Hand Hygiene in Healthcare

Basics of Infection Prevention
Healthcare-Associated Infections Program
Center for Health Care Quality
California Department of Public Health
Objectives

- Describe hand hygiene impact on infection prevention
- Review hand hygiene terminology
- Provide indications for hand hygiene
- Describe appropriate cleaning agents
- Describe proper hand hygiene techniques
HAI in Hospitals

- 722,000 patients acquire an HAI and 75,000 die annually
- Hands of healthcare workers are the most common mode of transmission of pathogens in hospitals

Many HAI are preventable with hand hygiene!

CDC Hospital HAI Prevalence Survey, 2014
https://www.cdc.gov/hai/surveillance/index.html
Hand Hygiene Guidelines, Regulations, and Policy Statements

- Centers for Disease Control and Prevention (CDC)
- Healthcare Infection Control Practices Advisory Committee (HICPAC)
- World Health Organization (WHO)
- Institute for Healthcare Improvement (IHI)
- Association of Professionals in Infection Control and Epidemiology (APIC)
- California Department of Public Health (CDPH)
- The Joint Commission (TJC)
- Healthy People 2020 (www.healthypeople.gov)
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
- Healthcare facilities have hand hygiene policies and procedures
- Lots of studies, intervention trials, observation and measurement

Still...Hand hygiene adherence in healthcare has lots of opportunity for improvement
Barriers to Hand Hygiene

- Agents cause irritation and dryness
- Insufficient sanitizer dispensers
- Sinks are inconveniently located or there is a lack of sinks
- The HCW perception that they do clean their hands
- The HCW perception that glove use removes the need for hand hygiene
- Lack of understanding of germ transmission
- The culture does not encourage HCW to remind other HCW to wash their hands
- 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 hand wash:** Washing hands with water and soap or other detergents containing an antiseptic agent
- **Alcohol-based hand rub:** Rubbing hands with an alcohol-containing preparation
- **Surgical hand hygiene/antisepsis:** Surgical scrub (extended period handwashing) with an antiseptic

Indications for Hand Hygiene

• When hands are contaminated, soiled, before and after eating, and after toileting wash with soap and water
  • If hands are not visibly soiled, use an alcohol-based hand rub for routinely decontaminating hands
  • During outbreaks and if infection rates are high, facility may allow only handwashing with soap and water

Examples: *C. difficile* infections, Norovirus
Indications for Hand Hygiene – 2

Before
- Patient contact
- Donning gloves
- Accessing devices
- Giving medication

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

- 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
Surgical Hand Hygiene

• Appropriate to use either antimicrobial soap or alcohol-based hand rub with persistent activity
  • Antimicrobial soap: scrub hands and forearms for length of time recommended by manufacturer
  • Alcohol-based hand rub: follow manufacturer’s recommendations
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
  • Avoid lotion containers that touch skin and may become contaminated
• Work with vendors to make sure lotions provided by the hospital are compatible with sanitizer
Fingernails and Artificial Nails

- Artificial nails and gel polishes should **not** be worn by healthcare personnel
- Polish may be worn but must be intact
- Nail tips should be kept to ¼ inch in length
Gloving and Hand Hygiene

- Always wear gloves when contact with blood or infectious material 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
- Perform hand hygiene upon removing gloves
- Do not wash gloves
- Do not reuse gloves
Indicators for Performance Improvement

- Measure 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 artificial nail / gel polish policy
- Provide feedback to HCPs individually, by service, department, or unit
Adherence Monitoring Tool - Hand Hygiene

<table>
<thead>
<tr>
<th>Discipline</th>
<th>What type of HH opportunity was observed? (select/ 1 per line)</th>
<th>Successful ✓</th>
<th>Ø Missed</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>[ ] entering room* [ ] before task [ ] after body fluids [ ] after care* ✓ leaving room</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ ] entering room* [ ] before task [ ] after body fluids [ ] after care* [ ] leaving room</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ ] entering room* [ ] before task [ ] after body fluids [ ] after care* [ ] leaving room</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ ] entering room* [ ] before task [ ] after body fluids [ ] after care* [ ] leaving room</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ ] entering room* [ ] before task [ ] after body fluids [ ] after care* [ ] leaving room</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ ] entering room* [ ] before task [ ] after body fluids [ ] after care* [ ] leaving room</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ ] entering room* [ ] before task [ ] after body fluids [ ] after care* [ ] leaving room</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ ] entering room* [ ] before task [ ] after body fluids [ ] after care* [ ] leaving room</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total # HH Successful ("# ✓"): _______

Total # HH Opportunities Observed: _______

Adherence: _______%

(Total # HH Successful ÷ Total # HH Opportunities Observed × 100)

CDPH Adherence Monitoring tools: cdph.ca.gov/hai
How to Improve Hand Hygiene Compliance

• Make hand hygiene a facility priority
  • Involve a multidisciplinary team
  • Physician champion

• Encourage patients and families to remind healthcare workers to clean their hands

• Make hand rubs easily available (e.g., place at entrance to patient room, at bedside)

• Monitor adherence to hand hygiene and provide feedback of gaps
  • Train/re-train secret shoppers
  • Explore electronic hand hygiene monitoring systems
Additional References and Resources

• Centers for Disease Control and Prevention:  
  https://www.cdc.gov/handhygiene/index.html

• APIC Hand Hygiene:  https://apic.org/Resources/Topic-specific-infection-prevention/hand-hygiene
Questions?

For more information, please contact any HAI Program Liaison IP Team member

Or email HAIProgram@cdph.ca.gov