Factsheet – Avian Influenza A (H7N11)

Note: This strain of avian influenza is (currently) fictitious. Information contained in this factsheet has been generated using information from CDC\(^1\) and WHO\(^2\).

**General**
Avian Influenza A (H7N11) in humans can have an aggressive clinical course. For the A (H7N11) virus infections in humans, current data shows an incubation period from 1 to 8 days with an average of 4 days. The case fatality rate for A (H7N11) subtype virus infections among humans is much higher than that of seasonal influenza infections.

**Signs and symptoms**
Avian Influenza A infections in humans can include a range of signs and symptoms, including typical influenza-like illness symptoms (fever, cough, sore throat, muscle aches), as well as nausea, diarrhoea and vomiting, and severe respiratory illness (Shortness of breath, difficulty breathing, pneumonia, acute respiratory distress, pneumonia, respiratory failure). In some cases there are reports of neurological changes (seizures, altered mental state), and involvement of other organ systems. The disease results in serious illness and levels of mortality are high.

**Diagnosis**
Diagnosis of Avian Influenza A is generally done by taking a swab from the upper respiratory tract (nose or throat) of the ill person. This swab should be sent to an appropriate laboratory for testing and processed according to relevant guidance and protocols. Critically ill patients may also have specimens taken from the lower respiratory tract which can also lead to a diagnosis of Avian Influenza infection.

**Treatment**
Like other avian influenza viruses, H7N11 appears to be susceptible to the neuraminidase inhibitors Oseltamivir, Peramivir and Zanamivir. There have been reports that there is some evidence of antiviral resistance isolated from some human cases of H7N11. Monitoring and reporting are crucial. These antivirals should be administered as soon as possible, ideally within 48 hours of onset of symptoms. Administration of these antivirals should also be considered in patients in late stages of the illness due to the prolonged viral replication of the H7N11 subtype.

**Prevention**
Most human cases of Avian Influenza A have occurred following direct or close contact with infected live or dead poultry and wild birds. The best method of prevention is to avoid direct contact with dead birds. Controlling the disease in birds is vital to reduce the risk to humans.

Other personal protective measures include:
- Regular hand washing and drying

\(^1\) https://www.cdc.gov/flu/avianflu/index.htm
\(^2\) https://www.who.int/influenza/human_animal_interface/en/
• Good respiratory hygiene – covering mouth and nose when coughing or sneezing, using tissues and disposing of them correctly
• Early self-isolation of those feeling unwell, feverish and having other symptoms of influenza
• Avoiding close contact with people who have influenza-like symptoms

Health care workers undertaking aerosol-generating procedures should use airborne precautions. Standard contact and droplet precautions and appropriate personal protective equipment (PPE) should be made available and used during epidemics.
Avian Influenza Scenario - Local

Session 1

Time-line = day 1

It is mid-week and 5 children from 2 families, aged between 6 and 11, within the local community have arrived at their local healthcare centre presenting with influenza-like symptoms including fever, dry cough, muscle aches and sore throat.

The children are all friends and spent the last weekend playing together outside.

Healthcare centre staff have taken swab samples and sent these to the nearest laboratory for testing. The children have been sent home with antipyretics. When treating the children, healthcare workers did not consider the need for any special precautions or measures.
Avian Influenza Scenario - Local

Session 2

Time-line = day 6

Of the original 5 cases, 1 child has died. More cases of the influenza-like illness are presenting at the local health centre with a further 7 children and 9 adults from the same local community attending the health centre.

New cases of the influenza-like illness are also being found in a neighbouring town where 3 children and 6 adults attended the privately run health clinic. Swabs have been taken and sent for testing at the laboratory.

The first group of children reported that they were playing near local waterways and touched dead birds in the water. Locals have also reported seeing unusually high numbers of dead migratory birds at the nearby waterways.

The health centre that first sent away swabs for testing has now received the results from the laboratory tests, and these show a strain of avian influenza A (H7N11).

The health centre is located amid a small group of shops, including a pharmacy.
Avian Influenza Scenario - Local

Session 3

Time-line = day 12

Cases of influenza-like illness are now 18 children and 23 adults from the original community cluster. There now appears to be human-to-human transmission, as many of the patients have not reported being near to any waterway or dead birds. In the neighbouring town 9 children and 15 adults are infected.

In addition, a third location has now reported 3 children and 17 adults being unwell with similar symptoms. This is in a nearby town.

Overall, there have been 6 deaths reported in connection with the influenza-like illness - 3 children and 3 adults.

There are reports of sickness amongst health care workers who treated the first group of children at the local health centre.

The numbers of dead migratory birds being seen across the region’s waterways has increased significantly. Local farmers are reporting that their poultry are becoming ill, with some dying. Animal health officials are trying to contain the problem.

Social media has many posts about the avian influenza, saying that there is little support from the authorities to tackle the outbreak.
Social Media Conversation on ‘Squawk’

Slim_G
@slimmy

I know, they haven’t told me anything either. I am scared to go out in case I get sick. How will I get food? The authorities don’t know what they are doing.
#birdflu, #deadbird

10:23am

Water_Baby
@water_b

Nothing from the hospital about how to stop bird sickness from spreading. They know nothing. It’s their fault. I heard that you get sick by touching people.
#birdflu, #deadbird

9:45am

MioMio_M
@miomio

All my chickens have died and I can’t get any more. It’s not right that people can treat us like this. I need my chickens to make a living.
#birdflu, #deadbird

8:25am

Sandy_H
@sandy_h

My child is very unwell from playing with birds and collecting eggs. Authorities have done nothing to keep him safe. Now he is in hospital.
#birdflu, #deadbird

8:18am