

Hand Hygiene Fact Sheet for Health Care Settings

In health care settings, hand hygiene is the single most important way to prevent infections.

Hand hygiene is the responsibility of all individuals involved in health care. Hand hygiene refers to removing or killing microorganisms on the hands as well as maintaining good skin integrity. There are two methods of removing/killing microorganisms on hands: washing with soap and running water or using an alcohol-based hand rub. Generally, the focus is on microorganisms that have been picked up by contact with patients/health care provider, contaminated equipment, or the environment (transient or contaminating bacteria).

Effective hand hygiene kills or removes microorganisms on the skin and maintains hand health.

ALCOHOL-BASED HAND RUB

Alcohol-based hand rub is the preferred method for decontaminating hands. Using alcohol-based hand rub is better than washing hands (even with an antibacterial soap) when hands are not visibly soiled.

However, hand washing with soap and running water must be performed when hands are visibly soiled. If running water is not available, use moistened towelettes to remove the visible soil, followed by alcohol-based hand rub.

HAND WASHING

Most transient bacteria present on the hands are removed during the mechanical action of washing, rinsing and drying hands. Hand washing with soap and running water must be performed when hands are visibly soiled.

WHEN SHOULD HAND HYGIENE BE PERFORMED?

Hand hygiene must be performed:

- Before and after contact with a patient
- Before performing invasive procedures
- Before preparing, handling, serving or eating food
- After care involving the body fluids of a patient (e.g. assisting patient to blow nose, toileting the patient or doing wound care) and before moving to another activity
- Before putting on and after taking off gloves
- After personal body functions, such as using the toilet or blowing one's nose
- Whenever a health care provider is in doubt about the necessity for doing so.
- When hands accidentally come into contact with secretions, excretions, blood and body fluids (hands must be washed with soap and running water)
- After contact with items in the patient's environment

FACTORS THAT INFLUENCE HAND HYGIENE

The following factors influence the effectiveness of hand hygiene:

- Condition of the skin— intact skin vs. presence of dermatitis, cracks, cuts or abrasions
- Nails: natural nails more than 3-4 mm (1/4-inch) long are difficult to clean, can pierce gloves and harbour more microorganisms than short nails
- Only nail polish in good condition is acceptable
- Artificial nails or nail enhancements are not to be worn by those giving patient care as they have been implicated in the transfer of microorganisms
- Jewellery - rings and bracelets hinder hand hygiene, and should not be worn for patient contact; rings increase the number of microorganisms present on hands and increase the risk of tears in gloves

Fact Sheet

Feuille de renseignements



PIDAC Provincial Infectious Diseases Advisory Committee
CCPMI Comité consultatif provincial des maladies infectieuses

HAND HYGIENE AGENTS

Alcohol-based hand rubs:

- are recommended to routinely decontaminate hands in clinical situations when hands are not visibly soiled
- provide for a rapid kill of most transient microorganisms
- contain a variety of alcohols in concentrations from 60 – 90%
- are not used with water
- contain emollients to reduce skin irritation
- are less time consuming than washing with soap and water

Liquid or Foam Soap:

- Soap must be dispensed in a disposable pump dispenser
- Soap containers are not to be topped up, as there is a risk of contamination
- Bar soaps are not acceptable in health care settings except for individual client/patient/resident personal use.
- Antibacterial soaps may be used in critical care areas such as ICU, or in other areas where invasive procedures are performed.

TECHNIQUES

Alcohol-based Hand Rub:

- Remove hand and arm jewellery. Jewellery is very hard to clean, and hides bacteria and viruses from the antiseptic action of the alcohol.
- Ensure hands are visibly clean (if soiled, follow hand washing steps).
- Apply between 1 to 2 full pumps of product, or squirt a loonie-sized amount, onto one palm.
- Spread product over all surfaces of hands, concentrating on finger tips, between fingers, back of hands, and base of thumbs. These are the most commonly missed areas.
- **Rub hands until product is dry*. This will take a minimum of 15 to 20 seconds if sufficient product is used.**

Hand Washing:

- Remove hand and arm jewellery. Jewellery is very hard to clean, and hides bacteria and viruses from the mechanical action of the washing.
- Wet hands with warm (not hot) water. Hot water is hard on the skin, and will lead to dryness.
- Apply liquid or foam soap. Do not use bar soap in health care settings as it may harbour bacteria that can then be spread to other users.
- Vigorously lather all surfaces of hands for a minimum of 15 seconds. Removal of transient or acquired bacteria requires a minimum of 15 seconds mechanical action. Pay particular attention to finger tips, between fingers, backs of hands and base of the thumbs. These are the most commonly missed areas.
- Using a rubbing motion, thoroughly rinse soap from hands. Residual soap can lead to dryness and cracking of skin.
- Dry hands thoroughly by blotting hands gently with a paper towel. Rubbing vigorously with paper towels can damage the skin.
- Turn off taps with paper towel, to avoid recontamination of your hands (NOTE: If hand air dryers are used, hands-free taps are necessary).

Other Issues

- Intact skin is the first line of defence, therefore careful attention to skin care is an essential part of the hand hygiene program.
 - A hand hygiene skin care program should be in place. Choice of products should also be "user-friendly."
 - If integrity of skin is an issue, the individual should be referred to Occupational Health for assessment.
- Use a skin lotion that does not interfere with glove integrity
- Note: It is reassuring to the patient to see that the health care provider performs hand hygiene, as patients have an increased awareness of the importance of hand hygiene.

* Hands must be fully dry before touching the patient or patient's environment/equipment for the hand rub to be effective and to eliminate the extremely rare risk of flammability in the presence of an oxygen-enriched environment.