Influenza at the human-animal interface

Summary and assessment as of 17 July 2015

**Human infection with avian influenza A(H5) viruses**

From 2003 through 17 July 2015, 844 laboratory-confirmed human cases of avian influenza A(H5N1) virus infection have been officially reported to WHO from 16 countries. Of these cases, 449 have died.

Since the last WHO Influenza update on 23 June 2015, two new fatal laboratory-confirmed human cases of avian influenza A(H5N1) virus infection were reported to WHO from Egypt. A 40-year-old male from Sohag governorate had an onset of illness on 14 June, was hospitalized on 16 June, but passed away on 22 June 2015. The likely source of exposure to the virus for this case was either direct exposure to poultry or indirect exposure via a contaminated environment. A five and a half-year-old male from Aswan governorate, with illness onset on 16 June was hospitalized on 24 June, but passed away on 27 June 2015. This case had a history of exposure to poultry. Both cases were given oseltamivir one day after hospitalization.

In addition, one laboratory-confirmed human case of avian influenza A(H5N6) virus infection was reported to WHO from China. A 37-year-old female from Yunnan province had an onset of illness on 6 July, was hospitalized on 9 July, but passed away on 10 July. There was no evidence of human-to-human transmission of this virus among the close contacts of this case.

Various influenza A(H5) subtypes, such as influenza A(H5N1), A(H5N2), A(H5N3), A(H5N6) and A(H5N8), continue to be detected in birds in West Africa, Asia, Europe, and North America, according to reports received by OIE. Although these influenza A(H5) viruses might have the potential to cause disease in humans, so far no human cases of infection have been reported, with exception of the human infections with influenza A(H5N1) viruses and the four human infections with influenza A(H5N6) virus detected in China since 2014.

**Overall public health risk assessment for avian influenza A(H5) viruses:** Whenever avian influenza viruses are circulating in poultry, sporadic infections and small clusters of human cases are possible in people exposed to infected poultry or contaminated environments, therefore sporadic human cases would not be unexpected.

With the rapid spread and magnitude of avian influenza outbreaks due to existing and new influenza A(H5) viruses in poultry in areas that have not experienced this disease in animals recently, there is a need for increased vigilance in the animal and public health sectors. Community awareness of the potential dangers for human health are essential to prevent infection in humans. Surveillance should be enhanced to detect human infections if they occur and to detect early changes in transmissibility and infectivity of the viruses.
Figure 1: Epidemiological curve of avian influenza A(H5N1) cases in humans by reporting country and month of onset.

Human infection with other non-seasonal influenza viruses

Human infections with avian influenza A(H7N9) viruses in China

A total of 677 laboratory-confirmed cases of human infection with avian influenza A(H7N9) viruses, including at least 275 deaths\(^1\), have been reported to WHO. The majority of recently reported human cases are associated with exposure to infected live poultry or contaminated environments, including markets where live poultry are sold. Influenza A(H7N9) viruses continue to be detected in poultry and their environments in the areas where human cases are occurring. There have been no major genetic changes in the viruses isolated from recent patients compared to previously-isolated viruses from humans. Information to date suggests that these viruses do not transmit easily from human to human.

Overall public health risk assessment for avian influenza A(H7N9) viruses: Overall, the public health risk from avian influenza A(H7N9) viruses has not changed since the assessment of 23 February 2015.

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\(^1\) The total number of fatal cases is published on a monthly basis by China National Health and Family Planning Commission.
Please find the most updated information at
http://www.who.int/influenza/human_animal_interface/avian_influenza/archive/en/ and
http://www.who.int/influenza/vaccines/virus/201502_zoonotic_vaccinevirusupdate.pdf?ua=1

Figure 2: Epidemiological curve of avian influenza A(H7N9) cases in humans by week of onset.

![Epidemiological curve of avian influenza A(H7N9) cases in humans by week of onset.](image)

Links:
WHO Human-Animal Interface web page

Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO

Avian Influenza A(H7N9) Information

WHO Avian Influenza Food Safety Issues
http://www.who.int/foodsafety/areas_work/zoonose/avian/en/$
World Organisation of Animal Health (OIE) web page: Web portal on Avian Influenza

Food and Agriculture Organization of the UN (FAO) webpage: Avian Influenza

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http://www.offlu.net/index.html