

*Opinion Article*

## An overview on avian influenza

Zhiao Feak\*

Department of Poultry Science, University of KwaZulu-Natal College of Health Sciences, University in Berea, Durban, South Africa.

Received: 01-Feb-2022; Manuscript No. AHPF-22-59200; Editor assigned: 04-Feb-2022; PreQC No: AHPF-22-59200(PQ); Reviewed: 21-Feb-2022; QC No: AHPF-22-59200; Revised: 28-Feb-2022; Manuscript No: AHPF-22-59200 (R). Published: 8-Mar-2022

### ABOUT THE STUDY

Avian influenza, often known as bird flu or avian flu, is a kind of influenza caused by viruses adapted to birds. The most dangerous variant is Highly Pathogenic Avian Influenza (HPAI). Bird flu, like swine flu, dog flu, horse flu, and human flu, is a sickness caused by influenza virus strains that have evolved to a specific host. Out of the three forms of influenza viruses (A, B, and C), influenza A virus is a zoonotic illness with a natural reservoir nearly solely in birds. Avian influenza refers to the influenza A virus for most purposes. Despite the fact that influenza A is suited to birds, it can also adapt to and survive person-to-person transmission. Recent influenza study into the Spanish flu virus's genome reveals that it has genes adapted from both human and avian strains. Pigs can also be infected with human, avian, and swine influenza viruses, allowing gene combinations (reassortment) to generate a new virus, causing an antigenic shift to a novel influenza. Most individuals have little to no immunological response to this viral subtype. Avian influenza strains are classified as High Pathogenicity (HP) or Low Pathogenicity (LP) depending on their virulence (LP). The most well-known HPAI strain, H5N1, was discovered in 1996 from a farmed goose in Guangdong Province, China, and low pathogenic strains have also been detected in North America. Companion birds in captivity are unlikely to transmit the virus, and no companion bird has been diagnosed with avian influenza since 2003. Pigeons can become infected with avian strains, but they seldom develop ill and are incapable of spreading the virus to people or other animals.

### Mode of transmission

Avian influenza is most commonly transmitted by contact between sick and healthy birds, although it can also be transmitted indirectly through contaminated equipment. The virus is present in secretions from sick birds' nose, mouth, and eyes, as well as their droppings. People become infected with

HPAI through direct contact with contaminated poultry, such as during slaughter or plucking. Though the virus can spread by airborne secretions, the sickness is not airborne. Highly pathogenic strains spread swiftly throughout flocks and can wipe out a whole flock in 28 hours; less pathogenic strains may impact egg production but are far less lethal. Although people may get the avian influenza virus from birds, human-to-human transmission is significantly more difficult to achieve without extended interaction. However, public health authorities are worried that bird flu strains will change and become easily transmissible between people. Although some strains of avian influenza are found in the digestive tracts of a considerable number of shorebirds and water birds, these types seldom cause human illness. Five man-made ecosystems have contributed to the ecology of modern avian influenza virus: integrated indoor commercial poultry, range-raised commercial poultry, live poultry markets, home and hobby flocks, and bird collecting and trading networks, including cockfighting. Indoor commercial poultry has had the largest influence on HPAI transmission, with the rise in HPAI outbreaks throughout the 1990s being primarily ascribed to increased commercial production.

### Village poultry

Village poultry and their owners were commonly involved in disease transmission during the early days of the HPAI H5N1 pandemic. Village poultry, also known as backyard and hobby flocks, are small flocks that are raised in tough conditions and are usually let to roam freely amongst many houses. However, studies have shown that these flocks are less dangerous than intensively farmed commercial chicken with homogeneous genetic stock and inadequate biosecurity. Backyard and village chickens also travel shorter distances than intensively kept poultry and contribute less to the development of HPAI. Because commercial techniques were not always relevant to domestic chicken flocks, the early conception of Asian poultry farmers as a unified large group hindered preventive measures.

\*Corresponding author. Zhiao Feak, E-mail: [fezhia056@edu](mailto:fezhia056@edu).

## **Prevention**

People who do not come into touch with birds on a regular basis are not at high risk of catching avian influenza. Poultry farm employees, animal control personnel, wildlife scientists, and ornithologists who work with live birds are among those at high risk. Before any instances of avian influenza are found, organizations with high-risk personnel should have an avian influenza response strategy in place. Poultry flock biosecurity is also vital for prevention. Flocks should be maintained away from other birds, especially wild birds, and their excrement; vehicles used around the flock should be cleaned on a regular basis and should not be shared between farms; and birds from slaughterhouses should not be returned to the farm. Infection is unlikely with appropriate infection control and the use of Personal Protective Equipment (PPE). Protecting the eyes,

nose, mouth, and hands is critical for protection since these are the most common entry points for the virus. Aprons or coveralls, gloves, boots or boot coverings, and a head cover or hair cover are all appropriate personal protective equipment. Disposable PPE is advised. Appropriate PPE also includes an N-95 respirator and unvented/indirectly vented safety eyewear. There is also the option of using a Powered Air Purifying Respirator (PAPR) with a hood or helmet and a face shield. Proper reporting of a single instance can aid in preventing its spread. If a person develops symptoms within 10 days after working with ill birds or potentially infected things, the Centers for Disease Control and Prevention (CDC) advises them to seek medical assistance and notify their employer, who should notify public health officials.