB)**

- Review the ATD policy and the TB Exposure Control Plan in the online IC Manual
- ATD expands the TB Exposure Control Plan to include diseases such as SARs and novel influenza viruses, e.g. H1N1

- **Bloodborne Pathogens (BBP)**

- Certain employees are at risk of exposure to BBP's because of the type of work that they do
- The 3 most common BBP's are HIV, Hepatitis B, & C
- Adherence to Universal/Standard Precautions greatly minimizes the risk of being exposed
- Details regarding the Cal-OSHA Bloodborne Pathogen Standard are available in the CPMC Infection Control Manual
- Needle stick prevention is a critical component

Needle stick Prevention:

- Never recap contaminated needles
- Utilize available safety technology
- Activate safety features
- Immediately dispose in sharps container

If a needle stick or body fluid exposure occurs:

- Render First Aid
- Notify your immediate supervisor
- Call Occupational Health Services (OHS) x66600
- If OHS is closed, page the Nursing Supervisor

# What are MDROs?

- Multi-drug Resistant Organisms
  - Defined as microorganisms, predominantly bacteria, that are resistant to one or more classes of antimicrobial agents
  - Some of the most common MDROs are:
    - MRSA – Methicillin Resistant Staphylococcus aureus
    - VRE – Vancomycin Resistant Enterococcus
    - Clostridium difficile (C. diff)
    - Gram negative bacteria
- Risk Factors
  - People who are already severely ill
  - Serious underlying disease or immuno-suppression
    - Includes stay in ICU/ oncology or transplant units
  - Patients with a prolonged hospital stay
  - Treatment with multiple antibiotics or prolonged antibiotic usage
  - Intra-abdominal or cardio-thoracic surgery
  - Very young or elderly people
  - Multi-drug Resistant Organisms

# MDROs

## ■ Transmission :

- Direct contact with an infected person
- Indirect contact
  - Carried on hands of Healthcare Worker (HCW)
  - Contact with contaminated environmental surfaces or patient-care equipment

### **Note:**

- *Patients with an active MDRO Infection may require contact precautions*
- *Patients who are colonized, but do not have an active infection are cared for using Standard Precautions*

## ■ How are Patients with MDROs Treated?

- Infected/symptomatic patients with MDROs are treated with organism-susceptible antibiotics
- Patients who have a positive culture for a MDRO without signs/symptoms an active infection are “colonized”
  - Colonized patients are generally not treated for the MDRO (decolonized)
  - However, facilities may attempt to decolonize selected patients based on criteria or physician judgment. For example:
    - Patients with recurrent MRSA infections
    - Specific surgeries (implanted devices and CABG)
    - Outbreak resolution or to limit household spread
    - Note: Decolonization is not considered to be long term

# Clostridium difficile (C. diff)

- Symptoms:
  - Watery diarrhea
  - Fever
  - Loss of appetite
  - Nausea
  - Abdominal pain/tenderness
- Risk factors for acquiring:
  - Immuno-suppression
  - Prolonged antibiotics usage
  - Prolonged hospital stay
  - Elderly
- Transmission Prevention
  - Same as other MDRO EXCEPT
    - Must wash hands with soap and water
    - Alcohol does not kill spores
    - Use appropriate hospital and EPA approved germicidal disinfectant product for environmental cleaning
- How treated?
  - Discontinue antibiotics causing diarrhea if possible
  - If symptomatic, treated with antibiotics, i.e. Flagyl, Vancomycin
- Isolation
  - Contact Precautions

# CLBSI Prevention: Central Line Insertion

- CLBSIs can be prevented through proper management of the central line.
- Prior to, and during central line insertion, these practices include:
  - Use of a checklist to ensure all steps are completed every time
  - Hand Hygiene and general infection prevention practices
  - Avoid using femoral vein for adult patients
  - Use an all-inclusive catheter insertion cart or kit to ensure all needed equipment and supplies are readily available
  - Maximal barrier precautions at insertion
    - Insertion team should wear gown, cap, mask, and gloves during procedure
    - Patient should be covered with a large sterile drape
  - Use a chlorhexidine-based antiseptic for skin preparation in patients older than 2 months of age
    - The antiseptic solution must be allowed to dry before making the skin puncture.

After central line insertion, preventative practices include:

- Disinfect catheter hubs, needleless connectors, and injection ports before accessing the catheter
  - Before accessing catheter hubs or injection ports, clean them with an alcoholic chlorhexidine preparation or 70% alcohol to reduce contamination.
  - Scrub the hub of the access port for 30 seconds. Allow the hub to air dry prior to access.
- Remove nonessential catheters
  - Assess the need for continued intravascular access on a daily basis during multidisciplinary rounds. Remove catheters not required for patient care.

# Surgical Site Infection (SSI)

- A surgical site infection is an infection that occurs after surgery in the part of the body where the surgery took place.
- Infections develop in about 2 to 5 out of every 100 patients who have surgery in the US.
- Approximately 500,000 SSIs occur each year
- Patients with an SSI have a 2-11 times higher risk of death, compared with operative patients without an SSI
- Common symptoms of a surgical site infection include:
  - Redness and pain around the area of surgery
  - Drainage of cloudy fluid from the surgical wound
  - Fever
- Preventative measures prior to and during surgery & Post :
  - Sterile scrub of hands and arms up to the elbows with an antiseptic agent just before the surgery.
  - If removal of hair is required, do so immediately before surgery using electric clippers. Do not shave the area with a razor.
  - Use of hair covers, masks, gowns, and gloves during surgery to keep the surgery area clean
  - Hand hygiene before and after caring for each patient, and providing wound care.
  - Sterile technique during dressing changes