Human infection with avian influenza A(H5) viruses

Human infection with avian influenza A(H5N1) virus

From 3 to 9 March 2017, no new cases of human infection with avian influenza A(H5N1) virus were reported to WHO in the Western Pacific Region.

From January 2003 to 16 February 2017, a total of 238 cases of human infection with avian influenza A(H5N1) virus were reported from four countries within the Western Pacific Region (Table 1). The last case was reported on 14 January 2016. Of these cases, 134 were fatal, resulting in a case fatality rate (CFR) of 56%.

Table 1: Cumulative number laboratory-confirmed human cases (C) and deaths (D) of influenza A(H5N1) virus infection reported to WHO (January 2003 to 03 February 2017), Western Pacific Region.

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<td>C  D</td>
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<tr>
<td>Cambodia</td>
<td>10  8</td>
<td>8  8</td>
<td>3  3</td>
<td>26 14</td>
<td>9  4</td>
<td>0  0</td>
<td>0  0</td>
<td>0  0</td>
<td>56 37</td>
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<td>China</td>
<td>40 26</td>
<td>1  1</td>
<td>2  1</td>
<td>2  2</td>
<td>2  0</td>
<td>6  1</td>
<td>0  0</td>
<td>0  0</td>
<td>53 31</td>
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<td>Lao PDR</td>
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<td>2  2</td>
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<td>Viet Nam</td>
<td>119 59</td>
<td>0  0</td>
<td>4  2</td>
<td>2  1</td>
<td>2  2</td>
<td>0  0</td>
<td>0  0</td>
<td>0  0</td>
<td>127 64</td>
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<tr>
<td>Total</td>
<td>171 95</td>
<td>9  9</td>
<td>6  6</td>
<td>30 17</td>
<td>13  6</td>
<td>6  6</td>
<td>1  0</td>
<td>0  0</td>
<td>238 134</td>
</tr>
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</table>

From January 2003 to 16 February 2017, there were 856 cases of human infection with avian influenza A(H5N1) virus reported from 16 countries worldwide. Of these cases, 452 were fatal, resulting in a CFR of 52.8%.

Human infection with avian influenza A(H5N6) virus

From 3 to 9 March 2017, no new cases of human infection with avian influenza A(H5N6) virus were reported to WHO in the Western Pacific Region. The last case was reported on 1 December 2016 (source: http://www.who.int/csr/don/07-december-2016-ah5n6-china/en/). A total of 16 laboratory-confirmed cases of human infection with influenza A(H5N6) virus, including six deaths, have been reported to WHO from China since 2014.

Public health risk assessment for human infection with 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 are not 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 is 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.

For more information on confirmed cases of human infection with avian influenza A(H5) virus reported to WHO, visit: http://www.who.int/influenza/human_animal_interface/en/
Human infection with avian influenza A(H7N9) virus in China

From 3 to 9 March 2017, no new cases of human infection with avian influenza A(H7N9) virus were published in Disease Outbreak News. The most recent notification of human infection with avian influenza A(H7N9) virus in the Western Pacific Region that has been published through Disease Outbreak News was notified to WHO on 14 February 2017. (Source: http://www.who.int/csr/don/20-february-2017-ah7n9-china/en/). As of 9 March, a total of 1,223 laboratory-confirmed human infections with avian influenza A(H7N9) virus have been reported to WHO and published in Disease Outbreak News since early 2013.

On 18 February 2017, the National Health and Family Planning Commission of China (NHFPC) reported to WHO the results of genetic sequencing of virus isolates from 2 previously reported cases of human infection with A(H7N9) virus from Guangdong province. Insertions at the cleavage site of the HA gene suggestive of being highly pathogenic to poultry was confirmed by the Chinese National Influenza Centre of the Chinese Centre for Disease Control and Prevention (China CDC).

On 2 March 2017, WHO issued a summary for antigenic and genetic characteristics of zoonotic influenza viruses and candidate vaccine viruses (CVV) developed for potential use in human vaccines. Recent A(H7N9) viruses belong to the Yangtze River Delta (YRD) or Pearl River Delta (PRD) HA lineages. Recent viruses of the YRD lineage reacted less well with post infection ferret antiserum raised against the available A/Anhui/1/2013 and A/Shanghai/2/2013-derived CVVs. A new A/Hunan/2650/2016-like CVV was proposed. Additionally, A(H7N9) viruses with genetic markers of high pathogenicity have been detected in humans, poultry and environmental samples from live poultry markets. The HPAI A(H7N9) viruses were genetically and antigenically distinct from other A(H7N9) viruses including A/Hunan/2650/2016 and the current CVVs. Therefore, a new CVV derived from an A/Guangdong/17SF003/2016-like virus (HPAI) was proposed.

(Source: http://www.who.int/influenza/vaccines/virus/characteristics_virus_vaccines/en/)

WHO is continuing to assess the epidemiological situation and will conduct further risk assessments with new information. Overall, the public health risk from avian influenza A(H7N9) viruses has not changed.

Further sporadic human cases of avian influenza A(H7N9) virus infection are expected in affected and possibly neighbouring areas. Should human cases from affected areas travel internationally, their infection may be detected in another country during or after arrival. If this were to occur, community level spread is considered unlikely as the virus does not have the ability to transmit easily among humans.

To date, there has been no evidence of sustained human-to-human transmission of avian influenza A(H7N9) virus. Human infections with the A(H7N9) virus are unusual and need to be monitored closely in order to identify changes in the virus and/or its transmission behaviour to humans as it may have a serious public health impact.

For more information on human infection with avian influenza A(H7N9) virus reported to WHO:

For more information on risk assessment for avian influenza A(H7N9) virus:
Animal infection with avian influenza virus

Between 3 and 9 March 2017, an outbreak of highly pathogenic avian influenza A(h7N9) virus in poultry was reported in Kelantan, Malaysia.

Highly pathogenic avian influenza (HPAI) A(H5N1) virus in Malaysia

On 8 March 2017, Malaysia reported to OIE of an outbreak of A(H5N1) virus in poultry in Kelantan, Malaysia.


For more information on animal infection with avian influenza viruses with potential public health impact, visit:

- World Organization of Animal Health (OIE) web page:

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

- OFFLU: http://www.offlu.net/

Latest information on human seasonal influenza

For the latest information on the seasonal influenza situation in the Western Pacific Region, visit:
http://www.wpro.who.int/emerging_diseases/influenza_biweekly_20170307.pdf?ua=1

For latest information on the global seasonal influenza situation, visit:

Epidemiology:
http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance

Virology:
http://www.who.int/influenza/gisrs_laboratory/updates/summaryreport

Other updates

WHO Risk Assessment of human infection with avian influenza A(H7N9) virus
14 February 2017 posted on WHO website

Recommended composition of influenza virus vaccines for use in the 2017-2018 northern hemisphere influenza season. 2 March 2017

Recommended composition of influenza virus vaccines for use in the 2017 southern hemisphere influenza season. 29 September 2016
Antigenic and genetic characteristics of zoonotic influenza viruses and candidate vaccine viruses developed for potential use in human vaccines—2 March 2017
http://www.who.int/influenza/vaccines/virus/characteristics_virus_vaccines/en/

H7N9 situation update (FAO) —8 March 2017