

## **Annex 7A: Fact Sheet**

### **Influenza A Virus**

#### **General Information About Avian Influenza a Virus Infection in Humans**

(Reference [http://www.who.int/influenza/human\\_animal\\_interface/faq\\_H7N9/en/](http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/))

Influenza A H7 viruses are a group of influenza viruses that normally circulate among birds. The influenza A (H7N9) virus is one subgroup among the larger group of H7 viruses. Although some H7 viruses (H7N2, H7N3 and H7N7) have occasionally been found to infect humans, no human infections with H7N9 viruses have been reported until recent reports from China.

#### **What are the Main Symptoms of Human Infection with Influenza A(H7N9) virus?**

Thus far, most patients with this infection have had severe pneumonia. Symptoms include fever, cough and shortness of breath. However, information is still limited about the full spectrum of diseases that infection with influenza A (H7N9) virus might cause.

#### **Why is this Virus Infecting Humans Now?**

We do not know the answer to this question yet, because we do not know the source of exposure for these human infections. However, analysis of the genes of these viruses suggests that although they have evolved from avian (bird) viruses, they show signs of adaptation to growth in mammalian species. These adaptations include an ability to bind to mammalian cells, and to grow at temperatures close to the normal body temperature of mammals (which is lower than that of birds).

#### **What is Known About Previous Human Infections with H7 Influenza Viruses Globally?**

From 1996 to 2012, human infections with H7 influenza viruses (H7N2, H7N3, and H7N7) were reported in the Netherlands, Italy, Canada, United States of America, Mexico and the United Kingdom. Most of these infections occurred in association with poultry outbreaks. The infections mainly resulted in conjunctivitis and mild upper respiratory symptoms, with the exception of one death, which occurred in the Netherlands. Until now, no human infections with H7 influenza viruses have been reported in China.

#### **Is the Influenza a (H7N9) Virus Different from Influenza A (H1N1) and A (H5N1) Viruses?**

Yes. All three viruses are influenza A virus, but they are distinct from each other. H7N9 and H5N1 are considered animal influenza viruses that sometimes infect people. H1N1

viruses can be divided into those that normally infect people and those that normally infect animals.

### **How did People Become Infected with the Influenza A (H7N9) Virus?**

Some of the confirmed cases had contact with animals or with an animal environment.

The virus has been found in a pigeon in a market in Shanghai. It is not yet known how persons became infected. The possibility of animal-to-human transmission is being investigated, as is the possibility of person-to-person transmission.

### **How can Infection With Influenza A (H7N9) Virus be Prevented?**

Although both the source of infection and the mode of transmission are uncertain, it is prudent to follow basic hygienic practices to prevent infection. They include hand and respiratory hygiene and food safety measures.

**Hand Hygiene:** Wash your hands before, during and after you prepare food; before you eat; after you use the toilet; after handling animals or animal waste; when your hands are dirty; and when providing care to someone who is sick. Hand hygiene will also prevent the transmission of infections to yourself (from touching contaminated surfaces) and in hospitals to patients, health care workers and others. Wash your hands with soap and running water when visibly dirty; if not visibly dirty, wash your hands with soap and water or use an alcohol-based hand sanitizer.

**Respiratory Hygiene:** Cover your mouth and nose with a medical mask, tissue or a sleeve or flexed elbow when coughing or sneezing; throw the used tissue into a closed bin immediately after use; perform hand hygiene after contact with respiratory secretions.

### **Is it Safe to Eat Meat; i.e., Poultry and Pork Products?**

Influenza viruses are not transmitted through consuming well-cooked food, because influenza viruses are inactivated by normal temperatures used for cooking (so that food reaches 70°C in all parts – “piping” hot, no “pink” parts), it is safe to eat properly prepared and cooked meat, including from poultry and game birds. Diseased animals and those that have died of diseases should not be eaten. In areas experiencing outbreaks, meat products can be safely consumed provided that these items are properly cooked and properly handled during food preparation. The consumption of raw meat and uncooked blood-based dishes is a high-risk practice and should be discouraged.

### **Is it Safe to Visit Live Markets and Farms in Areas Where Human Cases Have Been Recorded?**

When visiting live markets, avoid direct contact with live animals and surfaces in contact with animals. If you live on a farm and raise animals for food, such as pigs and poultry,

be sure to keep children away from sick and dead animals, keep animal species separated as much as possible, and report immediately to local authorities any case of sick and/or dead animals. Sick or dead animals should not be butchered and prepared for food.

### **Is There a Vaccine for the Influenza A (H7N9) virus?**

No vaccine for the prevention of influenza A (H7N9) infections is currently available. However, viruses have already been isolated and characterized from the initial cases. The first step in development of a vaccine is the selection of candidate viruses that could go into a vaccine. WHO, in collaboration with partners, will continue to characterize available influenza A(H7N9) viruses to identify the best candidate viruses. These candidate vaccine viruses can then be used for the manufacture of vaccines if this step becomes necessary.

### **Does Treatment Exist for Influenza A (H7N9) Infection?**

Laboratory testing conducted in China has shown that the influenza A (H7N9) viruses are sensitive to the anti-influenza drugs known as neuraminidase inhibitors (oseltamivir and zanamivir). When these drugs are given early in the course of illness, they have been found to be effective against seasonal influenza virus and influenza A(H5N1) virus infection. However, at this time, there is no experience with the use of these drugs for the treatment of H7N9 infection.

**Is the General Population at Risk from the Influenza A (H7N9) virus?** We do not yet know enough about these infections to determine whether there is a significant risk of community spread. This possibility is the subject of epidemiological investigations that are now taking place.

### **Are Health Care Workers at Risk from the Influenza A (H7N9) Influenza Virus?**

Health care workers often come into contact with patients with infectious diseases. Therefore, WHO recommends that appropriate infection, prevention and control measures be consistently applied in health care setting. The health status of health care workers should be closely monitored, together with standard precautions, health care workers caring for those suspected or confirmed to have influenza A(H7N9) infection should use additional precautions

### **Does this Influenza Virus Pose a Pandemic Threat?**

Any animal influenza virus that develops the ability to infect people is a theoretical risk to cause a pandemic. However, whether the influenza A(H7N9) virus could actually cause a pandemic is unknown. Other animal influenza viruses that have been found to occasionally infect humans have not gone on to cause a pandemic.

## **Preventing Human Infection with Avian Influenza A Viruses**

The best way to prevent infection with avian influenza A virus is to avoid sources of exposure. Most human infections with avian influenza A viruses have occurred following direct or close contact with infected poultry.

Seasonal influenza vaccination will not prevent infection with avian influenza A virus, but can reduce the risk of coinfection with human and avian influenza A viruses, because rare episodes of limited, non-sustained human-to-human transmission of HPAI H5N1 virus have been reported, persons should avoid sick patients who have suspected or confirmed HPAI H5N1 virus infections. Health care personnel caring for patients with suspected or confirmed HPAI H5N1 virus infection should wear recommended personal protective equipment and follow recommended infection control measures (standard, droplet, contact and airborne precautions).