

Influenza in Pigs: Code of Practice

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Introduction

This document has been produced in response to the current outbreak of influenza in humans caused by pandemic (H1N1) 2009 virus. This virus will be referred to as H1N1/09v throughout the document.

The aim is to provide guidance on how to minimise the risk of introducing this virus to your pig herd and how to minimise its spread should it enter your herd.

The advice and guidance is applicable to all strains of influenza virus in pigs including H1N1/09v.

The principles of biosecurity and disease control set out in this document will also aid prevention and control of other infectious pig diseases.

This document has been produced by Industry in partnership with Defra, Scottish Government and Welsh Assembly Government.

Key Information about H1N1/09v and other pig influenza viruses

- **There is no evidence that H1N1/09v or other influenza viruses can spread to humans from pigs from eating meat or meat products.**
<http://www.food.gov.uk/safereating/animaldiseases/swine/>
- **As is the case with all sick pigs, pigs with clinical signs of influenza, including H1N1/09v, MUST NOT be sent to slaughter for human consumption**
- **Should anyone in contact with your pigs, develop clinical signs of influenza you should immediately prevent them having any further contact with any pigs until their clinical signs have cleared. The welfare of pigs must be maintained at all times.**
- Influenza in pigs, including H1N1/09v is not notifiable in the UK and EU.
- Influenza infection in pigs results in clinical signs of respiratory disease including coughing, sneezing, nasal discharge, fever, lethargy and reddening of eyes.
- Influenza viruses are spread by droplets of respiratory secretions, mostly via direct contact, short distance spray and on machinery, equipment and clothing (or other contaminated surfaces).
- Affected pigs usually recover within 5-7 days (recovery can take longer if underlying health problems are present). However, the virus can circulate through a herd for prolonged periods if there are susceptible pigs present (i.e. not previously exposed to virus).
- Disease usually spreads rapidly in susceptible groups of pigs and the mortality rate is generally low if general health status is good. However, if underlying health problems are present, clinical signs can be more severe with a longer recovery period and mortality rates can be higher.
- Current vaccines are unlikely to protect pigs against the H1N1/09v strain. If a pig vaccine becomes available its effectiveness in preventing infection and aiding virus eradication will need to be assessed.
- If your pigs are showing clinical signs of influenza, it is recommended you discuss further testing with your vet to determine if influenza virus is present. Your vet can submit samples for influenza testing to Veterinary Laboratories Agency and to Scottish Agricultural College Veterinary Laboratories. Testing for influenza in pigs is performed free of charge.
- The more quickly influenza is identified in pigs, the better chance of preventing onward spread.
- People working with pigs should follow existing guidance aimed at protecting them from diseases that can pass from pigs to humans
<http://www.hse.gov.uk/pubns/ais2.pdf>.

About Influenza in Pigs

Influenza is a contagious disease that affects many species of animals. Influenza infection in pigs is considered endemic in most pig-producing countries. Within the European pig population, influenza A viruses of subtypes 'avian-like' H1N1, H3N2, and H1N2 circulate widely.

Influenza infection in pigs results in clinical signs of respiratory disease including coughing, sneezing, nasal discharge, fever, lethargy and reddening of eyes. Disease usually spreads rapidly in susceptible groups of pigs and the mortality rate is generally low if general health status is good. However, if underlying health problems are present, clinical signs can be more severe with a longer recovery period and mortality rates can be higher.

In uncomplicated cases individual pigs usually recover within 5-7 days (recovery can take longer if underlying health problems are present). However, the virus can circulate through a herd for prolonged periods if there are susceptible pigs present (i.e. not previously exposed to virus). If underlying health problems are present, disease may be more severe with increased mortality. The length of time influenza circulates for will depend on the set up and type of the unit. It can be difficult to eliminate virus from infected herds, therefore it is important to prevent disease incursion if possible.

Influenza viruses are transmitted by the spread of respiratory secretions, mostly via direct contact, short distance aerosol spread and fomite spread (i.e. mechanical spread of virus on objects such as farm equipment, clothes, water troughs etc).

H1N1/09v is currently circulating in the human population and, like many other influenza viruses, has the potential to pass to pigs. The possibility of H1N1/09v transmitting to pigs has been demonstrated experimentally and under natural conditions (infection of pigs thought to be associated with an infected pig worker has been reported from Argentina).

People working with pigs should follow the guidance already available aimed at protecting them from diseases that can pass from pigs to humans. <http://www.hse.gov.uk/pubns/ais2.pdf>. Government's independent expert Advisory Committee on Dangerous Pathogens has considered currently available evidence about influenza viruses in pigs and the current H1N1/09v outbreak, and on the basis of this, has concluded that no changes are needed to the occupational health guidance to pig workers and abattoir workers. As usual this advice will be kept under review in the light of any new knowledge which might unfold about the H1N1/09 virus in the future. For up-to-date information, you should consult information sources at the end of this booklet.

Keeping it out of your herd

The introduction of influenza into pig herds is an ever present risk. The following measures should be implemented to help prevent entry of the virus into your herd.

Control access of people

- Anyone with clinical signs of influenza, or who is in close contact with someone with influenza, should avoid contact with pigs. This includes vets and other visitors. Pig keepers must, of course, ensure that the health and welfare needs of pigs under their care are met by suitably skilled staff if they are unable to care for the animals themselves.
- People working with pigs known, or suspected to be, infected with influenza should not have contact with other pigs. If this cannot be avoided, you should ensure that there is at least a 48 hour period between contact with the known infected herd and a 'clean' herd.
- If a herd is known to be infected with H1N1/09v, personnel working with the infected herd should avoid contact with other pigs if at all possible.
- Do not allow unnecessary personnel or vehicles onto your pig farm. Keep records of visitors and ensure they follow biosecurity protocols.

Control movement of pigs onto the farm

- Only source pigs from herds of comparable health status to your own. With regards to influenza, you should not move pigs onto a clean holding if they are showing clinical signs suspicious of influenza.
- You should also consider additional ways to minimising the risk of influenza virus entry. For example, keep new pigs separated from the resident herd for at least 10 days (to monitor for signs of influenza).
- If you are not completely sure of the health status of pigs entering your unit, it is recommended that you impose a voluntary movement ban of at least 10 days (excluding movements to slaughter) to allow any clinical signs of influenza to develop, even if the unit is exempt from the compulsory 20 day standstill.
- Be vigilant for signs of disease and seek professional advice if clinical signs of influenza are seen.
- If your pigs have clinical signs of respiratory disease, you should make buyers aware of their health status.

Review bio-security practices

Code of Practice for Pig Keepers: Influenza in pigs

- Influenza can be spread by direct contact between infected pigs, fomite spread (mechanical spread of virus by people, vehicles and equipment, etc.,) and aerosol spread over short distances.
- You can minimise the risk of influenza virus entry with the following practices.

People

- Avoid sharing personnel between units, even within the same business. If personnel must move between units, strict biosecurity protocols should be implemented i.e. boots and clothes should be changed between units, hair should be protected with clean head covering in each unit and hands should be washed between units.
- Ensure everyone visiting the unit changes into clean clothes and boots when entering.
- Avoid unnecessary visitors entering your farm.

Equipment

- Avoid sharing equipment between units, even within the same business. If this is not possible, equipment should be thoroughly cleansed and disinfected between units.
- Ensure all equipment moving on to or leaving a unit is thoroughly cleaned and disinfected. This includes veterinary equipment, slurry spreaders etc

Vehicles

- The drivers of any vehicles entering or leaving the parts of the premises where pigs are kept should follow the principle of “clean on, clean off”. Vehicles should have their wheels, wheel arches and foot wells cleansed and disinfected and be free of visible contamination. This applies to commercial hauliers as well as farm vehicles
- Any vehicle used to transport a pig must be cleansed and disinfected to strict standard after each use. This is a legal requirement throughout GB. (Guidance on the requirements can be found at:

<http://www.defra.gov.uk/animalh/diseases/control/biosecurity/cleansing.htm>)

<http://www.wales.gov.uk/topics/environmentcountryside/ahw/disease/?lang=en>

<http://www.scotland.gov.uk/topics/farmingrural/agriculture/animalwelfare/Diseases/GenControls/Transport>

- Minimise the risk of cross-contamination between “dirty” on-site vehicles and those entering/leaving the premises.
- If possible, avoid multiple pick-ups/drop-offs. If this is not possible, organise transportation routes to ensure high health status farms are visited first.
- Where possible, feed and other delivery vehicles should not enter the part of the site where the pigs are kept.

General biosecurity advice is available from a number of sources, including:

- <http://www.defra.gov.uk/animalh/diseases/control/biosecurity/index.htm>
- <http://www.bpex.org.uk/PracticalAdvice/Health/Biosecurity.aspx>

If you suspect influenza infection in your herd

Influenza infection in pigs results in clinical signs of respiratory disease including coughing, sneezing, nasal discharge, fever, lethargy and reddening of eyes. Disease usually spreads rapidly in susceptible groups of pigs and the mortality rate is generally low if general health status is good. However, if underlying health problems are present, clinical signs can be more severe with a longer recovery period and mortality rates can be higher.

Testing for influenza in pigs is performed free of charge.

If you suspect swine influenza in your pig herd it is important to consult your veterinary surgeon who will advise on the best course of action and organise for diagnostic investigations to be carried out. This will involve a combination of postmortem examinations, virus isolation and serological testing.

It is especially important to consult your veterinary surgeon in the following situations:

You, or anyone else in contact with your pigs, develop clinical signs of influenza and the pigs show signs of influenza at a similar time.

A farm with which you have contact (through personnel, pigs or equipment) is known to have cases of influenza in pigs and your pigs are showing clinical signs of influenza.

The more quickly influenza is identified in pigs, the better chance of preventing onward spread.

Managing influenza in your herd

The aim of managing influenza virus on the farm is to:

- Stop disease leaving the infected unit
- Minimise negative health and welfare impacts on the pigs
- Eliminate virus from farm

You should discuss with your veterinary surgeon the most appropriate way to manage virus control in your herd. The optimal strategy will vary between herds.

Enhance bio-security

- Strengthen biosecurity protocols for staff and visitors on infected farms (see links to biosecurity advice above).
- Infected units should not be part of multi-pick up/drop-off routes. If this cannot be avoided, infected units should be visited last and vehicles thoroughly disinfected afterwards.
- It is advisable to work with your vet to determine the likely source of virus introduction on to your farm as this will help to highlight gaps in biosecurity.

Moving pigs off an infected farm

- To prevent onward transmission of virus, pigs should only be moved from units where influenza virus infection is present under certain circumstances.
 - Healthy pigs (including previously infected pigs) can move to slaughter as normal. Pigs showing clinical signs of illness **MUST NOT** be sent to slaughter for human consumption.
 - Food Chain Information (FCI) must be provided in the usual way for all pigs consigned to slaughter.
 - Pigs that appear healthy showing no clinical signs may be in early or late stages of infection and be shedding virus. Thus, healthy pigs from infected units should not move off the unit, other than to slaughter. In particular:
 - It is a legal requirement that pigs must not be transported if they are not fit for the intended journey.
 - Pigs from infected units should not be sent to markets and shows.
 - Breeding boars, and others intended to visit one or more premises before returning should not leave the unit.
 - In some cases, movement of pigs to other units may be necessary for welfare reasons. You should discuss with your vet how to do this with the lowest risk of further spread of virus and minimum impact on the welfare of individual pigs. If movement of pigs from an infected herd is necessary for welfare reasons important points to remember are:
 - Only healthy and recovered pigs should move (recovered pigs should be considered to be those previously infected who have shown no clinical signs of influenza for at least ten days or which have tested negative by nasal swab).

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- Pigs moved from an infected unit should only be moved to empty premises. If this is not possible, pigs could be moved to a recovered or infected herd. In particular, pigs from an infected herd should not be moved to a clean herd or to premises in close proximity to a non-infected unit.
- When a batch of pigs that have shown signs of influenza leave a building, the building should be thoroughly cleansed and disinfected to minimise risk of transmission to the next pigs that enter that building.
- Avoid long-distance movements of any pigs from infected units i.e. through areas of the country where no infected farms are present

Moving pigs on to an infected farm

- Avoid moving clean pigs onto premises known to have active influenza virus infection. The introduction of clean stock assists the persistence of infection on the unit as the clean pigs will be susceptible to infection. Ideally, infected herds should be considered to be 'closed' until the pigs have recovered and show no further clinical signs.

Surveillance

- As with the industry Swine Dysentery Charter, to help in regional disease control, you should disclose the health status of your unit to neighbouring pig keepers.
- If animals have moved from your unit to another unit within the 10 days prior to clinical signs of influenza developing in your herd, you should contact the farms to which the pigs moved. These farms should be extra-vigilant for signs of respiratory disease, and perform influenza testing if pigs develop signs of influenza.
- While influenza in pigs is not a notifiable disease, it is likely that if H1N1/09v is identified in pig herds, VLA/SAC, together with your vet, will provide some assistance with tracing of contact farms and reviewing biosecurity in the first few cases. This assistance will be of use to the industry in minimising further spread and determining how the disease has affected your herd, which may assist other herds that become infected so please provide information where possible.

Outdoor units

- On outdoor units, the virus may move more slowly between groups than on indoor units. You should discuss the best strategy for disease management with your vet.

Vaccines

- Current vaccines are unlikely to protect pigs against the H1N1/09v strain. If a pig vaccine becomes available its effectiveness in preventing infection and aiding virus eradication will need to be assessed.

Returning to normal

The best method of eliminating virus from a herd will vary between herds and you should discuss this with your vet. The strategy for virus control and elimination should take full account of the welfare of your pigs.

Generally, a group of pigs would be considered free from disease 10 days after the last clinical signs have resolved. In some cases however, your vet may advise testing a sample of pigs to determine that virus is no longer circulating and examination of production records may also be helpful in this regard. Again, your vet will be able to advise you what is most appropriate for your herd.

Where to get more advice

- Your private veterinary practitioner
- Veterinary Laboratories Agency (VLA):
http://www.defra.gov.uk/vla/diseases/dis_si.htm
- Scottish Agricultural College (SAC) <http://www.sac.ac.uk>
- Defra <http://www.defra.gov.uk/animalh/diseases/swine-flu/index.htm>
- Scottish Government <http://www.scotland.gov.uk/swineinfluenza>
- Welsh Assembly Government <http://www.wales.gov.uk/?lang=en>
- Pig Veterinary Society (PVS) www.pigvetsoc.org.uk
- BPEX www.bpex.org.uk
- National Pig Association (NPA) www.npa-uk.org.uk
- British Pig Association (BPA) www.britishpigs.org.uk
- Quality Meat Scotland (QMS) www.qmscotland.co.uk
- HCC Meat Promotion Wales www.hccmpw.org.uk/index.aspx
- British Meat Processors Association (BMPA)
www.bmpa.uk.com/content/home.asp
- Department of Health www.dh.gov.uk/en/index.htm
- Health Protection Agency (HPA) www.hpa.org.uk/
- Health and Safety Executive (HSE) www.hse.gov.uk
- Food Standards Agency (FSA) www.food.gov.uk
- Meat Hygiene Service (MHS) www.food.gov.uk/foodindustry/meat/mhservice