

Hand Hygiene in the Community Setting

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Connecting Hand Washing with Obstetrical Infections

- 1847—Hospital in Vienna determined that there was an increase of puerperal fever in wards where the delivery physician also performed cadaver autopsies
- Large reduction in fever if the physician washed cadaver matter off his hands prior to delivering a baby
- Began to connect hand washing with infection control
- Still did not understand the connection with microorganisms

The Spread of Microorganisms

- Taking vital signs
- Touching a hand or shoulder
- Lifting a person
- Touching objects in the room
- Wet hands transmit more organisms than dry hands

Factors in the Community Affecting Hand Hygiene

- Religious and cultural beliefs (Muslim and Hindu beliefs shun the use of alcohol which may include alcohol based hand sanitizers)
- Lack of soap and water, clean towels
- Time (being in a hurry)
- Forgetting
- Misuse of Gloves
- Artificial Nails, Nails Longer than $\frac{1}{4}$ inch, Chipped Polish

Hand Hygiene Options

- Use gloves
- Wash with plain soap and water
- Wash with antibacterial soap and water
- Alcohol-based Hand Sanitizer

Gloves Promote a False Sense of Security

30% of glove-wearers show contamination on their own hands

- Gloves can have defects
- Glove-wearers are less likely to hand-wash after removing gloves
- Glove-wearers may cross-contaminate the environment by failing to remove gloves
- Contamination during glove removal (improper technique)
- Petroleum products used on hands can erode the glove (defects)
- Vinyl gloves have more defects than latex. Nitrile and latex gloves have the same number of defects.

Alcohol-Based Hand Sanitizers are the Most Effective Against Many Microbes

- Soap—can be contaminated with microbes
- Plain Soap and Water remove dirt and oils but don't kill microbes
- Antimicrobial soap works well if hand-wash is longer than 30 seconds
- Alcohol denatures the proteins of many dangerous microbes:
 - MRSA, TB, HIV, Herpes Simplex, Hepatitis B and C
- Alcohol is ineffective against other microbes: common cold, polio, c.difficile

Pure Alcohol is **INEFFECTIVE** Against Microbes

- Alcohol-based hand sanitizers should be 60%-80% alcohol.
- Sanitizers need water to denature the proteins in (e.g, to kill) the microbes
- Higher concentrations of or pure alcohol is less effective
- Check your hand sanitizer to be sure it has the correct amount of alcohol

The CDC* and the WHO* Recommend the Use of Alcohol Based Hand Sanitizers

- Remove dirt and oil from hands with soap and water
- Sanitize with Alcohol-based sanitizer
- Use enough to coat the hands, and rub for 30 seconds, air dry
- Sanitize after glove use
- Community Health Workers: Sanitize before entering a home and after leaving a home

Presentation Resources

- *Morbidity and Mortality Weekly Report*, October 25, 2002 / Vol. 51 / No. RR-16

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 of the Centers for Disease Control and Prevention

- WHO Guidelines on Hand Hygiene in Health Care, 2009

Author: World Health Organization