

Information About H1N1 (Swine Flu), Avian and Other Forms of Influenza

Introduction

Following the Spanish Flu pandemic of 1918, the world learned a sobering lesson: without effective vaccines, advanced treatments and a rigorous public health infrastructure, people of all ages on all continents were at risk of becoming seriously ill and dying from a highly contagious virus.

While there have been many groundbreaking technological and medical advances since the early 20th century, the world is still very vulnerable to a pandemic. Today, emerging viral infections such as swine influenza, avian influenza, SARS, and others can pose a grave threat to the world community. According to the World Health Organization, it is not a question of if, but when a new pandemic will occur. This new pandemic is most likely to be caused by a novel strain of influenza.

This guide will give you information to better safeguard you and your family in the event of an influenza pandemic. It will explain how West Penn Allegheny Health System is preparing its workforce to deal with a potential pandemic. It will also provide invaluable guidelines about how to prepare you and your family for such an emergency.

Understanding a newly identified, rapidly spreading worldwide infection, such as swine or avian influenza

New strains of diseases such as influenza require scientific investigation before we can fully understand how the illness is transmitted, diagnosed, treated and prevented. At the same time, we know that influenza is a respiratory illness which is typically acquired by contact with or exposure to droplets when in proximity to someone who is infected. The basic tenets of infection prevention are hand hygiene and covering one's cough. These elements can be implemented immediately, even before new knowledge of the disease and other treatments are discovered.

What is the difference between epidemic or seasonal influenza and a pandemic strain of influenza?

Strains of influenza circulate every year. These strains cause illness which affects different geographic areas and communities. Before influenza season begins (usually in October) the CDC (Centers for Disease Control and Prevention) and the WHO (World Health Organization) work to identify which strains should be covered by the influenza vaccine which is changed every year. The reason it is changed every year is because the genetic makeup of influenza tends to change a little or "drift" slightly. Every once in awhile (usually every 25-35 years), a new strain of influenza emerges, which has genetic makeup that is

quite different from the seasonal strain. Instead of drifting slightly, the genes change markedly. This is called a genetic "shift." If the features of the new strain of influenza are new, they cause severe illness and they rapidly spread throughout the world. We call this a pandemic or global outbreak.

How serious would a pandemic be?

A pandemic could potentially kill more than 200,000 people and result in millions of hospitalizations and outpatient visits. Typically, pandemics last between two and three months and often occur in waves.

How is influenza transmitted?

Influenza is always spread from person to person via respiratory droplets from coughing or sneezing. A person exposed to someone else who is ill will either directly become infected through the droplets or through contacting surfaces with one's hands, which a person then inoculates into their eyes, nose or mouth. New strains of influenza can be different at first. This is because some animals such as birds or pigs can also become infected with influenza. Oftentimes, new strains first enter the human population in those people who had exposure to infected pigs or birds. This initial process usually causes infection only in people exposed to the animals. Sometimes, this process progresses such that the original person infected with a new strain of influenza (such as swine or avian influenza) then infects other people. When the disease is able to spread from person to person in a sustained fashion, there could then be a potential for global spread of the infection.

Who is most at risk of contracting a new strain of influenza?

Once the disease is able to spread from person to person, those at risk are people with immediate contact with an infected person. The seasonal influenza strains typically infect the very young and the very old because they have weakened immune systems.

Oftentimes, new strains of pandemic influenza cause a surprising rise in cases with a different population, namely those in good health between the ages of 20 and 50.

What are the symptoms of a new strain of influenza?

If left untreated, a new strain of influenza can cause life-threatening complications, such as viral pneumonia and acute respiratory distress syndrome. Contact your doctor immediately if you develop flu-like symptoms. The new strain of influenza is diagnosed by collecting a swab from the nose or throat during the early part of the illness and sending it to a lab for testing.

Our Core Lab works with the Allegheny County Health Department and the Pennsylvania Department of Health, which process the lab results and communicate with the CDC. This information helps guide treatment and allows for an understanding of the epidemiology of a new disease.

What should be done if I or a member of my household becomes ill with a new strain of influenza?

If you are a healthcare worker, be especially vigilant for the development of fever, respiratory symptoms and/or conjunctivitis (i.e., eye infections) for one week after your last exposure to influenza infected patients.

If you become ill, you should seek medical care and, prior to your arrival, notify your healthcare provider that you may have been exposed to a new strain of influenza. In addition, you should notify employee health and infection prevention personnel at your facility.

With the exception of visiting a healthcare provider, healthcare workers who become ill should be advised to stay home until seven days from the onset of illness, unless an alternative diagnosis is established or diagnostic tests are negative for Influenza A virus.

Here are some guidelines to follow if you or another member of your household has influenza:

- While at home, you should practice good respiratory hygiene and cough etiquette to lower the risk of transmission of the virus to others. Cover your mouth and nose when sneezing, coughing or blowing your nose. Wash your hands after throwing used tissue in the garbage. Be sure to wash your hands with soap and water or with an alcohol-based hand rub.
- Treatment should include rest, drinking fluids and analgesics for muscle pain and headache. Use of antivirals will be limited to those meeting priority criteria.
- Choose one person from your household to serve as the primary care provider. Other individuals in the household should limit contact with the patient and sleep in another room. Visitors should avoid entering the household while a patient has influenza. Those who enter the household should avoid contact with the patient.
- Do not share utensils, drinks, toothbrushes or cigarettes.
- Thoroughly clean surfaces contaminated by bodily secretions with any standard household cleaner or disinfectant, then rinse the surface with tap water. Wear rubber gloves while cleaning.
- Wash dirty dishes and utensils in a dishwasher or by hand with warm water and soap. You can wash laundry in a standard washing machine with warm or cold water and detergent. Be sure to wash your hands after handling soiled laundry. Try to prevent your clothes from coming in contact with soiled clothes.

- Persons with influenza should not take public transportation to visit a doctor; rather, they should be driven in a private car. Notify the doctor's office or clinic if you will be bringing a family member or friend for a visit. Patients should wear a surgical mask out in public and should be in a private room while awaiting to see the doctor.

How is a new strain of influenza treated?

Antivirals are the primary treatment option for a new strain of influenza. These drugs may help limit the symptoms and may reduce the chance of the virus spreading from person to person. In addition, antivirals may also offer some protection for healthcare workers who are in contact with an infected patient. However, antivirals must be taken within two days of the initial appearance of symptoms to be effective. Furthermore, new strains of influenza have the potential to become resistant to antivirals. No vaccines are commercially available right now, although there are research efforts that begin immediately after discovering a new strain of virus to help create a future vaccine.

What should be done if I or a member of my household has a milder form of influenza?

A new form of influenza is not the only virus that can put you at risk. You can also contract many other forms of influenza. To prevent or lessen the severity of influenza, follow these guidelines:

- Drink plenty of fluids and get plenty of rest.
- To relieve head and muscle aches, take an analgesic such as aspirin, ibuprofen (Motrin), and acetaminophen (Tylenol). Children and teenagers with influenza should avoid aspirin unless specifically directed by a physician.
- See your doctor if your symptoms don't clear up in about a week.
- To safeguard yourself, get an annual influenza vaccination.

How can I protect myself from a new potentially pandemic form of influenza or other types of influenza?

If traveling to an area of the world where a new strain of influenza is prevalent, keep informed of the changing trends in the world and in your area by getting updates from a reliable source of information such as the CDC Web site (www.cdc.gov).

Continue to get an annual influenza vaccine. While an influenza shot cannot prevent you from contracting a new form of influenza, it will reduce the risk of simultaneous infection with the human and the new viral strains.

Try to stay at least six feet away from the breathing zone of persons who are sick. If you are sick, stay at home until you are fully recovered.