

HAND HYGIENE

SUMMARY

This skill describes how to perform hand hygiene effectively, using an alcohol-based hand rub formulation, or soap, water, and disposable paper towels.

ALERT

Carry alcohol-based hand rubbing solutions, small containers of liquid soap, and disposable paper towels to every home visit. Never use the patient's personal bar or liquid soap or cloth towels because these may be contaminated.

Avoid using water in homes with potentially contaminated water sources

Wearing gloves does not replace the need to perform hand hygiene

Avoid acrylic nails and excessive jewelry; these may retain infectious organisms

OVERVIEW

Research indicates that for hand hygiene to be effective, it must be performed at the times and places where transmission of organisms is most likely to occur-the point of care. Hand hygiene, properly performed at the appropriate point of care, is recognized as one of the most effective ways to prevent the spread of infection. The Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), and The Joint Commission have embraced hand hygiene as a standard of practice and critical component in infection control across health care settings, including the home setting.

Hand hygiene is a general term that refers to handwashing (with plain soap and water), antiseptic handwashing (with soap containing an antiseptic agent and water). Antiseptic hand rubbing (rubbing an antiseptic agent, usually alcohol, on all surfaces of the hand), or surgical hand antisepsis (washing or rubbing with an antiseptic agent preoperatively). The purpose of hand hygiene is to remove dirt, materials, and microbial organisms picked up by contact with other people or the environment. Merely rinsing hands under water or quickly rubbing them with alcohol is not sufficient to prevent the spread of infection. Proper hand hygiene requires using the right agent for the circumstances (soap, water, and a disposable towel, or an alcohol-based rub) and mechanical rubbing of all surfaces for a sufficient length of time. Although both methods of hand decontamination are effective if performed properly, a few smaller studies show rubbing with alcohol-based agents keeps microorganisms from returning to the skin for a slightly longer time. The key is to choose the right method for the right circumstance and to perform hand hygiene correctly whenever it is indicated. Antimicrobial agents or plain soap and water should be used in the following situations:

- When hands are visibly dirty or soiled with blood or other body fluids
- After using the bathroom
- After exposure or suspected exposure to spore-forming pathogens (e.g., *Clostridium difficile*)

When not contraindicated, alcohol-base products are considered the gold standard when performing routine patient care because they reduce bacterial counts more effectively than soap and water. An alcohol-based hand rub should be used for routinely decontaminating hands in situations other than those previously listed.

There is an increase in the number of bacteria colonized under jewelry such as rings and watches. Long fingernails, artificial nails, and chipped nail polish also harbor bacteria. Therefore, health care personnel should refrain from wearing rings and other jewelry when providing care and should keep fingernails well-trimmed, natural (no artificial nails or extenders), and polish free. If jewelry is worn, it must be removed before performing hand hygiene.

Regardless of the health care setting or the method used, hand hygiene is a requisite skill that every health care professional must perform at key times. These include before and after patient contact, after contact with blood or body fluids, after contact with contaminated surfaces, and before donning and after removing gloves. In the home setting, the patient and caregivers need to perform hand hygiene and ensure the home health nurse does the same.

EQUIPMENT

Ensure that all necessary supplies and durable medical equipment are available before the home visit

- Small bottle of alcohol-based waterless antiseptic containing emollients
- Small bottle of liquid antimicrobial or regular soap
- Paper towels

PROCEDURE

1. Remove hand hygiene supplies from the outer pocket of the nursing bag
2. Remove rings or other jewelry and place them in a secure pocket or other secured area.
Do not leave jewelry on the patient's sink, counters, or tables.
If rings are replaced after hand hygiene, perform hand hygiene again
3. Inspect all surfaces of the hands for breaks or cuts in the skin or cuticles
4. Cover any skin lesions before providing patient care
5. Push long sleeves up above the wrists

Hand Hygiene Using a Waterless Alcohol-Based Antiseptic Rub

1. Dispense an ample amount of alcohol-based product into the palm of one hand
Rationale: An adequate amount of product is needed to thoroughly cover the hands
2. Rub the hands together, covering all surfaces of hands and fingers with antiseptic rub.
Rub the palms of the hands together
3. Rub the fingers of one hand over the dorsum of the other hand and interlace the fingers.
Repeat with the other hand.
4. Rub the fingers of each hand over the palmar surface of the other hand and interlace the fingers.
5. Rub the back of fingers across the palms of each hand alternately
6. Decontaminate the fingertips by rubbing them in the palm of the other hand. Repeat with the other hand
Rationale: Many microorganisms on the hands come from the subungual region (beneath the fingernails)
7. Clasp each thumb in the palm of the opposite hand and twist
8. Rub the hands together until the alcohol is dry. Allow the hands to completely dry before donning gloves
Rationale: Rub hands until they are dry to ensure maximum efficiency. If hands dry completely in less than 20 seconds, insufficient product probably was applied

Hand Hygiene Using Plain or Antimicrobial Soap, Water, and Disposable Paper Towel

1. If using soap and water, ask the patient or caregiver where the sink or water source for sanitizing hands is located; take the hand hygiene supplies to this location; take the hand hygiene supplies to this location
2. Stand in front of the sink, keeping the hands and clothing away from the sink surfaces
Rationale: Sink surfaces may be contaminated; contact with surfaces may be transfer contaminates to skin or clothing
3. If the hands touch the sink during handwashing, repeat handwashing
4. Turn on the faucets to begin the flow of water
5. Avoid splashing water on clothing
Rationale: microorganisms travel and grow in moisture
6. Regulate the flow of water so that the temperature is warm
Rationale: Warm water removes less of the protective oils on hands than hot water
7. Wet the hands and wrists thoroughly under the running water. Keep the hands and forearms lower than the elbows during washing
Rationale: Hands are the most contaminated parts to wash. Water should flow from the least to the most contaminated area, rinsing microorganisms into the sink
8. Apply an adequate amount of soap in the palm of one hand and rub the hands together to work up a lather
9. Use a rotating frictional motion, applying friction to all surfaces of the hands and wrists, including the balls of hands, between fingers, and around and under the nails. Interlace the fingers and rub up and down. Continue washing for at least 20 seconds, Hum the "Happy Birthday" song from beginning to end twice as a timer
Rationale: Soap cleanses by emulsifying fat and oil and lowering surface tension. Friction and rubbing mechanically loosens and removes dirt and transient bacteria. Interlacing the fingers and thumbs ensures that all surfaces are cleansed
10. Rinse the hands and wrists thoroughly, keeping the hands down and elbows up
Rationale: Rinsing mechanically washes away dirt and microorganisms
11. Dry the hands thoroughly with a paper towel
12. Discard the paper towel in a trash can
13. Turn off the faucet with a clean, dry paper towel. Avoid touching the handles with the hands
14. Apply lotion to the hands if needed at the end of the visit. Avoid petroleum-based lotions
Rationale: Lotion helps minimize skin dryness

PATIENT AND FAMILY TEACHING

- Teach the patient and caregivers proper hand hygiene techniques
- Teach the patient and caregivers the reason for hand hygiene
- Teach the patient and caregivers situations in which hand hygiene is required
- Educate the patient about the risks for infection with improper hand hygiene
- Teach the patient and caregivers to ensure that the home health nurse performs hand hygiene
- Encourage questions and answer them as they arise

REFERENCES

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ADDITIONAL READINGS

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