

Residents in nursing homes and other residential facilities are at higher risk of complications related to influenza and influenza-like infections. Both seasonal and swine-origin influenza A H1N1 as well as other disease-causing organisms can be transported into a facility by personnel, new residents or visitors. It is important to identify illnesses early so actions to control the spread can be started quickly.

Modes of Influenza Transmission:

The spread of influenza virus occurs through **droplet transmission**, when respiratory droplets from infected persons **directly** fall within 3–6 feet (may be up to 10 feet) from the infected person after coughing, sneezing or talking. These droplets infect the mucus membranes (eyes, nose or mouth) of others, or contaminate surfaces and items in the infected person's environment. The droplets can be picked up from surfaces and **indirectly** spread to mucus membranes after touching contaminated surfaces.

Droplet transmission differs from **airborne transmission**, which is the ability of tiny respiratory droplets to float in the air and travel further distances. Airborne transmission of influenza viruses is unknown. Therefore airborne precautions should be followed during aerosol-generating procedures such as bronchoscopy, intubation, cardiopulmonary resuscitation (CPR), open airway suctioning and sputum induction.

Influenza-like-illness (ILI) is defined as fever* and a cough and/or a sore throat in the absence of another **KNOWN** cause of illness.

*temperature of 100°F (37.8°C) or greater

Control and Prevention of Influenza Viruses:

1. **Encourage and provide annual influenza vaccination** against seasonal and novel strains of influenza to residents and employees.
2. **Focus in early recognition of patients with influenza-like symptoms.** Screen and monitor new residents and those returning after temporary absences. Encourage residents to report symptoms promptly, especially fever, cough, sore throat, headache, or body aches. Prevent spread within the facility by the following actions:
 - a. **Isolate residents with influenza-like illness from others.**
 - Residents should stay in their room until at least 24 hours after they are free of fever or signs of a fever without the use of fever-reducing medications.
 - Residents should not participate in any group activities during this time.
 - Patients with influenza-like symptoms and their roommates do not need to be separated. Roommates should be considered exposed contacts and monitored for development of illness.
 - b. **If a resident with influenza-like illness must be outside their room for any reason, place a surgical or procedure mask on them.**
 - If wearing a mask would compromise the resident's ability to breathe easily, others who need to be near them should wear a mask.
 - Instruct and monitor respiratory hygiene and hand hygiene (see #4) at all times.
 - c. **Separate symptomatic residents from others by at least 3-6 feet** if they must be outside their room.
3. **Educate residents to follow respiratory hygiene, cough etiquette, and hand hygiene, and ensure adequate supplies** of tissues, waste containers and hand hygiene materials.
 - Cover mouth and nose with a tissue when coughing or sneezing, OR cough or sneeze into the upper sleeve, NOT into one's hands.
 - Put used tissues into a waste basket immediately.
 - Wash hands with soap and water or use alcohol-based hand cleaner afterwards.

4. Use **standard precautions** when caring for all residents including those with influenza-like illness:
 - **Perform hand hygiene** with soap and water or alcohol-based hand product after contact with the resident or potentially contaminated environmental surfaces.
 - **Only use alcohol-based handrubs when hands are NOT visibly soiled.**
 - a. **When to perform hand hygiene:**
 - Before having direct contact with residents.
 - After contact with blood, body fluids or excretions, mucus membranes, nonintact skin, and wound dressings.
 - After contact with intact skin such as checking vital signs or positioning a resident.
 - If hands are moving from a contaminated body site to clean body site during care.
 - After contact with inanimate objects in the immediate vicinity of the resident.
 - After removing personal protective equipment such as gloves, gowns or masks.
 - b. **Follow respiratory hygiene and cough etiquette** (see #3 on previous page).
 - c. **Use gloves** if hand contact with secretions or contaminated surfaces is anticipated.
 - Change gloves between patients. Failure to do so is an infection control hazard!
 - Put on clean gloves just before touching a patient's mucous membranes, non-intact skin or contaminated items.
 - Gloves do not replace the need for hand hygiene because gloves may be torn during use, and hands can become contaminated during removal of gloves.
 - Remove gloves and perform hand hygiene when exiting the room.

5. Use **droplet isolation precautions** in addition to standard precautions when caring for residents with suspected or confirmed influenza, until at least 24 hours after they are free of fever ($\geq 100^{\circ}$ F or 37.8° C) or signs of a fever without the use of fever-reducing medications.
 - a. Use a **surgical or procedure mask** for all routine patient care when entering the patient's room. Remove the mask and perform hand hygiene when exiting the room.
 - b. Wear a **gown** when soiling of clothes or skin with blood, body fluids, secretions or excretions is anticipated. Change gowns between residents.
 - c. Remove gowns and perform hand hygiene when exiting the room.
 - d. The resident should wear a surgical mask if leaving the room is unavoidable.
 - e. Limit persons entering the room only to those necessary.

6. Use **airborne precautions during aerosol-generating procedures** (see box below) .
 - a. Wear an **N95 respirator (mask)**. These provide a seal around the nose and mouth, and filter out small organisms.
 - Only use the brand and size of N95 mask that was used for the fit-test.
 - Check the fit to insure effectiveness with each use.
 - Remove N95 masks and perform hand hygiene when exiting the room.
 - b. Wear **face protection** such as a face shield, a mask with attached shield, or a mask with goggles.
 - c. Use an **airborne infection isolation room (AIIR)** with negative pressure performing 6 to 12 air exchanges per hour for aerosol-producing procedures if possible.

Aerosol-Generating Procedures:

- Such as bronchoscopies, intubation, CPR, open airway suctioning, and sputum induction.
- When available, perform procedures in an Airborne Infection Isolation Room (AIIR) with negative pressure air handling with 6-12 air changes per hour.
- Healthcare personnel need to wear N95 masks with eye protection (goggles or face shield) during these procedures.

Safe Personal Protective Equipment (PPE) Removal Sequence: Do Not Touch the Outside of PPE Items:

1. Gloves:

- a. Grasp outside of glove with opposite gloved hand and peel off.
- b. Hold removed glove in gloved hand.
- c. Slide fingers of ungloved hand under remaining glove at wrist.
- d. Peel second glove off over first glove and discard into trash receptacle.

2. Goggles or Face Shield:

- a. Grasp head band or ear pieces.
- b. Place in designated receptacle for reprocessing or in waste container.

3. Gown:

- a. Unfasten ties.
- b. Pull away from neck and shoulders, touching inside of gown only.
- c. Turn gown inside out.
- d. Fold or roll into a bundle and discard.

4. Mask or Respirator:

- a. Grasp bottom ties or elastic band, then top and remove without contaminating face.

Environmental Infection Control:

1. Use routine cleaning and disinfection strategies during influenza seasons.
2. Focus on frequently touched surfaces.
3. For further guidance, consult this CDC guidance: www.cdc.gov/ncidod/dhqp/gl_environinfection.html

Preventing Exposures from Employees and Visitors:

1. Post signage at all building entry points instructing employees and visitors to report ILI symptoms at the first opportunity. Consider having personnel verbally and visually screen visitors for ILI symptoms.
2. Post educational materials in appropriate languages regarding respiratory hygiene/cough etiquette, and provide supplies to perform these actions.

Personnel Surveillance:

1. Monitor personnel daily for signs and symptoms of ILI. If an employee becomes ill while at work, they should cease working with residents, and notify their supervisor and/or the employee health nurse.
2. Healthcare personnel who have had an unprotected exposure to influenza may continue to work as long as they are asymptomatic and should contact their primary care provider regarding recommendations for antiviral prophylaxis.

Management of Ill Personnel:

1. Instruct all workers to stay home if they are sick with ILI symptoms. Healthcare workers with ILI should be excluded from work for at least 24 hours after they no longer have a fever (defined as $\geq 100^{\circ}$ F or 37.8° C) or signs of a fever, without the use of fever-reducing medicines. Those who work in areas where the patients are considered severely immunocompromised should be considered for temporary reassignment or exclusion from work for 7 days from symptom onset or until symptoms have resolved, whichever is longer.
2. Non-healthcare employees with ILI should stay home and not return to work until at least 24 hours after they are free of fever ($\geq 100^{\circ}$ F or 37.8° C) or signs of a fever without the use of fever-reducing medications.
3. Have time-off and return to work policies and procedures in place for employees who are asked to stay home because of fever and respiratory symptoms.

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