

Avian influenza (AI) advice for vets dealing with wild birds and backyard poultry

- Avian influenza is a notifiable disease of birds. It commonly circulates in wild birds in the winter months, associated with the migratory season.
- Where cases arise, Defra may declare an Avian Influenza Prevention Zone (AIPZ) with biosecurity advice and restrictions on bird gatherings, housing, and movements.
- AI is a zoonotic disease, but human infection is rare. Previously, Asian lineage strains H7N9 and H5N1 have caused morbidity and mortality in humans only outside Europe. The strain currently circulating in the UK is not related to the older H5N1 Asian strains associated with human infections and according to public health agencies, current strains of H5N1 HPAI carry very low risk for public health.
- Clinical signs in birds are variable between species and individuals, some infected individuals may be asymptomatic. Galliform poultry will typically show signs of disease.
- All birds should at this time be treated with appropriate caution and biosecurity, including initial examination and triage outside the practice, appropriate PPE must be worn, and sick birds may need to be humanely euthanised.
- Findings of dead wild birds should be reported to the Defra Helpline - 03459 33 55 77

Reporting

Avian influenza (AI) is a notifiable disease. All suspect AI cases in poultry and other kept birds must be reported - this is a legal requirement:

- In England to Defra Rural Services Helpline on 03000 200 301.
- In Wales, contact 0300 303 8268.
- In Scotland, contact the local [Field Services Office](#).
- In Northern Ireland contact the DAERA Helpline on 0300 200 7840 or your local [DAERA Direct Regional Office](#).

As the situation is ever changing, vets, keepers of backyard flocks and any other types of poultry, and wildlife rehabilitators are advised to sign up to the APHA's Animal Disease alert subscription service to receive immediate notification of new cases and updated zones. Further details can be found at <https://www.gov.uk/guidance/apha-alert-subscription-service>

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What is Avian influenza (AI)?

AI is a disease of animals caused by influenza A viruses. Influenza A viruses are classified according to the types of haemagglutinin (H1 - H18) and neuraminidase (N1 - N11) proteins on their surface.

All known influenza A virus subtypes have been found in birds (H1 - H16 and N1 - N9). Subtypes H17N10 and H18N11 have only been identified in bats. Wild birds act as natural, often asymptomatic carriers of influenza A viruses. Strains of influenza A virus may on rare occasions be transmitted from wild birds to other birds, pigs, horses, seals, whales, other mammals, and humans.

AI viruses are categorised as being High Pathogenicity Avian Influenza (HPAI) or Low Pathogenicity Avian Influenza (LPAI) depending on their virulence in poultry.¹ Ongoing surveillance for H5 and H7 AI is carried out in both poultry and wild birds.

Zoonotic risk²

The terms LPAI and HPAI relate to the virulence in poultry and do not reflect the seriousness of disease caused in humans; not all HPAI viruses infect humans, and some LPAI viruses can cause severe illness in humans. Avian influenza subtypes A(H7N9), and A(H5N1) have caused morbidity and mortality in humans outside Europe; there have, to date, been no cases in Europe.

AI is considered notifiable in the UK when:

- the subtype is either H5 or H7
- any influenza A virus causing HPAI

Under the International Health Regulations (2015), all human cases of influenza infections caused by a new subtype would be assessed for notification to WHO due to the potential public health impact.

The UK Health Security Agency advises the risk to public health from the H5 HPAI strains of bird flu is very low. Some strains of avian influenza can pass to humans, but this is very rare and usually requires very close contact between the human and infected birds. Individuals are considered as potentially

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/968566/Avian_influenza_guidance_and_algorithms_for_managing_incidents_in_birds.pdf

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/968566/Avian_influenza_guidance_and_algorithms_for_managing_incidents_in_birds.pdf

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exposed if they have handled a diseased or dead bird or a bird which subsequently died or became unwell due to AI. Individuals may also be considered as potentially exposed if they have handled the faeces, litter, or eggs of a dead or diseased bird.

Clinical signs in birds

The clinical signs of HPAI in birds can include any or a combination of the following³:

- sudden and rapid increase in the number of birds found dead
- several birds affected in the same shed or air space
- swollen head
- closed and excessively watery eyes
- lethargy and depression
- recumbency and unresponsiveness
- incoordination and loss of balance
- head and body tremoring
- drooping of the wings and/or dragging of legs
- twisting of the head and neck
- swelling and blue discolouration of comb, wattles and/or legs
- haemorrhages on shanks of the legs and under the skin of the neck
- loss of appetite or marked decrease in feed consumption
- sudden increase or decrease in water consumption
- respiratory distress such as gaping (mouth breathing), nasal snicking (coughing sound), sneezing, gurgling or rattling
- fever or noticeable increase in body temperature
- discoloured or loose watery droppings
- cessation or marked reduction in egg production

Photos are available online: <https://www.flickr.com/photos/defragovuk/sets/72157694543861305> and

- <https://bvajournals.onlinelibrary.wiley.com/doi/epdf/10.1002/vetr.1146>
- <https://bvajournals.onlinelibrary.wiley.com/doi/10.1002/vetr.731>

Clinical signs can vary according to species of bird, age of bird (for domestic waterfowl) individual immunity and concurrent disease; some species (eg ducks and geese) may show minimal clinical signs.

³ <https://www.gov.uk/guidance/avian-influenza-bird-flu#public>

Low pathogenicity avian influenza (LPAI) is usually less serious and may show more vague clinical signs. It can cause mild breathing problems and reduction of egg production but affected birds will not always show clear signs of infection.

Keepers of birds must keep a close watch on their birds for any signs of disease and seek prompt advice from a vet if they have any concerns. Avian influenza is a notifiable disease. Clinical signs indicative of avian influenza must be reported - this is a legal requirement:

- In England contact APHA via Defra Rural Services Helpline on 03000 200 301.
- In Wales, contact APHA on 0300 303 8268.
- In Scotland, contact the local [APHA Field Services Office](#).
- In Northern Ireland contact the DAERA Helpline on 0300 200 7840 or your local [DAERA Direct Regional Office](#).

Failure to report cases is an offence.

Spread of AI

Avian influenza is transmitted between birds by direct contact with an infected bird, or indirectly through contaminated body fluids and faeces, as well as by direct or indirect contact with infected wild birds and their secretions/faeces. It can also be spread by contaminated feed and water and other environmental matrices, or by dirty vehicles, clothing, footwear, and equipment. It is not an airborne virus, however there is the risk of droplet transmission.

Control of the disease, both between birds and to humans, is controlled by scrupulous biosecurity, hygiene and appropriate PPE (see below).

Biosecurity guidance

Biosecurity guidance for bird keepers and information on the latest avian influenza situation is available at:

- England: <https://www.gov.uk/guidance/avian-influenza-bird-flu>
- Scotland: www.gov.scot/avianinfluenza
- Wales: <https://gov.wales/avian-influenza-bird-flu>
- Northern Ireland: <https://www.daera-ni.gov.uk/articles/avian-influenza-ai>

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DEFRA, Welsh Government and Scottish Government have published specific biosecurity guidance relating to managing the more challenging bird species, such as ostriches, ducks and geese, where welfare can be compromised by inappropriate emergency housing. Please refer to this specific guidance for further advice:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1036185/biosecurity-poultry-guide.pdf

Keepers can check where disease control zones are located and if they are in a zone on the Animal and Plant Health Agency (APHA) [interactive map](#).

For further information on the measures that apply in the disease control zones see <https://www.gov.uk/guidance/avian-influenza-bird-flu-cases-and-disease-control-zones-in-england>. This is particularly important where there are overlapping zones.

Vets and keepers are reminded that the duty of care to provide for the basic needs for animals under their care according to the relevant country-specific animal welfare legislation must be ensured at all times, both for healthy and sick birds, unless otherwise directed by the UK Health Security Agency (UK HSA)

Dealing with birds in veterinary practice

Although the zoonotic risk of AI is very low, members of the public should not pick up obviously sick birds or handle dead birds, and veterinary practices should give out this advice.

Personal Protective Equipment (PPE)

Appropriate PPE for dealing with suspected (or unknown disease status birds, see wild birds below) should include FFP3 mask (or full-face respirator), coveralls, safety goggles, rubber/polyurethane boots (or disposable shoe covers) and disposable nitrile/vinyl/heavy duty rubber (not latex) gloves. PPE should be Fit Tested.

Care should be taken when removing and disposing of or cleaning PPE and hands washed well afterwards. Appropriate disinfectants should be used.⁴

Examination of birds

If suspect cases of AI are identified, it is likely that the location where the bird(s) are present will be placed under restrictions pending results. It is therefore sensible for veterinary practices and others to consider

⁴ http://disinfectants.defra.gov.uk/DisinfectantsExternal/Default.aspx?Module=ApprovalsList_SI

the possible impact on the practice if restrictions are served, to try and limit disruption to normal work. Good biosecurity is likely to be an important consideration for those deciding the extent of such restrictions. At the current time it is prudent for veterinary practices (and wildlife rehabilitation centres), where possible, to assess and examine birds outside, wearing appropriate PPE (see above) and minimising the number of staff involved.

Where clinical signs suspicious of AI are identified in sick live wild birds, the bird should first be humanely euthanised on welfare grounds. Contact should be made with the Defra Rural Services Helpline (in GB) or DAERA (in Northern Ireland) as above ('Clinical signs in birds'). The affected bird(s) should then be double bagged and labelled until further instruction is received.

Appropriate methods of euthanasia outside the practice will depend upon the clinical situation but the preferred method is intravenous barbiturate injection using the medial metatarsal vein (or the ulnar vein). Intrahepatic (not Intracoelomic) injection in small birds (up to 100g) or in larger birds (over 100g) following sedation. Physical techniques (where operators are confident and competent in these) may also be used where there is no other option available.

Ongoing clinical care

Where clinical signs of AI are not detected, the bird(s) should be clinically treated as appropriate and according to a practice-based AI risk assessment. Considerations for ongoing care within the practice may include:

- species of bird treated
- available isolation facilities
- practice layout
- number of birds routinely treated by the practice.

As the incubation period for AI is 2-8 days (and can be up to 14 days), it is sensible to barrier nurse birds where possible and continue to use of PPE as above. Footbaths should be used at entry points to isolation facilities. Waste material from all birds should be bagged and disposed of as infectious clinical waste following BVA guidelines⁵, and appropriate disinfectants for AI used.⁶

Additional considerations for backyard poultry and wild birds are given below.

Backyard poultry

⁵ <https://www.bva.co.uk/resources-support/practice-management/handling-veterinary-waste-guidance-posters/>

⁶ http://disinfectants.defra.gov.uk/DisinfectantsExternal/Default.aspx?Module=ApprovalsList_SI

All poultry owning clients should be encouraged to register their poultry with Defra; registration is a legal requirement for people owning 50 or more birds. Poultry includes chickens, ducks, turkeys, geese, pigeon (bred for meat), partridge, quail, ratites, guinea fowl, partridges and pheasants.

When there is an AIPZ in place this means that all bird keepers in Great Britain (whether they have pet birds, commercial flocks or just a few birds in a backyard flock) are required by law to take a range of biosecurity precautions.⁷ Additional precautions, including housing of birds, may be required and further guidance on this is available⁸.

If clients report birds with clinical signs suggestive of AI in poultry, there is a legal obligation to report these to APHA or DAERA as above, irrespective of the type or size of the flock. Birds presented to veterinary practices should be examined as above.

Where clients have collections of birds of special genetic or conservation status special guidance on enhanced biosecurity is available.⁹

Further information on backyard poultry is available in BSAVA's '[Avian influenza in backyard poultry](#)' [Q&A](#) and their [collection in the BSAVA Library](#).

NOTE: The Food Standards Agency has said that on the basis of the current scientific evidence, avian influenza poses a very low food safety risk for UK consumers. Properly cooked poultry and poultry products, including eggs, are safe to eat.¹⁰

Wild birds

AI has been isolated in a wide range of species of wild birds. The most common species affected however are waterbirds (waterfowl and waders, such as swans, ducks and geese) and birds that may feed off other dying or dead birds (corvids, some birds of prey, seagulls). Swans and geese are by far the most commonly affected species groups.¹¹

⁷ <https://www.gov.uk/guidance/avian-influenza-bird-flu>

⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1036185/biosecurity-poultry-guide.pdf

⁹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/669573/fangr-culling-derogation-guidelines.pdf

¹⁰ <https://www.gov.uk/guidance/avian-influenza-bird-flu>

¹¹ <https://www.gov.uk/government/publications/avian-influenza-in-wild-birds>

Members of the public finding dead wild birds should be asked to report them to the Defra helpline (03459 33 55 77) in Great Britain or DAERA in Northern Ireland. Members of the public should not touch, pick up or transport dead or sick birds.

Wild birds should be assessed outside the practice as described above and where signs of AI are suspected they should be euthanised and reported to Defra or DAERA.¹²

If dead wild birds are presented at the practice, they should not be taken into the premises, instead they should be double bagged (the outside of the bag should be disinfected with a government-approved disinfectant) and reported to the Defra helpline (03459 33 55 77) or DAERA. The exact location using [What3words](#), postcode, or map coordinates of where the carcass was found is required. Not all dead wild birds will be collected; if arrangements have not been made for collection within 48 hours of reporting, the carcasses should be disposed of as clinical waste.

Sick birds may also be reported to the RSPCA (0300 1234 999) where an in-situ assessment and further course of action will be taken, including euthanasia and disposal if appropriate.

Where birds are injured and show no clinical signs of AI then a normal approach to first aid and emergency care in British wildlife should be taken.¹³ Vets are obliged to provide appropriate first aid and emergency care under the RCVS Code.¹⁴

In common with all wildlife casualties, birds should be 'triaged' according to the likelihood of an eventual return to the wild. This should include consideration of the following:

- A suitable casualty - a bird that can be treated with a good likelihood of eventual release back to the wild. This may include treatment by the attending veterinary surgeon or referral (after appropriate first aid) to an alternative veterinary surgeon and/or a rehabilitation centre with appropriate veterinary care. Availability of referral services may differ during an AI outbreak and should be checked before making a treatment plan.
- Suitable rehabilitation and release facilities - veterinary practices are rarely suitable places for rehabilitation of wildlife. Availability of wildlife rehabilitation centre care may be limited in an AI outbreak. Practices should liaise regularly with local centres to check cases can be referred before embarking on a treatment plan.

¹² Rowena DE Hansen, Lévon Stephan, Catherine Man, Sophie Hepple, Fabian ZX Lean Caution needed when treating wild birds this winter. 19 November 2021 <https://bvajournals.onlinelibrary.wiley.com/doi/10.1002/vetr.1200>

¹³ <https://www.bornfree.org.uk/resources-for-vets>

¹⁴ <https://www.rcvs.org.uk/setting-standards/advice-and-guidance/code-of-professional-conduct-for-veterinary-surgeons/supporting-guidance/24-hour-emergency-first-aid-and-pain-relief/>

Veterinary surgeons should remember that all wild birds are protected under the Wildlife and Countryside Act, 1981. Whilst euthanasia of a wild bird may be necessary in many cases, a blanket approach to euthanasia, without full consideration of all options, may be considered unnecessary, unethical, and potentially illegal. At the same time RCVS supporting guidance to the Code of Professional Conduct makes it clear that the responsibility for wild animals and decision making around their clinical care, including euthanasia decisions, rests firmly with the attending veterinary surgeon.¹⁵

Where an appropriate wildlife rehabilitation centre, with strict biosecurity in place, is not available to take a case for ongoing care, birds should not be cared for in the home of an individual, because of the considerable disease risks associated with this. Where appropriate rehabilitation centre care is not available, birds should be euthanised.

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¹⁵ <https://www.rcvs.org.uk/news-and-views/features/standards-and-advice-update/>