

Practicing Good Hand-Hygiene for Care Providers



A 2010 shigellosis outbreak originating in an Illinois fast food restaurant infected 21 people and hospitalized 7. Health investigators suggested the source was an ill food handler who worked while sick and did not practice proper handwashing after visiting the restroom.

Public Health Reasons

Child-care providers must pay special attention to preventing the spread of microorganisms in the child-care facility. Infectious organisms can be spread:

- in human waste (urine, stool); and
- in bodily fluids (saliva, nasal discharge, secretions from open injuries, eye discharge, blood, and vomit); and
- through cuts or skin sores; and
- by direct skin-to-skin contact; and
- by touching an object that is contaminated with infectious organisms; and
- in droplets of bodily fluids, such as those produced by sneezing, coughing, or vomiting, that travel through the air.

In many cases, there are enough harmful microorganisms in an infected child's oral or nasal secretions, even before the child has visible symptoms, to potentially cause illness in a provider coming in contact with the child. Children in child-care centers commonly excrete intestinal pathogens even in the absence of symptoms. For example, noroviruses can be shed in the feces of children for at least 25 days after symptoms have stopped. Similarly, rotavirus can be shed for 25-57 days after the onset of diarrhea in children. Sick individuals can produce about 30ml of vomit per vomiting episode with a minimum of 10^6 norovirus particles present in a milliliter of vomit. Adult workers who do not practice proper hand-hygiene may spread illnesses to children or other workers. Montville et al. stated, "Proper hand washing has been recognized as one of the most effective measures to control the spread of pathogens, especially when considered along with the restriction of ill workers."

Nadel et al. conducted an observational study in 134 child-care centers in Pennsylvania. They found that of 114 food preparation or food consumption observations, 88 (77%) of the adults washed their hands. Of 181 diapering or toileting observations, 78 (83%) of the adults washed their hands. The researchers concluded that many child-care centers lack adequate health and safety practices.

Practices

By exposing their hands to contaminated items or bodily fluids, child-care providers can increase the risk for transmitting pathogens to the child-care environment. Therefore, routine hand hygiene is the safest practice.

Child-care providers must wash their hands:

- when they arrive for the day;
- after breaks;
- when moving from one child-care group to another;
- before and after:
 - preparing food or beverages
 - eating or handling food
 - feeding a child
 - giving medication
 - applying a medical ointment or cream in which a break in the skin may be encountered (e.g., sores, cuts, or scrapes)
 - diapering
- after:
 - using the toilet or helping a child use a toilet
 - handling bodily fluids (mucus, blood, or vomit), from sneezing, wiping and blowing noses, mouths, or sores
 - handling animals or cleaning up animal waste
 - cleaning or handling the garbage
 - using chemicals

Child-care providers must wash their hands using the following procedure:

- Remove any jewelry and roll up sleeves.
- Turn on water to a warm, comfortable temperature between 60°F and 120°F (16°C and 49°C).
- Moisten hands with water and apply soap to hands.
- While hands are out of the water stream, rub hands together vigorously until a soapy lather appears and continue for 10 to 15 seconds.
 - Pay particular attention to removing soil from underneath the fingernails during the cleaning procedure.
 - Create friction on the surfaces of the hands, arms, surrogate prosthetic devices for hands and arms, fingertips, and areas between the fingers.

- Rinse hands under running water, between 60°F and 120°F (16°C and 49°C), until they are free of soap and dirt. Leave the water running while drying hands.
- Immediately following handwashing, thoroughly dry hands with one of the following:
 - single-use paper towels
 - a continuous towel system that supplies the user with a clean towel
 - a heated-air hand drying device
 - a hand drying device that employs an air-knife system that delivers high velocity, pressurized air at ambient temperatures
- If taps do not shut off automatically, turn them off with a single-use towel.
- Throw the single-use towel into a lined trash container. Use hand lotion to prevent chapping of hands, if desired.
- Staff members who need to open a door to leave a bathroom or diaper-changing area must open the door with a disposable towel to avoid possible recontamination of clean hands.

When running water and soap are not available, use hand sanitizer as an alternative

- The use of alcohol-based hand sanitizers is an alternative to traditional handwashing with soap and water for adults whose hands are *not* visibly soiled.
- For guidelines on the proper use of hand sanitizer, see “Using Hand Sanitizers” fact sheet.

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