Epidemiological Unit
Ministry of Health and Mass Media
231, De Saram Place, Colombo 10
Tel: (011) 2695112, 4740490 Fax: (011) 2696583 e-mail: epidunit@sltnet.lk

Influenza Fact Sheet

Last update June 2025

Overview

There are four types of influenza viruses: A, B, C, and D. Among these, Influenza A and B viruses are responsible for seasonal epidemics in humans. However, only Influenza A viruses have been known to cause global pandemics, as per current scientific understanding.

Influenza A viruses are unique because they are established in a variety of animal species. A pandemic may arise if an Influenza A virus from an animal source adapts to infect humans and sustains efficient human-to-human transmission.

Influenza A viruses are further classified into subtypes based on the combinations of two surface proteins: hemagglutinin (HA) and neuraminidase (NA). When these viruses infect animals, they are named according to their host species, such as:

- Avian influenza viruses (birds)
- Swine influenza viruses (pigs)
- Equine influenza viruses (horses)
- Canine influenza viruses (dogs), etc.

These animal influenza viruses are genetically and antigenically distinct from human influenza viruses and do not typically transmit easily to or among humans.

Wild aquatic birds serve as the primary natural reservoir for most subtypes of Influenza A viruses. Outbreaks of avian influenza in poultry can result in serious consequences for agriculture, causing economic loss and food supply disruption.

Human infections with avian and other zoonotic influenza viruses are rare but have been reported sporadically worldwide. Most human cases are associated with direct or indirect contact with infected animals, such as handling live or dead animals, visiting live animal markets, or exposure to contaminated environments.

To date, these zoonotic influenza viruses have not shown the ability to sustain efficient human-to-human transmission, limiting their potential to cause widespread outbreaks in the general population.

Pandemic Potential of Influenza Viruses

Future pandemics are inevitable; however, predicting when, where, or how they will emerge and spread remains highly uncertain. An influenza pandemic occurs when a novel influenza virus emerges with the ability to sustain efficient human-to-human transmission, against which the global human population has little or no pre-existing immunity. In today's interconnected world, the expansion of global travel and trade increases the risk of rapid international spread.

While it is currently unknown whether any of the avian, swine, or other zoonotic influenza viruses circulating in animal populations will spark a future pandemic, the wide genetic and antigenic diversity of zoonotic influenza viruses that have caused human infections underscores the need for:

- Enhanced surveillance in both animal and human populations,
- A thorough investigation of every detected zoonotic influenza infection, and
- Robust pandemic preparedness and response planning at national and global levels.

Signs and symptoms in humans

Exposure to avian influenza viruses can result in human infection, with a range of clinical outcomes. Illness may present as mild, flu-like symptoms or conjunctivitis (eye inflammation), but can also progress to severe acute respiratory disease and, in some cases, death.

The severity of the disease depends on factors such as the specific virus subtype involved and the health status and underlying conditions of the infected individual. In rare instances, gastrointestinal and neurological symptoms have also been reported.

Diagnosis

Laboratory testing is essential to confirm human infection with zoonotic influenza viruses. Specimens should be tested in laboratories that have the appropriate biosafety measures and technical capacity to safely handle and accurately diagnose zoonotic influenza infections.

Diagnostic tests available for the detection of influenza viruses in respiratory specimens include molecular assays (including rapid molecular assays, reverse transcription polymerase chain reaction (RT-PCR) and other nucleic acid amplification tests); and antigen detection tests (including rapid influenza diagnostic tests and immunofluorescence assays).

Treatment

When zoonotic influenza infection is suspected, it is essential to promptly notify relevant health authorities and initiate appropriate clinical case management. This should include:

- Diagnostic testing to confirm infection,
- Triage and clinical assessment to determine disease severity,
- Evaluation of risk factors for severe disease (such as age, pregnancy, or underlying health conditions),
- Implementation of isolation measures to prevent transmission,
- Provision of appropriate treatment, including the use of antiviral therapy and supportive care as indicated.

Proper and timely management of patients with influenza is critical to reduce the risk of severe illness and death.

Prevention

To minimize public health risks, it is essential to maintain high-quality surveillance in both animal and human populations, conduct thorough investigations of every human infection, and implement risk-based pandemic planning. Collaboration and information sharing between public health and animal health authorities are crucial during investigations of human cases of zoonotic influenza.

The public should avoid contact with animals in areas known to be affected by animal influenza viruses, such as farms and places where live animals are sold or slaughtered.

Strict avoidance of contact with sick or dead animals, including wild birds, is strongly advised. Any discovery of dead animals should be promptly reported to local wildlife or veterinary authorities for appropriate removal.

Everyone should practice good hand hygiene by washing hands thoroughly with soap and running water or using alcohol-based hand rubs. This should be done as frequently as possible, especially before and after any contact with animals or their environments.