



## **Hand Hygiene Review**

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# Hand Hygiene

The #1 way to prevent the spread of germs from person to person, and place to place.



# Evidence-Based Theory

- Substantial epidemiologic evidence supports that hand hygiene reduces the transmission of healthcare-associated pathogens and the incidence of health-care associated infections
- The importance of hand hygiene is universally acknowledged by organizations such as the Joint Commission(TJC), World Health Organization (WHO) and Centers for Disease Control (CDC), which recommend or require hand hygiene practices and interventions to improve hand hygiene compliance in order to reduce health care-acquired infections

# Healthcare-associated infections

- Healthcare-associated infections (HAIs) affect 4% of patients worldwide and account for almost 100,000 deaths annually in the United States
- 1 in 25 patients get a Hospital Acquired Infection
- Infections result in tens of thousands of deaths & cost healthcare systems billions of dollars each year

## Infected patients:

- Stay longer in hospital
- Die
- Are treated with more toxic and less effective drugs
- Are prone to surgical site infections

# Risk Factors for HAIs

- Use of indwelling medical devices
  - Central Line Catheters
  - Urinary Catheters
  - Endotracheal
- Surgical procedures
- Injections
- Contaminated environment
- Transmission of communicable diseases
  - Occurs between patients and healthcare workers
- Overuse or improper use of antibiotics

# Top Antibiotic Resistant (AR) Infections 2019

- **Clostridium difficile**
  - 223,900 infections per year
  - 12,800 deaths
- **Staph including MRSA**
  - 323,700 infections in hospitalized patients per year
  - 10,600 deaths
- **Enterobacteriales (ESBL Producing)**
  - 197,400 cases in hospitalized patients per year
  - 9,100 deaths
- **Enterococcus (VRE)**
  - 54,500 cases in hospitalized patients per year
  - 5,400 deaths
- **Pseudomonas**
  - 32,600 cases in hospitalized patients per year
  - 2,700 deaths

**More than 2.8 million AR infections occur in the U.S. each year.**

**More than 35,000 people die from AR infections**

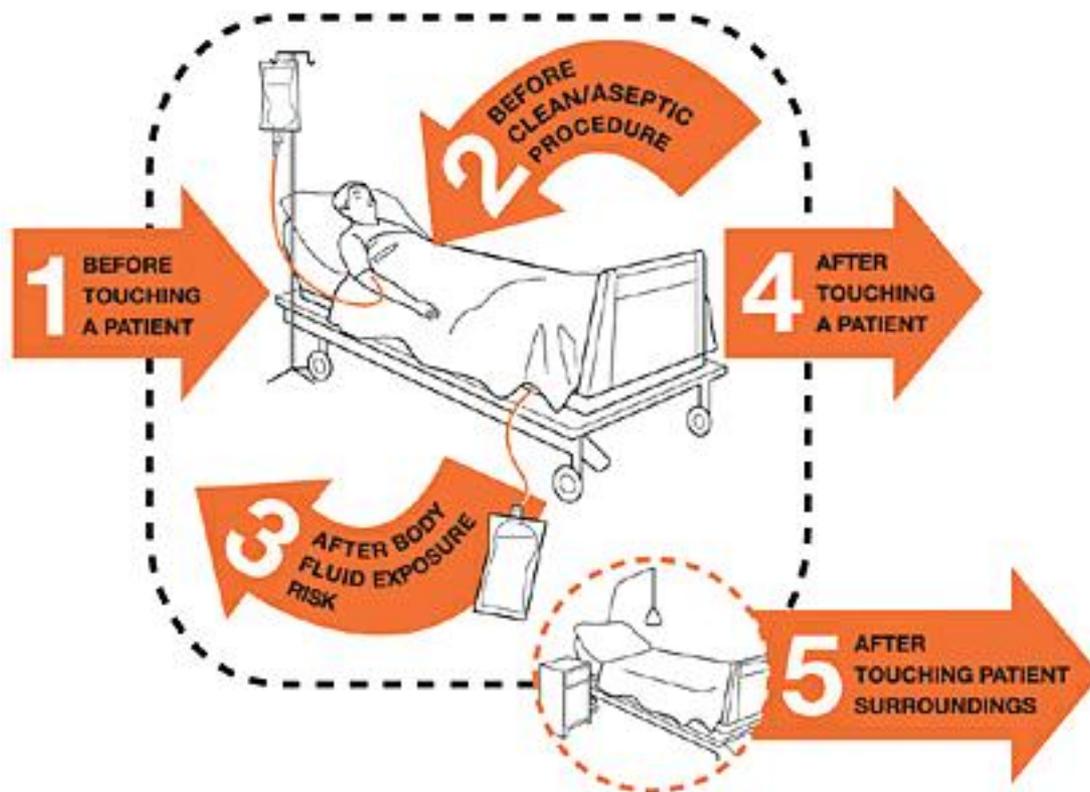
# Hand Hygiene - What?

- Hand hygiene
  - The What?
    - Act of cleaning hands for the purpose of removing dirt, soil, and microorganisms
  - The How?
    - Option 1 use alcohol-based hand sanitizer
      - Should contain 60-95% alcohol
    - Option 2 hand washing with soap and water
      - Soap and water must be used when hands are visibly soiled or in the presence of a patient in enteric precautions

Gloves DO NOT replace the need for Hand Hygiene before touching patients.

# Hand Hygiene – When?

## WHO World Health Organization 5 Moments of Care



1. before touching a patient,
2. before clean/aseptic procedures,
3. after body fluid exposure/risk,
4. after touching a patient, and
5. after touching patient surroundings.

# Hand Hygiene - Why?

**Bacteria is EVERYWHERE!!**



# Environmental Contamination: The “X”s Represent “High Touch” Areas where bacteria can be found



# HAND HYGIENE!!!

- A 2019 WHO systematic review of high-income countries found mean hand hygiene compliance rate in ICUs to be 59.6% with nursing staff 43.4%, physicians 32.6%, other staff 53.8%).
- Across the US the compliance rates have been historically low averaging 48%
- The first formal guidelines were released by the CDC in 1975
- Ignaz Semmelweis - The Savior of Mothers in 1847 found out that new mothers wouldn't die from Childbed Fever if their doc would simply wash his hands when he delivered their babies

# Tips for Infection Prevention for Residents

- Practice good hand hygiene
- Make sure attendings wash up
- Know the location of hand hygiene resources
- Don't substitute gloves for hand hygiene
  
- An article in the July 6, 2004, *Annals of Internal Medicine*, for instance, found that less than 60% of physicians in a Swiss university hospital complied with hand hygiene guidelines.
- Robert A. Weinstein, FACP, chair of the infectious diseases division at Chicago's Cook County Hospital, noted in an accompanying editorial that in the United States, "hand hygiene rates average 40% to 60% on a good day."

# Tips for Infection Prevention for Residents

- Clean diagnostic equipment that touches patients
- Using two alcohol wipes to clean the bell of your stethoscope. Use one to clean and one to disinfect.
- Also observe rules for keeping diagnostic equipment within isolation zones
- Wear clean clothing
- Get recommended vaccinations

# Tips for Infection Prevention for Residents

- Learn proper disposal and cleanup techniques: Learn the location of disposal containers and who to call when something needs to be cleaned up professionally. Simply wiping up a spill, especially if it contains body secretions, is not good enough.
- Realize that compliance is everyone's job: "Doctors need to understand that they can create harm by not following basic precautions, and they need to take a conscious, careful attitude toward infection control."

## Final Thought...

We strive to infuse hand hygiene practices into all infection prevention programs throughout healthcare. If we can't get handwashing right, then everything we're trying to do for pneumonia, or urinary tract infections, or central line infections is not going to be as effective because hand hygiene is such a foundational practice.

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