Influenza at the human-animal interface

Summary and assessment as of 25 June 2012

Human infections with avian influenza A(H5N1) virus and associated animal health events

From 2003 through 25 June 2012, 606 laboratory-confirmed human cases with avian influenza A(H5N1) virus infection have been officially reported to WHO from 15 countries, of which 357 died. Since January 2012, 28 human cases of influenza A(H5N1) virus infection have been reported to WHO.

Since the last update 1 new human case was reported from Egypt. No further cases linked to the confirmed case were reported. The case had exposure to backyard poultry. (see table 1)

Table 1: laboratory-confirmed human cases with avian influenza A(H5N1) virus infection reported between 4 and 25 June 2012

Country	Province	Age (y)	Sex	Date of onset	Date of Hospitalisation	Oseltamivir treatment Start date	Date of discharge	Exposure to
Egypt	Kfr Elsheikh governorate	4	F	25/04/2012	26/04/2012	26/04/2012	7/05/2012	Backyard poultry

In 2012, Egypt reported smaller number of cases with the virus infection (10 cases) for the first 6 months of the year comparing to the previous years (30 cases in 2009, 19 cases in 2010, 31 cases in 2011). The median age of reported cases has shifted upwards. Children under the age of 10 y old were overrepresented during 2009 relative to older age groups, this has decreased during recent years. It is not clear if this is due to differences in exposure, susceptibility for infection, health seeking behaviour or testing practices. Children under the age of 10 y old seem to have a better survival rate than older age groups as was noted previously[1]. (see table 2)

Table 2: laboratory –confirmed human cases of avian influenza A(H5N1) virus infection in Egypt 2009-2012

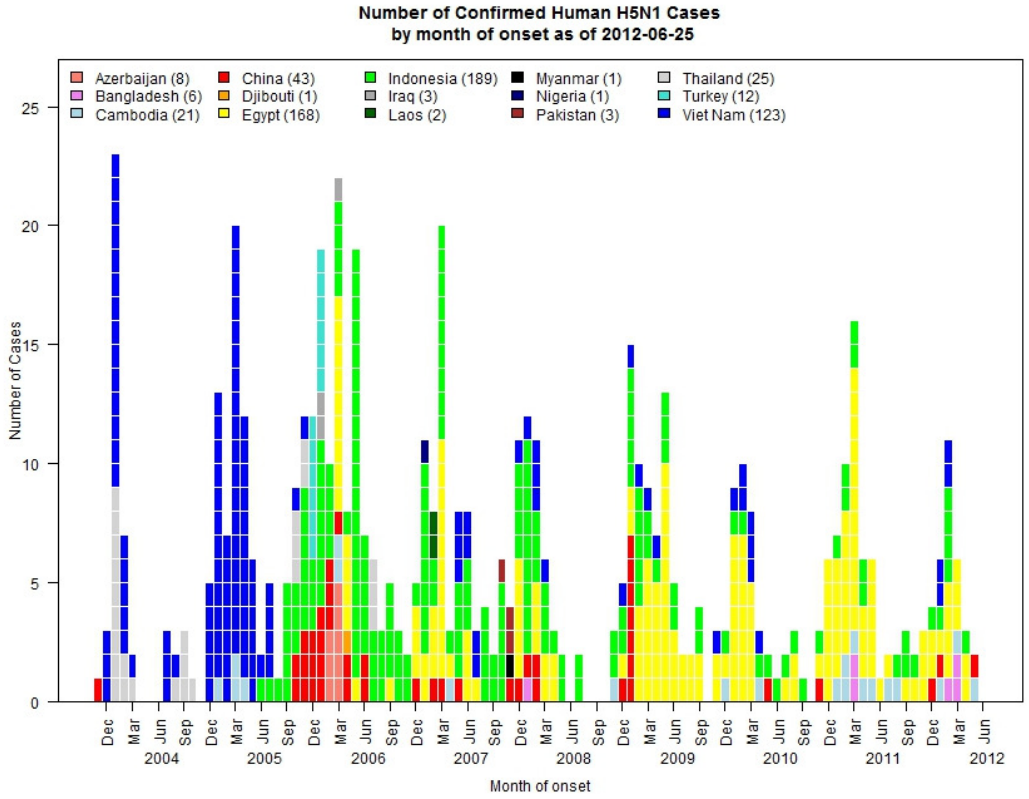
Year of onset	2009	2010	2011	2012
Median age	3y	27y	21y	31.5y
Number of cases	39	29	39	10*
Proportion of <10 y old	80%	20%	36%	30%
CFR overall	10%	45%	38%	50%
CFR in cases <10 y old	6%	16%	0	0

* first 6 months of the year

[1] http://www.who.int/wer/2012/wer8713/en/index.html

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[2]. 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.

Figure 1: Epidemiological curve of avian influenza H5N1 cases in humans by country and month of onset



Overall public health risk assessment: Based on previous years observations, a decrease in reported events in poultry is expected for this time of year. One sporadic case reported this month in the country with known influenza A(H5N1) virus circulation in poultry is within the expected range. From the data available there is no risk of onward sustained human to human transmission.

All human infections with non-human influenza viruses as such are reportable to WHO under IHR (2005). More information on influenza at the human-animal interface is available from WHO (http://www.who.int/influenza/human_animal_interface/en/); additional information on influenza in animals is available from OIE (www.oie.int/animal-health-in-the-world/web-portal-on-avian-influenza/), FAO (www.fao.org/avianflu/en/index.html), and OFFLU (http://www.offlu.net/index.html).

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

[2] Approaches to Controlling, Preventing and Eliminating H5N1 Highly Pathogenic Avian Influenza in Endemic Countries. Rome, United Nations Food and Agriculture Organization, 2011

WHO Table: H5N1 avian influenza: timeline of major events
http://www.who.int/influenza/human_animal_interface/avian_influenza/H5N1_avian_influenza_update.pdf

WHO Archive: Avian Influenza situation updates:
http://www.who.int/influenza/human_animal_interface/avian_influenza/archive/en/index.html

World Organisation of Animal Health (OIE) webpage: Web portal on Avian Influenza:
www.oie.int/animal-health-in-the-world/web-portal-on-avian-influenza/

Food and Agriculture Organization of the UN (FAO) webpage: Avian Influenza: www.fao.org/avianflu/en/index.html

Updated unified nomenclature system for the highly pathogenic H5N1 avian influenza viruses
http://www.who.int/influenza/gisrs_laboratory/h5n1_nomenclature/en/index.html