Influenza at the human-animal interface

Summary and assessment as of 6 February 2012

**Human infections with avian influenza H5N1 and associated animal health events**

From 2003 through 06 February 2012, 583 laboratory-confirmed human cases with avian influenza A(H5N1) virus infection have been officially reported to WHO, of which 344 died (CFR: 59.0%), from 15 countries.

Between 9 January 2012 and 6 February 2012, 8 new human cases have been reported from Cambodia (1), Indonesia (2), Egypt (2), China (1) and Vietnam (2).

According to FAO, H5N1 viruses are thought to be circulating endemically in poultry in China, Egypt, Indonesia, Viet Nam, Bangladesh and India. In Cambodia, sporadic reintroduction into poultry populations is thought to occur\(^1\). The epidemiologic curve of recent human cases (Figure 1) follows the same pattern seen in previous years, with larger numbers of cases in the winter months, decreasing towards summer in the northern hemisphere. This curve follows the seasonal curve of outbreaks in birds.

\(^1\) Approaches to Controlling, Preventing and Eliminating H5N1 Highly Pathogenic Avian Influenza in Endemic Countries. Rome, United Nations Food and Agriculture Organization, 2011
With the exception of the 2 epidemiologically linked cases in Indonesia, all other reported cases were sporadic. The cases in Indonesia are likely to have had common exposure and no further community spread was reported.

Based on assessment of most recent antigenic, genetic and epidemiological data, no new candidate vaccine viruses of H5 have been proposed during the last WHO vaccine composition meeting 20-22 Feb 2012.²

<table>
<thead>
<tr>
<th>Country</th>
<th>Province</th>
<th>Age (y)</th>
<th>Sex</th>
<th>Date of onset/ detection*</th>
<th>Date of hospitalisation</th>
<th>Start date Oseltamivir treatment</th>
<th>Date of death</th>
<th>Exposure to</th>
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<tbody>
<tr>
<td>Cambodia</td>
<td>Banteay Beanchey</td>
<td>2</td>
<td>M</td>
<td>03/01/2012</td>
<td>09/01/2012</td>
<td>NA</td>
<td>18/01/2012</td>
<td>sick poultry in village</td>
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<td>Indonesia</td>
<td>Jakarta</td>
<td>23</td>
<td>M</td>
<td>31/12/2012</td>
<td>06/01/2012</td>
<td>NA</td>
<td>07/01/2012</td>
<td>pigeons</td>
</tr>
<tr>
<td>Egypt</td>
<td>Cairo</td>
<td>2</td>
<td>F</td>
<td>30/01/2012*</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>the 23-y-old male confirmed case and pigeons</td>
</tr>
<tr>
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<td>Fayoum</td>
<td>31</td>
<td>M</td>
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<td>M</td>
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<tr>
<td>Vietnam</td>
<td>Soc Trang</td>
<td>26</td>
<td>F</td>
<td>23/01/2012</td>
<td>25/01/2012</td>
<td>27/01/2012</td>
<td>28/01/2012</td>
<td>slaughter of sick chicken</td>
</tr>
</tbody>
</table>

NA: not applicable or not available

Table 1: laboratory-confirmed human cases of avian influenza A(H5N1) virus infection (9 Jan - 6 Feb 2012)

Overall public health risk assessment: an increase in poultry outbreaks and sporadic human cases and small clusters would be expected at this time of year. No further spread has apparently occurred; therefore the risk to public health has not changed from what would be expected this time of year.

2. Human infections with other animal influenza viruses

A human case of influenza A(H3N2)v infection was retrospectively reported by Vietnam. The case was sampled on 18 April 2011 as part of influenza-like-illness (ILI) sentinel surveillance. The family raised animals including swine and poultry. The retrospective epidemiological investigation did not identify additional human cases.

Full genetic sequencing of RNA isolated from the clinical sample indicated that the virus was of A(H3N2) subtype; HA and NA genes of the virus are closely related to influenza A (H3N2) viruses that were circulating in swine in Asia in 2010-2011. Human infections with variant influenza viruses are rarely detected and this influenza A(H3N2)v virus from Viet Nam is different from the influenza A(H3N2)v viruses detected in humans in 2011 in the USA.

² http://www.who.int/influenza/vaccines/virus/201202_h5_h9_vaccinevirusupdate.pdf

Relevant Links:

WHO Table: Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO: http://www.who.int/influenza/human_animal_interface/EN_GIP_LatestCumulativeNumberH5N1cases.pdf


