

Need more information?

Reference Experts:

OFFLU :
OIE-FAO network
of expertise on influenza
www.offlu.net

References:

1. *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*
http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/2.08.08_SWINE_INFLUENZA.pdf
2. The Center for Food Security and Public Health (Université de l'État de l'Iowa)
http://www.cfsph.iastate.edu/Factsheets/pdfs/swine_influenza.pdf

Key Facts

- The first swine influenza virus was found in pigs in 1918. Research points to a possible avian origin of the virus that was then transmitted to pigs.
- Swine influenza is generally a mild disease of pigs, although it can spread very rapidly within a herd.
- There are different swine influenza virus subtypes and strains, some of which have been known to infect other animal species including (rarely) humans.
- The joint OIE-FAO network of expertise on influenza, called OFFLU, was initially established in 2005 to support international efforts to monitor and control infections of avian influenza in poultry and other bird species, and to share biological material and data to support early development of human pandemic vaccines. Today, its role has been expanded to cover all animal influenza viruses.

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Swine influenza

What is swine influenza ?

Swine influenza is a highly contagious viral infection of pigs. The disease usually spreads very quickly within swine units, even though all infected pigs might not demonstrate clinical signs of infection, followed by a rapid recovery of the infected animals.

Swine influenza is caused by influenza A viruses, which are further characterised by subtypes. The most common subtypes are H1N1, H1N2 and H3N2.

Morbidity rates can reach 100% with swine influenza infections, while mortality rates are generally low. The primary economic impact is related to retarded weight gain resulting in an increase in the number of days to reach market weight.

Swine influenza is not a listed disease with the OIE, causing a mild disease in pigs and very uncommonly documented human disease. It therefore does not meet OIE criteria for disease notification. The criteria that are democratically adopted by all OIE Members can be found in chapter 1.2 of the OIE *Terrestrial Animal Health Code* (2011).



Swine influenza



Where is the disease found?

Swine influenza is common in North and South America, Europe and parts of Asia. It has been reported in Africa too.

How is the disease transmitted and spread?

Swine influenza viruses are found mainly in pigs, but they have also been found in other species including humans, turkeys, and ducks.

Infected pigs may begin excreting swine influenza viruses within 24 hours of infection, and typically shed the viruses for 7-10 days.

What are the public health risks associated with this disease?

Human infections with swine influenza viruses are occasionally reported, usually in persons who have direct contact with infected pigs and resembling seasonal influenza. Swine influenza viruses spread very rarely in human populations.

Swine influenza is not a foodborne disease. The risk of being infected with swine influenza viruses through the consumption of pork or pork products is negligible. Influenza viruses are generally restricted to the respiratory tract of pigs, and are not detected in the muscle (meat) of pigs, even during acute illness.

What are the clinical signs of this infection?

The clinical signs usually appear within 1 to 3 days in pigs, and most animals recover within 3-7 days if there are no secondary infections or other complications.

Swine influenza is an acute upper respiratory disease characterized by fever, lethargy, anorexia, weight loss, and laboured breathing. Coughing, sneezing, and nasal discharge are commonly seen. Conjunctivitis is a less common clinical sign. Abortions may also occur. Some strains can circulate in pigs with few or no clinical signs. Complications may include secondary bacterial or other viral infections. Severe, secondary potentially fatal bronchopneumonia is occasionally seen.

Turkeys infected with swine influenza viruses may develop respiratory disease, have decreased egg production, or produce abnormal eggs.

In humans, when infections have been reported, symptoms observed generally resembled seasonal influenza, and included: upper respiratory disease, acute respiratory disease, or pneumonia. Very rare fatalities have been reported.

How is the disease diagnosed?

Swine influenza may be suspected on the basis of clinical signs and events leading to the disease, but is only one of the pathogens that commonly cause respiratory disease in pigs. Laboratory tests are required to confirm the diagnosis. Additional information can be found in the OIE. *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*, (2011) Chapter 2.8.8. (Swine Influenza).

What is being done to prevent or control this disease?

Good biosecurity measures are important to prevent transmission through fomites and mechanical vectors. Once a swine herd has been infected, the virus can persist in the herd and cause periodic outbreaks; however, good management can decrease the frequency, extent of outbreaks and severity of disease. Once swine influenza is established on a farm, it can be very difficult to completely clear and the depopulation of herds may be necessary.

People ill with influenza viruses have reportedly infected pigs; while this is possible, these events are not well documented. People working with pigs should follow the same advice as provided to the general public and stay home if showing flu-like symptoms.

Inactivated influenza vaccines are also available for some influenza virus infections in pigs.

To provide adequate protection, influenza vaccines need to reflect the current subtypes and strains in a geographic area and may need change periodically. These vaccines do not always prevent infection or virus shedding, but appropriately vaccinated pigs generally have milder disease if they are infected. Development of a vaccine should be elaborated according to OIE guidelines published in the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* (http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/2.08.08_SWINE_INFLUENZA.pdf)

