

RISKTOPICS

Hand hygiene in the healthcare setting
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Proper hand hygiene is the best way to keep from getting sick and prevent germs from being spread to others. For hospitals, nursing homes and other healthcare facilities, hand hygiene is particularly important to control disease transmission.

INTRODUCTION

Hand hygiene refers to handwashing, antiseptic handwash/handrubs, or surgical hand antiseptics. According to the Centers for Disease Control and Prevention (CDC), appropriate handwashing results in a reduced incidence of both nosocomial (acquired in a healthcare facility) and community infections.

Healthcare workers report that various factors contribute to poor compliance with hand hygiene. These include:

- Working in units with high patient demands, such as ICUs and Emergency Rooms
- Believing that wearing gloves eliminates the need to wash ones hands
- Complaints of hand dryness or irritation due to repeated hand washing
- Inconvenient location of sinks
- Lack of soap or towels
- Usage of unapproved soaps and/or lotions

It is important that employers educate employees on the importance of hand hygiene and proper handwashing techniques, along with providing the essential products (soaps, towels, sinks, alcohol-based products) to insure good hand hygiene is practiced.

GENERAL HAND HYGIENE TIPS

- It is best to wash your hands with soap and running water.
- Use alcohol based handrubs when soap and water are not available. These handrubs, rinses, or gels will significantly reduce the number of germs on the skin and are fast acting.

Handwashing Tips

- The components of good handwashing include using an adequate amount of soap, rubbing hands together to create friction, and rinsing under running water. The action of drying the hands also helps to remove most of the transient bacteria present.
- Prompt and thorough handwashing between patients and after contact with blood and other body fluids is an important component of infection control and body substance isolation procedures.
- Repeated use of HOT (vs. warm) water to wash hands may increase the risk of dermatitis.
- To help protect exposure to infectious materials, hands should be washed before and after:
 - Work
 - Eating
 - Smoking
 - Using Personal Protective Equipment (i.e. gloves)
 - Each patient contact
 - Putting in contact lenses
 - Applying makeup
- In addition, hands should be washed after:
 - Handling uncooked foods, particularly raw meat, poultry or fish
 - Changing diapers or cleaning up a child who has gone to the bathroom
 - After using the bathroom (*)
 - Handling garbage
 - Handling animal or animal waste
 - Blowing your nose, coughing, or sneezing
- The Occupational Safety and Health Administration (OSHA) standard for Bloodborne Pathogens handwashing requirements include:
 - Employers must ensure employees who come in contact with blood or other potentially infectious materials wash their hands and other skin with soap and water or flush mucous membranes with water as soon as feasible after contact.
 - Employers must provide readily accessible hand washing facilities and insure employees wash their hands immediately or as soon as feasible after removal of gloves.
 - When hand washing is not feasible, the employer must provide either an appropriate antiseptic hand cleaner in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleaners or towelettes are used, hands must be washed with soap and running water as soon as feasible.

(*) Studies show that up to 30% of individuals do not regularly wash their hands after using the restroom. By not washing their hands, people may be spreading germs (present in our bodies and in the restroom environment) onto every surface they touch. Hepatitis A is commonly spread through poor restroom practices, as are many food borne outbreaks. It is also good practice to use a disposable towel to open a restroom door for exiting after hand washing.

PROPER HAND HYGIENE TECHNIQUES

Hand washing with plain or antimicrobial soap and water

Plain soap mechanically removes transient bacteria from the skin, but does not kill bacteria released by the shedding of dead skin cells. Antimicrobial soap mechanically removes, kills or inhibits microbial flora. There are varying levels of activity among antimicrobial soap products.

- Place hands together under water (preferably warm)
- Apply soap (according to the manufacturers' directions) and rub your hands together for at least 15-30 seconds. Wash all surfaces well, including wrists, palms, backs of hands, fingers, thumbs and under the fingernails.
- Clean dirt from under your fingernails.
- Rinse the soap from your hands.
- Use towel to turn off the faucet.
- Dry your hands completely with a clean towel if possible. If towels are not available, it is okay to air dry your hands.
- Pat your skin rather than rub, to avoid chapping and cracking.
- If you use a disposable towel, throw it in the trash.

Hand hygiene with alcohol based products (handrubs, rinses, gels)

Antiseptic handrubs kill or inhibit microbial flora, but do not remove soil. For this reason, alcohol products should not be used in lieu of soap and water when visible dirt is present.

- Apply product (with amount applied according to manufacturers' directions) to palm of one hand.
- Rub hands together.
- Cover all surfaces of hands and fingers.
- Rub until hands are dry.
- It is not necessary, or recommended, to routinely WASH hands after application of alcohol-based products.
- While antimicrobial-impregnated wipes are considered equivalent to handwashing, they should not be a substitute for alcohol handrubs or antimicrobial soap.

Surgical hand antisepsis with antimicrobial soap or alcohol-based handrubs

The purpose of this procedure, which is performed prior to surgical procedures and before donning sterile gloves, is to eliminate transient microorganisms and reduce resident hand flora.

- Remove rings, watches, bracelets before beginning a surgical hand scrub.
- Use a nail cleaner and running water to remove debris from under fingernails.
- When using antimicrobial soap on hands and forearms, scrub for at least 2-6 minutes or as recommended by the manufacturer or company policy/procedure. When using an alcohol-based surgical hand scrub product with persistent activity, prior to donning the sterile gloves, the employee should prewash hands and forearms with a non-antimicrobial soap by:
 - Drying hands and forearms completely
 - Applying the alcohol-based product as recommended (at least 120 seconds).
 - Allowing the hands and forearms to dry completely.

TIPS REGARDING FINGERNAILS

Because pathogenic organisms can survive under and around fingernails, it is important to pay attention to these areas while washing or using alcohol handrubs for cleaning. Freshly applied nail polish does not increase the number of germs present, but chipped polish may harbor bacteria. Those persons with artificial nails may harbor even higher counts of bacteria than those who do not wear them. Healthcare personnel in high-risk areas should not wear artificial nails.

SUMMARY

To control the spread of communicable and nosocomial infection, hospitals, nursing homes and other healthcare facilities should enforce strong hand hygiene procedures to all employees who provide products, services, or patient care to residents or patients. Hand hygiene training, enforcement of hand hygiene rules, and providing adequate and appropriate cleaning supplies are essential to insure infection control in the healthcare environment.

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(*) APIC-Association for Professionals in Infection Control and Epidemiology

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