

Appendix 5: Guidance for protection of persons involved in avian influenza outbreak control and eradication activities in Ireland

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Introduction

Avian influenza is a disease of birds and poultry caused by influenza A viruses. Other animals can become infected, such as pigs, horses etc, but may remain asymptomatic. It can also rarely affect humans.

Routes of infection

Birds that are infected with influenza can shed virus in saliva, nasal secretions and faeces. Transmission from sick or dead birds can occur via these routes to other birds or to humans. Faeces contain high concentrations of virus and are an important factor in spreading disease. The viruses can survive in the environment for up to 3 months in cool and moist conditions.

Clinical symptoms in humans

Infection with Avian influenza in humans can cause flu like symptoms, i.e. cough, temperature, sore throat and coughing as well as diarrhoea. Avian influenza can also cause conjunctivitis, i.e. red watery itching painful eyes, with a purulent discharge. It can cause serious respiratory complications and death.

Activities that could result in exposure to avian influenza-related poultry outbreaks include euthanasia (culling of birds), carcass disposal, and cleaning and disinfection of premises affected by avian influenza.

These recommendations aim to protect individuals involved in the response to an outbreak of Highly Pathogenic Avian Influenza (HPAI) from illness. These should also be considered for all outbreaks of avian influenza.

Efforts must be made to limit exposure of persons to outbreaks of infected avian influenza. Technical and organisational measures must be taken to minimise the risk posed to those who will be required to work on outbreak control activities.

1. Hand hygiene

All workers who have been in close contact with infected animals should know the importance of and the need to adhere to proper use of hand hygiene after the following activities:

- Contact with infected or exposed poultry
- Contact with contaminated surfaces
- Removal of gloves

Hand hygiene consists of:

Washing with soap and water for 15-20 seconds

Or use of alcohol based hand rub/wipes.

Hand hygiene is **the most important measure in preventing the spread of infection** after contact with infected or exposed poultry, contact with contaminated surfaces or after removing gloves.

There should be no eating, drinking, smoking, applying cosmetics or putting on/taking off contact lenses in high-risk areas. Used wipes must be disposed of appropriately.

2. Personal Protective Equipment

All workers should have access to:

Appropriate personal protective equipment (PPE)

Instructions and training in PPE use

Respirator fit-testing

Disposable **gloves** made of lightweight nitrile or vinyl, or heavy-duty rubber work gloves that can be disinfected, should be worn. A thin cotton glove may be worn inside the external glove to protect against contact dermatitis. Change gloves immediately if they become torn or damaged. Remove gloves promptly after use, before touching non-contaminated surfaces and items.

Protective clothing, preferably disposable outer garments or overalls with hoods, or surgical gowns with long cuffed sleeves. This includes protective cover for the hair. (Mop cap or hair net)

Disposable **protective shoe covers** or rubber or polyurethane boots that can be cleaned and disinfected should be worn.

Safety goggles should be worn to protect the mucous membrane of the eyes. They should comply with EN standards⁴ and be the anti-mist type to allow prolonged periods of use. It's really important to avoid touching or rubbing eyes with hands after removing the goggles.

Disposable particulate respirators (e.g. European EN149: 2001 FFP2; or European EN149: 2001 FFP3;) are the minimum level of respiratory protection that should be worn. Prior to undertaking any outbreak eradication and control activities, **workers must be fit-tested to the respirator model that they will wear** and know how to check the face-piece to face seal. Workers who cannot wear a disposable

particulate respirator due to facial hair, should wear a loose-fitting (i.e. helmeted or hooded) powered air purifying respirator equipped with high-efficiency filters.

Disposable PPE should be **properly discarded (sealed plastic bags)** and non-disposable PPE should be cleaned and disinfected as specified. The sealed plastic bags need to be disposed of appropriately. **Hand hygiene should be performed after removal of PPE.**

Instructions and training in PPE use.

Workers should be trained in proper techniques of donning, removing and disposing of PPE, without contaminating him/herself. Prior to use of respirators, workers must be fit-tested to the model of respirator that they will wear.

Summary of order of removal of protective attire/equipment

1. Remove gloves* - use technique that avoids touching the outside surface of the gloves with bare hands
2. Remove gown* - use technique that minimises the risk of touching the outside surface of the gown
3. Wash/decontaminate hands
4. Remove eye protection
5. Remove mask/respirator
6. Wash/decontaminate hands again

* Order may vary according to local protocol

3. Use of oseltamivir

Unless medically contraindicated, workers should receive oseltamivir 75mg daily prophylactically for the duration of time during which contact with infected poultry or contaminated surfaces occurs. This should be continued for 7 days following last exposure. Further information on antiviral prescribing is available [here](#).

The Director of Public Health as Medical Officer for Health for the affected area will make arrangements for supply and distribution of oseltamivir as prophylactic treatment.

4. Vaccination with seasonal influenza vaccine

If human influenza is circulating, unvaccinated workers should receive the current seasons influenza vaccine⁵ to reduce the possibility of dual infection with avian and human influenza viruses.

5. Surveillance and monitoring of workers

All those in contact with potentially infected materials should be given information about avian influenza, and its symptoms, and should monitor their health for any suggestive symptoms. Further information on surveillance is available [here](#).

Workers should be asked to report any relevant health problems when undertaking outbreak control and eradication activities, and for one week following their last exposure to avian influenza-infected birds or contaminated environmental surfaces as follows:

Cough, shortness of breath

Fever

Flu-like illnesses: sore throat, myalgia/arthritis (painful muscles or joints), or headache

Watery diarrhoea – This is often present in the early stages of illness and may precede respiratory symptoms by up to one week

Abdominal pain and vomiting

Headache

Before seeking medical assistance, they should inform them that they might have been exposed to avian influenza. Suspected cases should be placed in isolation. If these symptoms develop, the attending doctor should notify the Director of Public Health/ MOH immediately.

Persons at high risk for severe complications of influenza (e.g. immunocompromised) those over 65 years old, or with chronic heart or lung disease or those for whom oseltamivir is contraindicated should avoid working with infected chickens. Those on medications such as steroids should seek medical advice prior to working with infected chickens.

A blood sample may be taken 1-2 months after outbreak control activities have commenced in exposed animal workers and veterinarians. This will be done by the occupational health staff.

6. Contacts should not visit other farms or unaffected agricultural locations with poultry or other birds to avoid spread of contaminated materials.

References

1. WHO interim recommendations for the protection of persons involved in the mass slaughter of animals potentially infected with highly pathogenic avian influenza viruses. 26 January 2004.
http://www.who.int/csr/disease/avian_influenza/guidelines/interim_recommendations/en/index.html. Last accessed 26th August 2005
2. CDC Interim Guidance for protection of persons involved in US avian influenza outbreak disease control and eradication activities, February 17 2004 <http://www.cdc.gov/flu/avian/professional/protect-guid.htm>. Last accessed 26th August 2005
3. Human Health Issues related to Domestic Avian Influenza Outbreaks. Canadian Pandemic Influenza Committee and affiliated Working Groups, May 2005. <http://www.phac-aspc.gc.ca/publicat/daio-enia/index.html> Last accessed 26th August 2005.
4. <http://www.hse.gov.uk/lau/lacs/68-7.htm>. Last accessed 29th August 2005
5. <http://www.who.int/csr/disease/influenza/vaccinerecommendations1/en/>. Last accessed 29th August 2005