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*Prepared for:*

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## SWINE INFLUENZA INFORMATION

### Swine Influenza - Overview

Swine influenza (or Swine flu) is a group of influenza viruses that regularly causes influenza in pigs. Usually infections in humans are uncommon. The current swine flu which is infecting people is a new strain of influenza A/H1N1. Experts do not yet know how it developed. Its genetic makeup shows parts of human flu, avian (bird) flu, and swine flu.

Like all human influenza viruses, swine influenza viruses also undergo constant change. There are four main influenza type A virus subtypes which have been isolated in pigs: H1N1, H1N2, H3N2, and H3N1. The most common strain found in pigs is the H1N1 virus. However, sometimes pigs can be infected with more than one virus type at a time. This allows the possibility for the genes from these viruses to mix and "reassort" to form a new virus. The swine H1N1 viruses are not the same as the human H1N1 viruses. Swine flu is genetically different from the human H1N1 strain. It is unlikely the human seasonal vaccine will provide protection against swine flu H1N1.

Since typical clinical presentation of swine influenza infection in humans resembles seasonal influenza and other acute upper respiratory tract infections, most of the cases have been detected by chance through seasonal influenza surveillance. Mild or asymptomatic cases may have escaped recognition; therefore, the true extent of this disease among humans is unknown.

### Transmission

Swine influenza can be spread from pigs to humans and from humans to pigs. Typically swine flu is more likely to occur when people have close contact (or are in close proximity) with infected pigs. If a swine flu virus mutates to a form that is transmissible between humans, the mode of transmission is likely to be the same as any other type of influenza virus which infects humans.

Human-to-human transmission of flu viruses can occur by "droplet" spread - when an infectious individual coughs, sneezes, talks. These infectious droplets can be deposited in the mouth, nose eyes of a non-infectious individual. It may also be possible that influenza spreads via "aerosol" transmission, where the virus floats in the air and infects people (particularly in crowded places). Individuals can also become infected by touching surfaces that have the flu virus on it and then touching their nose or mouth. Humans can transmit influenza to pigs.

The H3N2 virus was initially introduced into the pig population by humans. There is a close genetic relationship between the Human H3N2 virus and the Swine H3N2 virus.

### Treatment and Prophylaxis

Suspected swine flu cases should be treated with either zanamivir or a combination of oseltamivir with rimantidine or amantidine. A high percentage of some strains of regular seasonal flu have shown resistance to oseltamivir alone, and some suspected cases may well be seasonal flu.

Confirmed cases should be treated with zanamivir or oseltamivir.

References: CDC – Center for Disease Control & Prevention, WHO – World Health Organization

For Prophylaxis (medication to prevent illness) either zanamivir or oseltamivir should be used.

US CDC recommends prophylaxis before or after exposure for SOME people. These groups include people who are at high risk for severe influenza AND:

- live in the same house as a confirmed or suspected case
- are school children who have been in close contact with a confirmed or suspected case
- are traveling to Mexico
- are border workers (Mexico)
- health-care workers who had unprotected close contact with cases while the cases were infectious

US CDC advises considering prophylaxis before or after exposure for SOME people including:

- any traveler to Mexico
- first responders and border workers in an affected area
- health-care workers at high risk for complications who are working in an affected area

There is no specific vaccine against swine flu A/H1N1. The US CDC is developing the “seed” strain which may be used later to produce a vaccine against this illness. Seasonal flu vaccines are those offered to the public every year as flu season approaches. They are designed to help prevent people during the upcoming, seasonal waves of flu activity. Generally, most people should get a flu shot every year as a good health practice. In the current situation, it is still recommended that people who have not had an annual flu vaccination should consider having one to prevent regular seasonal flu. It is unknown whether the current seasonal flu vaccine provides any protection against the strain of swine flu currently circulating. Most likely, it is **not** effective against swine flu. Many of the people who have gotten swine flu in the USA had not had a seasonal flu vaccine. However, at least one case had been vaccinated, in October 2008. He got sick with swine flu in early April, had a mild illness and recovered.

### **Symptoms and Infectious Period**

Initial symptoms have been similar to seasonal flu such as fever, body aches, headache, runny nose, sore throat, and cough. A number of people have also vomited and had diarrhea.

Some people had severe illness. Those patients quickly got worse, in about five days.

The infectious period is not completely understood yet. Right now, the US Centers for Disease Control (CDC) considers it from:

- Starts one day before the person shows symptoms (gets sick)
- Lasts seven days after the symptoms appear

If infected people are still sick after seven days, they should be considered potentially contagious until symptoms have resolved. Children may potentially be contagious for longer.

### **TRAVELERS PRECAUTIONS**

#### **All travelers (any destination)**

People who have not had an annual flu vaccination should consider having one to prevent regular seasonal flu.

As a general good health practice, all travelers should:

- Maintain good personal hygiene. Wash your hands frequently. Avoid touching your face.
- Avoid people who are obviously sick.
- Cover coughs and sneezes with a mask or a tissue.
- Stay at home if you are unwell.
- Contact your health care provider if you or your children develop flu-like symptoms.
- Ensure their routine vaccinations are up-to-date. This includes pneumococcal vaccination for certain adults: those over 65, people with serious long term health conditions and people whose immune systems are compromised due to transplants, cancer treatments, HIV/AIDS, etc.

If you are in an affected area, or have traveled to an affected area recently:

- Monitor your health
- If you develop symptoms, seek medical attention. Advise the healthcare facility that you have recently been in an area that has reported swine flu.
- Parents should take their young children with fever or influenza-like symptoms for prompt medical attention.

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**United States and Canada**

Travel to the United States and Canada can proceed.

To prevent flu and prevent spreading illness:

- Maintain good personal hygiene. Wash your hands frequently. Avoid touching your face.
- Cover coughs and sneezes with a mask or a tissue.
- Consider using a mask.
- Stay at home if you are unwell.
- Parents should take their young children with fever or influenza-like symptoms for prompt medical attention.
- Contact your health care provider if you develop flu-like symptoms.

**Mexico**

Consider deferring non-essential travel to Mexico until further information on the extent and severity of the illness is available. Right now, there are no swine-flu related travel restrictions in place. If mandated travel restrictions are implemented, these would restrict movement into and out of the affected area / country.

To prevent respiratory infections, including flu, and prevent spreading illness:

- Maintain good personal hygiene. Wash your hands frequently. Avoid touching your face.
- Cover coughs and sneezes with a mask or a tissue.
- Consider using a mask.
- Avoid obviously sick people.
- Stay at home if you are unwell.

**MedAire Comment:**

Keep in mind that the swine flu situation is changing rapidly. The information provided is the most current published CDC recommendations. However, as the situation changes, so will the recommendations. For the most current information, refer to <http://urgent.internationalsos.com> daily, if not hourly. This information is being updated 24/7 by our parent company, International SOS.

It is also important to know that Tamiflu and Relenza will be increasingly more difficult to find as the demand for the medication increases. Due to the restricted availability and various import restrictions, MedAire recommends that you work with local suppliers to help procure these medications.