The Swine Flu

Contributed by Administrator

Swine influenza

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Swine influenza is endemic in pigsSwine influenza (also called swine flu, hog flu, and pig flu) refers to influenza caused by those strains of influenza virus that usually infect pigs and are called swine influenza virus (SIV). Swine influenza is common in pigs in the midwestern United States (and occasionally in other states), Mexico, Canada, South America, Europe (including the United Kingdom, Sweden, and Italy), Kenya, Mainland China, Taiwan, Japan and other parts of eastern Asia.

Transmission of swine influenza virus from pigs to humans is not common. When it is transmitted, it does not always cause human influenza; often, the only sign of infection is the presence of antibodies, detectable only by laboratory tests. When transmission results in influenza in a human, it is called zoonotic swine flu. People who work with pigs, especially people with intense exposures, are at risk of catching swine flu. However, only about fifty such transmissions have been recorded since the mid-20th Century, when identification of influenza subtypes became possible. (Importantly, eating pork does not pose a risk of infection.) Rarely, these strains of swine flu can pass from human to human. In humans, the symptoms of swine flu are similar to those of influenza and of influenza-like illness in general, namely chills, fever, sore throat, muscle pains, severe headache, coughing, weakness and general discomfort.

The 2009 flu outbreak in humans that is widely known as "swine flu" is due to an apparently virulent new strain of influenza A virus subtype H1N1 that was produced by reassortment from one strain of human influenza virus, one strain of avian influenza virus, and two separate strains of swine influenza. The origin of this new strain is unknown, and the World Organization for Animal Health (OIE) reports that this strain has not been isolated in pigs. It passes with apparent ease from human to human, an ability attributed to an as-yet unidentified mutation.This 2009 H1N1 strain causes the normal symptoms of influenza, such as fever, coughing and headache.

Transmission between pigs

The main route of transmission is through direct contact between infected and uninfected animals. These close contacts are particularly common during animal transport. The direct transfer of the virus probably occurs either by pigs touching noses, or through dried mucus. Airborne transmission through the aerosols produced by pigs coughing or sneezing are also an important means of infection.[14] The virus usually spreads quickly through a herd, infecting all the pigs within just a few days.Transmission may also go through wild animals, such wild boar, who can touch infected animals in one place, get infected themselves, and later go to touch an other farm's herds.

Transmission to humans

People who work with poultry and swine, especially people with intense exposures, are at increased risk of zoonotic infection with influenza virus endemic in these animals, and constitute a population of human hosts in which zoonosis and reassortment can co-occur. Transmission of influenza from swine to humans who work with swine was documented in a small surveillance study performed in 2004 at the University of Iowa. This study among others forms the basis of a recommendation that people whose jobs involve handling poultry and swine be the focus of increased public health

surveillance.The 2009 swine flu outbreak is an apparent reassortment of several strains of influenza A virus subtype H1N1, including a strain endemic in humans and two strains endemic in pigs, as well as an avian influenza.

Prevention of pig to human transmission

Swine can be infected by both avian and human influenza strains of influenza, and therefore are hosts where the antigenic shifts can occur that create new influenza strains.The transmission from swine to human is believed to occur mainly in swine farms where farmers are in close contact with live pigs. Although strains of swine influenza are usually not able to infect humans this may occasionally happen, so farmers and veterinarians are encouraged to use a face mask when dealing with infected animals. The use of vaccines on swine to prevent their infection is a major method of limiting swine to human transmission. Risk factors that may contribute to swine-to-human transmission include smoking and not wearing gloves when working with sick animals.

Prevention of human to human transmission

Influenza spreads between humans through coughing or sneezing and people touching something with the virus on it and then touching their own nose or mouth.[45] Swine flu cannot be spread by pork products, since the virus is not transmitted through food. The swine flu in humans is most contagious during the first five days of the illness although some people, most commonly children, can remain contagious for up to ten days. Diagnosis can be made by sending a specimen, collected during the first five days for analysis.

Recommendations to prevent spread of the virus among humans include using standard infection control against influenza. This includes frequent washing of hands with soap and water or with alcohol-based hand sanitizers, especially after being out in public. Although the current trivalent influenza vaccine is unlikely to provide protection against the new 2009 H1N1 strain, vaccines against the new strain are being developed and could be ready as early as June 2009.

Experts agree that hand-washing can help prevent viral infections, including ordinary influenza and the swine flu virus. Influenza can spread in coughs or sneezes, but an increasing body of evidence shows small droplets containing the virus can linger on tabletops, telephones and other surfaces and be transferred via the fingers to the mouth, nose or eyes. Alcohol-based gel or foam hand sanitizers work well to destroy viruses and bacteria. Anyone with flu-like symptoms such as a sudden fever, cough or muscle aches should stay away from work or public transportation and should contact a doctor to be tested.

Social distancing is another tactic. It means staying away from other people who might be infected and can include avoiding large gatherings, spreading out a little at work, or perhaps staying home and lying low if an infection is spreading in a community. Public health and other responsible authorities have action plans which social distancing actions to request or require depending on the severity of the outbreak.

Treatment

If a person becomes sick with swine flu, antiviral drugs can make the illness milder and make the patient feel better faster. They may also prevent serious flu complications. For treatment, antiviral drugs work best if started soon after getting sick (within 2 days of symptoms). Beside antivirals, palliative care, at home or in the hospitals, focuses on

controlling fevers and maintaining fluid balance. The U.S. Centers for Disease Control and Prevention recommends the use of Tamiflu (oseltamivir) or Relenza (zanamivir) for the treatment and/or prevention of infection with swine influenza viruses, however, the majority of people infected with the virus make a full recovery without requiring medical attention or antiviral drugs. The virus isolates in the 2009 outbreak have been found resistant to amantadine and rimantadine.

In the U.S., on April 27, 2009, the FDA issued Emergency Use Authorizations to make available Relenza and Tamiflu antiviral drugs to treat the swine influenza virus in cases for which they are currently unapproved. The agency issued these EUAs to allow treatment of patients younger than the current approval allows and to allow the widespread distribution of the drugs, including by non-licensed volunteers.