



HIGHLY PATHOGENIC AVIAN INFLUENZA: INTERIM HEALTH ADVICE FOR POULTRY AND ASSOCIATED INDUSTRIES

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The following guidelines provide summary information on avian influenza and specific information to protect poultry workers during an outbreak of highly pathogenic avian influenza (see Section 1.1 for explanation). Associated industries, such as those dealing with poultry products including poultry litter, should also follow the guidelines. Health advice is provided for all personnel involved in managing an outbreak of highly pathogenic avian influenza in poultry.

These guidelines are based on material developed by the World Health Organisation, the Centers for Disease Control and Prevention, and the Australian Government Departments of Agriculture, Fisheries and Forestry, and Health and Ageing.

Details for further information are appended at the end of this advice.

1 BACKGROUND

1.1 What is avian influenza?

Avian influenza (bird flu) is a disease of birds caused by avian influenza viruses. There are many strains of avian influenza viruses causing infections of varying severity, ranging from mild disease to severe disease with high mortality. Those causing high mortality, described as "highly pathogenic", are of most concern to the poultry industry and have the potential to impact on human health. Occasional and limited infection in humans has been reported.

1.2 How is avian influenza spread?

Avian influenza viruses usually cause outbreaks of infection among domestic poultry when infected wild birds contaminate food or water supplies. Subsequent spread of the virus occurs through the movement of live birds or contaminated feed, equipment and materials.

1.3 Can humans become infected?

Generally, humans are not affected by most strains of avian influenza. However, certain highly pathogenic strains such as H5N1 can cause influenza in humans. Transmission

occurs through handling live infected birds or through close contact with infected birds and their excretions. There is no evidence that human infection has been caused through eating poultry meat or eggs. Transmission from person to person is rare.

1.4 What are the signs of avian influenza in birds?

Signs of disease vary according to the strain of influenza virus, the age and species of the affected birds, the environmental conditions and husbandry practices.

Signs of severe disease include sudden death, swelling of the head, ruffled feathers, diarrhoea, bleeding, nervous signs and respiratory distress. Any signs of sickness or sudden death in a substantial part of a flock should be reported immediately to the appropriate authorities (see Further Information).

1.5 What are the symptoms of avian influenza in humans?

Symptoms of avian influenza infection in humans include fever, sore throat, cough, headache and muscle aches and pains.

2 PROTECTING POULTRY: BIOSECURITY

Poultry farmers should routinely maintain good biosecurity in their operations. In particular, maintain a barrier between wild and domestic birds and provide poultry with treated water, not untreated reservoir or dam water. For information on biosecurity for the poultry industry see Further Information.

In addition, during an outbreak of avian influenza, follow the biosecurity recommendations of the relevant state/territory and Commonwealth departments. The Australian Animal Diseases Emergency Plan (AUSVETPLAN) describes the quarantine and response measures that will be put in place (see Further Information).

3 PROTECTING POULTRY WORKERS

3.1 If there is no highly pathogenic avian influenza active anywhere in the world

- Normal workplace health and safety operations apply. Reinforce good hygiene. Contact your relevant state or territory authority for further information.
- Ensure biosecurity measures are in place and poultry workers are on alert to identify sick or dead birds.
- Review procedures for dealing with sick or dead birds including availability of suitable personal protective equipment (PPE) and training in its use.
- All workers in the poultry and associated industries should strongly consider vaccination with the seasonal human influenza vaccine every year as soon as the vaccine becomes available (usually March). Although the human influenza vaccine will not protect workers against avian influenza, it may avoid simultaneous infection with both human and avian influenza. There is a small possibility that if a person is infected with both of these viruses at the same time, the viruses could share genetic material to produce a new and highly transmissible virus that would pose a threat to the wider community.

3.2 If there is highly pathogenic avian influenza overseas but none in Australia

The above plus:

- If there is highly pathogenic avian influenza in Asia or Oceania, all workers in the poultry and associated industries and any other workers potentially involved with management of flocks affected by avian influenza **should** be vaccinated with the seasonal influenza vaccine as soon as the vaccine becomes available.

3.3 If highly pathogenic avian influenza is detected in Australia

The above plus:

- Avoid unnecessary contact with poultry and their products, including excreta. Children should not have contact with poultry or any other affected birds. People with conditions that weaken their immune system (such as some cancers or cancer treatments or high dose steroids), people over the age of 60 years and people with known chronic heart or lung disease should avoid working with affected birds.
- Poultry from an area affected by avian influenza should not be transported by workers or taken to their homes or any other location, even if the animals appear healthy.
- **Ensure** all workers who are or will be directly exposed to poultry or poultry products and waste are vaccinated with the seasonal human influenza vaccine.
- Know the symptoms of avian influenza infection in humans. If you or any household member becomes unwell with a fever, contact your doctor.
- Avoid contact with poultry farms or properties where birds have been sick, killed, or are thought to have avian influenza.

3.4 If poultry on your farm become sick or die with possible highly pathogenic avian influenza

The above plus:

- If any poultry become sick or die, notify the relevant authorities (see Further Information) and follow their advice.
- Follow guidance for health protection outlined in Section 4.

4 GUIDANCE FOR ALL PERSONNEL INVOLVED IN MANAGING AN OUTBREAK OF HIGHLY PATHOGENIC AVIAN INFLUENZA IN POULTRY

4.1 General information

- 4.1.1 Workers must be protected from highly pathogenic avian influenza wherever there is contact with infected poultry, their products including litter and contaminated premises.
- 4.1.2 **Government animal health agencies and poultry industry bodies will jointly lead the response to detections of avian influenza infection in poultry.** Poultry producers should not work independently of this formal response.
- 4.1.3 Procedures to respond to avian influenza virus infections in Australia are described in the Australian Animal Diseases Emergency Plan (AUSVETPLAN). This plan describes:
- quarantine measures
 - the outbreak management policy of stamping out infected birds
 - methods for disposal of carcasses
 - measures to contain disease at affected sites
- 4.1.4 **Any worker exposed to infected poultry and contaminated areas who does not agree to and adhere to the preventive and monitoring procedures described below should be excluded from handling infected poultry or working in a contaminated environment.**
- 4.1.5 Animal health personnel will arrange slaughter and disposal of infected birds and decontamination of the infected premises using AUSVETPLAN procedures. Poultry workers may participate in this process under the supervision of the animal health agency.
- 4.1.6 Avoid unnecessary contact with poultry. Children should not have contact with poultry or any other affected birds. People with conditions that weaken their immune system (such as some cancers and cancer treatments and high dose steroids), people over the

age of 60 years and people with known chronic heart or lung disease should avoid working with affected birds.

- 4.1.7 Poultry from an area affected by avian influenza should not be transported by workers or taken to their homes, even if the animals appear healthy.

4.2 Basic infection control

- 4.2.1 Instruct all workers who have been in close contact with infected animals to wash their hands thoroughly and frequently. This involves washing the hands with soap and running water for 15 to 20 seconds. Educate workers about the importance of strict adherence to handwashing procedures after contact with infected or exposed poultry, contact with contaminated surfaces, after removing gloves, and before eating, drinking or smoking.
- 4.2.2 Instruct workers to shower and wash their hair after handling contaminated materials and before putting on street clothes.
- 4.2.3 Instruct workers to cover open wounds with a water-resistant dressing.
- 4.2.4 Ensure workers have access to appropriate personal protective equipment (PPE) and provide instruction and training in use of PPE including respirator fit-testing.
- 4.2.5 Supervise the appropriate use of PPE.

4.3 Personal protective equipment

- 4.3.1 Wear protective clothing, preferably overalls and, where gross contamination of clothing is likely, an impermeable apron. Disposable protective clothing is the preferred option and this should be kept separate from street clothes. If non-disposable clothing is used, after use it should be placed in a plastic bag and sealed, then directly decanted from the bag into the washing machine for hot laundering.
- 4.3.2 Wear disposable gloves or heavy duty rubber work gloves that can be disinfected. Change gloves if torn or damaged.
- 4.3.3 A disposable P2 (N95) respirator is the minimum level of respiratory protection that should be worn. Ensure workers are clean-shaven and fit-tested to the model of respirator they will wear and know how to check the face seal. A powered-air purifying respirator (PAPR) will provide a higher degree of protection for high-risk activities such as the culling of poultry.
- 4.3.4 Wear goggles or safety glasses to prevent eye splash.
- 4.3.5 Wear disposable footwear or rubber or polyurethane boots that can be disinfected.
- 4.3.6 Discard all disposable PPE according to AUSVETPLAN instructions.
- 4.3.7 Wash hands thoroughly after removal of PPE.
- 4.3.8 Reusable items such as heavy duty gloves, boots and PAPRs should be cleaned and disinfected according to AUSVETPLAN recommendations. Avian influenza virus is susceptible to detergents as well as a range of disinfectant products.
- 4.3.9 After cleaning and disinfection, store PPE in a clean location to avoid contamination.

4.4 Vaccination with seasonal human influenza vaccine

- 4.4.1 Ensure all workers exposed to potentially infected animals are vaccinated with the seasonal human influenza vaccine. As this vaccine takes two weeks to take effect, it should be administered in advance. Although the human influenza vaccine will not protect workers against avian influenza, it may avoid simultaneous infection with both human and avian influenza. There is a small possibility that if a person is infected with both of these viruses, the viruses could share genetic material to produce a new and highly infectious virus that would pose a threat to the wider community.

4.5 Antiviral drugs

- 4.5.1 Antiviral drugs are recommended for workers in direct contact with infected poultry or contaminated surfaces, for the duration of their exposure and for 7¹ days after their last exposure.
- 4.5.2 Antivirals should not be taken for more than 42 days². If the exposure period (culling and clean-up) will be prolonged, plans for rotating workers should be implemented.
- 4.5.3 When possible, the choice of antiviral drug should be based on the sensitivity of the virus to available antiviral drugs.
- 4.5.4 If sensitivity is not available, the first choice of antiviral drug is a neuraminidase inhibitor (oseltamavir).
- 4.5.5 Contact public health authorities to confirm the drug of choice.
- 4.5.6 Supervised dosing of antiviral medications will occur daily at the workplace.

4.6 Health surveillance of workers

- 4.6.1 Instruct workers to monitor their health, watching for signs of fever, respiratory symptoms (eg cough) and conjunctivitis (eye infections) during exposure to infected birds or contaminated environments and for 1 week after the last exposure.
- 4.6.2 Instruct workers who become ill to telephone their local doctor or health care facility, indicating they may have had exposure to avian influenza. An appointment should be arranged for health assessment. In addition, instruct workers to report their illness to workplace health and safety officials at the workplace, who in turn should notify public health authorities.
- 4.6.3 Workers who are unwell should stay at home until 24 hours after any fever resolves, or until provided with a medical clearance.
- 4.6.4 Workers who are unwell should practice good respiratory hygiene by covering their mouth during coughing and wash their hands after coughing or using tissues or handkerchiefs, and disposing of tissues hygienically.
- 4.6.5 If any worker becomes unwell, close contacts (eg household members) will be contacted by public health authorities and advised according to public health management protocols (see Further Information). Those household members should also monitor their health, although transmission from person to person is rare.
- 4.6.6 Serological testing may be arranged for workers who are exposed to potentially infected poultry. This involves testing the blood for evidence of exposure to the avian influenza virus. The purpose of this would be to provide public health authorities with more information about the disease in humans and show if evidence of immunity emerges.

4.7 Evaluation of ill workers

- 4.7.1 Workers who become unwell should be assessed for respiratory illness by a medical practitioner.
- 4.7.2 **If there is evidence of respiratory infection, the treating doctor should contact an infectious diseases physician regarding patient management and the local public health unit regarding public health measures.**

5 RAISING POULTRY AT HOME IN AN AREA AFFECTED BY AVIAN INFLUENZA

- 5.1 If any poultry become sick or die, notify the relevant animal health authorities (see Further Information) and follow their advice.

¹ This duration is subject to revision

² This is based on limited data, and is subject to revision

- 5.2 Minimise contact with poultry and do not let children come into contact with poultry or their litter.
- 5.3 If contact with sick or dead poultry is unavoidable, follow the basic infection control guidelines and recommendations for personal protective equipment as outlined at 4.2 and 4.3.
- 5.4 If better protective equipment is not available, **at a minimum wear a P2 (N95) respirator, goggles, gloves and rubber boots.**
- 5.5 Remove all clothing after contact and place directly into washing machine. Wash your hands, and if possible your body. A shower is the best alternative.
- 5.6 Wash clothes in hot or warm soapy water and hang them in the sun to dry.
- 5.7 Dispose of gloves and any other disposable materials in a sealed plastic bag.
- 5.8 Clean reusable items such as rubber boots and goggles with warm soapy water and dry them in the sun.
- 5.9 Wash hands again after handling these items.
- 5.10 Don't transport poultry or poultry products to other properties, even if the animal looks healthy.
- 5.11 Know the symptoms of avian influenza infection in humans. If you or any household member becomes unwell with a fever, contact your doctor.
- 5.12 Avoid contact with poultry farms or properties where birds have been sick, killed or are thought to have avian influenza.
- 5.13 If you or other household members including children come into contact with sick or dead birds that are thought to have avian influenza, make sure that hands and any part of the body that has come into contact with the birds are washed and launder clothing as above. Contact your doctor to see if any treatment is needed. Mention to the doctor your possible contact with avian influenza. Local public health authorities should also be advised.
- 5.14 The relevant animal health authorities will provide advice on cleaning and disinfection.

6 SAMPLE CHECKLISTS FOR MANAGING AN OUTBREAK OF AVIAN INFLUENZA

6.1 Checklist for the poultry facility

Availability of PPE (consider minimum stock levels based on number of workers or size of farm)

- P2 (N95) disposable particulate filter respirators Number ____
- PAPR Number ____
- Disposable overalls/coveralls Number ____
- Gloves Number ____
- Goggles/safety glasses Number ____
- Boots Number ____

Handwashing facilities

- Basin/sink with running water available Y / N
- Liquid soap available Y / N
- Single use paper towels available Y / N
- Waste bin with liner available Y / N

Showering facilities Y / N

Washing machine Y / N

Disinfection procedure (per AUSVETPLAN) Y / N

Written procedures available on the use of PPE including respirator fit checking, handwashing and decontamination protocols Y / N

Record of staff influenza vaccination status kept Y / N

Record of staff training kept Y / N

6.2 Checklist for each person involved in culling/outbreak management

Vaccinated with seasonal influenza vaccine Y / N

Trained in hand hygiene Y / N

Personal protective equipment

Overalls Available: Y / N

Gloves Available: Y / N

P2 (N95) respirator Available: Y / N Trained: Y / N

PAPR Available: Y / N Trained: Y / N

Goggles/safety glasses Available: Y / N

Boots Available: Y / N

Antiviral drugs recommended: Y / N

Specify recommended drug, frequency and duration: _____

Health surveillance contact person: _____

7 FURTHER INFORMATION

For information on animal biosecurity:

Department of Agriculture, Fisheries and Forestry: www.dpie.gov.au

Relevant state or territory authorities:

ACT: ACT Government Veterinarian 02 62072357

New South Wales: <http://www.agric.nsw.gov.au/reader/19744>

Northern Territory: www.dpif.nt.gov.au

Queensland: www.dpi.qld.gov.au/home/

South Australia:

<http://www.pir.sa.gov.au/pages/showcase/emerg/emergres.htm:sectID=230&tempID>

Tasmania: www.dpiwe.tas.gov.au

Victoria: <http://www.dpi.vic.gov.au/>

Western Australia: www.agric.wa.gov.au/

Australian Chicken Meat Federation: www.chicken.org

Australian Egg Industry Association: www.aecl.org

To report a suspect outbreak:

Animal Disease Hotline 1800 675 888

Relevant state or territory authorities

ACT: ACT Government Veterinarian 02 62072357

New South Wales: Call your District Veterinarian (via the local Rural Lands Protection Board)

Northern Territory: 08 89992130

Queensland (DPI Call Centre): 132523

South Australia: 1800 675 888

Tasmania: 1800 675 888

Victoria: 136186

Western Australia (Animal Health): Office hours 08 9368 3351
After hours 041 791 0082

For information on avian influenza in humans:

Department of Health and Ageing: www.health.gov.au/avian_influenza/

Relevant state/territory health authorities

ACT: www.health.act.gov.au

New South Wales: <http://health.nsw.gov.au/>

Northern Territory: www.nt.gov.au/health/cdc/cdc.shtml

Queensland: www.health.qld.gov.au/

South Australia:

www.dhs.sa.gov.au/pehs/notifiablediseases-summary/current-epi-features.htm

Tasmania: www.dhhs.tas.gov.au/publichealth

Victoria: <http://www.health.vic.gov.au/avian/>

Western Australia: www.health.wa.gov.au/avianinfluenza

For current information on avian influenza outbreaks throughout the world

World Organisation for Animal Health: www.oie.int/eng/en_index/htm

World Health Organisation: www.who.int/csr/don/en/

For AUSVETPLAN:

www.aahc.com.au/ausvetplan

For information on public health management of contacts:

Department of Health and Ageing: www.health.gov.au/avian_influenza/

World Health Organisation: www.who.int/csr/don/en/