

Questions and answers on avian influenza

What is avian influenza?

Avian influenza (AI) is primarily disease of poultry, water fowl and migratory birds caused by Type “A” influenza viruses, which can infect several species of domestic poultry, including chickens, turkeys, quail, guinea fowl and ducks, as well as caged and wild birds. AI viruses have also been isolated, although less frequently, from mammalian species, including rats, mice, weasels, ferrets, pigs, cats, tigers, dogs and horses, as well as from humans.

There are many AI virus strains, which are usually classified into two categories according to the severity of the disease in poultry: low pathogenic (LPAI) strains, which typically cause few or no clinical signs in poultry, and highly pathogenic (HPAI) strains, which can cause severe clinical signs and potentially high mortality rates among poultry.

Differentiation between low and high pathogenicity AI viruses is based on the results of laboratory tests, which are described in the *OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*. This characterisation of AI viruses as low or high pathogenicity (severity of disease) is specific to poultry and other birds and does not necessarily apply to other species that can be susceptible to AI viruses, including humans.

Have wild birds been identified as a carrier of the avian influenza virus?

Wild birds can normally carry AI viruses in their respiratory or intestinal tracts but they do not commonly get sick. They have historically been known as reservoirs and vectors of AI viruses. Around the world, surveillance measures have been put in place to monitor the occurrence and characteristics of AI viruses in wild birds. In wild birds, it is common during routine testing to find influenza viruses. The majority of these viruses do not cause disease in wild birds.

How is avian influenza transmitted and spread between birds?

All AI viruses can be transmitted among birds through direct contact with secretions from infected birds, especially faeces, or through contaminated feed, water, equipment and human clothing. They are readily transmitted from farm to farm by the movement of domestic live birds, people (especially when shoes and other clothing are contaminated), and contaminated vehicles, equipment, feed and cages. Highly pathogenic viruses can survive for long periods in the environment, especially when temperatures are low.

Several factors can contribute to the spread of AI viruses, including: movement of people, equipment and goods, marketing practices (live bird markets), farming practices and the presence of the viruses in migratory wild birds that come into contact with poultry.

What are the reporting requirements for avian influenza?

As detailed in the *OIE Terrestrial Animal Health Code*, all cases of HPAI found in any domestic or wild bird must be notified to the OIE by the country’s competent authorities (Veterinary Services). Low pathogenic AI viruses of subtypes H5 and H7 in poultry are also notifiable to the OIE because, even though they do not cause severe disease, they have the potential to mutate readily into highly pathogenic viruses or to infect other species.

What are the basic requirements for worldwide prevention and control of avian influenza in animals?

All countries must maintain the public and private components of Veterinary Services, which comply with OIE standards on quality, including:

- appropriate legislation;
- early detection and response capacities of Veterinary Services and other competent authorities for dealing with biological events in animals;
- establishment and management of a compensation mechanism for farmers who have undergone stamping out of their animals to encourage reporting of the disease;
- efficient veterinary diagnostic laboratories;
- use of vaccination in specific epidemiological situations, where appropriate;
- ongoing implementation of biosecurity measures to protect farms.

Can culling be used as a control measure?

If the infection is detected in animals, a policy of culling infected and contact animals is normally used in an effort to rapidly contain, control and eradicate the disease.

Requirements include (and are described in the OIE *Terrestrial Animal Health Code*):

- humane destruction of all infected and exposed animals (according to OIE animal welfare standards);
- appropriate disposal of carcasses, litter and all animal products;
- surveillance and tracing of potentially infected or exposed poultry;
- strict quarantine and controls on movement of poultry and any potentially contaminated vehicles and personnel;
- thorough cleaning and decontamination of infected premises;
- a period of at least 21 days before restocking.

When outbreaks are detected, stamping out is generally applied at the level of the infected farm or within a short radius around the infected premises in conjunction with active surveillance.

Does OIE recommend vaccination of animals to control the disease?

When appropriate vaccines complying with OIE quality standards are available, vaccination is used to protect susceptible poultry populations from potential infection. Vaccination reduces viral shedding by animals and the capacity of the virus to spread. Vaccination strategies can be effective as an emergency measure in an outbreak or as a routine measure in an endemic area. Any decision to use vaccination must include an exit strategy, i.e. conditions to be met in order to stop vaccination.

Careful consideration must be given prior to implementing a vaccination policy and the recommendations from the World Organisation for Animal Health (OIE) on vaccinations and vaccines must be closely followed (<http://www.oie.int/download/AVIAN%20INFLUENZA/Guidelines%20on%20AI%20vaccination.pdf>).

In short, vaccination should be implemented when culling policies cannot be applied because either the disease has become endemic and therefore widespread, or the infection in affected animals is too difficult to detect.

What are the OIE recommendations for trade in poultry from a country infected with avian influenza?

The risk analysis to be used by importing countries in order to protect their territory from pathogens must be comprehensive and conducted in accordance with OIE standards and should respect their obligations under the sanitary and phytosanitary (SPS) agreement of the World Trade Organization (WTO).

The trade recommendations that apply can be found in the OIE Terrestrial Animal Health Code ([Chapter 10.4; 2014](#)). These measures are science-based and should not result in unjustified trade barriers; they include zoning provisions and the testing of the animal populations of origin.

What compensation measures should be applied for the farmers concerned?

Systems of financial compensation of farmers and producers who have lost their animals as a result of mandatory culling ordered by national authorities vary around the world; unfortunately they may not exist at all in some countries. The OIE encourages national authorities to develop and propose compensation schemes because they are a key incentive to support early detection and transparent reporting of animal disease occurrences, including avian influenza.

What are the food safety recommendations?

As a precautionary and regulatory measure, animals that have been culled as a result of measures to control an AI outbreak should not be allowed to enter the human food and animal feed chain.

However, there is no evidence to suggest that the consumption of poultry or eggs fit for human consumption could transmit the AI virus to humans.

What is the public health risk associated with avian influenza?

While AI viruses are highly species-specific, on rare occasions they have crossed the species barrier to infect humans. This disease should not be confused with seasonal human influenza (flu), a very common human disease (generally caused by human H1 and H3 viruses). Episodic transmission of AI viruses to humans occurs when there is close contact with infected birds or heavily contaminated environments.

Given the potential for human infection, people working with, or in contact with, poultry that are infected with (or suspected of being infected with) AI viruses are recommended to wear protective clothing, including face masks, goggles, gloves and boots.

What prevention measures are recommended at the farm level?

It is essential for poultry producers to maintain biosecurity practices to prevent the introduction of the virus into their flock:

- keep poultry away from areas frequented by wild fowl;
- do not keep on the premises elements that may attract wild birds, including poultry feed products placed outside the building;
- maintain strict control over access to flocks by vehicles, people and equipment;
- ensure the sanitation of property, poultry houses and equipment;
- avoid the introduction of birds of unknown disease status into the flock;

- report any bird illnesses and deaths to the Veterinary Services;
- ensure appropriate disposal of manure, litter and dead poultry;
- vaccinate animals where appropriate.

How can stakeholders be brought together to better safeguard animal health and public health?

To implement these various recommendations fully, it is essential to build strong public-private partnerships. This means enhancing collaboration between public Veterinary Services, the private veterinarians' network and farmers and industry associations.

For more information

1. OIE *Terrestrial Animal Health Code*:

<http://www.oie.int/en/international-standard-setting/terrestrial-code/access-online/>

2. OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*:

<http://www.oie.int/en/international-standard-setting/terrestrial-manual/access-online/>

3. OIE web portal on avian influenza:

<http://www.oie.int/en/animal-health-in-the-world/web-portal-on-avian-influenza/>

4. World Health Organization Global Influenza Programme at the Human-Animal Interface:

http://www.who.int/influenza/human_animal_interface/en/

5. OIE/FAO network of expertise on animal influenza (OFFLU):

<http://www.offlu.net/>