



## H1N1 influenza virus

The H1N1 influenza virus, also referred to as the **swine flu**, was first detected in people in the United States in April 2009. Highly contagious, it is spreading on a worldwide scale, probably in much the same way that regular seasonal influenza viruses spread. On June 11, 2009, the World Health Organization acknowledged a global 2009 H1N1 flu pandemic.

Most people who contract the virus can be treated without hospitalization. However, certain individuals face higher risks.

People aged 65 and older are the least likely to be infected with 2009 H1N1 flu, but if they do get sick, they could develop serious complications from their illness.

This issue will cover the H1N1 virus' **background**, its **common symptoms**, and how it can be effectively **treated**. It will also address techniques that CNAs should use to minimize the spread of H1N1 while protecting themselves from the virus.

Have a good day of training, and stay tuned for next month's issue of **CNA Training Advisor**, which will cover survey and MDS interview skills for CNAs.

### The H1N1 scare

At the onset of the 2009 H1N1 pandemic, inaccurate information was perhaps more prevalent than actual fact. Rumors, in all likelihood fueled by fear and misunderstanding, swirled about the virus' strength, symptoms, and transmission. Ask your CNAs to discuss what they first heard about H1N1 so you can discredit any inaccurate information.

### PROGRAM PREP

#### Program time

Approximately 30 minutes

#### Learning objectives

Participants in this activity will:

- Learn about H1N1's global reach
- Understand the common flu and H1N1 symptoms
- Develop resident care procedures
- Learn about prevention and treatment methods

#### Preparation

- Review the material on pp. 2–4
- Duplicate the **CNA Professor** insert for participants
- Gather equipment for participants (e.g., an attendance sheet, pencils, etc.)

#### Method

1. Place a copy of **CNA Professor** and a pencil at each participant's seat
2. Conduct the questionnaire as a pretest or, if participants' reading skills are limited, as an oral posttest
3. Present the program material
4. Review the questionnaire
5. Discuss the answers

### Tips and tools for CNA training

Looking for more information about CNA training? Sign up to receive the **LTC Nursing Assistant Trainer**, a free biweekly e-newsletter that addresses all of your training needs. The **LTC Nursing Assistant Trainer** provides training tips on nursing measures, best practices, and other crucial aspects of job training for CNAs. This free e-newsletter gives you valuable information and tools to help you conduct efficient, innovative training for every CNA in your facility.

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## H1N1 INFLUENZA VIRUS

H1N1 was originally referred to as “swine flu” because laboratory testing showed that many of the genes in this new virus were very similar to influenza viruses that typically occur in pigs (swine) in North America. But further study has shown that this new virus is very different from what normally circulates in North American pigs. It has two genes from flu viruses that usually circulate in pigs in Europe and Asia and bird (avian) and human genes. Scientists call this a “quadruple reassortant” virus.

The Centers for Disease Control and Prevention (CDC) routinely works with states to collect, compile, and analyze information about influenza and has done the same for the new H1N1 virus since the beginning of the outbreak.

Spread of the H1N1 virus is thought to occur in the same way that seasonal flu spreads. Flu viruses are spread mainly from person to person through coughing or sneezing by people with influenza.

Sometimes people may become infected by touching something—such as a surface or object—with flu viruses on it and then touching their mouth or nose.

### High-risk individuals

Most people who contract H1N1 or the seasonal flu will be able to recover in a two-week span without medical care. There are, however, certain individuals who, if infected, are at risk of becoming seriously ill.

Complications from either virus strain can result in hospitalization or death, especially when it comes to particular age groups and those with preexisting medical conditions. The list below details those high-risk individuals:

- ▶ Children younger than age 5 (especially those under age 2)
- ▶ Adults aged 65 or older
- ▶ Pregnant women
- ▶ People who have:
  - Cancer
  - Blood disorders (including sickle-cell disease)
  - Chronic lung disease (such as asthma or chronic obstructive pulmonary disease)
  - Diabetes
  - Heart disease
  - Kidney disorders
  - Liver disorders
  - Neurological disorders (such as epilepsy, cerebral palsy, brain or spinal cord injuries, moderate to profound intellectual disability, or developmental delay)
  - Weakened immune systems (such as people with HIV or AIDS or who are on medications that weaken the immune system)

### Recognizing common symptoms

The symptoms of the 2009 H1N1 flu virus in people include fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills, and fatigue. Some people may have vomiting and diarrhea. People may be infected with the flu, including 2009 H1N1, and have respiratory symptoms without a fever.

Although most people who have been sick have recovered without needing medical treatment, hospitalizations and deaths from infection with this virus have occurred.

With seasonal flu, people at higher risk of serious complications include people aged 65 and older, children younger than 5 years old, pregnant women, and people of any age with certain chronic medical conditions.

About 70% of people who have been hospitalized with the 2009 H1N1 virus have had one or more medical conditions previously recognized as placing people at a higher risk of serious seasonal flu-related complications. This includes pregnancy, diabetes, heart disease, asthma, and kidney disease. Young children are also at high risk of serious complications from 2009 H1N1, just as they are from seasonal flu.

CDC laboratory studies have shown that no children and very few adults under age 60 have existing antibodies to the 2009 H1N1 flu virus; however, about one-third of adults over age 60 may have antibodies against this virus. It is unknown how much, if any, protection may be afforded against the H1N1 flu by any existing antibody.

### Vaccination

There are two kinds of H1N1 vaccines available. One comes in a shot form, in which an inactivated vaccine (containing killed virus) is



*Illustration by  
David Harbaugh*

*“That’s the new night nurse counting residents’ heads at midnight. She folded after 106.”*

# H1N1 INFLUENZA VIRUS

given with a needle, usually in the arm. The indications for who can get the 2009 H1N1 flu shot are the same as for seasonal flu shots. The flu shot is approved for use in people 6 months of age and older, including healthy people, people with chronic medical conditions, and pregnant women.

The other H1N1 vaccine option comes in the form of a nasal spray, which is made with live, weakened viruses that do not cause the flu (sometimes called LAIV, or live attenuated influenza vaccine). The indications for who can get the 2009 H1N1 nasal spray vaccine are the same as those for the seasonal nasal spray vaccine. LAIV is approved for use in healthy people aged 2–49 but is not approved for women who are pregnant.

About two weeks after vaccination, antibodies that provide protection

against the H1N1 influenza virus infection will develop in the body. The 2009 H1N1 vaccine will not protect against seasonal influenza viruses.

### The illness' effect

With seasonal flu, seasons vary in terms of timing, duration, and severity. Seasonal influenza can cause mild to severe illness and, at times, can lead to death.

Each year in the United States, on average, 36,000 people die from flu-related complications and more than 200,000 people are hospitalized from flu-related causes.

Of those hospitalized, 20,000 are children younger than 5 years old. More than 90% of deaths and about 60% of hospitalizations occur in people older than 65.

## Wash and sanitize those hands!

The best way to prevent the spread of H1N1, in addition to protecting yourself, is by keeping your hands clean. Take the following steps to ensure proper hand washing:

1. Rinse hands under warm running water, which is less damaging to skin and creates a better lather.
2. Rub hands together, making a soapy lather. Do this away from the running water for at least 10–20 seconds, being careful not to wash the lather away.
3. Wash the front and back of your hands, your wrists, as well as between your fingers and under your nails. Use friction to help remove germs.
4. Let the water run into the sink, not down your elbows, by pointing your fingers downward. This prevents water from running down your arms and contaminating clean hands after they have been washed.

5. Dry hands thoroughly with a clean hand towel or disposable towel.
6. Turn off the water with a paper towel, which prevents recontaminating hands.
7. Use hand lotion to prevent hands from becoming chapped.

Make sure you are properly using hand sanitizer by taking the following steps:

1. Apply a dime-size amount of sanitizer onto hands and rub hands together, covering both hands entirely, including under the nails
2. Evenly distribute the disinfectant by using a rubbing motion for about 15 seconds or until your hands feel dry, whichever is longest
3. Wash your hands at the next opportunity
4. Apply hand lotion to counter the drying effects of alcohol

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## H1N1 INFLUENZA VIRUS

People infected with seasonal flu or the H1N1 virus may be able to infect others from one day before getting sick to five to seven days after. This can be longer in some people, especially children and people with weakened immune systems.

If a resident gets sick with flu-like symptoms, he or she should avoid contact with other people except to get medical care. Residents should not go to the emergency room if they are only mildly ill.

However, residents who have the emergency warning signs of flu sickness (difficulty breathing or shortness of breath, pain or pressure in the chest or abdomen, sudden dizziness, confusion, and severe or persistent vomiting) should go to the emergency room immediately.

### Treatment

There are drugs that may be prescribed for treating both seasonal flu and H1N1 called antiviral drugs. These drugs may prevent serious complications, in addition to making an infected individual feel better, faster.

Antiviral drugs are used mainly to treat people who are very sick, such as people who need to be hospitalized, and to treat sick people who are more likely to get serious flu complications.

Should a resident become ill with flu-like symptoms, keep the sick person in a room separate from others and from common areas. Keep

the sick resident's door closed. Unless required for medical care or other necessities, people who are sick with an influenza-like illness should keep away from others as much as possible. Use a fever-reducing medication to alleviate higher temperatures.

If residents with the flu need to leave the facility (e.g., for medical care), they should wear a face mask, if available and tolerable, and cover their nose and mouth when coughing or sneezing as much as possible.

When caring for a resident who is infected with H1N1 or the seasonal flu, CNAs should:

- Avoid being face-to-face with the sick person.
- Clean their hands with soap and water after touching the sick person or handling used tissues, laundry, or linens. If soap and water are not available, use an alcohol-based hand sanitizer.
- Consider taking antiviral medication to prevent catching the virus.

CNAs who are at a higher risk of influenza-associated complications should not be the designated caretaker, if possible. They should do their best to avoid close contact (within 6 ft.) with flu-infected residents.

If possible, designate a CNA who is not at high risk of flu-associated complications as the primary caretaker of residents infected with the H1N1 virus or seasonal flu. If close contact is unavoidable, consider wearing a face mask. ■

### Infection control: Handling objects

Take the following steps to ensure the proper handling of objects:

- Clean used equipment before giving it to another resident. Follow your facility's cleaning procedures.
- Use disposable equipment only once.
- Roll dirty linens, do not shake them, and hold the linens away from your body. Follow your facility's procedures when washing solid linens.
- You don't need special precautions for washing dishes or silverware. Normal dish soap and hot water (water temperature must be hot enough to meet state requirements) will kill germs.

### Resources

The following resources provide excellent information about the 2009 H1N1 influenza virus, including up-to-date situation reports:

- Centers for Disease Control and Prevention:  
[www.cdc.gov/h1n1flu](http://www.cdc.gov/h1n1flu)
- Centers for Medicare & Medicaid Services:  
[www.cms.hhs.gov/h1n1](http://www.cms.hhs.gov/h1n1)
- U.S. Department of Health and Human Services:  
[www.flu.gov](http://www.flu.gov)

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[jveiga@hcpro.com](mailto:jveiga@hcpro.com)

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## H1N1 INFLUENZA VIRUS

Mark the correct response.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. The World Health Organization never acknowledged a global 2009 H1N1 flu pandemic.
  - a. True
  - b. False
2. People in the 65-and-older age group are the most likely to contract H1N1.
  - a. True
  - b. False
3. H1N1 was originally referred to as "swine flu" because \_\_\_\_\_.
  - a. the scientist who discovered the strain had a pet pig
  - b. it is contracted through eating pork
  - c. initial lab testing showed that many of the genes were very similar to influenza viruses that normally occur in pigs
  - d. none of the above
4. Symptoms of the H1N1 virus include all of the following, except \_\_\_\_\_.
  - a. fever
  - b. sore throat
  - c. stuffy nose
  - d. swollen tongue
5. All of the following are medical conditions that put individuals at greater risk from the H1N1 flu, except \_\_\_\_\_.
  - a. pregnancy
  - b. food allergies
  - c. diabetes
  - d. kidney disease
6. There are three types of H1N1 vaccines.
  - a. True
  - b. False
7. On average, 36,000 people die every year from flu-related complications.
  - a. True
  - b. False
8. People infected with the seasonal or the H1N1 flu virus may be able to infect others from \_\_\_\_\_.
  - a. a week before getting sick and a week after
  - b. a day before getting sick and a day after
  - c. three days before getting sick and a week after
  - d. a day before getting sick and five to seven days after
9. The emergency warning signs of flu sickness include all of the following, except \_\_\_\_\_.
  - a. difficulty breathing
  - b. swollen eyes
  - c. chest or abdomen pain
  - d. severe or persistent vomiting
10. In caring for a resident who is infected with H1N1 or the seasonal flu, CNAs should \_\_\_\_\_.
  - a. avoid being face-to-face with the sick individual
  - b. clean their hands with soap and water after touching the sick person or handling used tissues, laundry, or linens
  - c. consider taking antiviral medication to prevent catching the virus
  - d. all of the above