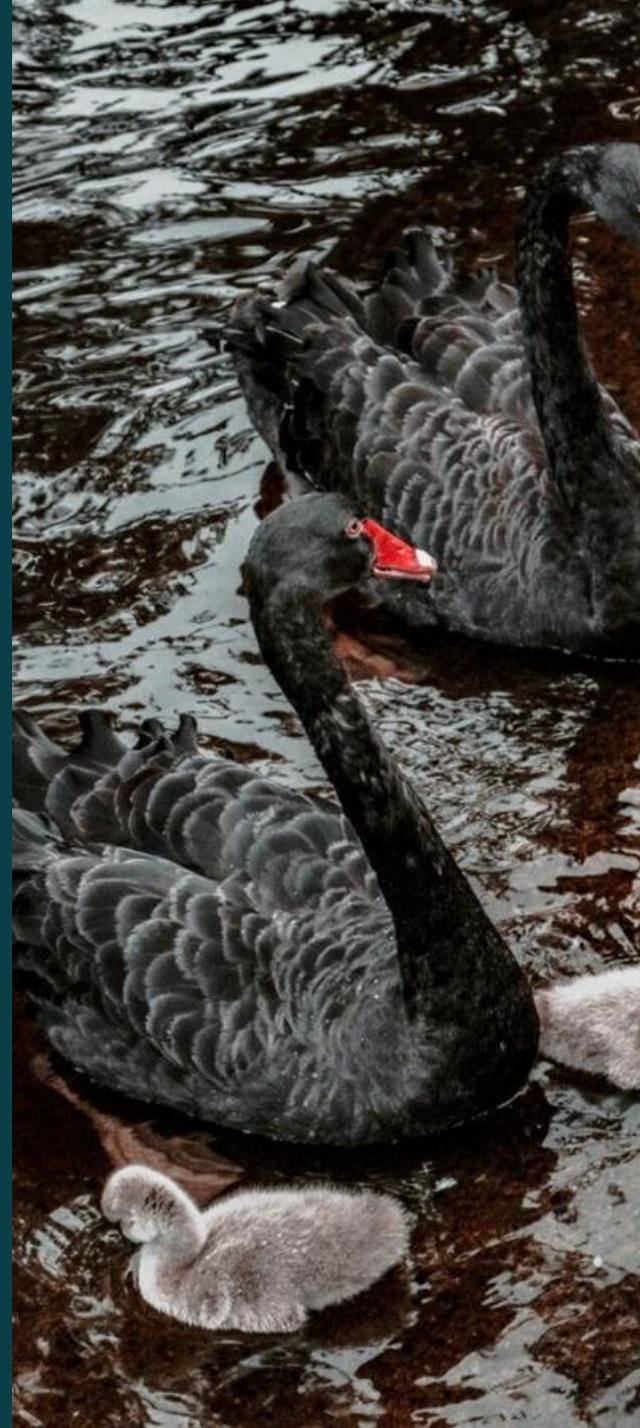


Department of Primary Industries  
and Regional Development

# High Pathogenicity Avian Influenza in Wildlife

## Veterinary Professionals

September 2025



Australian Registry  
of Wildlife Health



The Department of Primary Industries and Regional Development acknowledges that it stands on Country which always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

# HPAI overview

Jannene Geoghegan

NSW DPIRD-Animal Biosecurity

1

# Learning objectives

At the end of Section 1 you will have an understanding of:

- What is High Pathogenicity Avian Influenza (HPAI)
- How H5N1 clade 2.3.4.4b is different from previous outbreaks
- What species are affected
- The clinical signs of HPAI in wildlife
- How HPAI is spread





Australia is currently free from H5 avian influenza

Avian influenza is a nationally notifiable disease.

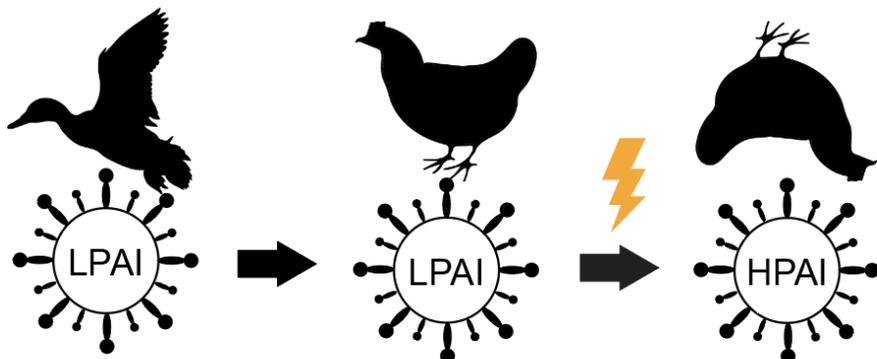
Any animal showing signs of disease consistent with AI must be reported immediately to the Emergency Animal Disease Hotline on 1800 675 888 (24 hours a day, 7 days a week).

Alternatively, report through the NSW DPIRD website:

<https://www.dpi.nsw.gov.au/dpi/bfs/animal-biosecurity/avian-influenza>

# AI in Australia

From low pathogenicity to high pathogenicity



M. Wille, Doherty Institute

- LPAI usually causes no or very mild disease in birds and circulates at low levels in wild birds in Australia
- Occasionally, LPAI will transmit from wild birds to poultry, and when circulating in poultry, LPAI strains mutate and become HPAI strains, resulting in severe disease and death in poultry.
- Currently HPAI does not circulate in wild birds in Australia

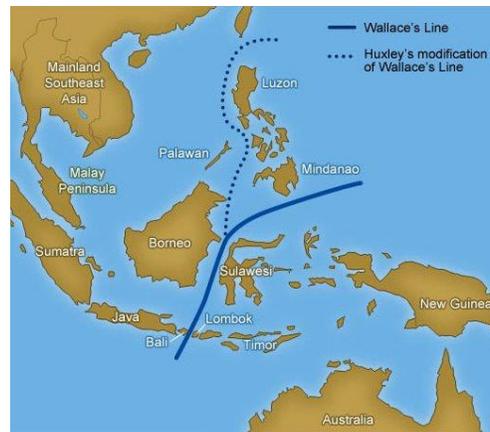
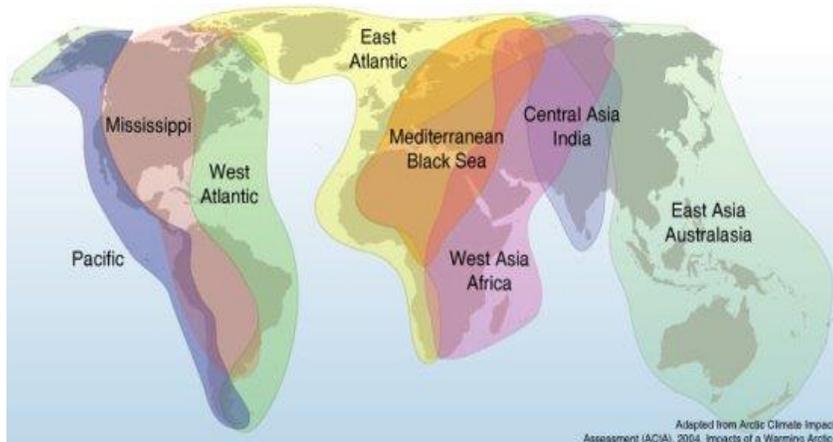
# H5N1

- A strain of HPAI, H5N1 clade 2.3.4.4b has been detected in wildlife on every continent other than Australia.
- This clade of H5N1 is different to others in that:
  - It circulates as HPAI in wildlife, causing disease and death.
  - It infects poultry farms more frequently, as it infects the flock with HPAI directly, without the need for the virus to change from LPAI to HPAI.
  - It infects a wide range of mammals, including wild and domestic species.



# Global situation and risk of introduction

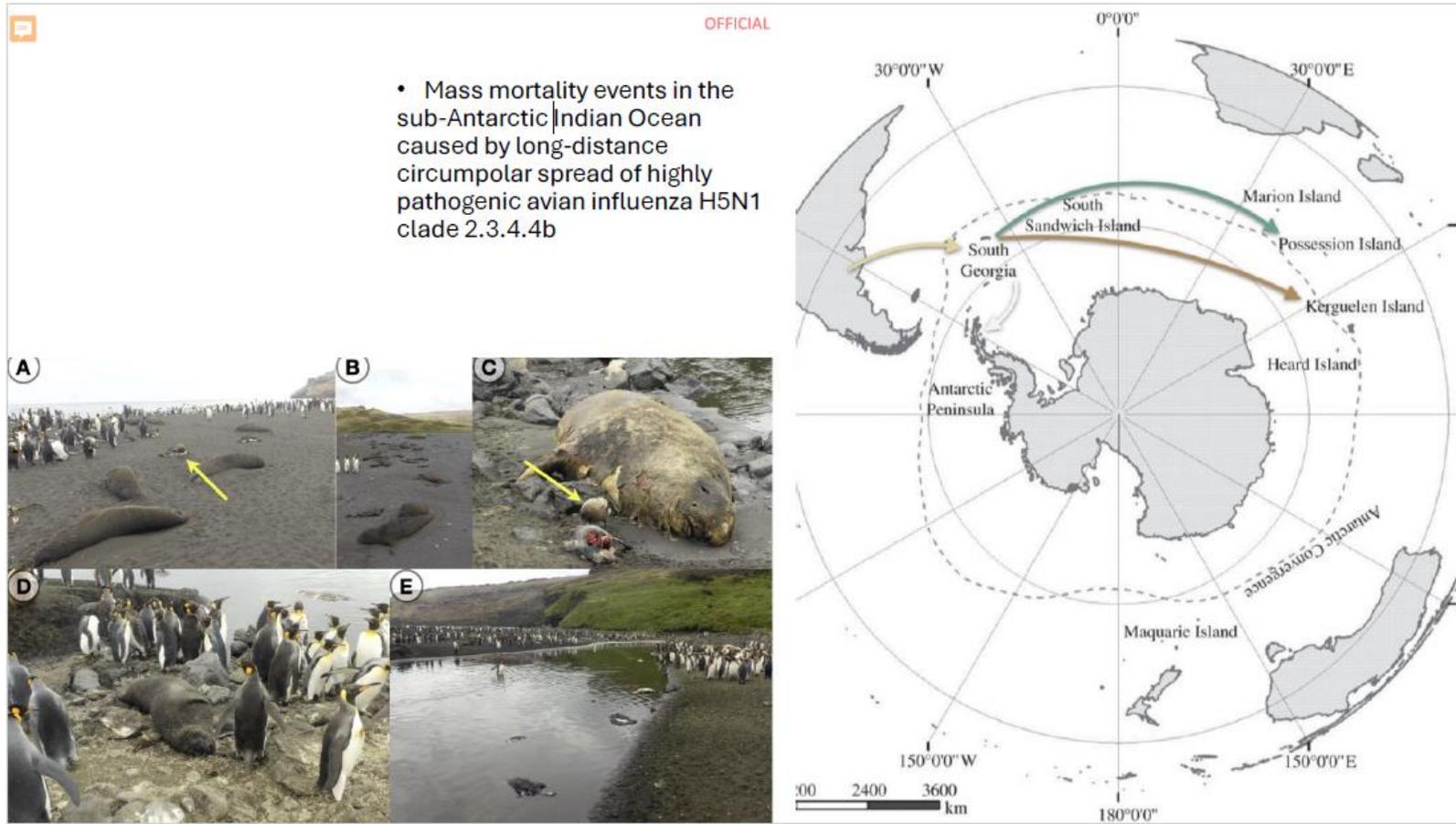
- H5N1 has been detected on every continent other than Australia.
- Moderate likelihood of introduction into Australia from migratory birds and through bird movements in the Australo-Papua region.
- Risk of introduction from Antarctic region is unknown.



Wallace's Line - demarcates regions with very different environmental conditions; many migratory bird species do not cross WL.

# Global situation and risk of introduction

- Oct – Nov 2024 detected in sub-Antarctic region



- H5N1 clade 2.3.4.4b detected in Kerguelen and Crozet archipelagos
- Detected in dead southern elephant seals, penguins, and skuas
- Believed to have originated from the South Georgia Islands, thousands of km away

# H5N1- Impact on wildlife

- H5N1 has caused unprecedented levels of disease and death in wildlife.
- Worst effects have been in waterbirds, shorebirds, scavengers, raptors, and marine mammals.
- Over 400 species of birds and many mammal species (including seals, sea lions, dolphins, bears, pigs, canines, felines, mice and many more) have been infected.



Researchers on Beak Island in Antarctica investigate the spread of bird flu to the continent this year. Photograph: Ben Wallis/Reuters

# H5N1- Impact on biodiversity

- Some species have experienced mass die-offs, which have had large impacts on biodiversity and conservation.

## Examples:

- 20% of Peruvian Pelicans in marine protected areas died between November 2022 and March 2023.
- HPAI has killed more than 30,000 South American Sea Lions and 17,000 elephant seal pups from late 2022 to mid 2024.
- There was a 95% mortality rate of elephant seal pups in Argentina's Peninsula Valdés in 2023.



# What does high pathogenicity avian influenza look like?

Often individual or clustered dead birds or mammals are the first sign of HPAI.

Birds or mammals infected with HPAI may have:

- Incoordination, head tremors, twisted necks, or neck and head held upside down
- tremors, inability to stand or fly
- unusual vocalisations
- diarrhoea or regurgitation
- rapid or laboured breathing, coughing or sneezing
- swelling of the head
- eye cloudiness or change in eye colour
- oral or nasal discharge



Ernesto Benavides/AFP via Getty Images

Clinically normal animals may still carry influenza viruses

WARNING: The content and videos in this training module can be confronting.

Support resources:

Mental health line: 1800 011 511

[www.health.nsw.gov.au/mentalhealth/Pages/mental-health-line.aspx](http://www.health.nsw.gov.au/mentalhealth/Pages/mental-health-line.aspx)

# Signs of HPAI in wild birds

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Videos of seabirds with HPAI  
from SANCCOB

# How does HPAI spread?

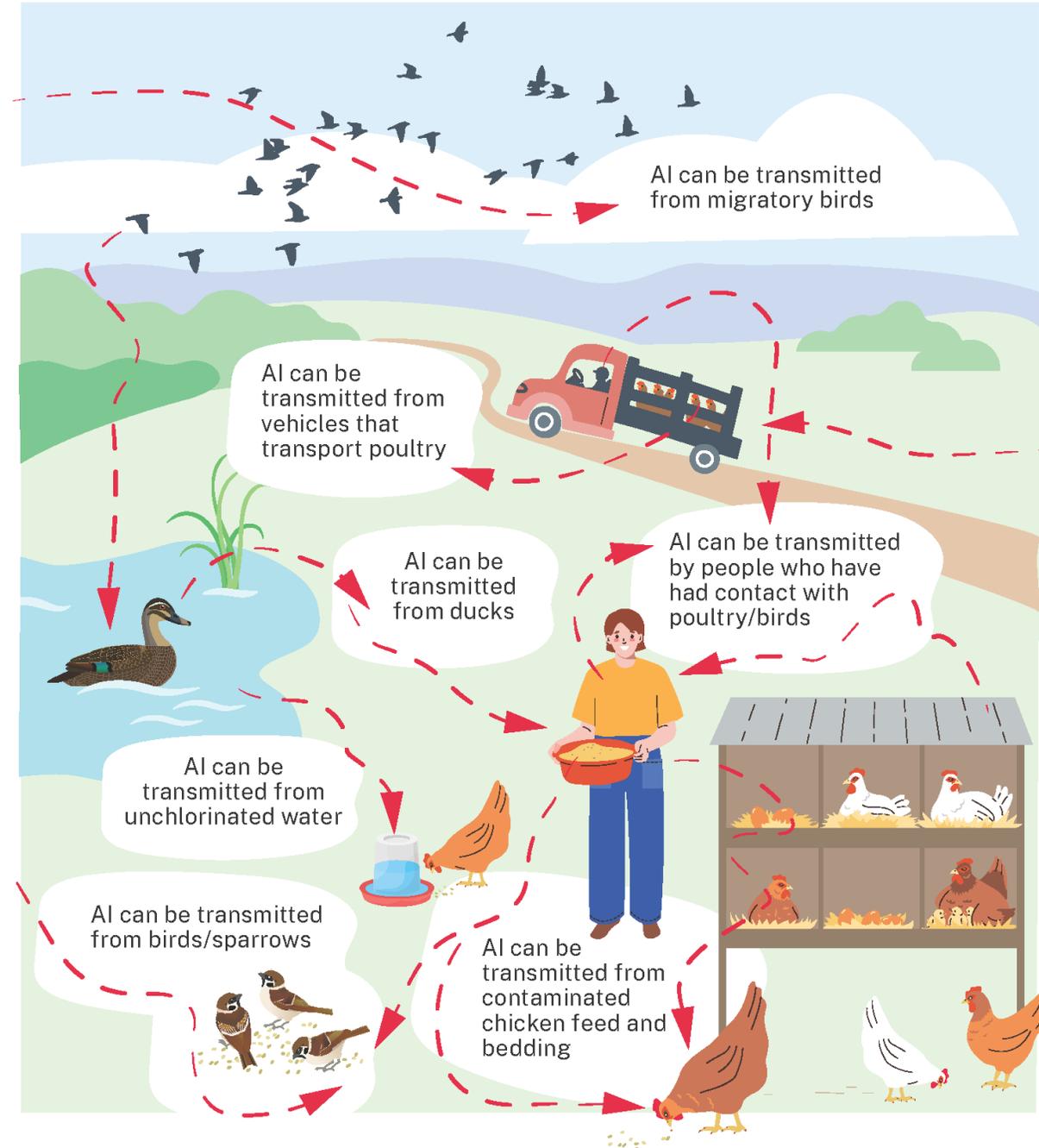
HPAI viruses are shed in:

- faeces and
- respiratory secretions (e.g., saliva).

The virus can be spread through:

- direct contact with infected animals, or their faeces
- contaminated feed and water
- contaminated equipment and clothing

It can also travel short distances by air if there are large congregations of infected animals.



# Emergency Management in HPAI

Jannene Geoghegan

NSW DPIRD-Animal Biosecurity

# 2

# Learning objectives

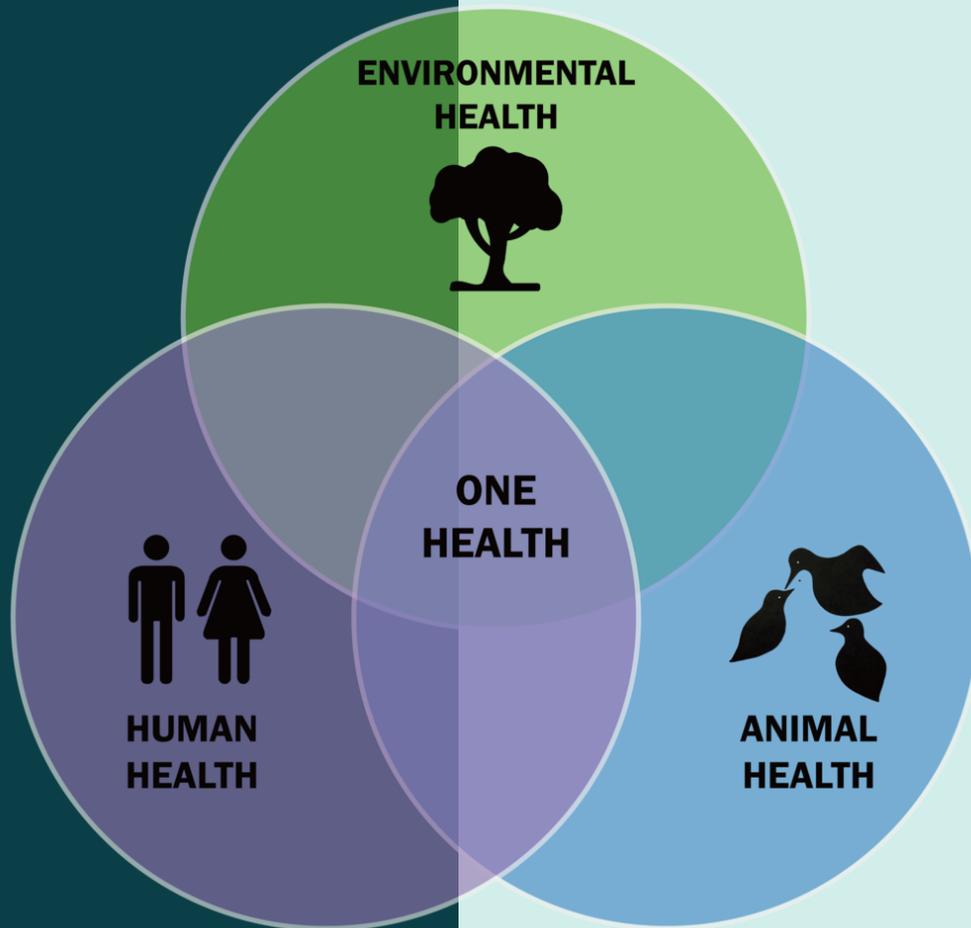
At the end of Section 2 you will have an understanding of:

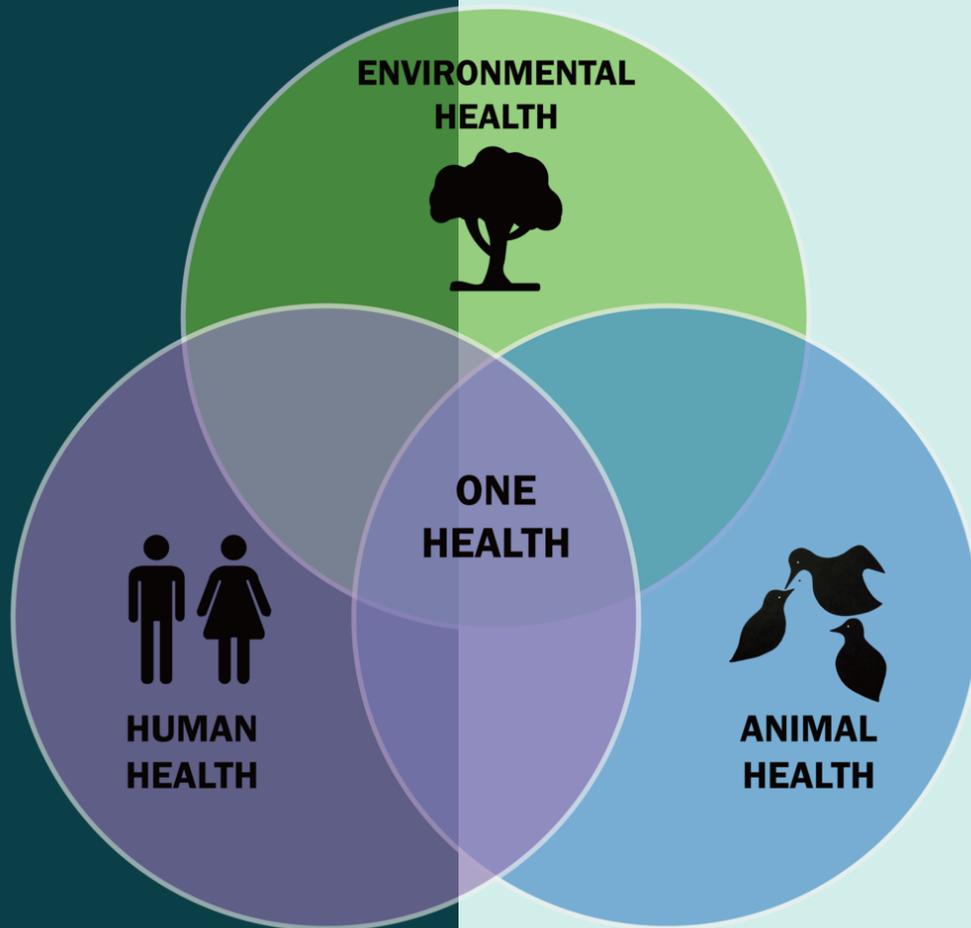
- The aims of HPAI response.
- Emergency management response structure in NSW
- Roles of relevant NSW government agencies
- Roles and responsibilities of the veterinary profession
- Reporting obligations and mechanisms

# One Health Approach

As HPAI can affect animals, people and the environment, a one health approach is required to respond to it.

A co-ordinated approach by different government agencies with responsibilities around human health, animal health and environmental health is being undertaken.





## Response aims

The response will aim to minimise the impacts of HPAI on people, animals and the environment.

Eradication of HPAI in wildlife is not feasible and will not be attempted.

No culling of free-ranging wildlife for disease control will be undertaken.

# NSW EMPLAN

Biosecurity Emergency  
Sub-plan

Wildlife in Emergencies  
Sub-plan

Environmental Services  
Functional Area  
Supporting Plan

## Roles and responsibilities

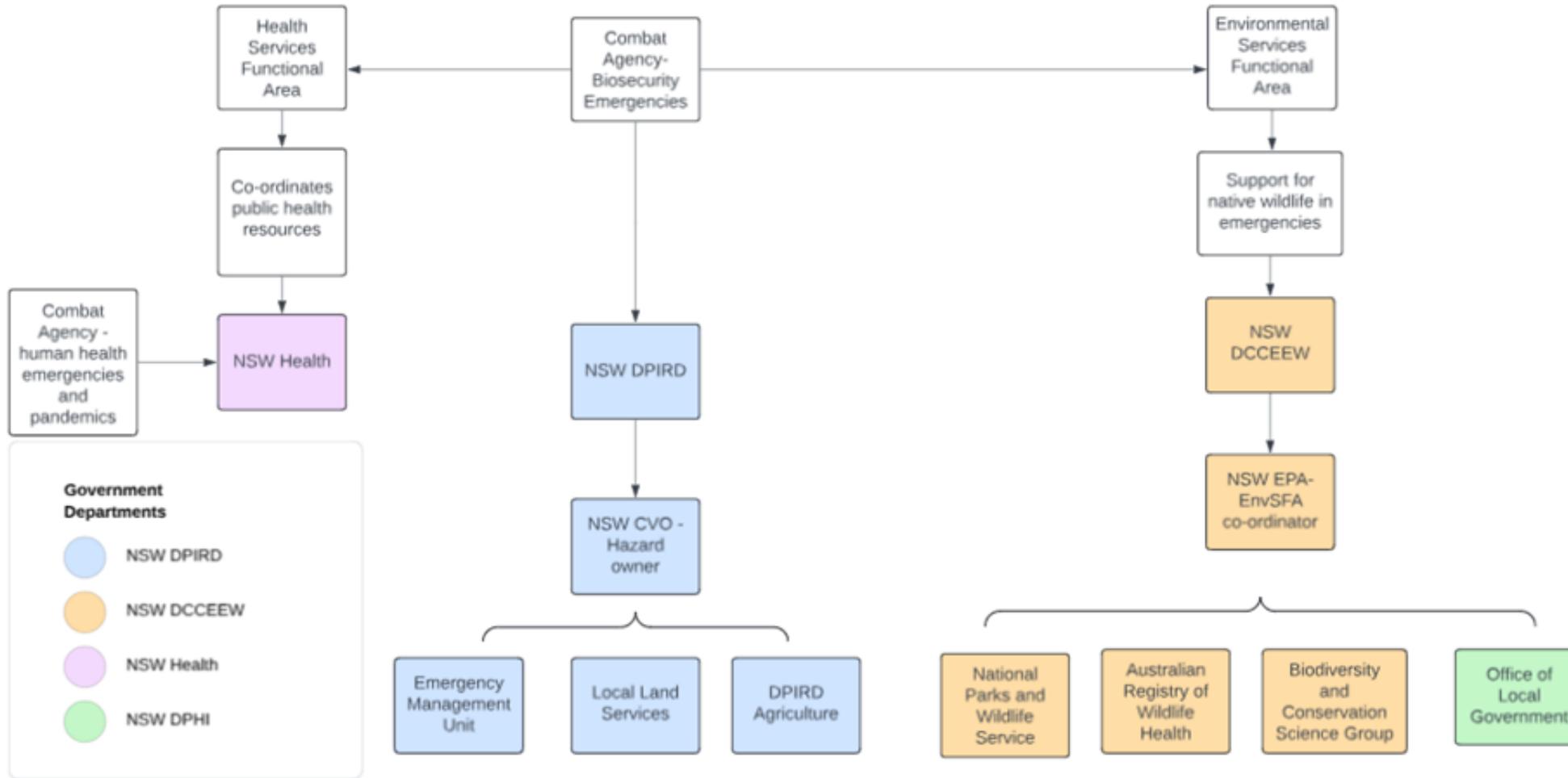
- The roles of different NSW government agencies in emergency responses are outlined in the NSW State Emergency Management Plan (EMPLAN).
- This document allocates a Combat Agency for each type of emergency, which is the agency that will lead the emergency response.
- It also outlines Functional Areas, which provide support and technical expertise to the combat agency.
- There are state sub plans that outline the response to specific events
- There are supporting plans that outline the capabilities and co-ordination of Functional Areas



# Agency Roles and Responsibilities

- NSW DPIRD is the combat agency for an avian influenza outbreak and will lead response activities
- NSW Health may become a combat agency if the zoonotic potential changes and a human health emergency is declared.
- Environmental Services Functional Area (EnvSFA) is coordinated by EPA, and is supported by NPWS, other DCCEEW agencies and Local Government.
- DCCEEW biodiversity and conservation experts will monitor and manage impacts on biodiversity.
- EPA will support landfill operation and environmental impacts.
- Local Government will support surveillance activities, reporting, public advice and wildlife carcass disposal.

## NSW agencies involved in preparedness and response to H5N1 Avian Influenza in wildlife (as per EMPLAN)



# Your responsibilities

Under the Veterinary Practice Regulation 2013, a veterinary practitioner must not refuse to provide relief of pain or suffering to an animal that is in his or her presence.

That is, they are legally required to provide either

- a) first aid treatment, or
- b) timely referral to another veterinary practitioner, or
- c) euthanasia, as appropriate.

Vets should consider either:

- Developing protocols to ensure that birds can be either treated or euthanised using appropriate biosecurity and quarantine measures,
- or
- if they are unable to meet these requirements, have an arrangement with an alternative veterinary practice that agreed to receive referrals.



# Your responsibilities

HPAI is listed as a **Prohibited Matter** under Schedule 2 of the NSW Biosecurity Act 2015, meaning that there are legal obligations that you must meet if you suspect an animal has HPAI.

You must:

- Immediately report to the Emergency Animal Disease Hotline on 1800 675 888, or the DPIRD website [www.dpi.nsw.gov.au/dpi/bfs/animal-biosecurity/avian-influenza](http://www.dpi.nsw.gov.au/dpi/bfs/animal-biosecurity/avian-influenza)
- Take all practical steps to mitigate the risk of spread of HPAI

If HPAI is detected in NSW, a Biosecurity (Avian Influenza) Emergency Order will be published online.

- Any movement restrictions will be listed
- If a restricted movement is needed, DPIRD will need to issue a permit.
- Diagnostic samples are considered exempt from permits and are permitted to travel to appropriate laboratories.



# Reporting

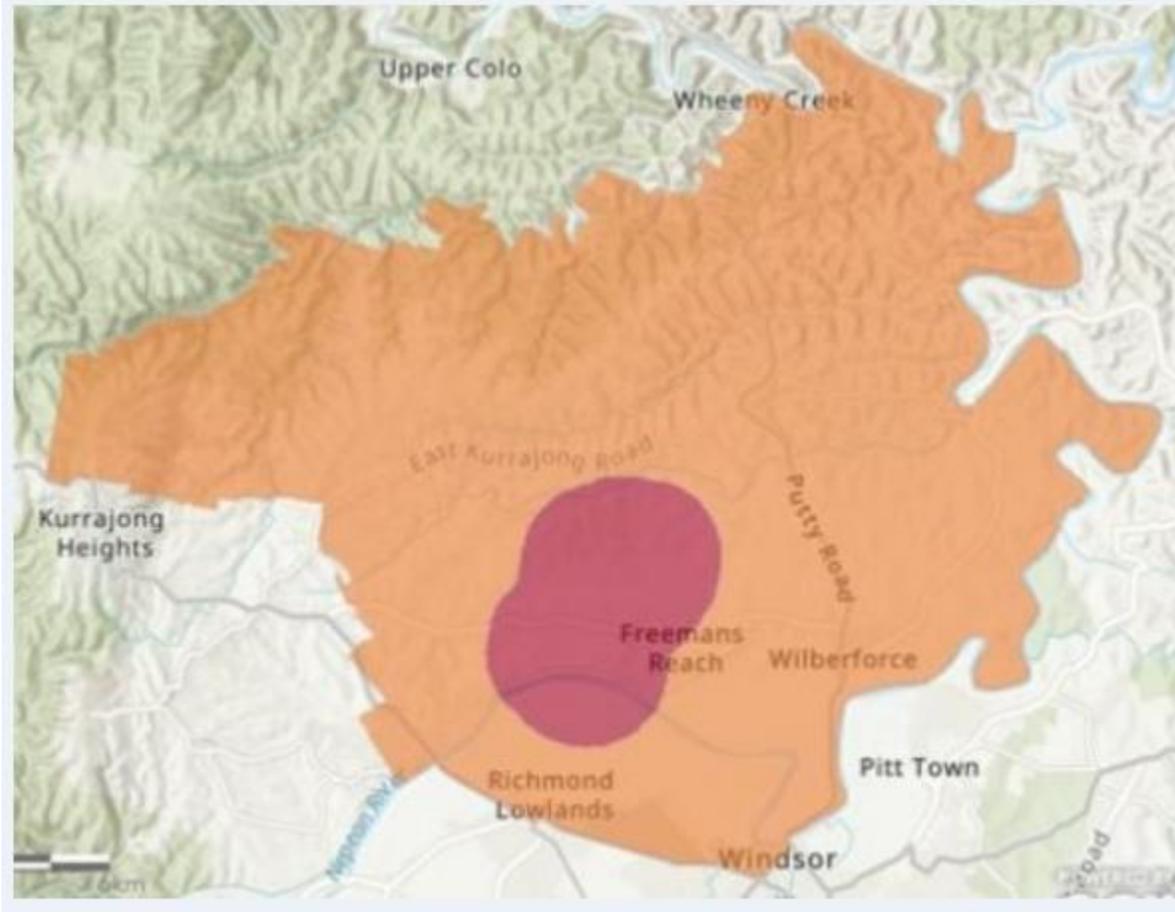
## Include the following information:

- Location
- Species affected; species present
- Number sick, dead, healthy
- Distribution of remains
- Condition of the carcasses (how rotten)
- Clinical signs (if known)

## Extra information to include if available:

- Sudden death or prolonged illness?
- Sex and age
- Nutritional condition
- Recent changes in environment, weather
- When did this start
- Water & food supplies, any changes
- Proximity to livestock and other domestic animals – any sick?
- Endemic diseases – what is known in the area
- Exposure to toxins – pesticides, sprays, poisons in use?

# Emergency Response – emergency zones



## EMERGENCY ZONES

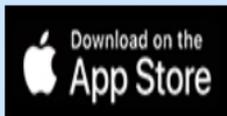
- aim to minimise disease spread
- Restricted Emergency Zones (REZ) – surrounding infected premises; highly restrictive.
- Control Emergency Zone (CEZ): buffer around REZ
- Outside area: minimal restrictions

# Emergency Response

## –download the free BioResponse NSW App

### The Biosecurity response tool for NSW

BioResponse NSW is a free, easy-to-use app that provides users with fast, reliable and up-to-date information about biosecurity emergencies. You can download BioResponse NSW from the app store to receive real-time updates about how the outbreak affects you and what you need to do.



### Stay informed

Get crucial, up-to-date information about biosecurity emergencies, including emergency zone locations and restrictions.

### Be aware

In the event of an emergency, immediately know how you will be affected, and what you should and shouldn't do.

### Act with confidence

Receive real-time notifications and easy-to-digest alerts that enable you to quickly take the right action.

<https://www.dpi.nsw.gov.au/emergencies/emergency/management/bioresponse>





# Human health considerations when handling wildlife

Jennifer Case  
Manager, Animal and Vector Borne Diseases,  
One Health Branch, Health Protection NSW

# 3

August 2025

# Acknowledgement of Country

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NSW Health would like to acknowledge the traditional custodians of the lands on which we work and pay our respects to Elders past, present and emerging and all Aboriginal communities. We extend that respect to our Aboriginal colleagues joining us today.

We celebrate the diversity of Aboriginal peoples and their connections to the lands, waters and wildlife of NSW.

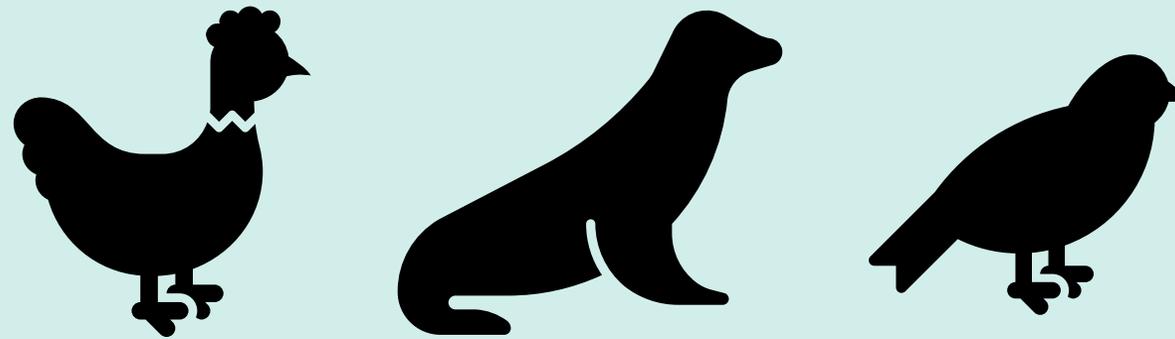


# Learning objectives

At the end of Section 3 you will have an understanding of:

- The risk to human health from Avian Influenza.
- How Avian Influenza can spread to people and how to protect yourself from infection.
- The symptoms of avian influenza in people.
- What to do if you have been exposed to Avian Influenza.
- Other human health considerations when handling sick and dead wildlife.





How to keep safe around sick or dead wildlife : Avian Influenza

# Avian Influenza: Who is at risk?

People at highest risk of getting avian influenza are those who:

- work with commercial poultry and / or are in close contact with sick birds that may be infected with avian influenza or their environments
- work with and / or are in close contact with other sick animal species that may be infected with avian influenza (e. g. mammals) or their environments
- travel to countries with avian influenza and have contact with sick birds or other infected animals
- are in close contact with a person who is infected with avian influenza



People who work with poultry



People who work with poultry products



Bird flu outbreak responders



Bird handlers



Wildlife workers and carers



Hobby farmers and backyard poultry owners

*From iCDC: Bird flu toolkit*

# Avian Influenza: How is avian influenza transmitted to people?



You touch infected animals without PPE



You touch something with the virus on it and then touch your eyes, nose or mouth



You breathe in dust or droplets that contain the virus



Liquid with the virus in it splashes into your eyes, nose or mouth



Wearing appropriate PPE correctly can protect you

*From iCDC: Bird flu toolkit*

# Preventing avian influenza infection



Don't touch birds, unless you have to



Wash hands thoroughly and frequently with soap and running water



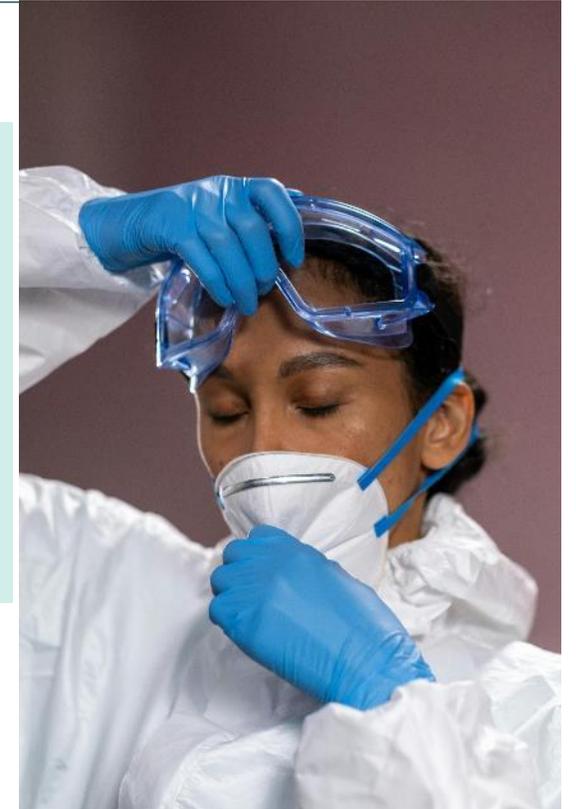
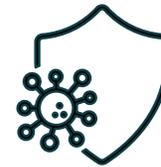
Wear appropriate PPE



If you get symptoms, tell your doctor you have been around birds

Get the seasonal flu vaccine every year.

Although this does not protect against avian influenza infection, it can reduce the risk of viral reassortment



# What if you are in contact with avian influenza?

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If you have been in close contact with infected poultry, wild birds, livestock, wildlife, their secretions, their contaminated environments or contaminated materials, or people infected with avian influenza, you should carefully monitor your health (including symptoms) for 10 days after contact.

Your local public health unit (PHU) will follow up about the nature of your contact and provide advice.

If you remain well, you will not be required to isolate. Your local PHU may contact you to check in how you are going.

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*From Australian Broadcast Corporation*

# Symptoms of avian influenza



Fever (temperature  $\geq 38^{\circ}\text{C}$ ),  
chills or shakes



Sore throat



Cough



Runny nose



Difficulty breathing  
(shortness of breath)



Headache or muscle  
aches and pains



Diarrhoea



Nausea or vomiting



Red, sore eyes (conjunctivitis)

If you develop symptoms:

- Contact your doctor and mention possible bird flu exposure
- Isolate yourself from others until seen by a doctor. Wear a mask if you cannot isolate from other people
- Tell your employer
- Practice good hygiene. Cover your mouth when coughing / sneezing, wash hands often and dispose of used tissues properly
- Report your illness to your local Public Health Unit (1300 066 055)

# Personal Protective Equipment (PPE)



Personal Protective Equipment (PPE) is essential for safeguarding humans from exposures to hazards such as infectious diseases.

NSW Health advises that PPE that should be used when handling wildlife. This includes:

- disposable gloves or gloves that can be disinfected,
- overalls or disposable coveralls,
- disposable shoes or shoe covers or washable boots (i.e. gum boots),
- respiratory protection (P2/N95 respirator mask)\*, and
- eye protection (goggles or face shield).

Ensure that PPE is donned (put on) and doffed (removed) appropriately.

*\*P2/N95 masks should be fit-checked prior to use*

# Additional PPE considerations: handling carcasses

The level of PPE required depends on the level of anticipated contact with a carcass.

In circumstances where all these PPE items are not available or appropriate, NSW Health advises that at a minimum:

- Disposable gloves or gloves that can be disinfected
- Respirator (P2/N95)
- Boots that can be cleaned
- No touch technique (e.g. use of equipment to pick up and dispose of carcass)
- Proper cleaning and disinfection of equipment and materials

Follow DPIRD  
carcass  
disposal  
guidance\*

Perform hand hygiene, either with alcohol-based hand rub or by washing hands with soap and water if visibly soiled.

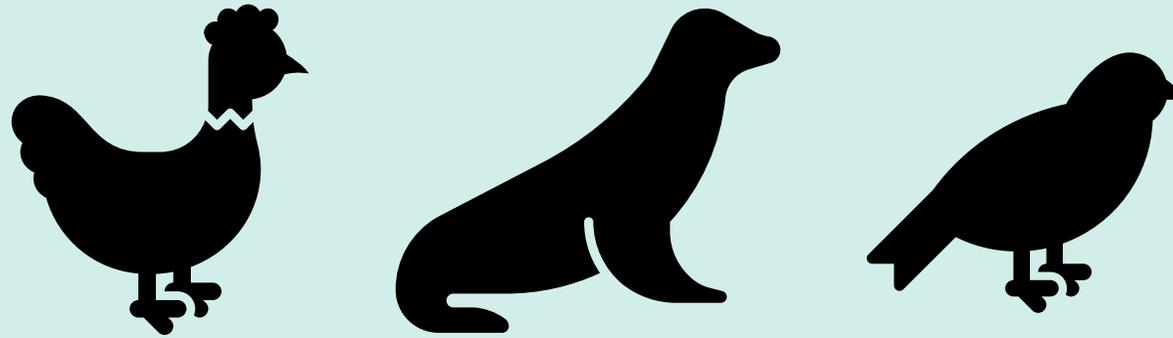
This should be done regularly –but especially before and after contact with animals/carcasses and their environments.

Efforts should be made to avoid touching the nose, eyes or mouth with the hands.

Showering and changing into clean clothes after work, if feasible, is also recommended.

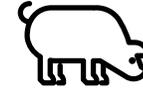
\*Disposal of bird carcasses from public and private land:

[https://www.dpi.nsw.gov.au/\\_data/assets/pdf\\_file/0004/1588828/Disposal-of-bird-carcasses-from-public-and-private-land-Local-Government.pdf](https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0004/1588828/Disposal-of-bird-carcasses-from-public-and-private-land-Local-Government.pdf)



How to keep safe around animals :  
Other health risks

# Other health considerations



## Psittacosis

Wild birds may carry the bacterium that causes psittacosis in people (*Chlamydia psittaci*).

Human psittacosis may include symptoms such as fever, headache, chills, muscle pain, cough and breathing problems.

Psittacosis Factsheet:  
<https://www.health.nsw.gov.au/Infectious/factsheets/Pages/Psittacosis.aspx>

## Brucellosis

Brucellosis may cause a flu-like illness including drenching sweats and weight loss and in some cases be life-threatening. *B. suis* is endemic in feral pigs in NSW with pig hunting dogs often infected. Appropriate identification of at-risk animals and use of appropriate PPE is essential to reduce risk of transmission to people.

Brucellosis Factsheet:  
<https://www.health.nsw.gov.au/Infectious/factsheets/Pages/brucellosis.aspx>

## Q fever

Q fever can cause prolonged illness in humans. Although Q fever is most often contracted from contact with livestock, wildlife can also be a source.

Q Fever vaccine is recommended for people who work with animals.

Q Fever Factsheet:  
<https://www.health.nsw.gov.au/Infectious/factsheets/Pages/q-fever.aspx>

## Australian Bat Lyssavirus (ABLV)

ABLV is closely related to rabies virus and causes rabies disease. Exposures (bat bites, scratches or mucous membrane exposure) require urgent first aid and medical assessment.

Any bat in Australia may carry ABLV.

Anyone who handles bats must be trained, wear appropriate PPE, and vaccinated.

ABLV and Rabies Factsheet:  
<https://www.health.nsw.gov.au/Infectious/factsheets/Pages/rabies-australian-bat-lyssavirus-infection.aspx>

# Other health considerations

## Mosquito-borne diseases

Mosquitoes can transmit serious diseases such as Ross River Virus, Barmah Forest virus, and Japanese Encephalitis virus, that are spread to humans.

The best prevention for all mosquito-borne diseases is to avoid mosquito bites.

Spray up, Cover up, Clean up, Screen up!

NSW Health Mosquito Borne Diseases:

<https://www.health.nsw.gov.au/Infectious/mosquito-borne/Pages/default.aspx>

## Japanese Encephalitis Virus (JEV)

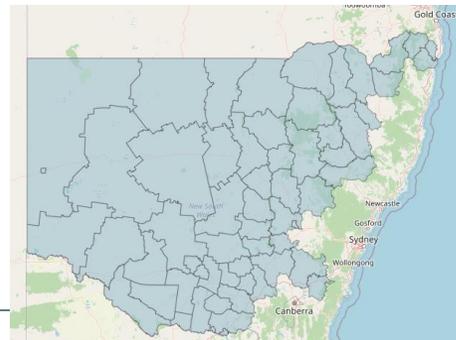
People working outdoors / in wild bird environments in inland NSW may be at risk of Japanese Encephalitis Virus (JEV) infection.

JEV is a rare but serious illness and is spread to humans by infected mosquitoes. A safe, effective and free vaccine is available for people who live or work in any of the 60 high-risk LGAs, or to people based on certain occupation risks. Once vaccinated, it takes 2-4 weeks to build immunity.

We strongly recommend if you live or work in the high-risk LGAs, that you / your networks speak to your GP, pharmacist or Aboriginal Medical Service about getting vaccinated.

For further information:

<https://www.health.nsw.gov.au/Infectious/jev/Pages/vaccination.aspx>



# Other health considerations

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## Mental Health

NSW Health acknowledges that the response to an avian influenza outbreak or any animal mortality events can impact mental health

For mental health support:

- Talk to your GP or other primary health care provider
  - Call the Mental Health Line: 1800 011 511
  - Visit: <https://www.health.nsw.gov.au/mentalhealth/Pages/mental-health-line.aspx>
  - Other mental health support services are listed on the Australian Government Department of Health, Disability and Ageing webpage: <https://www.health.gov.au/topics/mental-health-and-suicide-prevention/mental-health-and-suicide-prevention-contacts>
-

# More information :



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National Guidelines for avian influenza: protecting people who work with birds and wildlife

[https://www.health.gov.au/sites/default/files/2024-12/cdna-national-guidelines-for-avian-influenza-protecting-people-who-work-with-birds-and-wildlife\\_0.pdf](https://www.health.gov.au/sites/default/files/2024-12/cdna-national-guidelines-for-avian-influenza-protecting-people-who-work-with-birds-and-wildlife_0.pdf)

NSW Health Avian Influenza Fact Sheet

<https://www.health.nsw.gov.au/Infectious/factsheets/Pages/avian-influenza.aspx>

Other resources:

- Interim Australian Centre for Disease Control Bird Flu Toolkit - <https://www.cdc.gov.au/resources/publications/bird-flu-toolkit-people-who-work-birds>
- NSW Health Be Careful Around Wildlife: Protect Yourself - <https://www.health.nsw.gov.au/Infectious/factsheets/Pages/be-careful-around-wildlife.aspx>
- Communicable Disease Network Australia Guidelines – Avian Influenza in Humans - <https://www.health.gov.au/sites/default/files/2024-10/avian-influenza-in-humans-cdna-national-guidelines-for-public-health-units.pdf>

# Preparing for HPAI Clinic Biosecurity

Karrie Rose/ Jane Hall

Australian Registry for Wildlife Health

# 4

# Learning objectives

By the end of Section 4 we will have discussed:

- Preparing your clinic and your team for HPAI
- Resources to assist your preparations
- Risk assessment
- Onsite biosecurity & disinfection
- Communications
- Workplace health and safety obligations



# Clinic preparedness

## Develop a Clinic Biosecurity Plan. What's in your plan?

- Isolation and biosecure workflows
- Clinical management of suspect cases
- PPE and staff training
- Staffing
- Decontamination
- Ensure adequate sampling equipment is available
- WHS management processes
- Keep up to date on the latest AI information relevant to NSW

[www.dpi.nsw.gov.au/dpi/biosecurity/animal-biosecurity/avian-influenza](http://www.dpi.nsw.gov.au/dpi/biosecurity/animal-biosecurity/avian-influenza)

Once HPAI is in NSW, bring avian patients into your veterinary clinic only when you are confident that can be done in a manner that minimises the risk of HPAI spread.

### Hundreds of migrating shearwaters found dead on NSW beaches

ABC Newcastle / By Romy Stephens and Melinda James

Posted Mon 6 Nov 2023 at 12:38pm, updated Mon 6 Nov 2023 at 2:56pm



Hundreds of mutton birds have been found washed up on Hunter and Central Coast beaches. (ABC Newcastle: Romy Stephens)

# Resources to guide you

- **Avian Influenza Information for Private Veterinarians. A guide for case management.**

Best practice for the management of potential cases of HPAI and other zoonotic diseases in alignment with professional standards and legal obligations.

[www.dpi.nsw.gov.au/\\_data/assets/pdf\\_file/0003/1607673/Avian-Influenza-Information-for-Private-Veterinarians-A-guide-to-case-management-FINAL.pdf](http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0003/1607673/Avian-Influenza-Information-for-Private-Veterinarians-A-guide-to-case-management-FINAL.pdf)

- **The Code of Practice for Injured, Sick and Orphaned Protected Fauna.**  
Guidelines for wildlife assessment, monitoring, transport, housing, record keeping, euthanasia and release.  
[www.environment.nsw.gov.au/sites/default/files/code-practice-injured-protected-fauna-110004.pdf](http://www.environment.nsw.gov.au/sites/default/files/code-practice-injured-protected-fauna-110004.pdf)

- **High Pathogenicity Avian Influenza (HPAI) and Wildlife in Australia – A Risk Mitigation Toolbox for Wildlife Care Providers”**  
Provides a template for your clinic plan.  
[www.wildlifehealthaustralia.com.au/Portals/0/Incidents/WHA\\_HPAI\\_Risk\\_mitigation\\_toolbox\\_WCP.pdf](http://www.wildlifehealthaustralia.com.au/Portals/0/Incidents/WHA_HPAI_Risk_mitigation_toolbox_WCP.pdf)

- **American Animal Hospital Association**  
<https://www.aaha.org/trends-magazine/publications/feeling-ready-scenario-based-planning-for-hpai-h5n1-in-small-animal-practice/>

	During an HPAI Outbreak	Outside an HPAI Outbreak
<b>High Risk</b>	<ol style="list-style-type: none"> <li>1. Any bird from an Exclusion Zone</li> <li>2. Any sick bird from the surrounding containment area</li> <li>3. Any sick bird that has come from a market, bird show or farm</li> <li>4. Any poultry, waterfowl or wildlife with multiple deaths, respiratory or neurological symptoms (see below)</li> <li>5. All avian wildlife patients</li> </ol>	<ol style="list-style-type: none"> <li>1. Any sick bird from a location where multiple deaths have occurred (&gt; 3) in a relatively short time frame, particularly older birds (not freshly hatched)</li> <li>3. Avian wildlife exhibiting respiratory or neurological signs</li> </ol>
<b>Moderate Risk</b>	<ol style="list-style-type: none"> <li>1. Any non-poultry species that exhibits respiratory, neurological or gastro-intestinal signs</li> </ol>	<ol style="list-style-type: none"> <li>1. Any sick avian wildlife patients</li> <li>2. Any sick bird that has come from a market, bird show or farm</li> <li>3. Any sick bird that has been outside instead of indoors isolated from other birds.</li> </ol>

# Risk Assessment

---

## Factors that would increase suspicion of HPAI

- Location: Proximity to a known outbreak
- Clinical signs: Mass mortality, high morbidity, neurological and respiratory signs
- Timing: Acute onset
- Species affected: Poultry, waterbirds/shorebirds, raptors/scavengers

## Factors that would decrease suspicion of HPAI

- Timing: chronic
- Clinical signs: Low mortality, low morbidity
- Species: Other species than listed above
- Housing: No access to wild birds/ housed indoors, no contact with poultry

**Be cognisant of sub-clinically affected animals**

---

# Prior to animals arriving

- Phone - Assess likelihood of HPAI infection based on history.
- Where possible, advise owner not to move the bird(s).
- **Contact the Emergency Animal Disease Hotline.**
- Assess the bird off-site if possible.
- Assess whether the clinic can practically mitigate the spread risk and refer where necessary.
- Where transport is required, advise the owner on biosecurity precautions to take during transport.
- Prepare for the bird's arrival under the clinic's HPAI protocol.
- Initial triage outside or in isolation room where possible.



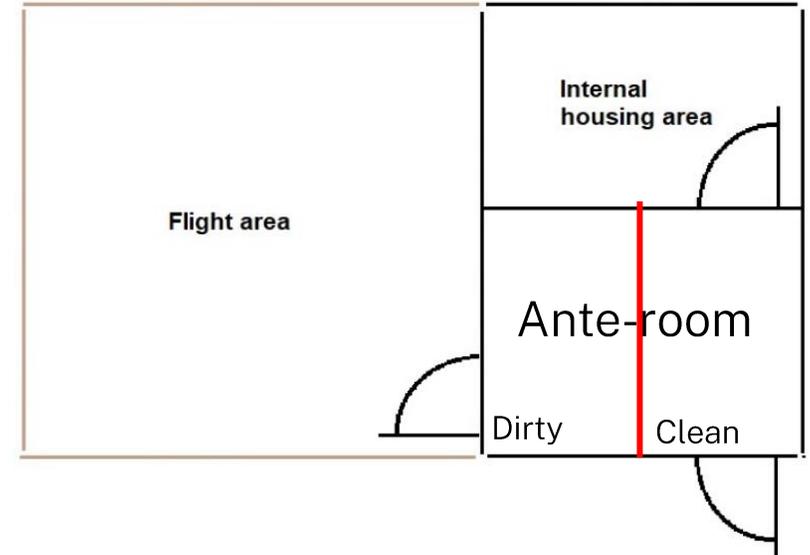
# Onsite Biosecurity Considerations

- Location –anteroom or transitional zone
- Signage –clearly demarcating isolation and transitional zones and “Zoonotic Agent - Airborne and Contact Precaution” signage
- Staffing –miminise contact with animals
- Quarantine unit
- Map flow - animals, people, equipment, air, waste, laundry, samples



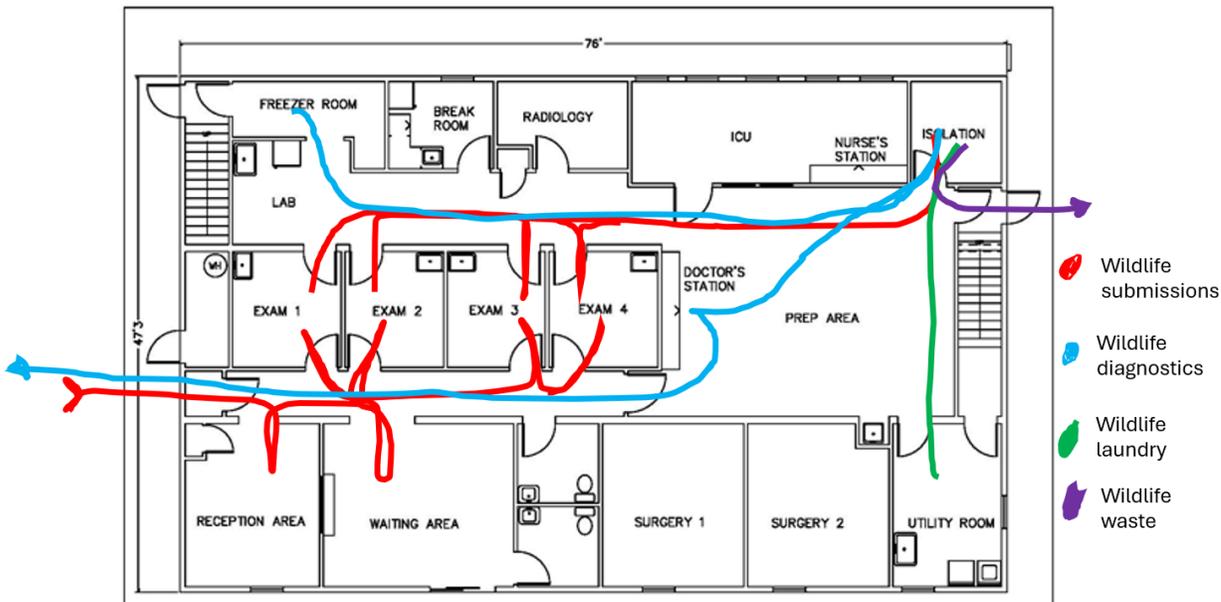
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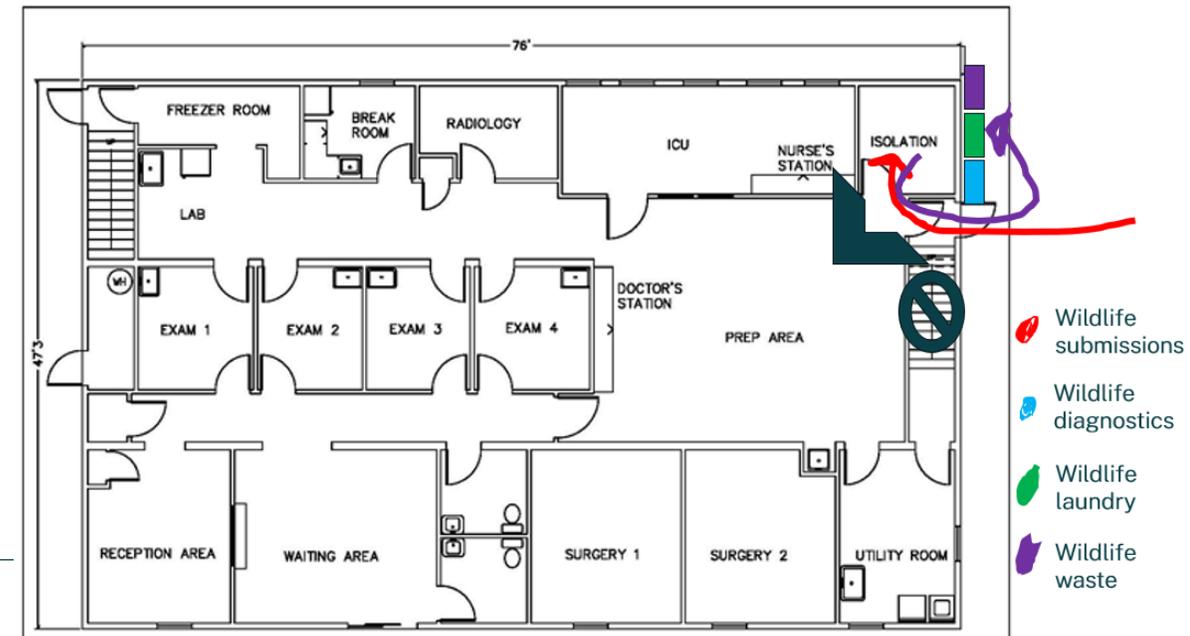
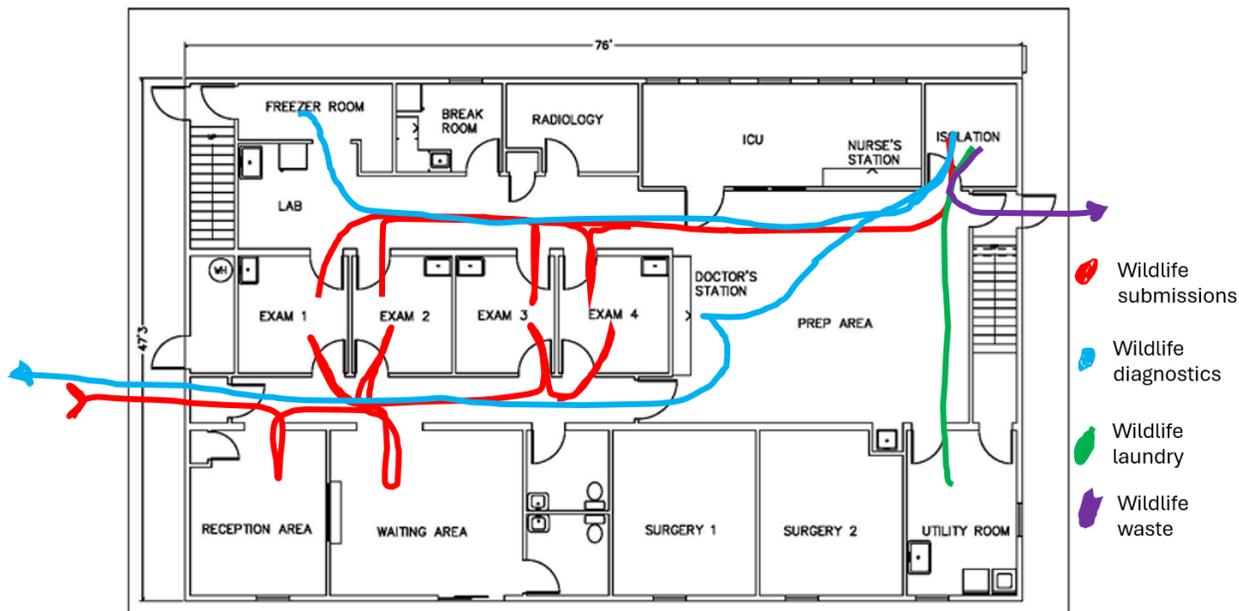
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# Onsite Biosecurity Considerations

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- Quarantine unit
- Map flow - animals, people, equipment, air, waste, laundry, samples



# Onsite Biosecurity Considerations

- Ventilation – flow clean to dirty, no contamination of food, humans, other animals. Isolation areas should have separate air ducting.
- Drainage – where does water go when heading down drains or when rooms or enclosures are hosed?
- Proximity to domestic animals and agriculture (preferably > 200 m)
- Placement of hand hygiene stations and signage on proper technique
- Animal identification, record keeping and tracking
- Avoid aerosolisation (e. g. gaseous anaesthesia)
- Dedicated clinic footwear for staff, footbath for clients and visitors



# Onsite Biosecurity Considerations

If a high-risk case is on-site:

- Have dedicated staff handling the case and not in contact with other susceptible species.
- If not possible, handle the suspect case after other patients.
- Ideally, staff that have been in contact with high-risk cases should not encounter other birds for 72 hours, including their own birds.
- Showering and changing into clean clothes after work is recommended.
- If a highly suspect case is present, consider ceasing avian consults until negative results have been received.
- If a positive result occurs, DPIRD will contact you regarding next steps.



# Disinfection

## Principles

Remove organic matter first

Use appropriate contact time

## Disinfectants active against AI viruses include:

1% sodium hypochlorite (200mL of 5% solution into 800mL potable water, 10-30 minutes)

1% Virkon S™

80% ethanol (10–20 minutes contact time)

60-90% isopropyl alcohol

quaternary ammonium compound, F10 or Safe4™ -detergent and disinfectant (10-30 minutes contact time)

For further details consult guidelines for broad spectrum disinfectants and sanitisers for use in Approved Arrangements:  
<https://www.agriculture.gov.au/biosecurity-trade/import/arrival/arrangements/requirements/disinfectants>



# Communications

- Reception phone:
  - Do not touch dead wild birds – Avoid, Record, Report.
  - Do any animals on or near your property have signs of infectious disease?
  - What other animals are on your property?
  - Any recent handling of free-ranging wildlife or poultry?
- Up to date client and stakeholder list – to share notifications
- What assurances are your suppliers providing that they won't bring HPAI to your premises?
- Signage – outside clinic, hand wash stations, transitional and quarantine zones, contaminated equipment/laundry/waste
- Courier forms and labels printed and ready to go
- Directory with EAD Hotline, DV, EMAI lab, Metrostate courier



# Workplace Health & Safety (WHS)

Consider your obligations under WHS legislation

- Duty of care to always ensure a safe working environment
- Biosecurity and WHS policies, procedures, personnel training and actions should meet professional standards for infection control and the health protection of staff, clients, students, volunteers and the public.
- Ensure that PPE is available and that protocols include its use, fit testing, and safe disposal. Establish hand hygiene stations with instructional signage
- Exposure to, or illness from, a potentially zoonotic must be documented. Illness may require notification of SafeWork NSW.
- Affected employees should seek medical evaluation and follow advice provided by their Local Public Health Unit (NSW Health).



# Handling Wildlife Triage Euthanasia

Australian Registry for Wildlife Health

# 5

# Learning objectives

At the end of Section 5 you will have an understanding of:

- Safe handling techniques for wildlife
- Triage considerations
- Criteria for euthanasia
- Approach to humane euthanasia



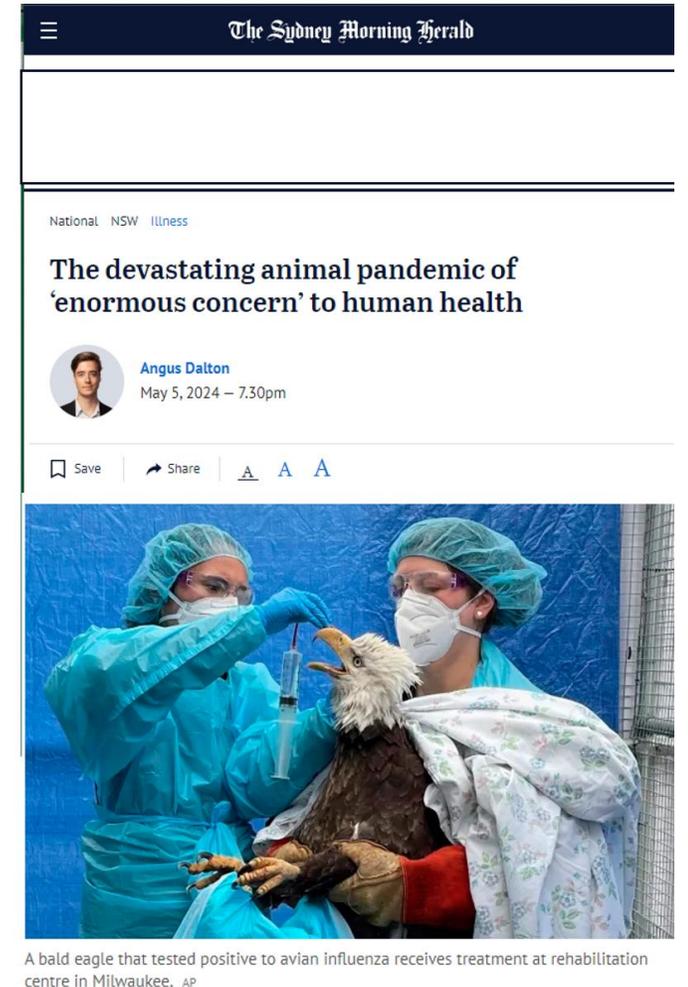
# Wildlife Handling



- Registered veterinarians in NSW can handle and possess sick, injured or orphaned protected animals (other than not marine mammals) for the purposes of providing veterinary care under the Biodiversity Conservation Act (NSW 2016).
- Wildlife rehabilitators require training and participation within a group that is licensed by NSW National Parks and Wildlife Service under this act to handle and house wildlife.
- Be aware of the NSW Code of Practice for Injured, Sick and Orphaned Protected Fauna:  
[www.environment.nsw.gov.au/resources/wildlifelicences/110004faunarehab.pdf](http://www.environment.nsw.gov.au/resources/wildlifelicences/110004faunarehab.pdf)  
Enforceable provisions are identified by the word 'Standards' and they must be followed.

# Safe Wildlife Handling

- Ask for help when required
- Prioritise health and safety of all involved
- Assess danger in the environment and associated with the animal
- Do not handle live or dead bats unless vaccinated recently or with a protective titre within previous 24 months, and use full PPE everytime (two layers of puncture resistant nitrile gloves, wrist guards that extend to the elbow, leather gloves, P2 mask, goggles and a lab coat)



# Safe Wildlife Handling

- Quiet, warm, dark environment
- Have everything ready that you might need
- Have next housing prepared – transport box, housing with den, branches, hiding spots, food, water
- If bitten or scratched, clean and disinfect, seek medical advice and tell them you have been handling wildlife



# Safe Wildlife Handling



# Triage Process

- Report- Emergency Animal Disease Hotline
- Capture - live animals if approved by hotline personnel
- Collect-samples as instructed by the Hotline staff
- Examine and assess- where animal was found.  
Best done at the site the animal is found whenever possible.

Avian anesthesia in common use at Taronga Wildlife Hospital:

- Midazolam 0.5-1mg/kg + Butorphanol 1-2mg/kg IM or intra-nasal
- Ketamine 10-40mg/kg + Midazolam 0.2-2mg/kg s/c or IM
- Propofol 2-5mg/kg IV (excellent in pelicans and waterfowl)
- Alfaxan 10-12mg/kg s/c



# Triage Process

- Post Assessment Actions:
  - first aid,
  - recuperation and rehabilitation care,
  - intensive veterinary intervention,
  - immediate euthanasia,
  - immediate release.

Wounds, fractures, trauma, intoxication, and hydration are priority assessment criteria.

- First aid and stabilisation
- Consider a referral service, or suitable rehabilitation centre with veterinary care
- Treatment and quarantine pending test results
- Release if HPAI negative, healthy and assessed as able to survive and thrive independently.



# Wildlife First Aid

Assume 5-8% dehydrated. Hartmann's generally safe as first line.

Address bleeding, wounds, fractures, other trauma

Provide fluids and nutritional support (once head is up) if not drinking

Warm, quiet environment

Pain relief



# Criteria for Humane Euthanasia

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MUST be seen as a positive welfare outcome.

The NSW Code of Practice for Injured, Sick and Orphaned Protected Fauna lists the following criteria for considering the euthanasia of a protected species:

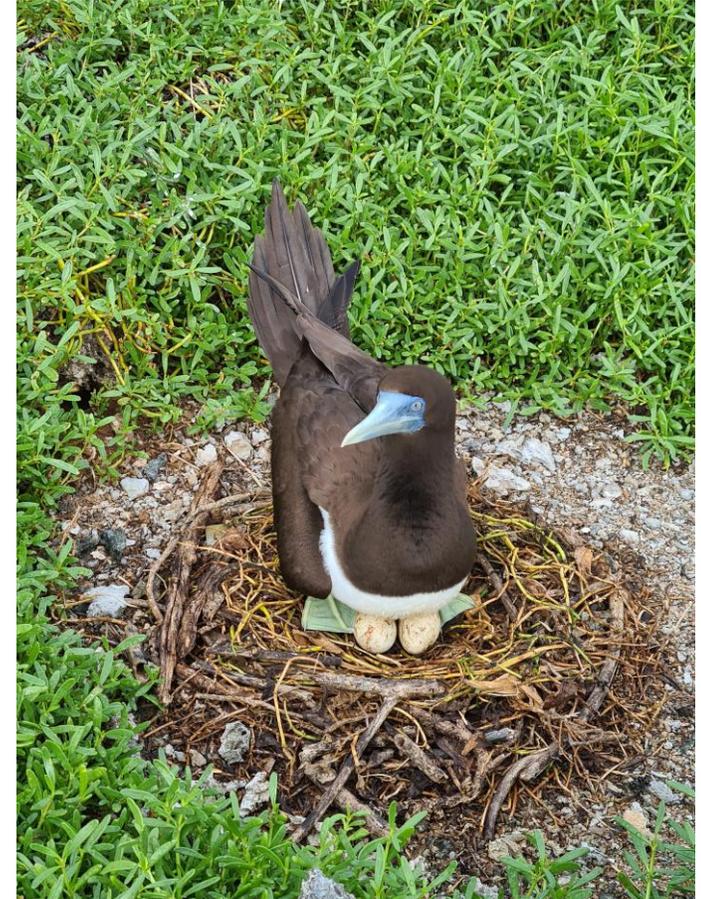
- an assessment of imminent death
- high likelihood of death regardless of care
- poor likelihood for successful reintegration to the wild population and no suitable long-term care option
- low suitability for rehabilitation and insufficient facilities and resources available
- no suitable options for care in proper facilities by a trained and licensed rehabilitator and the species is not threatened, endangered or critically endangered
- NSW NPWS policy or recognised practice prohibiting the release of the species (pests).

# Approach to Humane Euthanasia

Factors to consider prior to undertaking euthanasia of wildlife:

- Human safety
- Aim -minimal distress prior to rapid loss of consciousness
- The method should not destroy tissues that are critical for diagnostic testing
- Prevent undue stress to human observers/public
- The procedure should only be performed by competent and experienced persons
- Dependent offspring –care or euthanasia
- Death must be confirmed prior to disposal of the carcass (lack of respiration, cardiac function, corneal and withdrawal reflexes)
- Prevent secondary poisoning of other animals when barbiturates used. Potassium chloride euthanasia may negate some of these concerns.

**Two-step process –always** –surgical plane of anaesthesia followed by iv, ip, ic, ih barbiturates or physical methods



# Mechanical Methods of Euthanasia

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Cervical dislocation <200 grams (larger is anaesthetised)

Blunt force trauma - base of the skull

<150 g, 2 cm<sup>2</sup> face hammer, 150 g–1 kg 4cm<sup>2</sup> face mallet, > 1kg – 8cm<sup>2</sup> face mallet or wood splitter

Decapitation - any size

Firearms – larger animals, when restraint is difficult or barbiturate-laden remains are problematic. Experienced and licensed personnel

# Euthanasia

Not always possible based on:

Human health considerations

Wildlife population health and biosecurity



# Remains Disposal

Jannene Geoghegan

NSW DPIRD-Animal Biosecurity

6

# Learning objectives

At the end of Section 6 you will understand:

- How to determine if carcass disposal is required
- Who is responsible for carcass disposal
- Options for disposing of carcasses



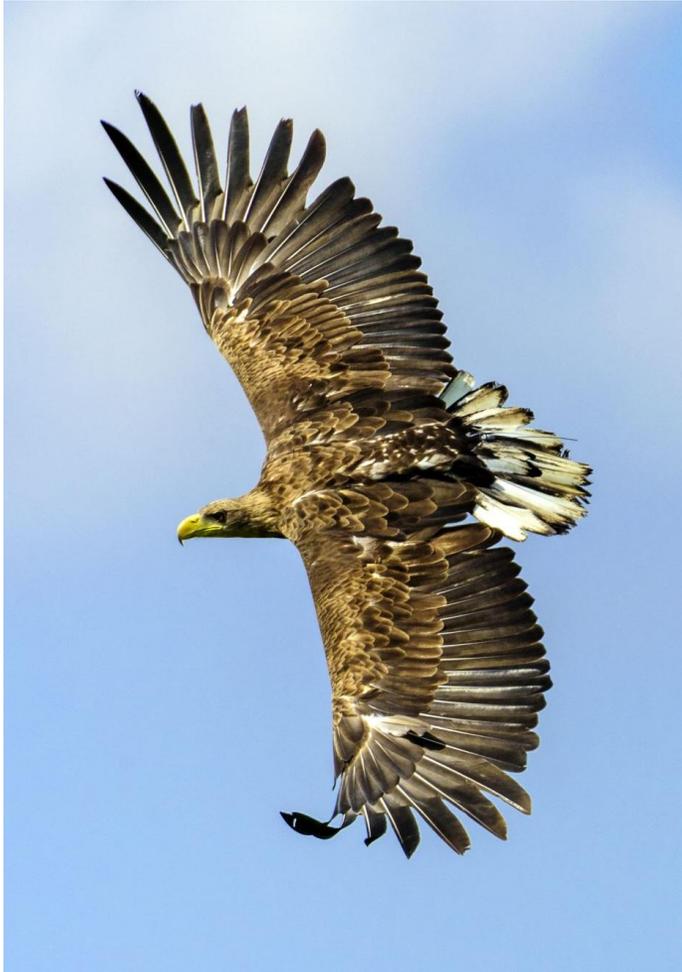
# Disposal: Pre-incursion



- Where H5N1 has not been detected in Australia, the disposal of bird carcasses should proceed per current local council and/or EPA procedures and guidelines.
- NSW DPIRD has not imposed biosecurity restrictions nor requires permits for the movement and disposal of bird and animal carcasses at present.
- Guidelines are available on the DPIRD website.
- Guidelines may change post-incursion and be dependent upon emergency zoning.

# Disposal: Responsibilities

---



- Where possible, leave the carcasses to decompose naturally and prevent access by people, livestock or pets.
- It is recommended to collect and dispose of carcasses where they are:
  - likely to be encountered by members of the public, such as areas used by children or pets, on a public right of way or an area frequented by the public
  - in areas where wild birds regularly feed, breed or roost

Disposal of bird carcasses from public and private land:

[https://www.dpi.nsw.gov.au/\\_data/assets/pdf\\_file/0005/1588811/Disposal-of-bird-carcasses-from-public-and-private-land-Public-Version.pdf](https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0005/1588811/Disposal-of-bird-carcasses-from-public-and-private-land-Public-Version.pdf)

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# Disposal: Responsibilities



- Veterinary clinics can dispose of carcasses as per their current protocols.
- The collection and disposal of wild bird carcasses is the responsibility of each respective landholder and/or land manager.
  - E.g. The local council is responsible for carcass removal on council land, NPWS is responsible for carcass removal in National Parks.
- Members of the public are responsible for disposal of carcasses on their own properties if they want them removed.

# Disposal: Guidelines

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- If carcasses must be handled:
  - do not touch the carcasses with your bare hands
  - either wear PPE as described for sampling, or, if not available, wear a face mask, long-sleeved clothing, disposable gloves or gloves that can be disinfected, and shoes that can be cleaned
  - use tongs, shovels or other appropriate equipment to handle the carcasses
  - alternatively, lift the bird(s) using an inverted bag. Once the carcass is grasped, the bag can be turned back on itself and tied off.
  - the bag should then be placed in a second leak proof plastic bag, ensuring not to contaminate the outside of the outer bag
  - remove any gloves and place them in the second bag as well and tie it shut.

  - clean and disinfect any materials and equipment used
  - wash hands with soap and hot water or an alcohol-based hand sanitiser before and after handling carcasses.

# Disposal: Options



1. Double bag the carcasses and place them in the general waste bin (“red bin”) or clinic’s biohazardous waste bin.
2. Bury carcasses to a depth of 60 cm, covered with rocks or other materials over the filled-in hole to prevent animals from digging up the carcasses.
  - Burial is only permitted on your own property. It may be an offence to bury carcasses on land you don’t own or manage
3. Take the double-bagged carcasses in a sealed container to an EPA-licensed landfill that is permitted to accept animal wastes for burial or composting

The guidelines that have been outlined may be subject to change if HPAI H5N1 is detected in Australia.

# PPE Donning and Doffing

Karrie Rose & Jane Hall

Australian Registry for Wildlife Health

# 7

# Learning objectives

At the end of Section 7 you will have an understanding of:

- Recommended Minimum PPE
- How to Don and fit check PPE
- How to Doff PPE



# PPE – Key points

**It is essential that you use PPE correctly to protect yourself, other animals and the broader community by preventing the spread of disease.**

## **Putting on (donning) PPE**

You must follow the correct order when putting on (donning) PPE to avoid cross contamination and disease spread.

## **Fitting PPE Correctly**

The effectiveness of PPE is decreased or lost if not fitted correctly or the correct PPE is not used.

## **Taking off (doffing) PPE**

You must follow the correct order when taking off (doffing) PPE to avoid cross contamination and disease spread.

# PPE – Donning and Doffing Video

[Watch the Donning and Doffing Video on this Link](#)



# Sample Collection & Shipping

Karrie Rose & Jane Hall

Australian Registry for Wildlife Health



# Learning objectives

At the end of Section 8 you will understand:

- Preparing to collect samples
- Swabbing technique
- Sample packaging
- Sample shipping



# Responding to a suspect case

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NSW DPIRD will advise you of further steps that you will need to take. These may include:

1. Attending the site and observing the numbers and types of animals affected, their location and the clinical signs shown by any sick animals.
2. Collecting, packaging, and transporting samples from carcasses to the laboratory to test for HPAI, if directed by NSW DPIRD.
3. Collecting carcasses for storage until negative HPAI results are received, to facilitate further testing, if requested by NSW EPA or NSW DPIRD.
4. Safely disposing of carcasses where required.

# Before responding

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Key areas to consider before responding to a suspect case:

## *Logistics & communication*

- Ensure you are clear on what you have been asked to do.
- Be authorised to enter the site.
- Discuss the visit with site owner/manager
- Have access to relevant procedures, risk assessments and chemical safety data sheets needed

## *What to pack*

- Decontamination kit
  - Sampling supplies
  - Recording and packaging materials
  - PPE kit
-

# What to pack - Recording and Packaging equipment

- Data form and pen to collect animal data
- Camera/phone
- Plastic bags for animal remains and samples (double-bag everything)
- Packing tape and courier forms, appropriate specimen advice form
- Disinfectant in a spray bottle



**Department of Primary Industries** **Veterinary Specimen Advice Form**

Customer No: [ ] Your Reference: [ ] Quote No: (if applicable) [ ]

**SUBMITTER DETAILS** Results will be reported to the submitter's email address provided below

Submitter name: [ ] Company/Clinic: [ ]  
 Postal address: [ ] ABN: [ ]  
 Email: [ ] Phone: [ ]

**OWNER DETAILS**

Owner name: [ ] Phone: [ ]  
 Property address: [ ] PIC: [ ]  
 Postal address: [ ]

**SUBMISSION DETAILS**

Disease(s) suspected:  
 1. [ ] 2. [ ] 3. [ ]

**Case History**

Previous job no. (if applicable): [ ] No. of dead animals: [ ]  
 Species: Choose from menu [ ] No. of sick animals: [ ]  
 Breed: [ ] No. of at risk animals: [ ]  
 Age group: [ ] OR Age:  yes  mths  days Sex: Choose from menu [ ]

**Additional information** (husbandry, nutrition, clinical signs, treatment, lesions etc.)  
 [ ]

**Microchip Number:** (if more than 1 sample, please include in a separate key-list)  
 [ ]

**Sample collection date:** [ ] **LLS & DPI USE ONLY**

**Reason for testing:**  Accreditation/MAP  Export to: [ ]  Legal proceeding  District Surveillance:  Yes  No  
 AI centre entry  Import from: [ ]  Research & development  Charge to WBS/Project code: [ ]  
 Diagnostic  Interstate movement to: State [ ]  Second opinion  First lead submission:  Yes  No

**SPECIMEN DETAILS**

SAMPLE TYPE	QTY	SAMPLE TYPE	QTY	SAMPLE TYPE	QTY	SAMPLE TYPE	QTY
Blood - clot		Fluid - Ocular		Fresh Tissue - Liver		Swab - Nasal	
Blood - EDTA		Hair		Fresh Tissue - LN		Swab - Oral	
Blood - lith hep		Semen		Fresh Tissue - Lung		Swab - Preputial	
Blood - serum		Histology slide		Fresh Tissue - Spleen		Swab - Vaginal	
Blood - other		Fixed tissue - Brain		Fresh Tissue - Kidney		Other swab(s):	
Blood smear		Fixed tissue - other		Fresh Tissue - Spinal cord			
Ear notch				Other fresh tissue(s):		Other sample(s):	
Faeces							
Fluid - Foetal							

**Sample Keylist (Attach a separate keylist for large submissions)**

No.	Sample ID						
1.		5.		9.		13.	
2.		6.		10.		14.	
3.		7.		11.		15.	
4.		8.		12.		16.	

**LAB USE ONLY**

QA  D  M  AI  E  Other: [ ]  NOTIFIABLE  EXOTIC  ACCREDITATION  TSE  RESIDUE  ANIMAL WELFARE

Total samples received: [ ]

Use this form when submitting samples for diagnostic testing. Completed forms and associated samples can be submitted to the laboratory at Woodbridge Road, Murrumbidgee NSW 2566 or Private Bag 4008 Narrabri NSW 2397. For assistance, please contact Customer Service on 1800 675 623. For current pricing refer to the veterinary test list online at: [Veterinary Test List \(nsw.gov.au\)](http://www.dpi.nsw.gov.au)

EMAI Form SR 45- October 2023

## What to pack – Sampling Equipment

- 2 x 2.5 ml screw-top vials containing swab transport media (Phosphate Buffered Gelatin Saline - PBGS).
- Sterile swabs
- Scissors
- Eski and ice bricks to store transport medium and swabs
- Permanent marker/pencil/sample labels



# What to pack – Decontamination Kit



- buckets
- brushes
- paper towel
- footbath pan
- antiseptic soap
- disinfectant spray bottle
- alcohol-based hand gel
- rubbish bags



## What to pack - PPE

- Latex or vinyl gloves
- N95 or P2 mask,
- Protective eyewear
- Protective coveralls
- Rubber (water-resistant) boots or equivalent covers



# Sample Quality



Carcasses selected as suitable for post-mortem examination should ideally be kept chilled (**NOT** frozen) unless otherwise directed

Large carcasses may be shielded from the sun, packed with ice, or covered in wet towels to cool the body temperature and slow the decomposition process.

## Freshness Scale

Class	Characteristics	Suitability for examination and testing
Class 1	Recently euthanased Behaviour would have been observed before euthanasia Blood can be collected before euthanasia	Best specimen
Class 2	Fresh–recently dead	Good specimen
Class 3	Mild to moderate decomposition Organs still intact & recognisable May be mild bloating of carcass Tissues of mouth & eyes may be dry/wrinkled but are not green or purple Fur or feathers do not pull out easily	Good to swab for viral exclusions Less suitable for additional testing that class 1 & 2
Class 4	Advanced decomposition Organs no longer intact Carcass bloated Oral tissues often green or purple Fur or feathers easily removed with gentle traction Internal organs are soft or liquified	Generally unsuitable  Can be used for heavy metal analysis A gross post-mortem exam may provide some useful information
Class 5	Mummified or skeletal remains	Generally unsuitable  Only gross, radiographic and genetic examinations are possible

# Swabs in PBGS for Notifiable Disease Exclusion

• Label samples – pencil or permanent marker:

- Species
- Date
- Body site

- Oropharyngeal swab
- Cloacal/rectal swab



Oro-pharyngeal Swab



Tracheal Swab



Cloacal Swab



Cutting the Swab





# Swabs in PBGS for Notifiable Disease Exclusion

How to order PBGS media in NSW:

<https://www.dpi.nsw.gov.au/about-us/services/laboratory-services/kits-and-media/order-media>

PBGS (viral transport media)

Pestivirus antigen ELISA (PACE) ear notch media

Media (other) - please specify

Additional information

Please include sterile swabs



# Marine Mammal Sample Collection

## Live:

- Deep oropharyngeal
- Nasal/blow hole
- Rectal



## Dead:

- Tracheal/lung
- Brain/spinal cord
- Rectal

# History

- Species affected
- Species present
- Number sick, dead, healthy
- Sex and age
- Distribution of remains
- Condition of the carcasses (how rotten)
- Clinical signs
- Sudden death or prolonged illness
- Nutritional condition
- Recent changes in environment, weather
- When did this start
- Water & food supplies, any changes
- Proximity to livestock or domestic animals – any sick?
- Endemic diseases – what’s known in the area
- Exposure to toxins – pesticides, sprays, poisons in use?
- List of contact details of those involved



**TARONGA**  
AUSTRALIAN REGISTRY  
OF WILDLIFE HEALTH

**REGISTRY SUBMISSION FORM**

Office Use Only  
Case No: \_\_\_\_\_

**SUBMITTER INFORMATION**

Submitter name: \_\_\_\_\_ Organisation: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Report copy to: \_\_\_\_\_

**ANIMAL INFORMATION**

Number of animals dead: \_\_\_\_\_ Number of animals sick: \_\_\_\_\_

Species: \_\_\_\_\_

ARKS/Wildlife/ID#: \_\_\_\_\_ Animal name: \_\_\_\_\_

Origin: Zoo / Wild / QTN / \_\_\_\_\_ **Euthanased**: Yes/No Method: \_\_\_\_\_ Sex: Male / Female / Unk

Age: \_\_\_\_\_ years/months/days **OR** Neonate / Juvenile / Subadult / Adult / Aged / Egg / Nestling / Fledgling

Specimen submitted: \_\_\_\_\_ State: Fresh / Decomposed / Fixed / Frozen

Date Died/Found: \_\_\_\_\_ Date of submission: \_\_\_\_\_ Weight: \_\_\_\_\_ g/kg

Location found: \_\_\_\_\_

Animal history/circumstance of death: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

FOR PATHOLOGY USE ONLY: eWHIS?

Necropsy commenced: \_\_\_\_:\_\_\_\_ am / pm Date: \_\_\_\_\_

**EXTERNAL FINDINGS:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Hydration: Poor / Fair / Mod / Good

Fat deposits: Poor / Fair / Mod / Good / Excessive

Muscle mass: Emaciated / Poor / Fair / Mod / Good / Excellent

Stomach content: \_\_\_\_\_



# Sample submission – veterinary specimen advice form



Department of Primary Industries **Veterinary Specimen Advice Form**

Customer No:  Your Reference:  Quote No: (if applicable)

**SUBMITTER DETAILS** Results will be reported to the submitter's email address provided below  
 Submitter name:  Company/Clinic:   
 Postal address:  ABN:   
 Email:  Phone:

**OWNER DETAILS**  
 Owner name:  Phone:   
 Property address:  PIC:   
 Postal address:

**SUBMISSION DETAILS**  
 Disease(s) suspected:  
 1.  2.  3.

**Case History**  
 Previous job no. (if applicable):  No. of dead animals:   
 Species: Choose from menu  No. of sick animals:   
 Breed:  No. of at risk animals:   
 Age group:  OR Age: yrs  mths  days Sec: Choose from menu   
 Additional information (husbandry, nutrition, clinical signs, treatment, lesions etc.)

Microchip Number: (if more than 2 sample, please include in a separate key-list)

**sample collection date:**  **LLS & DPI USE ONLY**  
 Reason for testing:  Accreditation/MAP  Export to:  Legal proceeding  District Surveillance:  Yes  No  
 AI centre entry  Import from:  Research & development  Charge to WBS/Project code:   
 Diagnostic  Interstate movement to: State  Second opinion  First lead submission:  Yes  No

**SPECIMEN DETAILS**

SAMPLE TYPE	QTY	SAMPLE TYPE	QTY	SAMPLE TYPE	QTY	SAMPLE TYPE	QTY
Blood - dot	<input type="text"/>	Fluid - Ocular	<input type="text"/>	Fresh Tissue - Liver	<input type="text"/>	Swab - Nasal	<input type="text"/>
Blood - EDTA	<input type="text"/>	Hair	<input type="text"/>	Fresh Tissue - LN	<input type="text"/>	Swab - Oral	<input type="text"/>
Blood - lith hep	<input type="text"/>	Semen	<input type="text"/>	Fresh Tissue - Lung	<input type="text"/>	Swab - Preputial	<input type="text"/>
Blood - serum	<input type="text"/>	Histology slide	<input type="text"/>	Fresh Tissue - Spleen	<input type="text"/>	Swab - Vaginal	<input type="text"/>
Blood - other	<input type="text"/>	Fixed tissue - Brain	<input type="text"/>	Fresh Tissue - Kidney	<input type="text"/>	Other swab(s):	<input type="text"/>
Blood smear	<input type="text"/>	Fixed tissue - other	<input type="text"/>	Fresh Tissue - Spinal cord	<input type="text"/>		
Ear notch	<input type="text"/>			Other fresh tissue(s):	<input type="text"/>	Other sample(s):	<input type="text"/>
Faeces	<input type="text"/>						
Fluid - Foetal	<input type="text"/>						

**Sample Keylist (Attach a separate keylist for large submissions)**  

No.	Sample ID						
1.	<input type="text"/>	5.	<input type="text"/>	9.	<input type="text"/>	13.	<input type="text"/>
2.	<input type="text"/>	6.	<input type="text"/>	10.	<input type="text"/>	14.	<input type="text"/>
3.	<input type="text"/>	7.	<input type="text"/>	11.	<input type="text"/>	15.	<input type="text"/>
4.	<input type="text"/>	8.	<input type="text"/>	12.	<input type="text"/>	16.	<input type="text"/>

**LAB USE ONLY**  
 QA  D  M  AI  E  Other:   NOTIFIABLE  EXOTIC  ACCREDITATION  TSE  RESIDUE  ANIMAL WELFARE  
 Total samples received:

Your details (DVM) →

Landowner, agency, rehabilitator →

Location –GPS locators when possible →

Avian influenza →

Bird - non poultry →

Detailed history →

Date →

Diagnostic →

Sample types and numbers →

Sample inventory →

The Specimen Advice Form should be placed inside a plastic bag/sleeve to protect it and then placed inside the box, on top of the samples. This allows the form to be read before samples are removed.

[https://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0007/680425/Vet-specimen-advice-form-Oct-2023.pdf](https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0007/680425/Vet-specimen-advice-form-Oct-2023.pdf)

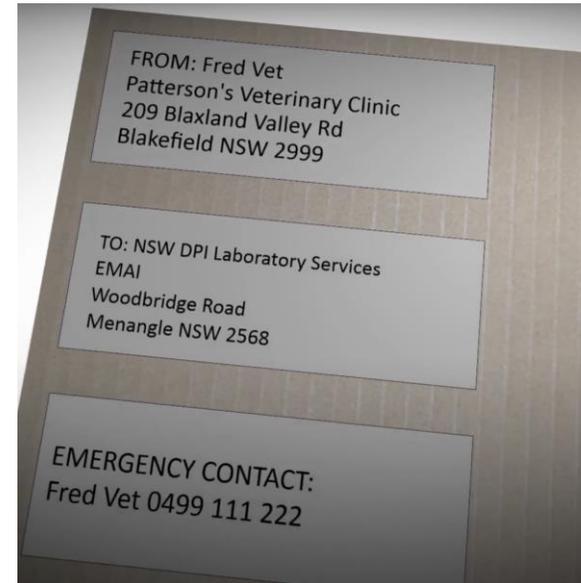
Use this form when submitting samples for diagnostic testing. Completed forms and associated samples can be submitted to the laboratory at Woodbridge Road Murrumbidgee NSW 2568 or Private Bag 4008 Narrellan NSW 2567. For assistance, please contact Customer Service on 1800 675 623. For current pricing refer to the veterinary test list online at: [Veterinary Test List \(nsw.gov.au\)](http://www.dpi.nsw.gov.au)

EMA Form SR 45- October 2023

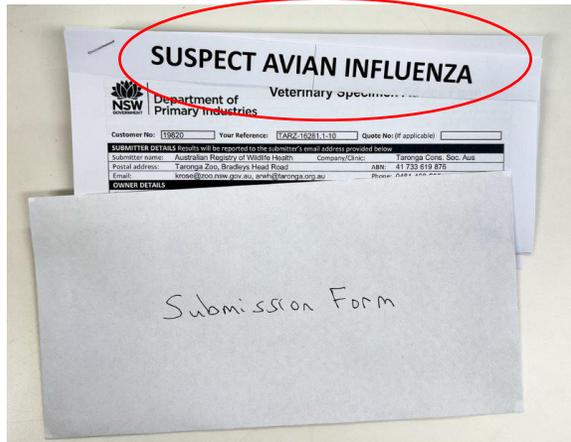
# Sampling and sample submission

Getting samples to the lab as soon as possible helps to detect new infections quickly and provide answers for those affected.

To minimise the time from sample collection to sample test result, it is essential that the sample is collected and **packaged correctly and submitted with accurate paperwork**



# Sample packaging



“Suspect avian influenza” label outside the eski but not visible on the outside of the box

- Vials disinfected and double bagged
- Securely packed (rigid container)
- Chilled
- Clearly labelled as SUSPECT AVIAN INFLUENZA
- Accompanying submission form
- NSW DPI will cover costs of notifiable testing



# Sample submission - process

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Contact the DPIRD lab (EMAIL) – specimen reception BEFORE sending:

1800 675 623

[laboratory.services@dpiird.nsw.gov.au](mailto:laboratory.services@dpiird.nsw.gov.au)

Ship samples to:

**NSW DPIRD**

**Elizabeth MacArthur Agricultural Institute**

**Specimen Reception**

Private Bag 4008, Narellan NSW 2567

Woodbridge Road, Menangle NSW 2568

# Avian Influenza – Helpful Resources



- Wildlife Health Australia Took Kit and video: <https://wildlifehealthaustralia.com.au/Incidents/Incident-Information/high-pathogenicity-avian-influenza-information>
- World Organisation for animal Health Avian Influenza Resources <https://www.woah.org/en/disease/avian-influenza/>
- Up to date scientific literature on Avian Influenza <https://www.michellewille.com/avian-influenza-resources/>
- Food and Agriculture Organization of the United Nations – Situation Update – species affected: <https://www.fao.org/animal-health/situation-updates/global-aiv-with-zoonotic-potential/bird-species-affected-by-h5nx-hpai/en>
- Ausvetplan - - decontamination, disinfection, laboratory controls, movement controls <https://animalhealthaustralia.com.au/ausvetplan/>
- Wild Bird HPAI Surveillance <http://3.104.156.86/wp-content/uploads/2021/05/Wild-Bird-HPAI-Surveillance-Manual.pdf>
- Australian Interim Centre for Disease Control Toolkit for people who work with birds <https://www.cdc.gov.au/resources/publications/bird-flu-toolkit-people-who-work-birds>



[https://wildlifehealthaustralia.com.au/Portals/0/Incidents/WHA\\_HPAI\\_Risk\\_mitigation\\_toolbox\\_WCP.pdf](https://wildlifehealthaustralia.com.au/Portals/0/Incidents/WHA_HPAI_Risk_mitigation_toolbox_WCP.pdf)

# Reporting

Any animal showing signs of disease consistent with HPAI must be reported immediately to the Emergency Animal Disease Hotline on 1800 675 888 (24 hours a day, 7 days a week).

Alternatively, report through the NSW DPIRD website:  
<https://www.dpi.nsw.gov.au/dpi/bfs/animal-biosecurity/avian-influenza>



