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Avian influenza

Information for Private Veterinarians

High Pathogenicity Avian Influenza (HPAI) has been detected in a small number of domestic birds in NSW, including backyard poultry and aviary birds. HPAI may cause severe disease and mortalities in poultry, waterfowl, parrots, songbirds, pigeons and wildlife.

All birds are considered HPAI carriers which means that they can contract and potentially spread HPAI. Veterinarians in private practice in NSW have an obligation under the *Biosecurity Act 2015* to mitigate the spread of HPAI whilst providing care to avian patients.

This guide provides best practice recommendations on how the risk of HPAI spread may be minimised by veterinary clinics in NSW.

This document sets out recommended practices to be employed by veterinary clinics

- before an avian patient presents to a clinic
- at the clinic
- for collection and submission of samples

It is recommended that veterinary clinics use this guide to consider their capacity to provide for adequate biosecurity to limit the potential spread of avian influenza when making decisions about receiving and treating sick birds.

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Information for NSW Veterinary Clinics

High Pathogenicity Avian Influenza (HPAI) has been detected in domestic birds in NSW, including backyard poultry and an aviary bird. HPAI may cause severe disease and mortalities in poultry, waterfowl, parrots, songbirds, pigeons and wildlife.

All birds are considered HPAI carriers which means that they can contract and potentially spread HPAI. Veterinarians in private practice in NSW have an obligation to mitigate the spread of HPAI whilst providing care to avian patients.

This guide will provide best practice recommendations on how the risk of HPAI spread may be minimised by veterinary clinics in NSW. Every veterinary clinic that sees avian patients should:

- use this information to develop a HPAI protocol that is practical for their staff and facility.
- retain up to date contact information for all owners of avian patients to allow for further investigation in the event of a positive HPAI detection and for follow-up by NSW Health to manage human health risk.
- only accept avian patients where they are confident in their ability to minimise the risk of HPAI spread.
- direct avian patients to avian or wildlife speciality clinics within their referral network if they are not confident in their ability to adequately manage the risk of HPAI spread.

HPAI is also a public health concern. NSW Health has guidance around avian influenza in people available on its [avian influenza](#) webpage.

Legal duties

HPAI is listed as Prohibited Matter under schedule 2 of the [NSW Biosecurity Act 2015](#).

Under the Biosecurity (Avian Influenza) Emergency Order, movement of any HPAI carrier into, out of or within the [declared emergency zones](#) in NSW is prohibited. Movement of birds for veterinary treatment only is allowed under a [Group Biosecurity Emergency Permit \(movement of birds for veterinary treatment\) 5/7/24 \(PDF 248.09K\)](#). This does not require owners to apply for a movement permit individually as long as they are only moving the bird directly to a veterinary clinic for the purposes of veterinary care.

Under section 36 of the Act, a person who becomes aware of, or suspects prohibited matter (HPAI) in a bird in their care or as a results of any consultation or other work carried out in their professional capacity, has a biosecurity duty to ensure that, so far as is reasonably practicable, the biosecurity risk posed or likely to be posed by the prohibited matter (HPAI) is prevented, eliminated or minimised.

In order to discharge this legal duty during the current HPAI outbreak, private veterinary clinics MUST:

- immediately and verbally notify an authorised officer where they suspect, or become aware of HPAI infection by:
 - Calling the EAD Hotline on 1800 675 888
- take all practical steps to mitigate the risk of spread of HPAI whilst caring for avian patients, including developing a protocol for managing avian patients (see guidelines below) and reviewing all information on the [NSW Department of Primary Industries and Regional Development website](#).

Best-practice recommendations for managing HPAI spread risk

Every veterinary clinic that sees avian patients should develop a HPAI protocol to manage the risk of spread of HPAI.

At a minimum, this protocol should describe the process for assessing the likelihood of HPAI infection in an avian patient, the maximum spread risk that the clinic can practically mitigate and what biosecurity practices will need to be implemented to achieve this.

Biosecurity practices should include:

1. Isolation and bio-secure workflows
2. Clinical management of suspect cases
3. Personal protective equipment and staff management
4. Decontamination

Detailed guidance is provided later in the guide.

Before a bird presents to the clinic

Where possible, information should be collected prior to a bird presenting at a clinic, to assess the likelihood of infection with HPAI. This allows a clinic to:

assess whether the case is a very high likelihood for HPAI infection (see below) in which case:

- the owner should be instructed to not move the bird and immediately contact the Emergency Animal Disease Hotline (1800 675 888) for emergency investigation,
- advise the owner on biosecurity precautions to take during transport.
- assess whether the clinic is able to practically mitigate the spread risk associated with assessed likelihood of HPAI and refer where necessary, and
- prepare for the arrival of the bird under the clinic's HPAI protocol.

If you need support conducting an assessment on the likelihood of HPAI infection in an avian patient prior to arrival at your clinic, please call the EAD Hotline on 1800 675 888.

Clinical signs of HPAI

Clinical signs in non-poultry species may be less specific and include gastrointestinal clinical signs (vomiting, diarrhoea), petechial haemorrhage and lethargy.

Sudden death.

Increased flock mortality

Decreased appetite, decreased feed and intake

Reduction in egg production or abnormal eggs

Lethargy, depressed demeanour, fluffed feathers

Swelling and/or cyanosis of the head, face, legs, feet

Neurological:

- Torticollis
- Tremors
- Ataxia
- Paralysis
- Seizure

Respiratory:

- Watery eyes
- Nasal discharge
- Sinusitis
- Cyanosis
- Dyspnoea, gasping
- Watery eyes
- Nasal discharge

Gastrointestinal

- Diarrhoea
- Vomiting
- Polyuria

HPAI RISK	Criteria		Action
VERY HIGH	<p>Any domestic bird</p> <ul style="list-style-type: none"> • demonstrating clinical signs <u>strongly indicative of HPAI</u> (see above), OR • from a location where <u>unexplained mortalities</u> in birds have occurred in the last week. <p style="text-align: center; margin: 10px 0;">OR</p> <p>Any wild bird:</p> <ul style="list-style-type: none"> • that is presenting with clinical signs <u>strongly suggestive of HPAI</u> (see above), OR • from a location where there have been <u>five or more unexplained mortalities</u> in birds in the last week, OR • that is a seabird, waterbird, shorebird, bird of prey or scavenging bird. 	<p>AND Bird/s originate from a <u>declared emergency zone</u></p> <p style="text-align: center; margin: 10px 0;">OR</p>	<p>Anyone that has regular contact with the bird/s has had contact with unwell birds originating within <u>declared emergency zone</u> in the last 72 hours (e.g., poultry farm worker from an infected premise, wildlife carer, etc.)</p> <p>Advise the owner:</p> <ul style="list-style-type: none"> • do not move the bird. • immediately call the Emergency Animal Disease Hotline (1800 675 888) for investigation.

HPAI RISK	Criteria		Action	
<p>HIGH</p>	<p>Any domestic bird</p> <ul style="list-style-type: none"> demonstrating clinical signs <u>weakly indicative of HPAI</u> (see above) <p>OR</p> <p>Any wild bird:</p> <ul style="list-style-type: none"> that is presenting with clinical signs <u>weakly suggestive of HPAI</u> (see above), OR from a location where there has been <u>fewer than five unexplained mortalities</u> in birds in the last week 	<p>AND Bird/s originating from a <u>declared emergency zone</u></p>	<p>OR Anyone that has regular contact with the bird/s has had contact with unwell birds originating within the declared zones in the last 72 hours (e.g., poultry farm worker from an infected premise, wildlife carer, etc.)</p>	<p>Only accept the bird if the high biosecurity risk can be adequately managed on site. Immediately call the Emergency Animal Disease Hotline (1800 675 888) to arrange for testing.</p>
<p>Moderate</p>	<p>Any domestic bird</p> <ul style="list-style-type: none"> demonstrating clinical signs <u>weakly indicative of HPAI</u> (see above) 	<p>AND Bird/s that have been to a bird show, market or farm within the last 2 weeks.</p>	<p>OR Anyone that has regular contact with the bird/s has had contact with unwell birds from anywhere in NSW in the last 72 hours (eg. wildlife carer)</p>	<p>Only accept the bird if the moderate biosecurity risk can be adequately managed on site. Immediately call the Emergency Animal Disease Hotline (1800 675 888) to arrange for testing.</p>

HPAI RISK		Criteria	Action
Low	Any bird not showing signs consistent with HPAI or where HPAI can be excluded as a cause for those signs (eg. neurological presentation following trauma).	AND The bird has not left the premises in the last two weeks and there are no links to anyone/ location within the <u>declared emergency zone</u>	Only accept the bird if some enhanced biosecurity measures can be implemented for avian patients. HPAI testing is not necessary in the first instance.

Once a bird is at the clinic

Where assessment of the likelihood of HPAI infection was not able to be conducted prior to presentation at the clinic, the bird should be isolated (see below) and assessed as a matter of priority.

Once a bird has presented at the clinic, appropriate biosecurity practices to mitigate the spread risk associated with the assessed likelihood of HPAI infection should be implemented. This should be guided by the clinic HPAI protocol.

Best-practice recommendations for managing HPAI spread risk

Every veterinary clinic that sees avian patients should develop a HPAI protocol to manage the risk of spread of HPAI.

At a minimum, this protocol should describe the process for assessing the likelihood of HPAI infection in an avian patient, the maximum spread risk that the clinic can practically mitigate and what biosecurity practices will need to be implemented to achieve this.

Biosecurity practices should include:

1. Isolation and bio-secure workflows
2. Clinical management of suspect cases
3. Personal protective equipment and staff management
4. Decontamination and disinfection

1. Isolation and biosecure workflows

- Wherever possible, all avian patients should be isolated upon presentation at the hospital until clinical assessment can be undertaken.
- If multiple avian patients are likely to be present at any time, multiple isolation areas may be needed.
- Where this is not possible, a designated isolation area for avians should be prioritised.
- Ideally a designated isolation room should:
 - have separate air ducting to the rest of the hospital. Aerosolisation of virus particles is considered high risk transmission.
 - be as far from any avian treatment areas as possible.
 - Be stocked with sufficient equipment to reduce the need to move equipment between isolation and other areas. This may include:
 - Paper bowls and plates for patient care that can be disposed of
 - Paper and pencils
 - Scales

- Disposable plastic feeding tubes (do not reuse crop needles)
 - Stethoscope
 - Thermometer
 - Disposable perches (consider PVC piping and bandage material)
 - Appropriate disinfectants
- Personnel movement into and out of isolation rooms should be limited eg. no visitors, minimise clinically handling of the case, etc. Ideally,
 - Separate staff will handle isolated suspect HPAI cases and other susceptible species
 - Where the same staff need to handle all avian species at the clinic, cases deemed lowest risk for infection should be handled first, moving to highest risk cases last.
 - Ensure staff that have had contact with the high-risk case do not come into contact with other birds for 72 hours after exposure, including their own pets.

2. Clinical management of suspect cases

In addition to reporting the case to the EAD hotline and implementation of spread management procedures, consider:

- refraining from conducting diagnostic procedures that may aerosolise respiratory particles (eg. anaesthesia) or transmit fomites (eg. faecal cytology).
- minimise handling the patient where possible
- where the bird is not domestic (eg. wild or stray), consider euthanasia, collection of samples and containment of the carcasses.

3. Personal protective equipment and staff management

- Handling of animals suspected of being infected with HPAI should be conducted with appropriate PPE, including gloves, a facemask and eye protection.
- PPE should be removed properly to avoid self-contamination (see Figure 1)
- PPE should not be reused. Depending on the level of risk of HPAI infection recommended PPE may include:
 - Disposable suit
 - Disposable hat
 - Disposable gloves
 - Disposable boot covers
 - Disposable mask (P2/N95)
 - Disposable goggles

- Particular attention should be given to hand washing after handling animals, after contact with potentially contaminated materials and after removal of gloves. Hands and arms should be washed with abundant soap and warm water, then dried thoroughly. Hand sanitizer (gel with 60 to 90% ethanol concentration) can be applied to reinforce disinfection but should not replace proper handwashing.
- Ideally staff that have had contact with the high-risk cases should not come into contact with other birds for 72 hours after exposure, including their own pets.
- In high-risk cases, complete cessation of avian patient consultations is recommended until testing has returned negative results or until further information is available from the NSW Avian Influenza Emergency Response.


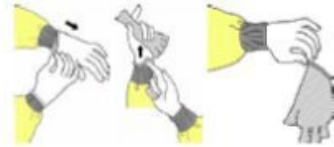







SEQUENCE FOR PUTTING ON PPE		SEQUENCE FOR REMOVING PPE	
HAND HYGIENE • Perform hand hygiene 		GLOVES • Outside of glove is contaminated! • Grasp outside of glove with opposite gloved hand; peel off • Hold removed glove in gloved hand • Slide fingers of ungloved hand under remaining glove at wrist • Peel glove off over first glove • Discard gloves in waste container • Perform hand hygiene 	
GOWN • Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back • Fasten at the back of neck and waist 		PROTECTIVE EYEWEAR OR FACE SHIELD • Outside of eye protection or face shield is contaminated! • To remove, handle by head band or ear pieces • Place in designated receptacle for reprocessing or in waste container 	
MASK or RESPIRATOR • Secure ties or elastic bands at middle of head and neck 		GOWN • Gown front and sleeves are contaminated! • Unfasten ties • Pull away from neck and shoulders, touching inside of gown only • Turn gown inside out • Fold or roll into a bundle and discard 	
PROTECTIVE EYEWEAR OR FACE SHIELD • Place over face and eyes and adjust to fit 		MASK or RESPIRATOR • Front of mask is contaminated – DO NOT TOUCH! • Grasp bottom, then top ties or elastics and remove • Discard in waste container • Perform hand hygiene 	
GLOVES • Extend to cover wrist of isolation gown 		Perform hand hygiene immediately after removing all PPE	
<small>Note that for surgical procedures and dentistry, the sequence for putting on PPE differs. In these situations, masks and protective eyewear are applied first prior to hand preparation. Gown and gloves are then put on.</small>			

Figure 1. Sequence for putting on and removing PPE [Source: Small Animal Specialist Hospital]

4. Decontamination and disinfection

Avian influenza is highly susceptible to detergents. On clean surfaces, AI viruses are destroyed by common veterinary disinfectants including F10, virkon, viraclean and other surface disinfectants. Organic material must be removed by dry or wet cleaning before disinfectants will work properly.

Testing and sample submission

Testing should be performed under the direction of the relevant authorities.

Oropharyngeal and cloacal swabs in PBGS viral transport media are required. Paediatric swabs may be required for smaller birds. **DO NOT** use commercially prepared swabs with plastic sleeves that contain transport medium. In an emergency if PBGS is not available, swabs should be placed in 2 ml sterile saline.

Oropharyngeal sampling

A handler holds the bird's head up nearly vertical, facing the person swabbing, with wings and feet restrained. Insert tip of the swab into the mouth, gently rub the swab around the tracheal opening, then up along the choanal slit as you remove the swab. It is not necessary to insert the swab into the trachea (see fig 2).

Clearly label the vial with patient details and "T" for oropharyngeal swab.

Cloacal sampling:

A handler holds the bird's head down in a nearly vertical position with feet restrained and faces the bird's vent towards the person swabbing. The person swabbing locates and grasps tail feathers at the base and reflects them away to locate cloaca (see Fig 2). Insert tip of the swab into cloacal orifice (1 cm). Rotate swab tip against lining of the cloaca two or three times. Shake off excess faecal material.

Place swab directly into the liquid transport medium (PBGS) provided. With the swab in the PBGS, break the stem of the swab off by clamping it under the lid of the vial, leaving the swab tip in the tube.

Ensure that the screw top on the vial is fully sealed and that the swab remains immersed in the liquid.

Clearly label the vial with patient details and "C" for cloacal swab.

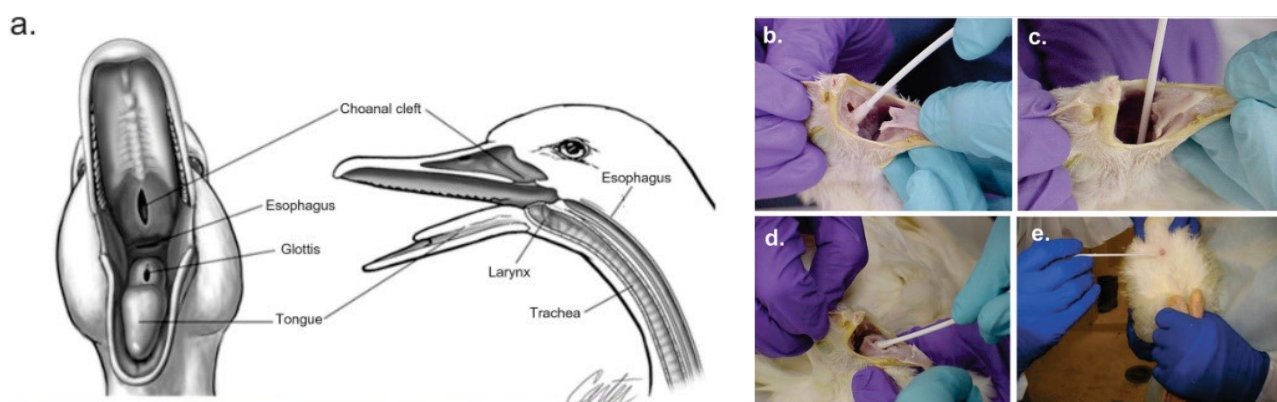


Figure 2. a) avian oral cavity, b-d) tracheal/oropharyngeal swabs, e) cloacal swab [Source: Methods in molecular biology, vol. 436: Avian influenza virus. E. Spackman, 2008]

Please contact your local government laboratory for PBGS viral transport media. In NSW, viral transport media for AI exclusion can be obtained from your local District Veterinarian or EMAI (call 1800 675 623) or <https://www.dpi.nsw.gov.au/about-us/services/laboratory-services/kits-and-media/order-media>.

When submitting AI samples, EMAI customer service should be contacted in advance of submission on 1800 675 623 or laboratory.services@dpi.nsw.gov.au in order for:

- Dispatch logistics to be arranged, and
- Biosecurity precautions to be implemented at the laboratory for receipt of samples.
- “SUSPECT AVIAN INFLUENZA” needs to be marked on specimens and on an additional label placed under the lid of the outer packaging.
- Specimens need to be packed securely and leak-proof, by double bagging and placing within a rigid container and submitted chilled (i.e., on wet ice packs). It is important that there is not direct contact between ice packs and samples to avoid freezing. Placement of insulating material between samples and icepacks is advised.
- A submission form must accompany submission, available at: <https://www.dpi.nsw.gov.au/about-us/services/laboratory-services/veterinary/avian-influenza> and it must also be emailed to EMAI, laboratory.services@dpi.nsw.gov.au.

The cost of avian influenza testing will be covered by the NSW Avian Influenza Emergency Response. Any additional testing of suspect cases must be paid for by the submitter and will be conducted only upon a negative avian influenza result.

Swabs should be sent to the lab for screening for HPAI, and dead birds should be double-bagged, clearly labelled and retained in refrigeration at the veterinary clinic in case they are needed for follow up testing.

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