What Pork Producers and Workers Need To Know About Influenza (Flu) In Pigs and People

Introduction

In April 2009, an outbreak of 2009 H1N1 influenza virus infections were detected in people in North America and then spread around the world. In October 2009, the first case of 2009 H1N1 influenza virus in a pig in the United States was confirmed. Pig infections with 2009 H1N1 flu have been found in other countries, including Canada, Australia and Argentina.

As a pork producer, you may have questions about the difference between the 2009 H1N1 influenza virus and common swine influenza viruses. This document addresses what is known about the swine influenza viruses that have been found in pigs and what workers can do to avoid getting sick.

Swine Influenza Virus Infections In Pigs

Swine influenza is a respiratory disease of pigs caused by type A influenza viruses. Pigs most commonly get infected with flu viruses from other pigs (swine flu), but also can get infected with flu viruses from birds (avian flu), and from people (human flu). This cross-species spread of flu viruses can lead to new types of flu viruses. At this time, there are three main influenza subtypes that circulate in U.S. pigs: H1N1, H1N2 and H3N2.

Flu outbreaks in pigs are common and can result in high rates of illness but few deaths in herds.

Signs of swine flu in pigs include:

- Coughing (“barking”)
- High fevers
- Discharge from the nose
- Sneezing
- Breathing difficulties
- Going off feed

The number of subtypes and strains of flu virus circulating among U.S. herds has complicated vaccine programs for swine and resulted in increased economic loss from illness in pigs.

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Questions & Answers about Swine Flu *in Pigs*

Q. How does swine flu spread among pigs?

A. Swine flu viruses are thought to spread mostly through close contact among pigs and possibly from contaminated objects moving between infected and uninfected pigs.

Q. Can swine flu infections be prevented in pigs?

A. It may be possible to lessen the risk of infections in pigs by following these management strategies:

- Vaccinating herds
- Using good biosecurity measures
- Encouraging good hygiene practices among workers
- Using proper ventilation systems

Q. What about flu vaccines for pigs?

A. Flu vaccines for pigs can help, but are not 100% effective. Importantly, current vaccines may not be effective in young pigs due to maternal antibody interference. Protection of young pigs is achieved by vaccinating sows; however, those maternal antibodies are not fully protective for the young pig and fade by the time they are 10-13 weeks of age. Producers may vaccinate their animals after maternal antibodies fade.

Q. How can veterinarians help?

A. Producers and their veterinarians should work together to develop management strategies to reduce the spread of flu among herds and to prevent the introduction and spread of flu viruses between pigs, people, and birds.

Q. Can people catch swine flu from eating pork?

A. No, swine influenza is not spread by food so a person cannot get the flu by eating pork, pork products or other foods.

Questions & Answers about 2009 H1N1 Flu *in People*

Q. What is "2009 H1N1 flu?"

A.. 2009 H1N1 flu virus is a new influenza virus causing illness in people. This new virus was first detected in people in the United States in April 2009 This virus is spreading from person-to-person, in much the same way that regular seasonal influenza viruses spread.

Q. Why is this 2009 H1N1 virus sometimes called "swine flu?"

A. This virus was originally called swine flu because laboratory testing showed that many of the genes in this new virus were very similar to influenza viruses that normally occur in pigs 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 normally circulate in pigs in Europe and Asia as well as genes from birds and people. Scientists call this a "quadruple reassortant" virus.

Q. Can 2009 H1N1 virus infect pigs?

A. Yes. This influenza virus can infect pigs, as do many other human flu and bird flu viruses. In October 2009, the first case of 2009 H1N1 influenza virus in a pig in the United States was confirmed. Pig infections with 2009 H1N1 flu have been found in other countries, including Canada, Australia and Argentina. USDA and other researchers are conducting further pig studies with the virus and it appears that this virus causes a similar disease to other well known circulating swine influenza viruses.

Q. Can pigs be vaccinated against 2009 H1N1 virus?

A. As of October 7, 2009 commercial vaccine is not available. However, efforts are underway to develop a vaccine for swine. As a first step, USDA, using material provided by CDC, has made a 2009 H1N1 master seed virus isolate available to licensed veterinary biologics manufacturers for development of a commercial 2009 H1N1 swine influenza vaccine.

Flu Can Spread from Pigs to People and from People to Pigs

- Swine flu viruses can infect people, but this is not common.
- Human and swine flu viruses are different. People who get vaccinated for human flu can still get sick from swine flu. Pigs that have been vaccinated for swine flu can still get sick from human flu.
- Symptoms of swine flu in people are no different from symptoms that people get when they are infected with human flu viruses.
- People infected with flu can have fever, cough, body aches, headaches, fatigue and runny or stuffy nose. They may also have vomiting or diarrhea.
- Recent studies have shown that 15% to 25% of swine farmers may have been exposed to swine flu viruses at some time in their lives, as well as about 10% of veterinarians.
- Human cases of swine flu are uncommon. These cases have occurred in people who work directly with pigs or who have been near pigs in public settings such as fairs or petting zoos.

What you can do to prevent the spread of flu virus from pigs to people and people to pigs

First, wash your hands frequently with soap and running water after exposure to animals and avoid contact with animals that look ill. If you or your family becomes sick with flu-like symptoms, take the following steps

- Contact your health care provider and let them know that you work with swine.
- Avoid travel and limit contact with other people and pigs as much as possible. Stay away from pigs for 7 days after symptoms begin or until you have been symptom-free for 24 hours, whichever is longer.
- Practice good respiratory and hand hygiene to lower the risk of transmission of virus to others. Cover your mouth and nose with a tissue when coughing or sneezing and put used tissues in a waste basket. If tissues are not available, cough or sneeze into your upper sleeve. Always wash your hands after coughing or sneezing.

Most flu cases in humans are caused by human flu viruses, not swine flu viruses. However, if you are infected with a swine flu virus, the health department will want to talk with you about your illness and make sure that other people you live and work with are not sick with swine flu. Flu medications are available to treat swine flu illness in people. These medicines should be started in the first two days of being ill to be most effective.

If swine flu is diagnosed in humans public health and animal health officials may conduct a follow-up investigation which may include traceback and testing of swine for the virus.

CDC's interim guidance for workers who are employed at commercial swine farms is available at http://www.cdc.gov/h1n1flu/guidelines_commerical_settings_with_pigs.htm and the National Pork Board 'Biosecurity recommendations for producers" is available at http://www.pork.org/documents/News/Novel%20H1N1%20Biosecurity%20Recommendations%20for%20Producers%20v2.pdf.

It is important to know if swine flu viruses are spreading among people so that cases in other people can be prevented.

For more information, visit:

http://www.cdc.gov/flu/ or http://www.cdc.gov/h1n1flu/ or http://www.flu.gov

http://www.aphis.usda.gov/newsroom/hot_issues/h1n1/

http://www.avma.org/public_health/influenza/default.asp

http://www.cfsph.iastate.edu/Factsheets/pdfs/swine_influenza.pdf

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