Infection Prevention and Control: It’s In Your Hands!

2017 JHS Annual Mandatory Education
Objectives

- Describe evidenced-based hand hygiene practices
- Discuss environmental cleaning and disinfection
- Identify and discuss personal protective equipment requirement
- Discuss isolation precautions in health care settings
- Discuss evidenced-based practices to prevent transmission of healthcare associated infections
- Discuss Communicable diseases transmission and prevention
Click in the link below to watch the video

Alicia Cole Story
Mode of Transmission of Organisms

- Most Common Mode of Transmission of Organisms:
  - Via the hands of healthcare workers (HCWs)
Click on the link below to watch the video

Wash your hands – It Just Make Sense
Hand Hygiene: The Best Way to Prevent Transmission

1. Use soap and water OR alcohol-based products.
2. When washing with soap and water, scrub hands and wrists for at least 20 seconds.
3. When using alcohol-based hand sanitizer, apply to all areas of hands and wrists and allow to dry.

Exceptions:
- For patients with C. difficile, use soap and water for a minimum of 20 seconds after contact with the patient or the environment.
- When hands are visibly soiled.

Our Goal is to have ZERO Infections. HAIls are preventable! Everyone has a role in Infection Prevention.
Your 5 Moments for Hand Hygiene

1. Before touching a patient
2. Before clean/aseptic procedure
3. After body fluid exposure risk
4. After touching a patient
5. After touching patient surroundings
When Should You Perform Hand Hygiene?

• **Before:**
  – Patient contact and/or entry into room
  – Aseptic procedures
  – Donning gloves

• **After:**
  – Contact with patient’s skin
  – Contact with patient’s environment
  – (i.e. bed rails, side tables)
  – Contact with body fluids, excretions or wound dressings
  – Removing gloves
  – Leaving the patient’s room
Equipment and Environmental Hygiene

- Objects in patient’s rooms such as bed rails, bedside tables, monitors, IV pumps, ventilator equipment, etc. get colonized with the patient’s bacteria. Thus, contamination of your hands and clothes occurs just by contact with those surfaces (even without touching the patient).

- If you take clean equipment into a patient’s room you are contaminating that equipment (i.e. workstation on wheels, glucometer, vitals machine, stethoscopes, and thermometers). Therefore, you should disinfect it before taking it to the next patient’s room.

- Clean equipment and surfaces of the patient’s environment (i.e. bedside table) with hospital-approved disinfectants.

2 Minutes Contact Time
2 Minutes Contact Time
Remember

Work from “clean to dirty”
• Limit opportunities for “touch contamination” - protect yourself, others and environment
  – Don’t touch your face or adjust PPE with contaminated gloves
  – Don’t touch environmental surfaces except as necessary during patient care
  – Don’t touch your personal devices (i.e., pager, cell phones, iPads)
  – Change gloves that are torn or soiled (hand hygiene before and after glove use)
Rationale for Isolation Precautions in Hospitals

- Prevents transmission of bacteria from healthcare workers to patients and from our patients to healthcare workers.
- Protects susceptible hosts
- Remember: Use **Standard Precautions** all the time.
What Type of Personal Protective Equipment (PPE) Would you Wear?

Q & A

- Giving a bath?
  - Generally none

- Suctioning oral secretions?
  - Gloves & mask/goggles or a face shield-sometimes gown

- Transporting a patient in a wheelchair?
  - Generally none required

- Responding to an emergency where blood is spurting?
  - Gloves, fluid-resistant gown, mask/goggles or a face shield

- Drawing blood from a vein?
  - Gloves

- Cleaning an incontinent patient with diarrhea?
  - Gloves w/wo gown

- Irrigating a wound?
  - Gloves, gown, mask/goggles or a face shield

- Taking vital signs?
  - Generally none

- PPE should not be worn outside of the patient’s room

(CDC, PPE Use in Healthcare Settings, 2004)
Contact Precautions

- Private room
- Place sign on door or a highly visible area
- Hand hygiene
- Wear gown and gloves upon entry into room
- Hand hygiene
- Use disposable or dedicated patient care equipment
  Examples:
  - Multi-Drug Resistant Organisms (MDROs), Lice, Scabies, Diarrhea until C. difficile is ruled out
Case Study

A 23 year old female arrives to the ER complaining of chills, a productive cough, malaise, and fever of 39.0 degrees. The patient states that she had a recent knee surgery at an outside facility and the wound is red and very painful with lots of drainage for three days. The patient is admitted. Urine and blood cultures are ordered and a throat swab is collected for Influenza A and B. The Influenza test comes back positive for Influenza A and blood cultures are positive for MRSA.

- What isolation precautions should have been instituted and when?
- How do you ensure that everyone know what precautions should be taken to prevent the transmission of organisms that can cause infection?
Clostridium difficile

- Spore forming organisms that are resistant to many disinfectants.
- Soap and water for hand hygiene (no alcohol as it does not kill spores).
- Contact precautions for patients with diarrhea. Maintain on contact precautions until no diarrhea for 2 days (48 hours).
- Daily cleaning of patient rooms with bleach (other disinfectants do not kill the spores).
- Antibiotic exposure is the highest risk factor attributed to C. difficile infections (Antimicrobial Stewardship Program)
Influenza can be transmitted from healthcare workers to patients and from patients to healthcare workers.

You can protect yourself, patients, and your family by getting the flu vaccine each year.

Respiratory etiquette should be used at all times.

If you are sick, you should NOT be in contact with patients and other healthcare workers.

Do not allow sick visitors to enter patient care areas.
Droplet Precautions

- Private room usually required
- Place sign on door or a highly visible area
- Hand hygiene
- Wear surgical mask on entry
- For patient transport, place surgical mask on patient
- Examples:
  - Influenza (including rule out for flu), pertussis, meningococcal meningitis
Click in the link below:

Slow Motion Sneeze
Airborne Infection Isolation

- Private room with negative airflow (Airborne Infection Isolation Room)
- Post sign on door
- Keep door closed
- Hand hygiene
- Put on N95 particulate respirator prior to entering room
- For patient transport, place a surgical mask on patient
- Examples:
  - Tuberculosis, Measles, Chickenpox, Smallpox, Viral Hemorrhagic fever
Think TB!!!
Symptoms of Tuberculosis

- Unexplained cough > three weeks
- Unexplained cough with fever > three days
- Unexplained pleuritic chest pain, hemoptysis (coughing up blood) and/or dyspnea
- Unexplained fever, night sweats, weight loss
- Individuals with the above symptoms should get a chest x-ray
- Key Note: A positive TST (PPD) or IGRA (Quantiferon or T-Spot) does not indicate active disease.

- **When to call the Tb Coordinator:**
  - Concern regarding proper isolation
  - Possible or known exposures
  - Information regarding past treatment
  - Case management of TB patient
  - Tuberculosis Control Contact Numbers:
    - Office: 305-585-6629
    - Pager: 305-314-2881
How Serious Are Healthcare-Associated Infections (HAIs)? us is HAI?


<table>
<thead>
<tr>
<th>Major Site of Infection</th>
<th>Estimated No.</th>
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<tbody>
<tr>
<td>Pneumonia</td>
<td>157,500</td>
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<tr>
<td>Gastrointestinal Illness</td>
<td>123,100</td>
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<tr>
<td>Urinary Tract Infections</td>
<td>93,300</td>
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<tr>
<td>Primary Bloodstream Infections</td>
<td>71,900</td>
</tr>
<tr>
<td>Surgical site infections from any inpatient surgery</td>
<td>157,500</td>
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<tr>
<td>Other types of infections</td>
<td>118,500</td>
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<tr>
<td>Estimated total number of infections in hospitals</td>
<td>721,800</td>
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</tbody>
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If you are admitted to a hospital, you have a 5% chance of contracting an HAI.

- 1.7 million people per year get an infection during a hospital stay.
- $35 Billion/yr in healthcare costs due to HAIs.
- $1,100 per admission due to HAIs.
- 9.4% of total inpatient costs are HAIs related.
- More than 1% of HAIs affect people with Medicare or Medicaid.
- HAIs kill more people each year than Breast Cancer and Prostate Cancer combined.

Your length of stay in the hospital increases by 17.6 days if you get an HAI.

- 98,987 people in the U.S. die annually from HAIs.
- HAIs kill more people each year than Breast Cancer and Prostate Cancer combined.
Preventing HAIs: The Bundles

**CLABSI**
Central line associated bloodstream infection
- Assess daily
- Limit use of femoral lines
- Visually inspect dressing
- Use chlorhexidine-impregnated patch (Biopatch™)
- Daily chlorhexidine baths in select areas (ICUs)
- Use Curos™ caps

**CAUTI**
Catheter-associated urinary tract infection
- Assess daily
- Use silver-impregnated catheters if catheters will be used for >5 days
- Secure catheter appropriately
- Maintain closed drainage system
- Maintain unobstructed urine flow
- Obtain urine samples aseptically
- Keep catheter bag below bladder level

**VAP**
Ventilator-associated pneumonia
- Assess daily
- Conduct spontaneous breathing trials
- Head of bed at least 30°
- Oral care every 4 hours
- Chlorhexidine oral care every 12 hours
- Maintain appropriate cuff pressure on the endotracheal tube (range 20-22 mm Hg)
Preventing HAIs: The Bundles

Cleaning: Clorhexidine (CHG) baths should be full body skin massages and include cleaning the proximal 6 inches of any line/tubing exiting the body

Alternatives: Consider external (i.e. condom) catheters for cooperative male patients without obstruction or urinary retention and straight/intermittent catheterization on a temporary basis

Use Silver coated catheters (IC) in adult patients with catheters in place for 5 or more days

Trained personnel: Only trained staff should insert/handle/remove

Is indwelling urinary catheter needed? Ask Daily!

Curos® port protectors on all unused ports

Limit use of femoral/lower extremity central lines

Assess daily for line necessity

Bathe daily using chlorhexidine (CHG) cloths

Site inspection (dressing, skin, and Biopatch®)

Insertion checklist
Infection Control Contact Numbers

• Call us:
  – Jackson Memorial Hospital: 305.585.6820
  – Jackson South Community Hospital: 305.256.5147
  – Jackson North Medical Center: 305.654.5215

24 Hour cell phone number:
786.266.0624 for urgent matters after hours/weekends.

The safety of patients and staff depends on all of us!
Thank You for Preventing Infections!

Clean Hands