

# **Pandemic Influenza A/H1N1 2009 in Pigs**

## **Code of Practice**



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#### **FAO, WHO and OIE joint statement issued on 7 May 2009:**

**“In the ongoing spread of influenza A (H1N1), concerns about the possibility of this virus being found in pigs and the safety of pork and pork products have been raised. Influenza viruses are not known to be transmissible to people through eating processed pork or other food products derived from pigs.”**

**14 September 2009**

**Produced by the Department of Agriculture, Fisheries and Food in conjunction with the National Pig Health Council**

## 1. Introduction

This document has been produced in response to the current outbreak of influenza A in humans caused by pandemic H1N1 2009 virus, and to implement European Commission working document SANCO/6211/2009 Rev 1 on “surveillance and control measures for pandemic H1N1 2009 influenza virus in pigs”.

The objectives are to:

- ensure early detection of pandemic H1N1 2009 virus in the Irish pig population
- implement proportional and sustainable measures to limit the spread of the virus in the pig population
- limit occupational exposure of personnel to the virus.

The Code includes 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 pandemic H1N1 2009 virus.

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 DAFF in partnership with the National Pig Health Council.

## 2. About influenza in pigs

Influenza A is an infectious viral disease that affects many species of animals. Swine influenza is considered enzootic in most pig-producing countries. Within the European pig population, influenza A viruses of subtypes 'avian-like' H1N1, H3N2, and H1N2 circulate widely. In Ireland both H1N1 and H3N2 have been detected. However pandemic H1N1 2009 has not been detected in pigs in Europe to date.

### **Clinical signs:**

- high temperature
- listlessness
- coughing
- discharge from eyes and/or nose
- sneezing
- reddening of eyes
- abortion

The mortality rate is generally low if the general health status is good. However, if underlying health problems are present, clinical signs can be more severe and mortality rates can be higher.

### **Recovery:**

In uncomplicated cases individual pigs usually recover within 5-7 days. However, the virus can circulate through a herd for longer if there are susceptible pigs present.

### **Transmission:**

Influenza viruses are transmitted by the spread of respiratory secretions by:

- direct contact with other pigs
- short distance aerosol spread and
- fomite spread (mechanical spread on farm equipment, clothes, water troughs etc).

Disease usually spreads rapidly in susceptible groups of pigs.

### **Transmission of pandemic H1N1 2009 virus from humans to pigs:**

Pandemic H1N1 2009 virus is currently circulating in the human population worldwide, including Ireland. Like many other influenza viruses, it has the potential to infect pigs. To date this is thought to have occurred in two outbreaks of pandemic H1N1 2009 in pigs, in Argentina and Australia.

### **3. Transmission of pandemic H1N1 2009 virus from pigs to humans:**

Swine influenza rarely infects humans. There are 2-3 reported cases of such infections worldwide each year. The disease in humans is usually mild.

To date, there have been only 2 cases of pandemic H1N1 2009 transmitting from pigs to humans, from a single infected pig farm in Canada. The disease in these human cases was mild.

Clinical signs of influenza in humans are:

- fever of sudden onset
- cough
- sore throat
- runny nose
- headache
- muscle aches
- some people have vomiting and diarrhoea.

People working with pigs should follow the guidance already available aimed at protecting them from zoonotic diseases.

**Health and Safety Authority**

<http://www.hsa.ie/eng/>

<http://publications.hsa.ie/index.asp?locID=5&docID=-1>

## 4. Keeping influenza out of your herd

The introduction of influenza into pig herds is an ever-present risk. You can minimise this risk by implementing the following measures:

### Pigs

- Only source pigs from herds that are not showing clinical signs of infectious disease.
- Keep new pigs separated from the resident herd for at least 14 days (to monitor for signs of influenza and other infectious diseases).
- Be vigilant for signs of disease and seek the advice of your veterinary practitioner if clinical signs of influenza are seen.

### People

- **Personnel with clinical signs of influenza** should avoid contact with pigs. Pig keepers must 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.
- If a herd is known to be infected with pandemic H1N1 2009, **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.
- Ensure everyone visiting the farm changes into clean clothes, boots, head covering and mask, and washes their hands before entering.
- Avoid sharing personnel between units if possible.
- If personnel must move between units - at a minimum they should change their boots and clothes, wear head covering and a mask, and wash their hands between units.

### Equipment

- Ensure all equipment moving on to or leaving a unit is thoroughly cleaned and disinfected. This includes veterinary equipment, slurry spreaders etc. Avoid sharing equipment between units if possible.

## **Vehicles**

- Where possible, feed and other delivery vehicles should not enter the part of the site where the pigs are kept.
- All vehicles that must enter the site should be clean and free of visible contamination.
- Vehicles used to transport pigs should always be cleansed and disinfected after each use. This should be done as soon as is reasonably practicable after unloading animals (at least before the vehicle is used again and within 24 hours of unloading). Cleaning and disinfection should include the inside and outside of the vehicle, wheels, wheel arches and mud flaps.
- 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.
- Drivers should not get out of their vehicles and should not enter pig houses unless it is absolutely necessary. Where it is necessary for them to get out of their vehicles, they should follow the advice for people above.

## 5. If you suspect influenza infection in your herd

If your pigs are showing clinical signs of influenza, notify your veterinary practitioner as soon as possible.

Influenza in pigs is a notifiable disease in Ireland. You should notify any suspicion of pandemic H1N1 2009 infection in your herd to your local District Veterinary Office if:

- Anyone in contact with your pigs develops 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.
- Your pigs have clinical signs of influenza and other causes for this have been ruled out.

Your vet can submit samples for influenza testing to Virology Division, Central Veterinary Research Laboratory, Stacumny Lane, Backweston, Celbridge, Co. Kildare.

Nasal swabs collected from pigs with clinical signs are the sample of choice.

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

### **While you are waiting for test results**

You should implement the measures outlined in **Section 6: Managing influenza in your herd** below to limit the risk of possible onward transmission.

### **Department of Agriculture involvement**

DAFF will not be placing restrictions on farms with suspected or confirmed swine influenza.

DAFF will assist the veterinary adviser with epidemiological investigations and reviewing of biosecurity measures in order to monitor the epidemiological situation.

## 6. Managing influenza in your herd

- The aim of managing influenza in your herd is to:
  - Prevent the transmission of the virus to unaffected farms
  - Minimise negative health and welfare impacts on pigs in your herd
  - Limit exposure of personnel in contact with the pigs to the virus
  - Where feasible - eliminate the virus from the 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 herd types.

### Enhance biosecurity

- 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
- Strengthen biosecurity protocols for staff and visitors on infected farms (see advice above).

### Moving pigs off an infected farm

- Pigs should only be moved from farms where influenza virus infection is present under certain circumstances.
- Pigs that appear healthy and are showing no clinical signs may be in early or late stages of infection and be shedding virus. Thus, healthy pigs from infected farms should not move off the farm, other than to slaughter, except in exceptional circumstances. Pigs are considered to have recovered from disease and to be safe to move, when virus excretion has ceased (7 days after the disappearance of clinical signs).
- Avoid long-distance movements of any pigs through areas of the country where no infected farms are present.
- Infected units should not be part of multi-pick up/drop-off routes. If this cannot be avoided, infected farm should be visited last and vehicles thoroughly disinfected afterwards.
- Buildings should be thoroughly cleansed and disinfected after each batch of pigs have left the building, to minimise risk of transmission of virus to the next batch of pigs that enter that building.

*Pigs going for slaughter:*

- Pigs showing clinical signs of illness are not fit for transport in accordance with Welfare Legislation, and must not be sent to slaughter for human consumption in accordance with Hygiene Legislation.

Healthy pigs and pigs that have recovered from infection can move to slaughter as normal. Food Chain Information (FCI) must be provided in the usual way for all pigs consigned to slaughter.

*Pigs going to markets or shows:*

- Pigs from infected farms should not be sent to markets and shows.

*Breeding boars:*

- Breeding boars and other pigs intended to visit one or more premises before returning should not leave the farm.

*Pigs moving to other farms:*

- In some cases, movement of pigs to other farms 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 it is important to remember:
  - Only healthy pigs and pigs that have recovered from infection should be moved.
  - Pigs should preferably be moved to empty premises. If this is not possible, pigs could be moved to a recovered or infected herd.
  - Pigs should not be moved to a clean herd or to premises in close proximity to a clean herd.

**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 farm as the clean pigs will be susceptible to infection.
- Ideally, infected herds should be considered as 'closed' until the pigs have recovered and show no further clinical signs.

## **Surveillance**

- If animals have moved from your farm to another farm 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.

## **Outdoor farms**

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

## **Vaccines**

- The current swine influenza vaccines in use in other countries are unlikely to protect pigs against the pandemic H1N1 2009 strain. If a new vaccine becomes available, its effectiveness in preventing infection and aiding virus eradication will need to be assessed.

## **7. Further advice:**

For advice on human influenza:

**Department of Health and Children**

<http://www.dohc.ie/>

**Health Protection and Surveillance Centre**

<http://www.hpsc.ie/hpsc/>

**Health Services Executive**

<http://www.hse.ie/eng/>

For advice on health and safety:

**Health and Safety Authority**

<http://www.hsa.ie/eng/>

For advice on food safety:

**Food Safety Authority of Ireland**

[http://www.fsai.ie/news\\_centre/influenza\\_A.html](http://www.fsai.ie/news_centre/influenza_A.html)