

Hand hygiene in CVC care bundle

Langkawi
14 – 16th April 2008

Why hand hygiene?


Most common mode of transmission of pathogens is via hands!

- Infections acquired in healthcare
- Spread of antimicrobial resistance

Hand hygiene adherence in hospitals

<u>Year of Study</u>	<u>Adherence Rate</u>	<u>Hospital Area</u>
• 1994 ⁽¹⁾	29%	General and ICU
• 1995 ⁽²⁾	41%	General
• 1996 ⁽³⁾	41%	ICU
• 1998 ⁽⁴⁾	30%	General
• 2000 ⁽⁵⁾	48%	General

1. Gould D, *J Hosp Infect* 1994;28:15-30.
2. Larson E, *J Hosp Infect* 1995;30:88-106.
3. Slaughter S, *Ann Intern Med* 1996;3:360-365.
4. Watanakunakorn C, *Infect Control Hosp Epidemiol* 1998;19:858-860.
5. Pittet D, *Lancet* 2000;356:1307-1312.

A close-up photograph of a person's hand, palm facing up. The hand is covered in numerous small, bright green, glowing spots that represent germs. The background is a plain, light-colored surface.

if you could
see the germs,
you'd wash
your hands

Self-reported factors for poor adherence with hand hygiene

- Handwashing agents cause irritation and dryness
- Sinks are inconveniently located/lack of sinks
- Lack of soap and paper towels
- Too busy/insufficient time
- Understaffing/overcrowding
- Patient needs take priority
- Low risk of acquiring infection from patients

Definitions

- Hand hygiene
 - Performing handwashing, antiseptic handwash, alcohol-based handrub, surgical hand hygiene/antiseptis
- Handwashing
 - Washing hands with plain soap and water
- Antiseptic handwash
 - Washing hands with water and soap or other detergents containing an antiseptic agent
- Alcohol-based handrub
 - Rubbing hands with an alcohol-containing preparation
- Surgical hand hygiene/antiseptis
 - Handwashing or using an alcohol-based handrub before operations by surgical personnel

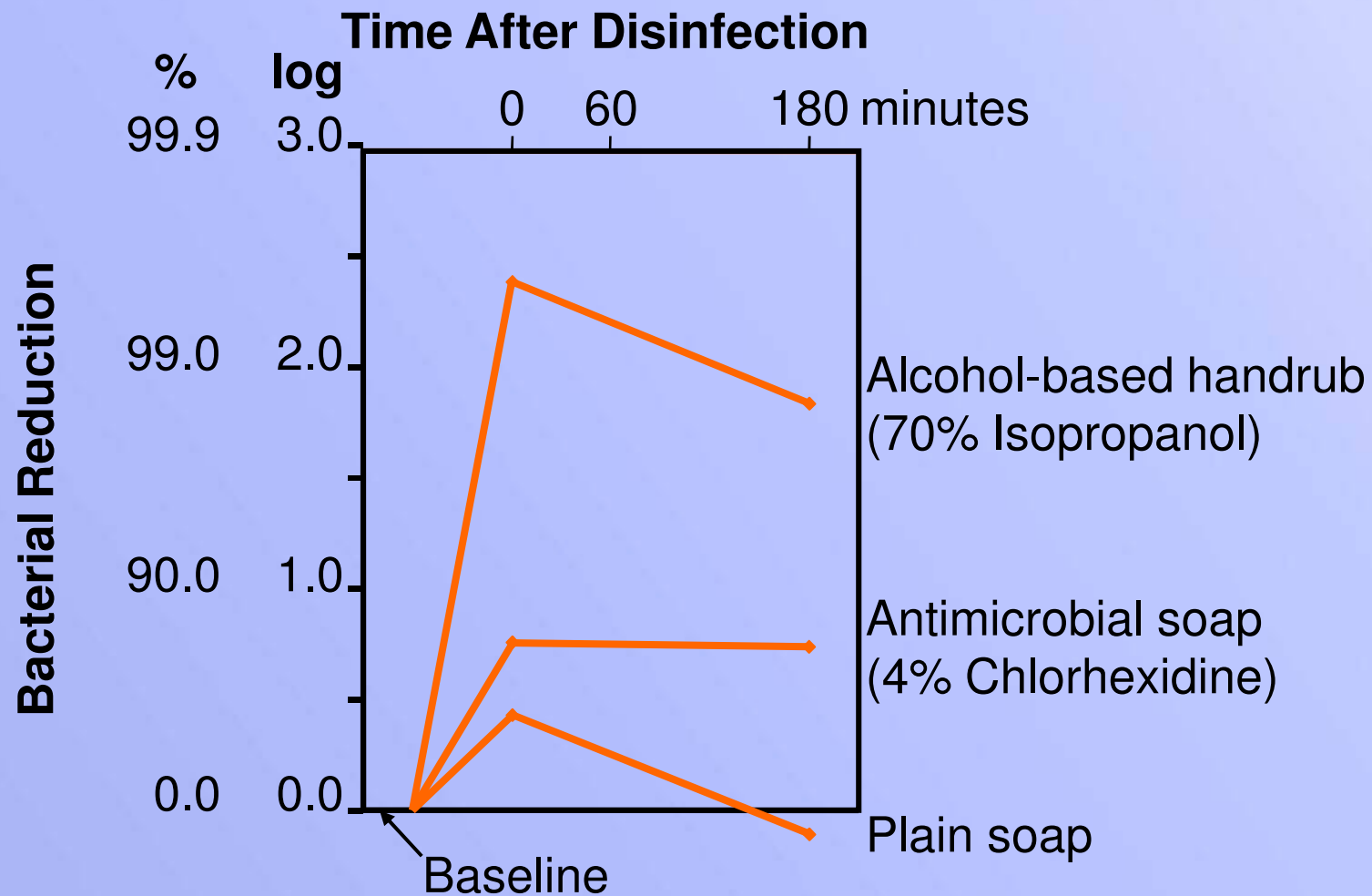
Indications for Hand Hygiene

- When hands are visibly dirty, contaminated, or soiled, wash with non-antimicrobial or antimicrobial soap and water.
- If hands are not visibly soiled, use an alcohol-based handrub for routine decontamination of hands.

Specific indications for hand hygiene in relation to CVC care

- Before and after palpating catheter insertion sites
- Before donning gloves and gown
- Before and after inserting, replacing, accessing, or dressing a catheter
- After removing gloves (gloved hands can also become contaminated due to tiny punctures in the glove material or during glove removal)

Efficacy of hand hygiene preparations in killing bacteria



Recommended hand hygiene technique

- Handrubs
 - Apply to palm of one hand, rub hands together covering all surfaces until dry
 - Volume: based on manufacturer
- Handwashing
 - Wet hands with water, apply soap, rub hands together for at least 15 seconds
 - Rinse and dry with disposable towel

Surgical hand hygiene

- Use either an antimicrobial soap or alcohol-based handrub
- 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

Infection rates: Surgical handscrub vs. handrub

<u>Class Contamination</u>	<u>No. SSI / No.Operations (%)</u>		<u>χ² Test of Equivalence (p-value)</u>
	<u>Handscrub</u>	<u>Handrub</u>	
• Clean surgery	29/1485 (1.9)	32/1520 (2.1)	16.0 (<0.001)
• Clean-Contaminated	24/650 (3.7)	23/732 (3.1)	1.9 (0.09)
• All	53/2135 (2.5)	55/2252 (2.4)	19.5 (<0.001)

Parienti et al. *JAMA* 2002; 288(6):722-27.

Measures to improve hand hygiene

- Include hand hygiene as part of checklist for central line placement
- Empower nurses to stop doctors from performing catheterisation if hand hygiene is not observed
- Create an environment where reminding each other about hand hygiene is encouraged.

Boyce JM, Pittet D
Guideline For Hand Hygiene In Health-care
Settings. Recommendations Of The Healthcare
Infection Control Practices Advisory Committee
and the HICPAC/SHEA/APIC/IDSA Hand
Hygiene Task Force.

MMWR Recomm Rep 2002; 51(RR-16):1-47 .

Available online at:

<http://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf>

**Knowing is not enough;
we must apply**

**Willing is not enough;
we must do**

Goethe