



BirdLife's Guidance for Public Authorities

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H5N1 is primarily a disease of poultry, but some outbreaks have occurred in wild birds. There is a risk of the virus being carried by poultry, and poultry products or migrant birds to countries which have so far been unaffected by the current sequence of outbreaks. The H5N1 virus has been recorded in a number of different wild bird species. However, waterbirds, especially swans, ducks and geese, are particularly likely to contract and carry the virus. Most wild birds catching H5N1 quickly become sick and die, but some may show few symptoms while infected and carry the virus to new areas. Incidents of H5N1 among wild birds have mainly affected small numbers of individuals at any particular locality. Major outbreaks, with rapidly increasing numbers of sick and dead birds, are, so far, unusual.

The virus is spread through excreta, saliva and nasal fluids and can be transmitted directly to humans. However nearly all fully documented cases have been linked to intimate exposure to infected poultry rather than to wild birds.

2. Monitoring and surveillance

Regular surveillance of wild bird deaths, and of wetland sites where waterbirds occur, is very important. This should engage site management authorities, birdwatchers, hunters, farmers and the general public.

It is important that an appropriate national authority take charge of co-ordinating these efforts, drawing on the expertise of the veterinary and medical establishments, ornithologists, ecologists and other scientists in devising national monitoring programmes and guidelines.

The need for surveillance must be publicized. There should be clear procedures for reporting unusual sickness or deaths among birds, for taking and testing samples, for collating findings and for follow-up action.

As well as numbers and species of sick and dead birds, as much other relevant information as possible should be recorded for any outbreak, including key ecological features (see Box below).

Where teams of staff or volunteers can carry out regular monitoring, for example at nature reserves or bird-shooting sites, twice-weekly scans are recommended.

On other wetland sites, monitoring procedures should be established where possible, and birdwatchers, hunters, farmers and other countryside users encouraged to be vigilant and to report unusual die-offs of birds.

Birds in recreational areas such as parks and ornamental gardens, particularly ducks, geese and swans, should also be monitored.

Birds die for many reasons, including (for example) starvation and botulism. However, any unusual incident involving sickness or death should be reported, to enable veterinary authorities to assess whether investigation is required. The UK government's advice, for example, is to contact the authorities if you find one or more dead swans, ducks or geese, more than three dead birds of the same species, or more than five dead birds of different species, in the same place. Die-offs involving significant (5+) and rapidly increasing numbers of sick or dead birds should be considered as likely H5N1 outbreaks and immediate precautionary measures taken while screening is taking place.

In such a case, the site (including all areas used for feeding and roosting by the birds affected) should be immediately closed to public access, to prevent human contact with infected birds, their droppings or water. Signs should be put up explaining the reasons for the closure and warning the public not to touch dead birds, and to be particularly careful to wash, and if possible disinfect, their hands before eating, smoking or otherwise touching the face and mouth.

Note that some species have a daily pattern of activity which may take in a number of locations at some distance from one another for feeding, resting and roosting. A knowledge of the ecology of the species will help reduce the risks of infections at these sites going undetected. Local ornithologists or national bird conservation groups may be able to help in identifying these locations.

If screening is positive for H5N1, the area should remain closed. The survival time of H5N1 outside of hosts depends on temperature and pH. Testing in waterbodies, faecal matter or disinfecting an area may help to determine appropriate quarantine periods. Previous studies have suggested that H5N1 can survive a few weeks in faeces to several months in water bodies. Vehicles, equipment and boots that may have been in contact with soil or water at the site should be thoroughly cleaned (e.g. with a pressure washer) and disinfected to prevent passive transfer of the virus.

3.1. Culling: an inappropriate response

Attempts to control the spread of H5N1 by culling large numbers of wild birds are inadvisable for several reasons. They are costly and unlikely to be effective; they may disperse infected birds over a wide area; they may kill or cause disturbance to non-target species which may be of conservation concern; and they require resources to be diverted

from more effective ways of combating the virus, such as improving biosecurity and clamping down on illegal or unregulated movements of poultry.

To eliminate potential sources of infection of H5N1, the greater part of the affected wild bird population would have to be killed very quickly, before it could spread the disease further. None of the techniques available for killing wild birds can achieve this. Birds from elsewhere will quickly repopulate attractive sites, and come into contact with any persisting infection.

Most killing techniques involve severe disturbance (shooting, trapping, explosives). None of the techniques is totally efficient. Varying numbers of surviving birds are thus able to respond quickly by moving to less disturbed areas, where they could establish new foci of infection. Displaced birds may be harder to monitor and control. Without adequate information on the locations of alternative habitats, culling or disturbing birds may significantly exacerbate the problem.

Chemical culling methods such as poisons, which involve less disturbance, and less potential for dispersing survivors to new sites, frequently have serious secondary effects, such as persistent environmental contamination or deaths of non-target species.

Techniques that enable the killing of large numbers of birds are unselective, posing potential dangers for threatened birds and other non-target species.

Avian influenza viruses are presently spreading mainly through the movements of poultry and poultry products, and contamination of people and vehicles used for transport or of water sources at poultry-rearing facilities. The most effective means of containing the virus is thus to ensure adequate biosecurity at all stages of the poultry production and distribution cycle. Eliminating contact between poultry and wild birds not only reduces the risk of wild birds passing on the disease to poultry, but also of the disease escaping from infected poultry into the wild. This is particularly important to prevent the genesis of highly pathogenic strains of avian influenza because scientific research suggests that low pathogenic strains of avian influenza carried by wild birds, mutated into highly pathogenic H5N1 in poultry operations.

The major international agencies involved in the monitoring and eradication of the H5N1, the World Health Organisation (WHO), Food and Agriculture Organisation (FAO), and World Organisation for Animal Health (OIE), all state that the control of avian influenza in wild birds is not feasible *and should not be attempted*.

Wild birds make a significant contribution to many economies, providing services including pest control (note the disastrous consequences of the attempt to exterminate sparrows from China), and bringing in revenues from hunting and ecotourism. They have recreational, cultural and spiritual value, enriching lives and contributing to health and mental wellbeing. The loss of these benefits would need to be added to the already high and misdirected costs of attempting to control avian influenza by culling wild birds.

3.2. Habitat destruction: an inappropriate response

There have been proposals to drain wetlands and destroy vegetation, such as reedbeds, and other breeding and roosting grounds to deter returning migrant birds from settling. Such actions would be ineffective at best, and at worst would have disastrous, wide-ranging and long-term consequences, including the risk of increasing the spread of infection.

Deliberate environmental damage of this kind poses risks not only to birds and biodiversity, but also to human and economic wellbeing. Apart from their extremely high conservation value, wetlands provide vital ecosystem services like flood control, water purification and nutrient recycling, and the livelihoods of many communities depend on them.

Displaced birds may move to new sites, where it will be harder to monitor them for signs of infection. Birds will gather in greater numbers at remaining sites, where a combination of stress and crowded conditions will increase the likelihood of infection spreading.

4. Advice to the public on feeding wild birds, birdwatching and other recreational activities

'Casual' contact, for example walking through parks or town squares where birds such as ducks or pigeons are present, carries a very low risk of infection from any pathogen carried by wild or feral birds, including H5N1. As a matter of course – regardless of the risk from H5N1 – people should wash their hands after touching any wild or domestic animal, their faeces, or water used by them, especially before eating, smoking or otherwise touching the face and mouth.

Advice to the public should emphasise that the risk of contracting H5N1 from wild birds is minimal, and that there are no documented cases of transfer from wild birds to humans. The faeces of many kinds of animal carry zoonotic diseases – dog and cat faeces, for example, are responsible for some particularly nasty infections – but people are only at risk if they fail to observe common-sense hygienic precautions.

However, authorities should ensure that there is adequate dissemination of information on this disease and basic preventative measures at remote villages where people may have less access to information on H5N1. The human mortality rate once infected is over 50 % and recent human H5N1 deaths in some less developed countries have indicated that hygienic precautions were not followed.

Only in the event of an outbreak of H5N1, should public access to potentially infected bodies of water and their margins be restricted. These restrictions should be extended to areas of grass or water bodies where ducks or geese have defecated.

Birdwatching is safe, though people should avoid touching birds, their droppings or water near them. Similarly, it is safe to continue feeding garden birds. The birds that visit feeders and bird tables are unlikely to carry the H5N1 virus. Observe normal, sensible hygiene precautions: wash hands after handling equipment that has been splashed with bird faeces, and clean and disinfect feeders and bird-tables regularly.

5. Recording information on avian 'flu outbreaks

Despite numerous recent outbreaks of H5N1 avian influenza, there remains limited information on how the virus affects wild birds, and how it behaves in the environment. Reports of incidents among wild birds often lack key information such as species, the number of individuals sampled and the exact location. More complete, and better standardised information, is vital for understanding better how to prevent the disease, focus contingency efforts, predict future outbreaks and guide effective policy to reduce the economic and conservation impacts of avian influenza.

Most of the information needed can easily be recorded at the site of an outbreak. Below is a list of variables that are important to collect for both positive and negative H5N1 surveillance tests:

Timing	
	Date of collection
	Bird(s) alive or dead when collected
	If dead, state of decay when found
Location	
General	County, City
	Water body (e.g. lake – water source, size of lake/reservoir/swamp)
	Description of habitat – Coastal, inland (km to coast)
Human uses	Surrounding land-use : Urban, agriculture (specify types), poultry operations (distances and density), Aquaculture (specify types), Tourism
	Distances to major railways, highways, airports
Population details	
General	No. of each species in affected area
	Habitat type: Resident/migratory breeding/wintering habitats
	If migratory, approximate timing of arrival or departure
Outbreak	No. of dead birds of each species
	If available details on sex, age (adult versus juvenile) of dead birds may help to identify migration patterns
Sample type	Faecal, blood, cloacal, tracheal
	No. of each species tested
	No. of each species testing positive
	H5N1 strain / additional genetic information
Conservation implications	
	Threatened species in area
	Important Bird Areas in area
Context	Previous outbreaks in area (in wild birds or poultry)
	Future testing to be conducted in region