

Handwashing 101

By Greg Schaffer, BA, EMT-P

Handwashing is the simplest and certainly the most important thing you can do to care for your health, and the health of your patient. However, while good handwashing habits are critical in the fight to control the spread of infectious diseases, many EMS personnel do not follow appropriate handwashing procedures, and have not developed these handwashing habits.

One result of our failure to properly wash our hands before and after each patient contact is the spread of nosocomial infections. Since infectious diseases are the leading cause of death and disease, we should pay greater attention to lessons that have been learned and well documented for over 100 years. Handwashing before and after all patient contacts can significantly reduce the spread of infectious diseases; it is the single most important procedure for preventing nosocomial infections. A lack of attention to basic hygiene practices can be blamed for the spread of these infections from patient to EMS personnel, and from EMS personnel to patient.

The purpose of washing your hands is to remove dirt, organic material, and transient microorganisms. To be effective, washing should be of sufficient duration for mechanical action and allow antimicrobial products enough contact time to achieve results; this is at least 10-15 seconds. During handwashing you should pay particular attention to areas of the hands that are frequently missed. This includes the thumbs, backs of the fingers, back of the hands and under the fingernails. The following are some generally accepted rules for handwashing:

- 10-15 seconds of vigorous rubbing that generates friction.
- If hands are visibly soiled rub longer.
- Lather every surface well, especially around the nails.
- Use Antimicrobial soap or detergent, or in the absence of water use alcohol based hand rub for hand antisepsis. Do not use hand rubs if hands are soiled.
- Use soap or detergent to remove soil and transient microorganisms.
- Rinse hands in a flowing stream of water
- Dry hands with paper towels or hand dryers (activate lever-operated dispensers before washing and activate hand dryers with elbows).
- If exiting a bathroom, use paper towel to prevent touching door handles.

It has been discovered through multiple studies that the handwashing habits of healthcare providers are poor, yet we fail to improve. While the use of gloves during patient contact has increased dramatically, handwashing has not. In fact, there is a danger that this practice of glove use has provided a false sense of security, overshadowing the importance of handwashing as the foremost principle of infection control and leading to its neglect.

Perhaps because handwashing is repetitive, tedious and mundane we tend to forget about it, or simply decide it is something that will wait...and wait.

According to the Centers for Disease Control (CDC) the following are key hand hygiene procedure recommendations:

- When hands are visibly dirty or contaminated with proteinaceous material or are visibly soiled with blood or other body fluids, wash hands with either a non-antimicrobial soap and water or an antimicrobial soap and water.
- If hands are not visibly soiled, use an alcohol-based hand rub for routinely decontaminating hands.
- Decontaminate hands before having direct contact with patients.
- Decontaminate hands after contact with a patient's intact skin (e.g., when taking a pulse or blood pressure, and lifting a patient).
- Decontaminate hands after contact with body fluids or excretions, mucous membranes, nonintact skin, and wound dressings if hands are not visibly soiled.
- Decontaminate hands if moving from a contaminated-body site to a clean-body site during patient care.
- Decontaminate hands after contact with inanimate objects (including medical equipment) in the immediate vicinity of the patient.
- Decontaminate hands after removing gloves.
- Before eating and after using a restroom, wash hands with a non-antimicrobial soap and water or with an antimicrobial soap and water.
- Antimicrobial-impregnated wipes (i.e. towelettes) may be considered as an alternative to washing hands with non-antimicrobial soap and water. Because they are not as effective as alcohol-based hand rubs or washing

hands with an antimicrobial soap and water for reducing bacterial counts on the hands of HCWs, they are not a substitute for using an alcohol-based hand rub or antimicrobial soap.

- Wash hands with non-antimicrobial soap and water or with antimicrobial soap and water if exposure to *Bacillus anthracis* is suspected or proven. The physical action of washing and rinsing hands under such circumstances is recommended because alcohols, chlorhexidine, iodophors, and other antiseptic agents have poor activity against spores.

Proper skin care is essential for EMS personnel who are frequently washing their hands throughout the day. Hands that are washed frequently can become dry and cracked if not properly cared for. However, rather than limiting handwashing, the key is proper skin care. The following are recommendations by the CDC that will facilitate proper skin care and reduced opportunity for the spread of infections:

- Providing healthcare workers with hand lotions or creams to minimize the occurrence of irritant contact dermatitis associated with hand antisepsis or handwashing.
- Solicit information from manufacturers regarding any effects that hand lotions, creams, or alcohol-based hand antiseptics may have on the persistent effects of antimicrobial soaps being used.

If you are not familiar with the Hand Hygiene Guidelines (<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5116a1.htm>) published by the CDC on October 25, 2002, I suggest you review it and use this guideline to update your infection control policy. In-service training is always a good idea to remind us all of the importance of protecting their health through proper infection control procedures.

In the meantime:

- Wash your hands immediately after turning your patient over to the emergency department, after each and every call.
- Wash your hands after touching EMS equipment.
- Wash your hands after removing gloves.
- Wash your hands after you complete an EMS report or use your computer.
- Wash your hands after you touch the inside of your EMS vehicle, or its door handles.
- Wash your hands after you use that pen you let the patient use to sign the report, better yet... keep a throw-down pen, and let them keep the pen.
- Wash your hands after going to the restroom.
- Wash your hands before you eat.
- Wash your hands...you think about it and complete the list.

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References

Larson; EL, 1992, 1994 APIC Guidelines Committee. "APIC Guideline for Handwashing and Hand Antisepsis in Health Care Settings." *AJC (American Journal of Infection Control)* 1995, 23:251-269.

"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*, October 25, 2002, 51(RR16); 1-44.

May 2004