



# Swine Flu: How to Protect Yourself



Serving the Educational Needs of Health Care Professionals

**The** focus of this newsletter will be on the swine, or H1N1, influenza pandemic. Information about the virus, its transmission, and possible consequences will be explored. Methods to decrease the spread and impact of H1N1 will be discussed, including hand hygiene and other precautions. The goal of this newsletter will be to educate health care professionals working in a variety of settings on the best way to understand, prevent, and 'remain calm' about H1N1 as we move into the influenza season.

- Cough
- Sore throat
- Runny/stuffy nose
- Headaches/Body aches
- Chills
- Fatigue

Many patients infected with H1N1 have also reported bouts of diarrhea, nausea, and vomiting.

## What Is H1N1?

H1N1 is a novel influenza virus first diagnosed in the US in April 2009 and later labeled as a pandemic flu by the World Health Organization (WHO). H1N1 is also called swine flu because initial testing indicated that many of the H1N1 viral genes are highly analogous to genes found in the flu virus that typically infects pigs. H1N1 has resulted in numerous deaths in both the US and abroad; therefore, it is vitally important that everyone know how to protect themselves and their loved ones.

## Symptoms of H1N1

While the seasonal flu is typically more severe and deadly in older populations (>65), H1N1 appears to affect people under the age of 50 more seriously. In fact, reports of death due to H1N1 infection among those over 65 are rare. Symptoms associated with H1N1 are similar to those seen with a regular seasonal flu:

- Trouble breathing
- Dizziness/confusion
- Fever

## How Is H1N1 Transmitted?

H1N1 is transmitted from person to person via close contact. There are various routes by which transmission can occur, including airborne and contact transmission. Airborne transmission typically involves virus or viral particles which are expelled into the air when infected patients cough, sneeze, or talk. Infection occurs when these airborne particles make contact with the mucous membranes of the mouth, nose, or eyes. Transmission via airborne particles can occur over short or long distances depending on the size of the aerosol created by the cough or sneeze and the susceptibility of the person being infected. H1N1 can also be transmitted by direct contact with contaminated hands, skin, linens, etc.

## How Is H1N1 Diagnosed?

The Centers for Disease Control and Prevention (CDC) uses the term influenza-like illness (ILI) to describe a fever (greater than 100 °F) with a sore throat or a cough in the absence of a known cause. For confirmation of H1N1, ILI must be present along with a positive H1N1 virus detection via real-time reverse transcriptase polymerase chain reaction (RT-PCR) or by culture. A probable

case of H1N1 is defined as ILI with a positive result for influenza virus A but is negative for H1 or H3 by RT-PCR.

## Infection Control

Infection control is a common component within the health care system. On a daily basis, patients with everything from the common headache to pneumonia to athlete's foot visit the doctor's office looking for some relief. Infection control not only protects the office staff and health care providers, but also prevents patients in the waiting or examination rooms from unnecessary exposure to additional diseases/infections.

According to WHO, standard infection control precautions for all health care facilities include:

- Hand hygiene
- Avoid touching your eyes, nose, or mouth
- Appropriate use of personal protection equipment (PPE) to avoid contact with bodily fluids, blood, excretions, and secretions
- Appropriate handling of equipment and soiled linens
- Prevention of needlestick or sharp injuries
- Appropriate environmental cleaning and spill management
- Appropriate handling of waste

## Hand Hygiene

Hand washing should be completed using either an alcohol-based hand cleaner or by washing hands with soap and warm water for 15 to 20 seconds and utilizing a single-

use towel to dry hands off. Appropriate hand washing should be done:

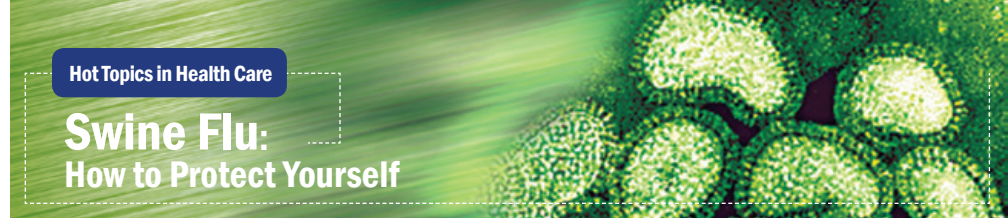
- Before and after contact with patients
- After removing any PPE
- If hands are visibly dirty or exposed to potentially infectious materials
- After using the restroom

## Respiratory Hygiene and Cough Etiquette

Since virus particles can be transmitted through the air by coughing and sneezing, utilizing proper respiratory hygiene and cough etiquette can presumably reduce the risk of spreading H1N1. Patients may need to be educated about reducing viral aerosols and proper hygiene and etiquette, and health care facilities should promote proper techniques. Proper respiratory hygiene and cough etiquette involves:

- Covering of mouth and nose with a tissue when coughing or sneezing
- Disposing of contaminated tissues in waste receptacles
- Using a mask when coughing if one is available
- Washing of hands following coughing or sneezing or any contact with bodily secretions
- Standing/sitting at least 3 feet away from other people if possible

Health care workers can take additional actions/precautions to protect themselves, including utilizing surgical masks and respirators (preferably N95 or higher), gloves, gowns, and face shields. It is recommended by WHO that patients with acute febrile respiratory illness be treated promptly for their benefit as well as the benefit of others in the medical office. Ensuring that medical equipment and waiting areas are cleaned and disinfected daily can also reduce the risk of viral infection. It is also advised that health care workers monitor themselves for fever or any flu-like symptoms.



## Treatment Options for H1N1 Antiviral Drugs

Currently, the CDC recommend that antiviral drugs such as oseltamivir or zanamivir be used for the treatment or prevention of H1N1 infection. These drugs can help reduce the symptoms of H1N1 by hindering viral reproduction within the patient. In addition to symptom relief, treatment can help reduce the duration of the infection and should be administered as soon as a diagnosis is made. Of note, there are various strains of H1N1 virus, some of which have developed antiviral resistance. The latest WHO guidelines indicate that the H1N1 virus is susceptible to oseltamivir and zanamivir, but has acquired resistance to amantadine and rimantadine.

## H1N1 Vaccine

The common seasonal flu vaccination does not protect against H1N1; however, production of a specific H1N1 vaccination has been underway for some time now. It was originally expected that 120 million doses of the H1N1 vaccine would be readily available for the public by October 15th.

## Summary

As flu season approaches, awareness and taking the necessary precautions can help reduce the likelihood of health care professionals becoming infected with H1N1. Several actions are key to help prevent the spread of the flu:

1. Education of personnel and patients in regards to H1N1 symptoms and precautions
2. Utilization of respiratory hygiene, cough etiquette, and proper hand washing
3. Vigilant utilization of standard infection control procedures
4. Remaining up-to-date with appropriate treatments and the availability of the H1N1 vaccine

## More Educational Resources at PRIME

Additional resources and free continuing education programs are available for nurses, physicians and medical assistants at [www.primeinc.org](http://www.primeinc.org).

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