



Influenza in Pigs: Code of Practice

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Introduction

This Code of Practice has been produced in response to the current pandemic in humans caused by Human Influenza A type H1N1 2009 virus. This virus will be referred to as Novel H1N1 influenza A 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 in pigs including Novel H1N1 influenza A.

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 Department of Agriculture, Environment and Rural Affairs, in agreement with Industry.

Summary Information about Novel H1N1 Influenza A and Other Pig Influenza Viruses

- There is no evidence that Novel H1N1 Influenza A or other influenza viruses can spread to humans from pig meat or meat products.
- As is the case with all sick pigs, those with clinical signs of influenza including Novel H1N1 Influenza A, must not be sent to slaughter for human consumption. This is an animal welfare issue. It is a legislative requirement under animal welfare legislation that unfit animals cannot be transported.
- 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 ensured at all times.
- Influenza A in pigs is notifiable however DAERA policy only requires notification as a result of laboratory confirmation.
- 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 Novel H1N1 Influenza A 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 that you contact your Private Veterinary Practitioner for advice.
- 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/agriculture/topics/zoonoses.htm>

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 H1N1, H3N2, and H1N2 co-circulate widely.

Influenza 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. 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). 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).

Novel H1N1 Influenza A is currently circulating in the human population and, like many other influenza viruses, has the potential to pass to pigs. The possibility of Novel H1N1 Influenza A 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/agriculture/topics/zoonoses.htm>

If you have questions or concerns related to the human health aspects of influenza infection, you should contact the National Pandemic Flu Service:

<http://www.direct.gov.uk/pandemicflu>

Keeping Influenza 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 virus.

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 applies to vets and other visitors. Pig keepers must, of course, ensure that the health and welfare needs of pigs under their care are met by suitable 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 a herd is known to be infected with Novel H1N1 Influenza A, personnel working with the infected herd should avoid contact with other pigs for at least 10 days after the cessation of all clinical signs of influenza within the herd.
- Do not allow unnecessary personnel or vehicles onto your pig farm. Keep records of visitors and ensure they follow biosecurity protocols.
- Influenza viruses are transmitted by the spread of respiratory secretions mostly via direct contact, short distance aerosol spread. Aerosols from humans such as sneezing typically travel for 1-2 metres. If you have pigs in close proximity to the general public such as on an outdoor unit by a public footpath or open farms you are advised to ensure a distance of 3 metres between the public and any pigs using perimeter fencing or other appropriate barriers.

Control movement of pigs onto the farm

- Only source pigs from herds of comparable health status to your own and do 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.
- 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. Pigs with clinical signs of disease, or pigs from a farm where clinical signs have been identified, should not be moved onto your farm.

Review bio-security practices

- Influenza can be spread by direct contact between infected pigs, fomite spread (mechanical spread of virus by people, vehicles and equipment) and aerosol spread over short distances.
- You can minimise the risk of influenza virus entry with the following practices. These measures will also reduce the risk of entry of other infectious diseases to your unit.

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 farm changes into clean clothes and boots when entering the unit.
- Avoid unnecessary visitors entering your farm.
- Necessary visitors to a pig farm should be free of any pig contact for a minimum of 3 days.

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 and wheel arches cleansed and disinfected and be free of visible contamination. Foot wells should be clean and floor mats cleaned regularly. 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 Northern Ireland under the Transport Of Animals And Poultry (Cleansing And Disinfection) Order (Northern Ireland) 2007 and guidance on the requirements can be found at: <https://www.daera-ni.gov.uk/publications/guide-transport-animals-and-poultry-cleansing-and-disinfection-order-northern-ireland>.)
- Minimise the risk of cross-contamination between “dirty” on-site vehicles and those entering/leaving the premises.
- If possible, avoid multiple offs/. If this is not possible, organise transportation routes to ensure high health status farms are visited first.
- Only essential vehicles should be allowed where pigs are kept and where possible, feed and other delivery vehicles should not enter the part of the site where pigs are kept.

General bio security advice is available on the DAERA Website: <https://www.daera-ni.gov.uk/articles/biosecurity>

A list of approved disinfectants can be found at <https://www.daera-ni.gov.uk/publications/approved-disinfectants>

If You Suspect Influenza infection in Your Herd

Pig farmers are encouraged to be vigilant for unusual signs of respiratory disease in pigs. If your pigs are showing clinical signs of influenza, it is recommended that you contact your Private Veterinary Practitioner (PVP).

The quicker influenza is identified in pigs, the better the 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 PVP the most appropriate way to manage virus control and elimination in your herd. The optimal strategy will vary between herds.

Enhance Biosecurity

- Biosecurity protocols for staff and visitors on infected farms should be reviewed and strengthened (see links to biosecurity advice above).
- Infected farms should not be part of multi-pick up/drop-off routes.
- It is advisable to work with your PVP 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 of pigs is present under certain circumstances.
- Healthy Pigs (including previously infected pigs) can be moved to slaughter as normal. Pigs showing clinical signs of illness must not be sent to slaughter for human consumption as under animal welfare legislation unfit animals cannot be transported.
- 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 farms is necessary for welfare reasons. You should discuss with your PVP how to do this with the lowest risk of further spread of virus. 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).

- Pigs 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 herd.
- When batches 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 farms 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

- To help in disease control within Northern Ireland, you should disclose the health status of your unit to neighbouring herds.
- 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, implement strengthened biosecurity and contact their PVP if pigs develop signs of respiratory disease.
- It is likely that if Novel H1N1 Influenza A is identified in pig herds, DARD 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 PVP.

Vaccines

- Current vaccines are unlikely to protect pigs against the Novel H1N1 Influenza A 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 PVP. The strategy for virus control and elimination should take full account of the welfare of your pigs.

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

Where to get more advice

- Your private veterinary practitioner (PVP)
- Department of Agriculture, Environment and Rural Affairs – local Divisional Veterinary Office
- Agri-Food and Biosciences Institute (AFBI)
- <https://www.gov.uk/guidance/swine-influenza>
- <https://www.gov.uk/government/organisations/department-of-health>
- <https://www.daera-ni.gov.uk/publications/approved-disinfectants>
- <https://www.daera-ni.gov.uk/articles/biosecurity>