



Infection Control Prevention Guidance for Community Shelters Following Disasters

Community shelters provide housing for persons displaced from their homes following natural disasters such as hurricanes, floods, and earthquakes. In these settings, individuals share living space. Some individuals may have health problems, including acute or chronic infectious diseases. These recommendations provide basic infection control information that will help to prevent exposure to or transmission of infectious agents.

General Infection Prevention Techniques

Use of these infection prevention measures by all staff and shelter residents can reduce the spread of infections and infectious diseases.

- Wash your hands and those of children regularly. Alcohol gels are an adequate substitute when soap and clean water are not readily available.
- Maintain a clean living environment.
- Maintain good personal hygiene techniques including the following:
 - Cover your cough with tissues, disposing tissues in the trash, and performing hand hygiene
 - Follow good hygienic practices during food preparation
 - Do not share eating utensils or drinking containers
 - Do not share personal toilet articles such as combs, razors, toothbrushes, or towels with any one else
 - Dispose of razor blades and needles used for medications in containers designed for sharps disposal
 - Bathe on a regular basis
 - Wash clothing regularly

Hand Hygiene

After an emergency, it can be difficult to find running water. However, it is still important to wash your hands to avoid illness. It is best to wash your hands with soap and water but, when water isn't available, you can use alcohol-based products made for washing hands. Below are some tips for washing your hands with soap and water and with alcohol-based products.

When should you wash your hands?

1. Before preparing or eating food.
2. After going to the bathroom.
3. After changing a diaper or cleaning up a child who has gone to the bathroom.
4. Before and after tending to someone who is sick.
5. After handling uncooked foods, particularly raw meat, poultry, or fish.
6. After blowing your nose, coughing, or sneezing.
7. After handling an animal or animal waste.
8. After handling garbage.
9. Before and after treating a cut or wound.

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Techniques for Hand Washing with Alcohol-Based Products

When hands are visibly dirty, they should be washed with soap and water if available. However, if soap and water are not available, use an alcohol-based product for washing your hands. When using an alcohol-based handrub, apply product to palm of one hand and rub hands together, covering all surfaces of hands and fingers, until hands are dry. Note that the volume needed to reduce the number of bacteria on hands varies by product. Alcohol-based handrubs significantly reduce the number of germs on skin and are fast acting.

Proper Techniques to Use When Washing your Hands with Soap and Water:

1. Place your hands together under water (warm water if possible).
2. Rub your hands together for at least 10 seconds (with soap if possible). Wash all surfaces thoroughly, including wrists, palms, backs of hands, fingers, and under the fingernails.
3. Clean the dirt from under your fingernails.
4. Rinse the soap from your hands.
5. Dry your hands completely with a clean disposable towel if possible (this helps remove the germs). However, if towels are not available it is acceptable to air dry your hands.
6. Pat your skin rather than rubbing to avoid chapping and cracking.
7. If you use a disposable towel, throw it in the trash.

Cleaning the Living Environment and Personal Items

Keeping items clean helps to reduce the spread of infections to residents and staff.

- Clean surfaces when visibly dirty and on a regular schedule:
 - Kitchens and bathrooms daily and as necessary
 - Living areas at least weekly and more often if necessary
 - Bed frames, mattresses and pillows between occupants
 - Other furniture weekly and as needed
 - Spills immediately
- Sanitize (i.e., reducing contamination to safer levels) surfaces that are most likely to be sources of germs:
 - Food preparation surfaces
 - Diaper changing surfaces
 - Body fluid spills (e.g., vomitus, blood, feces)
- Use the appropriate cleaning agents:
 - Detergents and water for surfaces, common household products are acceptable
 - Sanitize with a product that the label says is a sanitizer or mix 1 teaspoon of household bleach in 1 quart of water
- Provide facilities for washing clothing on a regular basis
 - Remove all bulk solids (e.g., stool) before laundering clothing
 - Low temperature water can be used for washing
 - Wash clothing in a washing machine, if possible
 - Use household detergents for washing clothing
 - Household bleach can be used in the rinse water
 - Dry clothes in a dryer, if possible
 - There is no need to disinfect the tubs of washers or tumblers of dryers if cycles a run until they are completed
 - Make sure donated clothing is washed before distribution

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- Provide proper trash removal
 - Contact local authorities to determine local requirements for disposal of household and medical waste, such as needles and bandages
 - Use trash receptacles lined with plastic bags that can be securely tied
 - Remove trash bags and tie them securely before they are overfilled
 - Place trash in an area separated from the living spaces, preferably in trash bins
 - Have waste pick ups scheduled frequently, daily if possible

Staff Management of Sheltered Persons with Infectious Diseases

Persons living in group situations can spread infections such as colds and skin infections and other infections through diarrhea and vomiting. Upon arrival at a shelter, all residents should be screened for the following conditions:

- Fever
- Bad cough
- Skin rash
- Open sore(s)
- Vomiting
- Diarrhea

Persons with any of the above conditions should be referred for medical evaluation. If a potentially infectious condition is determined to be present, ill residents should be isolated from other shelter residents or placed in a special needs shelter (see below).

To reduce the potential for spread of droplets between shelter residents, staff should separate sleeping cots by 3 feet, if possible.

Additional Recommendations for Special-Needs Shelters

Special-needs shelters are defined as shelters that are capable of providing safe refuge to those individuals who require the supervision of a healthcare professional during the time of a disaster. The special-needs shelter is designed to care for:

- People with minor health or medical conditions that require professional observation, assessment, and maintenance and can not be handled by the general public shelter staff or exceed the capability of the general public shelter
- People with infectious health conditions who require precautions or isolation that can not be handled by general public shelter staff
- People with chronic conditions who require assistance with activities of daily living or more skilled nursing care but do not require hospitalization
- People who need medications or vital sign readings and are unable to receive such without professional assistance

Standard Precautions* should be applied to all residents to protect residents and staff from contact with infectious agents in recognized and unrecognized source of infection. Each resident should be screened at the time of entry to the special needs shelter to detect any conditions necessitating isolation and/or use of Transmission-Based Precautions. <http://www.cdc.gov/ncidod/hip/ISOLAT/Isolat.htm> Personal protective equipment (e.g., gloves, masks, and gowns) should be provided for healthcare personnel who staff the special-needs shelter. If possible, special-needs shelter staff should have access to healthcare personnel who are trained in infection control.

*Standard Precautions Summary

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During the care of any patient with symptoms of a respiratory infection, healthcare personnel should adhere to Standard Precautions:

- Wear gloves if hand contact with respiratory secretions or potentially contaminated surfaces is anticipated.
- Wear a gown if soiling of clothes with a patient's respiratory secretions is anticipated.
- Change gloves and gowns after each patient encounter and perform hand hygiene.
- Decontaminate hands before and after touching the patient, after touching the patient's environment, or after touching the patient's respiratory secretions, whether or not gloves are worn.
- When hands are visibly dirty or contaminated with respiratory secretions, wash hands with soap (either plain or antimicrobial) and water.
- If hands are not visibly dirty, use an alcohol-based hand rub for routinely decontaminating hands in clinical situations. Alternatively, wash hands with soap (either plain or antimicrobial) and water.

Related Links:

- Keep Food and Water Safe after a Natural Disaster or Power Outage (<http://www.bt.cdc.gov/disasters/foodwater.asp>)
- Cooking for Groups: A Volunteer's Guide to Food Safety (<http://www.fsis.usda.gov/OA/pubs/cfg/cfg.htm#contents>)

For more information, visit www.bt.cdc.gov/disasters,
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

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