Influenza at the human-animal interface

Summary and assessment as of 15 February 2013

Human infection with avian influenza A(H5N1) viruses and associated animal health events

From 2003 through 15 February 2013, 620 laboratory-confirmed human cases with avian influenza A(H5N1) virus infection have been officially reported to WHO from 15 countries, of which 367 died. Since the last update on 16 January 2013, ten new laboratory-confirmed human cases with influenza A(H5N1) virus infection were reported to WHO.

Since 16 January, Cambodia reported seven new human cases with influenza A(H5N1) virus infection including six fatal cases. These cases come from four provinces all located in southern Cambodia. These cases do not seem to be linked epidemiologically, and most had contact with sick poultry in the village. Enhanced surveillance has been put in place and did not detect additional cases linked to these cases. Current evidence does not support human-to-human transmission. It has been suggested that the A(H5N1) virus is endemic in poultry in Cambodia[1], and that there is more poultry and human movement around the Lunar New Year. As such, additional sporadic human cases might be expected.

Egypt has reported one new human case with influenza A(H5N1) virus infection in Behera Governorate. The A(H5N1) virus is also endemic in poultry in some areas of Egypt, and additional sporadic human cases are possible.

On 10 February 2013, China reported 2 new human cases of influenza A(H5N1) virus infection. Both remain in critical condition. The cases come from the same province but do not seem to be epidemiologically linked. Neither had documented contact with sick or dead poultry. Contact tracing and follow up is on-going but no additional cases have been identified. The last official report of A(H5N1) in poultry in mainland China was from Guangdong Province in September 2012.

[1] Sorn, S., et al. Dynamic of H5N1 virus in Cambodia and emergence of a novel endemic sub-clade. Infect. Genet. Evol. (2012), http://dx.doi.org/10.1016/j.meegid.2012.05.013 http://www.sciencedirect.com/science/article/pii/S1567134812002158

Table 1: Laboratory-confirmed human cases of avian influenza A(H5N1) virus infection (16 January - 8 February 2013)

Country	Province	Age (y)	Sex	Date of onset	Date of Hospitalisation	Oseltamivir treatment Start date	Date of death	Exposure to
Cambodia	Phnom Penh	8 months	M	8 /1/ 2013	NA		NA	Poultry
	Takeo	15	F	11 /1/ 2013	17/1/ 2013		21/1/ 2013	Sick and dead poultry
	Kampong Speu	35	M	13/1/2013	21/1/2013		21/1/2013	Sick and dead poultry
	Kampong Speu	18 months	F	13/1/2013	17/1/2013		28/1/2013	Sick and dead poultry
	Kampot	9	F	19/1/2013	27/1/2013		28/1/2013	Sick and dead poultry
	Takeo	5	F	25/1/2013	31/1/2013		7/2/2013	Sick and dead poultry
	Kampot	3	F	3/2/2013	6/2/2013		13/2/2013	Sick and dead poultry
China	Guizhou	21	F	2/2/2013				No exposure documented
	Guizhou	31	M	3/2/2013	8/2/2013			No exposure documented
Egypt	Behera	36	F	16/1/2012	20/1/2013	20/1/2013	26/1/2013	Sick poultry

NA: not applicable or not available

Public health risk assessment of avian influenza A(H5N1) viruses: Any time influenza viruses are circulating in poultry, sporadic infections or small clusters of human cases are possible especially in people exposed to infected poultry kept in households. However, currently, this H5N1 virus does not appear to transmit easily among people and therefore the risk of community level spread of this virus remains low. Therefore, the public health risk associated with this virus remains unchanged.

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

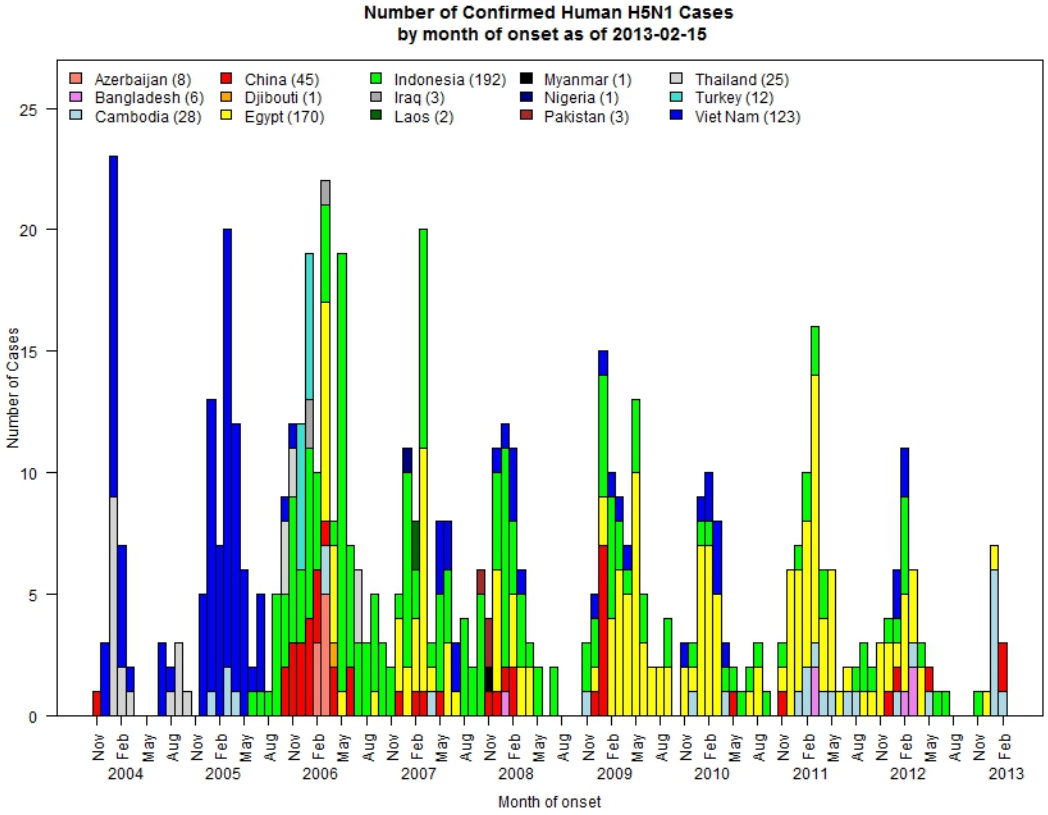
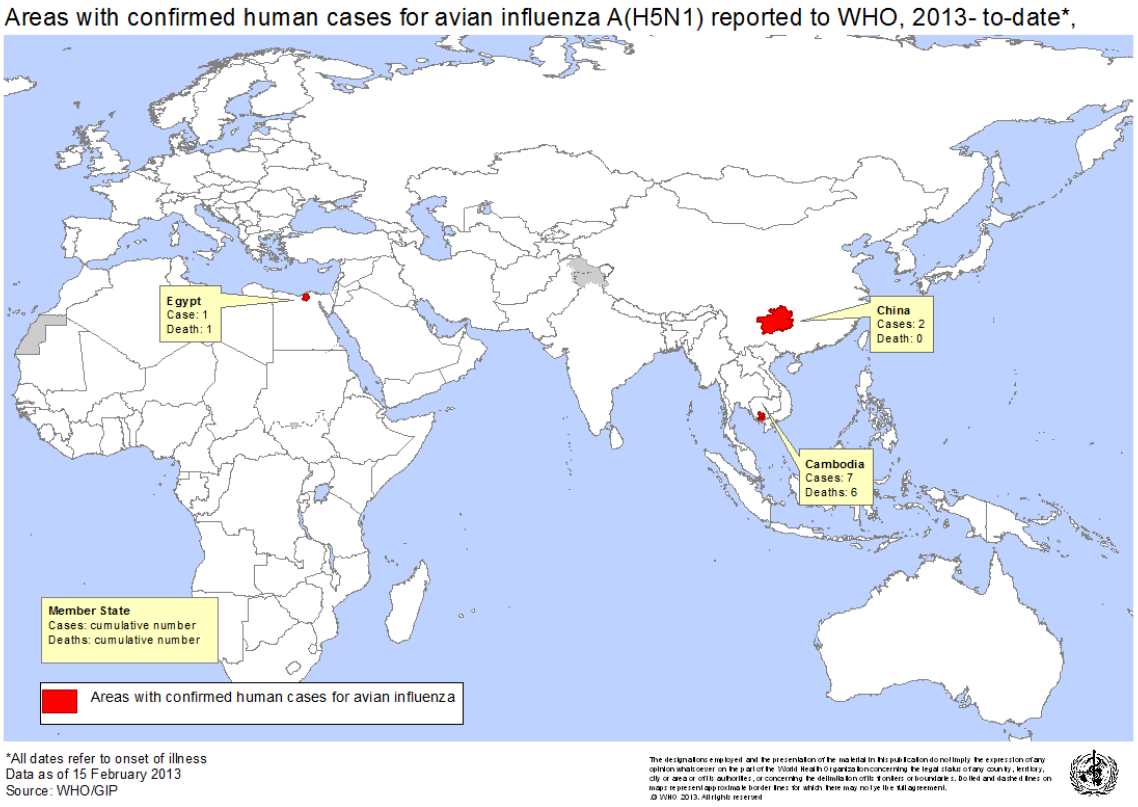


Fig 2: Map of avian influenza H5N1 cases in humans for 2013



Human infection with other non-human influenza viruses

A(H3N2) variant virus infection

No new human cases of influenza A(H3N2)v infection were reported from the United States of America (USA) or elsewhere.

Overall public health risk assessment of the influenza A(H3N2)v viruses: Further human cases and small clusters may be expected as this virus is circulating in the swine population in the USA. Continued close monitoring of the situation and the virus is warranted.

Animal outbreaks with high pathogenic avian influenza viruses with potential public health impact

Overall, official reports of animal influenza outbreaks have increased over the past months (http://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI). This seasonal pattern is expected with the onset of winter in the northern hemisphere.

Due to the constant evolving nature of influenza viruses, WHO continues to stress the importance of global monitoring of influenza viruses in animals and people and recommends all Member States to strengthen routine influenza surveillance. All human infections with non-seasonal influenza viruses are reportable to WHO under IHR (2005).

Relevant Links:

WHO human-animal interface web page
http://www.who.int/influenza/human_animal_interface/en/

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

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

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

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

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