Hand Hygiene in Healthcare

Last Updated 2015
Objectives

• Describe hand hygiene impact on infection prevention
• Review hand hygiene terminology
• Cite indications for appropriate use
• Select appropriate agents
• Describe proper hand hygiene techniques
Healthcare-Associated Infections (HAI)

- 722,000 patients acquire an HAI every year; 75,000 die
- HAI are the 4th leading cause of death in U.S.
- Hands of healthcare workers are the most common mode of transmission of pathogens in hospitals

Many HAI are preventable with hand hygiene!
Hand Hygiene Guidelines, Regulations, and Policy Statements

- World Health Organization (WHO)
- Centers for Disease Control and Prevention (CDC)
- Healthcare Infection Control Practices Advisory Committee (HICPAC)
- Institute for Healthcare Improvement (IHI)
- Association of Professionals in Infection Control and Epidemiology (APIC)
- California Department of Public Health (CDPH)
- The Joint Commission (TJC)
Multi-Organizational Efforts

- Hand hygiene has been known to prevent spread of infection for 150 years
- CDC and many other authorities have promulgated hand hygiene guidelines
- Hand hygiene required by TJC (Patient Safety Goal 7)
- Healthcare facilities write and rewrite hand hygiene policies and procedures
- Lots of studies, intervention trials, observation and measurement

Still: Hand hygiene adherence in healthcare is ~40%
Perceived Barriers to Hand Hygiene

- Agents cause irritation and dryness
- Sinks are inconveniently located or there is a lack of sinks
- “Too busy”
- “Patient needs take priority”
- “Low risk of acquiring infection from patients”
- Lack of soap and paper towels (not regularly refilled)
- Understaffing or overcrowding
- No consequences for not performing hand hygiene

Hand Hygiene Terminology

• **Hand hygiene:** Performing handwashing, antiseptic handwash, alcohol-based hand rub, or surgical hand hygiene/antisepsis

• **Handwashing:** Washing hands with plain soap and water

• **Antiseptic handwash:** Washing hands with water and soap or other detergents containing an antiseptic agent

Guideline for Hand Hygiene in Health-care Settings. *MMWR 2002;* vol. 51, no. RR-16
Hand Hygiene Terminology - 2

- **Alcohol-based handrub:** Rubbing hands with an alcohol-containing preparation
- **Surgical hand hygiene/antisepsis:** Surgical scrub (extended period handwashing) with an antiseptic

Guideline for Hand Hygiene in Health-care Settings.
*MMWR 2002;* vol. 51, no. RR-16
Indications for Hand Hygiene

• When hands are contaminated or soiled, wash with soap and water

• If hands are not visibly soiled, use an alcohol-based hand rub for routinely decontaminating hands
  – Exceptions: spore-forming bacteria (e.g., *C. difficile*), certain non-enveloped viruses (e.g., norovirus, protozoan oocysts), prions

Guideline for Hand Hygiene in Health-care Settings. *MMWR 2002*; vol. 51, no. RR-16
Indications for Hand Hygiene – 2

Before
• Patient contact
• Donning gloves
• Inserting urinary catheters, peripheral vascular catheters, or other invasive devices that don’t require surgery

After
• Contact with a patient’s skin
• Contact with body fluids or excretions, non-intact skin, wound dressings
• Removing gloves

Guideline for Hand Hygiene in Health-care Settings.
*MMWR 2002;* vol. 51, no. RR-16
• We are not always ‘aware’ of where our hands have touched.
• Perform hand hygiene before moving on.

World Health Organization (WHO)
Factors to Consider When Selecting Hand Hygiene Products

- Efficacy of antiseptic agent
- Acceptance of product by healthcare personnel
  - Characteristics of product
  - Skin irritation and dryness
- Accessibility of product
- Dispenser systems
Efficacy of Hand Hygiene Preparations

- Good: Plain Soap
- Better: Antimicrobial Soap
- Best: Alcohol-based handrub*

* less effective in presence of organic material
Recommended Hand Hygiene Technique

Hand rub
• Apply to palm of one hand, rub hands together covering all surfaces until dry
• Volume: based on manufacturer recommendation

Hand washing
• Wet hands with water, apply soap, rub hands together, paying close attention to between the fingers and nails, for at least 15 seconds
• Rinse and dry with disposable towel
• Use towel to turn off faucet

Guideline for Hand Hygiene in Health-care Settings. MMWR 2002; vol. 51, no. RR-16.
Surgical Hand Hygiene

• Appropriate to use either antimicrobial soap or alcohol-based hand rub
  – Antimicrobial soap: scrub hands and forearms for length of time recommended by manufacturer
  – Alcohol-based handrub: follow manufacturer’s recommendations. Before applying, pre-wash hands and forearms with non-antimicrobial soap

• Surgical handrubs are better tolerated and are not associated with increased risk of SSI compared with traditional handrubs
Skin Care

- Provide healthcare workers with hand lotions or creams
  - Dryness or irritation of hands is often cited as a reason for non-compliance with hand hygiene regimes
- Seek information from manufacturers regarding effects that hand lotions, creams, or alcohol-based hand rubs may have on the effectiveness of antimicrobial soaps

Guideline for Hand Hygiene in Health-care Settings. *MMWR 2002*; vol. 51, no. RR-16
Fingernails and Artificial Nails

• Natural nail tips should be kept to ¼ inch in length from the quick
• Artificial nails should be worn when having direct contact with patients

Guideline for Hand Hygiene in Health-care Settings. *MMWR 2002*; vol. 51, no. RR-16
Unresolved Issues

- Use of non-alcohol based hand hygiene products
- Wearing rings in healthcare settings

Guideline for Hand Hygiene in Health-care Settings. *MMWR 2002*; vol. 51, no. RR-16
Gloving and Hand Hygiene

• Always wear gloves when contact with blood or infectious materials is possible
• Remove gloves after caring for each patient
  – Remove gloves, perform hand hygiene, and re-glove when transitioning care from a soiled to a clean area of the same patient’s body
• Perform hand hygiene upon removing gloves
• Do no wash gloves
• Do not reuse gloves nor wear same gloves for multiple patients

Do we need to consider a different approach?

*Insanity: doing the same thing over and over again and expecting different results.*

- Albert Einstein
Indicators for Performance Improvement

Process measures

• Record adherence to hand hygiene
  – Use “secret shopper” method, iScrub app
• Assess volume of alcohol-based hand rub used per 1,000 patient days
• Measure adherence to policies on wearing artificial nails
• Provide feedback to HCWs individually, by service, department, or unit
  – Comparisons to other units can create healthy competition

Guideline for Hand Hygiene in Health-care Settings. 
*MMWR 2002; vol. 51, no. RR-16.*
# Hand Hygiene Adherence Monitoring Tool

**HEALTHCARE-ASSOCIATED INFECTIONS PROGRAM**

[Cdph.ca.gov/hai](Cdph.ca.gov/hai)

<table>
<thead>
<tr>
<th>HH Opportunity</th>
<th>Discipline</th>
<th>What type of HH opportunity was observed? (select/ ✓ 1 per line)</th>
<th>Was HH performed for opportunity observed? ✓ or Ø</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>N</td>
<td>□ before care/entering room* □ before task □ after body fluids □ after care* ✓ upon leaving room</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Remember: Hand hygiene should be performed before and after glove use</td>
<td></td>
</tr>
<tr>
<td>HH1.</td>
<td></td>
<td>□ before care/entering room □ before task □ after body fluids □ after care □ upon leaving room</td>
<td></td>
</tr>
<tr>
<td>HH2.</td>
<td></td>
<td>□ before care/entering room □ before task □ after body fluids □ after care □ upon leaving room</td>
<td></td>
</tr>
<tr>
<td>HH3.</td>
<td></td>
<td>□ before care/entering room □ before task □ after body fluids □ after care □ upon leaving room</td>
<td></td>
</tr>
</tbody>
</table>

**Disciplines:**  
P = Physician  
RT = Respiratory Therapist  
VOL = Volunteer  
W = Social Worker  
S = Student  
OTH = Other, Specify  
N = Nurse  
VIS = Visitor  
U = Unknown

**Opportunities:**  
✓ = Opportunity Successful  
Ø = Opportunity Missed

**For HH1-HH10:**  
Total # HH Successful (“# ✓”): _________  
Total # HH Opportunities Observed: ________  
Adherence: _______%  
(Total # HH Successful ÷ Total HH Opportunities Observed x 100)
How to Improve Hand Hygiene Compliance

- Make hand hygiene a facility priority
  - Involve a multidisciplinary team
- Encourage patients and families to remind healthcare workers of hand hygiene
- Make hand rubs easily available (e.g., place at entrance to patient room, at bedside; provide HCW with pocket-sized containers)
- Use surveillance to monitor gaps in hand hygiene practices and provide feedback

Guideline for Hand Hygiene in Health-care Settings. *MMWR 2002; vol. 51, no. RR-16*
References and Resources 1


References and Resources 2


World Health Organization. [WHO Five Moments for Hand Hygiene Poster](http://www.who.int/gpsc/5may/Your_5_Moments_For_Hand_Hygiene_Poster.pdf?ua=1). 10/9/11.

Questions?

For more information, please contact any HAI Liaison Team member.

Thank you.