Avian Influenza

Avian Influenza, also known as the Avian or Bird Flu, is a form of influenza caused by a virus found in birds.

Avian Flu is similar to variants found in animals and humans-caused strains of influenza that have adapted to specific hosts.

Avian influenza has been in the news recently when, in June 2021, the strain H10N3 was first reported in China to infect a human being.

This article will further give details about the Avian influenza within the context of the IAS Exam. The details will help candidates in staying up to date about recent events for the current affairs segment of the exam.

Overview of Avian Influenza

There are three types of influenza viruses labelled A, B and C. It is the 'A' variant which is found mostly in birds and is commonly referred to as Avian Influenza.

Recent studies into genes of the Spanish flu virus have shown it was adapted from both human and avian strains. Avian influenza strains are also further divided as per their pathogenicity: high pathogenicity (HP) or low pathogenicity (LP).

Note: Pathogenicity can be defined as the capacity of a microbe to cause damage in a host, while virulence refers to the degree of damage caused by the microbe.

The well-known strains is H5N1, first isolated from a farm goose in China in 1996. Low pathogenic variants have also been found in North America.

Between early 2013 and early 2017, 916 lab-confirmed human cases of H7N9 were reported to the World Health Organization (WHO).

What are the Subtypes of the Avian Influenza?

Although there are many subtypes of avian influenza viruses, only the following strains are known to infect humans:

1. H5N1
2. H7N3
3. H797
4. H9N2

Strains like the H10N8 and H10N3 also have been found to infect humans.

Infections in humans are a result of handling infected poultry birds. Even contaminated surfaces and droppings can also be a source of infections. H5N1 is a large threat in Asia with infected poultry due to low hygiene conditions and close quarters. Although it is easy for humans to contract the infection from birds, human-to-human transmission is more difficult without prolonged contact.

Modes of Transmission of Avian Influenza

Direct contact between infected and healthy birds is how avian influenza primarily spreads. It is found in secretions from nostrils, mouth eyes etc. HPAI infection is spread through people from infected poultry, the disease itself is not airborne.

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The following man made ecosystems have contributed to the spread of avian influenza:

1. Indoor commercial poultry
2. Range-raised commercial poultry
3. Live poultry markets
4. Hobby flocks
5. Bird collection and trading systems

Out of the 5, it's indoor commercial poultry that has the largest impact when it comes to the spread of Avian influenza. The rate of spread has only increased in the 1990s.

Impact of Avian Influenza

World Health Organization member states have recognised the need for a transparent system regarding sharing of vaccines and benefits from other networks. Cooperative measures created in response to HPAI have served as a basis for programs related to other emerging and re-emerging infectious diseases.

About 20% of the protein consumed is from the poultry industry. Periodic infections from bird flu does have an impact on poultry consumption as infected birds are culled in large numbers. In Vietnam alone, 50 million birds were culled as part of infection control programs. As per a report by the Food and Agriculture Organisation (FAO) economic losses in South East Asia totalled around US$ 10 billion.

The impact on small commercial farmers is the greatest. Government compensation for the lost poultry has varied from time to time. Some received compensation far below the market rate, while some received no compensation at all.

Poultry is one of the cheapest sources of proteins available. The loss of poultry birds will mean loss of food security for low-income groups. Now, as of 2021, there have been certain strains which have been infecting humans of late. Due to the close contact nature of the poultry industry, it is likely that there is another pandemic in the making.

Frequently related to Avian Influenza

How is Avian influenza transmitted to humans?

The disease is transmitted to humans through contact with infected bird faeces, nasal secretions, or secretions from the mouth or eyes. Consuming properly cooked poultry or eggs from infected birds doesn't transmit the bird flu, but eggs should never be served runny.

Which type of birds are commonly affected by avian influenza?

Avian influenza refers to the disease caused by infection with avian (bird) influenza (flu) Type A viruses. These viruses occur naturally among wild aquatic birds worldwide and can infect domestic poultry and other bird and animal species. Avian flu viruses do not normally infect humans.