

Hand Hygiene in Healthcare

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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)
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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

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

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



*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 health care personnel
- Polish may be worn but must be intact
- Nail tips should be kept to $\frac{1}{4}$ 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

Discipline	What type of HH opportunity was observed? (select/ <input checked="" type="checkbox"/> 1 per line)	✓ Successful Ø Missed
	*Remember: Hand hygiene should be performed <u>before</u> <u>and</u> <u>after</u> glove use	
N	<input type="checkbox"/> entering room* <input type="checkbox"/> before task <input type="checkbox"/> after body fluids <input type="checkbox"/> after care* <input checked="" type="checkbox"/> leaving room	✓
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Total # HH Successful ("# ✓ "): _____	Total # HH Opportunities Observed: _____	Adherence: _____% (Total # HH Successful ÷ Total # HH Opportunities Observed x 100)
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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
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Or email

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