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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 CDC¹ and WHO².

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 – National

Session 1

Time-line = day 6

A member of MoH staff has heard on the news that there have been reports of children becoming unwell after playing with birds near local waterways, and that 1 child has died.

The MoH staff member then phoned her friend at the local healthcare centre and found out that five children presented to the health centre five days ago with influenza-like symptoms. At the time swabs were taken and sent to the laboratory for testing.

She says that of the original 5 cases, 1 child has died. More cases of the influenza-like illness are presenting at her healthcare centre with a further seven children and nine adults from the same local community attending the centre. The healthcare centre is located amid a small group of shops, including a pharmacy.

She reports that new cases of the influenza-like illness are now being found in a neighbouring town. There, 3 children and 6 adults attended the privately run health clinic and they have also had swabs taken which have been sent for testing at the laboratory.

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

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



Avian Influenza Scenario – National

Session 2

Time-line = day 12

Cases of influenza-like illnesses are now 18 children and 23 adults from the original community cluster. There appears to be human-to-human transmission, as many of these cases have not reported to have been near the waterways or any 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 unwell with the same symptoms. This is in a nearby town.

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

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



Avian Influenza Scenario – National

Session 3

Time-line = day 19

The avian influenza outbreak has now reached a total of 43 children and 55 adult cases within the original community. In addition, the second community to report cases now has 21 children and 29 adults confirmed with A (H7N11). The third location now has 19 children and 31 adults with symptoms of avian influenza. Deaths from the outbreak now stand at 8 children and 7 adults.

Healthcare workers are worried about how they can keep themselves safe, as many of their colleagues have also become unwell with the same influenza-like symptoms. Staff have also reported working double shifts to cover for their sick colleagues. There have been unverified reports that personal protective equipment such as face masks, are being reused and there are shortages of antiviral medicines, particularly in the private healthcare clinics.

The laboratories that have been testing for the disease are coming under operational pressures, with high levels of staff sickness, increased demand for services, and shortages of resources. They are now reporting longer processing times for samples – up to 10 days. A private, un-licenced laboratory has offered to do some of the tests.

Local communities are saying they are concerned that the outbreak may spread to larger population areas, and are worried about whether it is safe to eat poultry meat and eggs. Fast-food restaurants have also reported their concerns about whether poultry products are safe to eat, and are asking for clarification from the government.