Content on this page was developed during the 2009-2010 H1N1 pandemic and *has not been updated*.

- **The H1N1 virus that caused that pandemic is now a regular human flu virus and continues to circulate seasonally worldwide.**
- **The English language content on this website is being archived for *historic and reference purposes only*.**
- **For current, updated information on seasonal flu, including information about H1N1, see the CDC Seasonal Flu website (http://www.cdc.gov/flu/) .**

CDC Guidance for Emergency Shelters for the 2009-2010 Flu Season

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This document provides interim guidance specific for U.S.-based emergency shelters used by displaced persons during a natural or man-made disaster during the 2009-2010 influenza ("flu") season. This document provides guidance to reduce the risk of introducing and transmitting both seasonal and 2009 H1N1 flu in these settings. **This document is intended for use by federal, state, local, and tribal jurisdictions in the United States. It should be used in conjunction with existing shelter operation and management plans, procedures, guidance, resources, and systems.** It is not a substitute for shelter planning and preparedness activities, including other guidance documents. A multi-disciplinary approach that includes community response partners (e.g., public health, emergency management, and volunteer organizations) should be used to apply the guidance in this document. Recommendations may be revised as more information becomes available. This guidance is intended for "general population" or "congregate" shelters. It should not be applied to medical support shelters (i.e., shelters that accommodate people with functional disabilities and medical needs beyond the typical capability of traditional shelters) or functional needs shelters (i.e., shelters that support individuals with physical, cognitive, sensory, and behavioral disabilities or other conditions that impair their level of functioning and individuals who have chronic medical or health conditions that require functional or medical support, but not at the level of care provided in medical support shelters.) Medical support shelters and functional needs shelters should follow the Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, (/h1n1flu/guidelines_infection_control.htm) Including Protection of Healthcare Personnel.

Background

Emergency Shelters

Every year thousands of individuals are displaced from their homes by natural and human-generated disasters. Many will be housed in shelter facilities operated by the American Red Cross and other agencies and organizations. Shelters are a critical determinant for survival in the initial stages of a disaster. Shelters can vary in size and purpose. They may range from small shelter operations that house few individuals to larger facilities that shelter thousands.

Individuals in shelters are required to share living spaces and sanitary facilities and may be exposed to crowded conditions. Local, state, federal, and tribal emergency management, shelter coordinators and managers, and public health professionals should be aware of the risk of introduction and subsequent transmission of flu and other infectious diseases in these settings. CDC developed these recommendations to assist shelter staff to assess and take appropriate actions for identifying persons who may have influenza and subsequently reducing the possibility of transmission of influenza to shelter clients and staff. During times of disaster, the availability of resources to apply these guidelines may be limited; best efforts should be made to implement these guidelines to the extent possible, as appropriate.

For the purposes of this document, "shelters" include small-, medium- and large-scale, organized, temporary accommodations for persons displaced by disasters. Facilities may be residential (e.g., dormitories or campsites) or non-residential (e.g., sports stadiums, schools, or churches), with varying degrees of sanitary infrastructure. These shelters are sometimes referred to as "general population" or "congregate" shelters.

Influenza Symptoms and Transmission

Symptoms of flu can include fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills, and fatigue, and sometimes diarrhea and vomiting. It's important to note that not everyone with the flu will have a fever. Both 2009 H1N1 flu and seasonal flu are expected to be circulating during the 2009-2010 flu season. Like seasonal flu, 2009 H1N1 flu infection in humans can vary in severity from mild to severe. For more information on the symptoms of 2009 H1N1 flu, refer to CDC's What to Do If You Get Flu-Like Symptoms (/h1n1flu/sick.htm) .

2009 H1N1 flu virus spreads from person to person in the same way as seasonal flu. The main way that flu is thought to spread is through the coughing or sneezing of people infected with the flu virus. People may also become infected by touching objects with flu viruses on them (e.g., doorknobs, tabletops, keyboards) and then touching their mouth, nose, or eyes. In shelters, close quarters, larger groups of people, and shared sanitary and other facilities may increase opportunities for flu to spread from person to person.

Some people are at higher risk than others for serious complications from flu. These people include: children younger than 5 years old, but especially children younger than 2 years old; people aged 65 years or older; pregnant women; adults and children who have asthma, neurological and neurodevelopmental conditions; chronic lung disease; heart disease; blood disorders; endocrine disorders, such as diabetes; kidney, liver, and metabolic disorders; weakened immune system due to disease or medication; and people younger than 19 years of age who are receiving long-term aspirin therapy. More information on people at high risk for flu (/h1n1flu/highrisk.htm) complications is available.

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Recommended Strategies for Influenza Prevention in Shelters

CDC will provide periodic updates of assessments on the spread of flu, the severity of the illness it is causing (including hospitalizations and deaths), and possible changes in flu viruses at www.cdc.gov/h1n1flu/. If the information CDC gathers indicates that flu is beginning to cause more severe disease than seen previously in 2009, or if other developments indicate more aggressive mitigation measures should be taken, CDC may recommend additional strategies. Also, because conditions may vary from community to community, emergency shelter managers should also look to their state and local health officials for information and guidance specific to their location.

- **Encourage staff and clients to get vaccinated against the flu as vaccines become available:**
  - **Seasonal flu vaccine:** The best way to protect against the flu – seasonal or 2009 H1N1 – is to get vaccinated. Every year a vaccine is produced to protect against seasonal flu. In general, anyone who wants to reduce their chances of getting seasonal flu can get a seasonal influenza vaccine. However, vaccination is especially important for those at increased risk of severe illness from influenza and for people who live with or care for high risk persons (/flu/protect/keyfacts.htm) .
  - **2009 H1N1 vaccine:** A separate vaccine to protect against 2009 H1N1 flu has also been produced. The five primary target groups for initial doses of the 2009 H1N1 flu vaccine include pregnant women, people who live with or care for children younger than 6 months of age, healthcare and emergency medical services personnel, people age 6 months through 24 years, and people age 25 through 64 years who have certain underlying medical conditions that put them at higher risk of complications from flu (/h1n1flu/highrisk.htm) . People at higher risk of complications from the flu who are likely to work or volunteer in emergency shelters should consider getting vaccinated (/h1n1flu/vaccination) as soon as vaccine is available to them.

- **Encourage hand hygiene and respiratory etiquette of people who are well, those who have any symptoms of flu, and those who care for someone who is sick:** Wash hands frequently with soap and water when possible; keep hands away from your nose, mouth, and eyes; and cover noses and mouths with a tissue when coughing or sneezing (or a shirt sleeve or elbow if no tissue is available). Regularly remind staff to clean their hands with soap and water after touching someone who is sick or handling a sick person's personal effects, used tissues, or laundry. If soap and water are not available, an alcohol-based hand rub can be used. More information on hand hygiene (/cleanhands) , respiratory etiquette (/flu/protect/covercough.htm) or posters / display materials (/FLU/freeresources/index.htm) are available.
- **Increase the distances between people.** When possible, select a shelter facility large enough to provide additional space for distancing among clients and equipped with adequate air exchange systems and service, and adequate air volume per person (e.g., tall ceilings, adequate HVAC system with filter changes). When possible, place groups or families in individual rooms or in separate areas of the facility. Place cots head-to-toe and provide 6 feet of distance between cots, if possible. For detailed information on airborne and droplet infectious disease prevention, see Appendix E

(http://www.apic.org/Content/NavigationMenu/EmergencyPreparedness/SurgeCapacity/Shelters_Disasters.pdf) (http://www.cdc.gov/Other/disclaimer.html) of the APIC Infection Prevention and Control for Shelters During Disasters.

- **Plan for possibly changing staffing needs.** People with high-risk health conditions (as described previously) should avoid caring for people with flu-like illness if possible. Because this could lead to decreases in the available labor pool, plan for alternative staffing resources and training. Consider pre-deployment of additional healthcare workers and mental health personnel to shelters during flu season.
- **Prepare for significant increases in the use of supplies to control the spread of and care for patients with flu-like illness.** Such supplies could include:
  - Over-the-counter medications to treat symptoms of flu
  - Water and other fluids for hydration
  - Ice
  - Cups and other utensils
  - Facial tissues
  - Soap
  - Hand washing stations
  - Alcohol-based hand rubs
  - Paper towels
  - Disinfection and cleaning agents and supplies
  - Bed linens/blankets
  - Materials to be used for barriers between cots in separation area(s)
  - Personal protective equipment (/h1n1flu/masks.htm) (information about personal protective equipment to use when ill or when caring for someone who is sick)
  - Over-the-counter medications to treat symptoms of flu (Children younger than 4 years of age should NOT be given over-the-counter cold medications without first speaking with a health care provider. Do NOT give aspirin (acetylsalicylic acid) to children who have the flu; this can cause a rare but serious illness called Reye's syndrome.)

- **Perform routine environmental cleaning:**
  - Ensure the adequate supply and use of the cleaning agents routinely used in shelters. Train and supervise custodial and other staff members who perform cleaning functions to follow proper cleaning and disinfecting procedures for bodily fluids and environmental surfaces. Areas and items that are visibly soiled should be cleaned immediately, and all areas should be regularly cleaned – with a particular focus on items that are more likely to have frequent contact with hands, mouths, and bodily fluids. CDC does not believe any additional disinfection of environmental surfaces beyond routine cleaning is required. Instructional materials and training for custodial and other staff should be provided in languages other than English as locally appropriate.
  - Linens (such as bed sheets and towels), eating utensils, and dishes belonging to those who are sick do not need to be cleaned separately, but they should not be shared without thorough washing. Wash linens using laundry soap and tumble dry on a hot setting. Staff should wash their hands with soap and water or use an alcohol-based hand rub immediately after handling dirty laundry or used eating utensils and dishes. For more information about selection of cleaning/disinfection agents, cleaning bodily fluid spills, cleaning cots/mattresses, and handling and cleaning communal toys, refer to the following:
    - APIC Infection Prevention and Control for Shelters During Disasters (http://www.apic.org/Content/NavigationMenu/EmergencyPreparedness/SurgeCapacity/Shelters_Disasters.pdf) (http://www.cdc.gov/Other/disclaimer.html)
    - International Association of Assembly Managers Mega Shelters: A Best Practice (http://www.iaam.org/members/Sec_pages/Mega-ShelterPlanning&Activation.pdf) (http://www.cdc.gov/Other/disclaimer.html)
    - EPA's Antimicrobial Products Registered for Use Against the H1N1 Flu and Other Influenza A Viruses on Hard Surfaces (http://www.epa.gov/oppad001/influenza-disinfectants.html) (http://www.cdc.gov/Other/disclaimer.html)

- **Implement strategies to ensure infection prevention and control during meal service**. Look for ways to increase the distance between people at meal times, for example, increased floor area or table spacing. Serve pre-packaged meals or meals dispensed by food service workers when possible. Cafeteria-style service is preferred over self-service, buffet- or family-style. Provide hand washing stations with disposable towels, or alcohol-based hand rubs, for use prior to entering food lines. Position shelter staff at hand washing stations to promote proper hand washing and to monitor for signs of illness.
- **Pay special attention to the needs of children (/h1n1flu/childcare/toolkit/) .** Shelter staff can educate parents and caregivers on ways to recognize and to reduce the spread of flu-like illness. Encourage parents and caregivers to monitor children for symptoms of flu-like illness and to report any suspected illness immediately to shelter medical staff or shelter management. All areas where children play, for example a common play area or temporary respite care area, should be regularly and frequently cleaned with a particular focus on items that

are more likely to have frequent contact with the hands, mouths, or bodily fluids of children (for example, toys). Use shared toys that can be washed or sanitized and implement a systematic rotation of clean toys. Require hand hygiene for children, parents and staff before entering and leaving the children's temporary respite care area.

- **Screen for flu-like illness at shelter registration and intake, and at the beginning of shifts for all staff.**
  - Provide separate waiting areas during shelter registration and intake for clients who self-identify as sick prior to medical screening, hand-washing stations or alcohol-based hand rubs, tissues and wastebaskets, and education to clients about flu risk and infection control. Provide an area for staff who become sick while at the shelter to self-isolate until they can leave the shelter. Schedule housekeeping staff for regular cleaning in both areas.
  - If possible, provide additional personnel for medical screening to decrease intake time. Utilize trained medical or health care staff to conduct assessments and screening where feasible. Consider providing and encouraging use of appropriate personal protective equipment (/h1n1flu/masks.htm) , for staff conducting screening and assessments of ill persons and providing surgical masks to ill clients, if available and tolerable.
  - Initial screening should include observed and self-reported signs and symptoms of flu-like illness at intake areas. Secondary screening should include a more detailed examination by assigned shelter staff. Staff should also be screened for flu-like illness. If a person reports a fever, and a thermometer is available, take his or her temperature. If a person has signs or symptoms of flu consider isolating the client or referring to a higher level of care if medically indicated. Staff making assessments and assigning placement of patients should be reminded that many persons with influenza may not have a fever. Most persons with influenza will be shedding most virus, and likely be most infectious, in the first 3 days of illness. Most persons infected with influenza will no longer be infectious 7 days after illness onset.
  - Immediately following assessment, clients should be grouped as "not sick," "sick," and "requires immediate medical attention." Shelter staff involved in transporting clients with flu-like illness to a higher level of care should use appropriate personal protective equipment (/h1n1flu/masks.htm) and ill clients should be asked to wear surgical masks, if available and tolerable.
  - Shelters should record and monitor occurrence of flu-like illness so that shelter and local officials can be alerted to increasing or excessive numbers of cases. Monitoring can also trigger periodic reassessment of policies and procedures.

- **Advise all workers to stay home if they are sick.** Under current flu conditions, volunteers and staff with flu-like symptoms should stay home for at least 24 hours after they no longer have a fever (100 degrees Fahrenheit or 37.8 degrees Celsius or more) or signs of a fever (have chills, feel very warm, have a flushed appearance, or are sweating). This should be determined after fever-reducing medicines (any medicine that contains ibuprofen or acetaminophen) are no longer needed. The sick person may decide to stop taking fever-reducing medicines as he or she begins to feel better and should continue to monitor his or her temperature until it has been normal for 24 hours. Shelters should review their policies and practices to consider ways to allow flexibility for staff to stay home when they are sick.
- **Encourage staff and clients at higher risk of complications from flu, and those with signs of more severe illness, to contact their health care provider as soon as possible if they have flu-like symptoms**. Taking antiviral medicines early can decrease the duration and severity of symptoms. Flu antiviral drugs work best if they are started within 2 days of getting sick. There may still be benefit in treating people with antiviral drugs even after two days have gone by, especially if the sick person is at higher risk for flu complications, experiencing severe symptoms, or in the hospital because of the flu. People at higher risk for flu complications include pregnant women and people with certain chronic medical conditions (such as asthma, heart disease, or diabetes). Know the warning signs (/h1n1flu/sick.htm) of serious illness that require emergency treatment. These include fast breathing or trouble breathing, severe or persistent vomiting, blue or gray skin color, chest pain, confusion or change in behavior, and worsening or return of symptoms.
- **Isolate and group sick clients and their caregivers or family members.** When possible, place groups or families with sick family members in individual rooms. If individual rooms are not possible, designate a separate area for sick clients. Choose an area or building that is separate from the rest of the shelter. Ill persons should be placed in well-ventilated areas when possible and placed in areas where at least 6 feet distance can be maintained between the ill person and other well and ill persons. Therefore, place cots at least 6 feet apart and, if possible, place temporary barriers between cots. Bathroom facilities should be nearby and separate from bathrooms and hand washing areas used by well clients. Sick people should be asked to wear a surgical mask, if they can tolerate it, while in close contact with others. Provide additional comfort items, for example, tissues and blankets for sick clients.
- **Limit access to and traffic between isolation area(s) and general population area(s)**. Assign staff to monitor access and traffic flow. Assign dedicated shelter staff (e.g., healthcare workers, housekeeping, custodial) to work exclusively in the isolation area(s). Encourage one adult to provide care for sick family members while in the shelter. Care providers and staff members should take precautions to protect themselves against becoming sick and should not be at high risk for complications from the flu. Clients should remain in the isolation area and away from others until at least 24 hours after they no longer have a fever (100 degrees Fahrenheit or 37.8 degrees Celsius or more) or signs of a fever (have chills, feel very warm, have a flushed

appearance, or are sweating). This should be determined after fever-reducing medicines (any medicine that contains ibuprofen or acetaminophen) are no longer needed.

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For More Information

- Interim Guidance for Infection Control for Care of Patients (/h1n1flu/guidelines_infection_control.htm) with Confirmed or Suspected Novel Influenza A (H1N1) Virus Infection in a Healthcare Setting.
- CDC's Home Care Guidance: Physician Directions to Patient/Parent (/h1n1flu/guidance_homecare_directions.htm) .
- Mental Health All-Hazards Disaster Planning Guidance. (http://download.ncadi.samhsa.gov/ken/pdf/SMA03-3829/All-HazGuide.pdf) (http://www.cdc.gov/Other/disclaimer.html)

If you have additional questions, please contact the Centers for Disease Control and Prevention's (CDC) Hotline at 1-800-CDC-INFO, available in English and Spanish, 24 hours a day, 7 days a week.

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