

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

### Human infection with avian influenza A(H5N1) virus

Between 27 December 2017 and 4 January 2018, **no new cases** of human infection with avian influenza A(H5N1) virus were reported to WHO in the Western Pacific Region.

As of 4 January 2018, a total of 238 cases of human infection with avian influenza A(H5N1) virus were reported from four countries within the Western Pacific Region since January 2003 (Table 1). Of these cases, 134 were fatal, resulting in a case fatality rate (CFR) of 56%. The last case was reported from China and its onset date was 27 December 2015 (1 case, no death).

**Table 1: Cumulative number laboratory-confirmed human cases (C) and deaths (D) of influenza A(H5N1) virus infection reported to WHO, by date of onset (January 2003 to 19 October 2017), Western Pacific Region.**

Country	2003-2010		2011		2012		2013		2014		2015		2016		2017		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Cambodia	10	8	8	8	3	3	26	14	9	4	0	0	0	0	0	0	56	37
China	40	26	1	1	2	1	2	2	2	0	6	1	0	0	0	0	53	31
Lao PDR	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Viet Nam	119	59	0	0	4	2	2	1	2	2	0	0	0	0	0	0	127	64
<b>Total</b>	<b>171</b>	<b>95</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>6</b>	<b>30</b>	<b>17</b>	<b>13</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>238</b>	<b>134</b>

Globally, from January 2003 to 7 December 2017, there were 860 cases of human infection with avian influenza A(H5N1) virus reported from 16 countries worldwide. Of these 860 cases, 454 were fatal (CFR of 52.8%). The last case was reported from Indonesia on 26 September 2017.

(Source: [http://www.who.int/influenza/human\\_animal\\_interface/HAI\\_Risk\\_Assessment/en/](http://www.who.int/influenza/human_animal_interface/HAI_Risk_Assessment/en/))

### Human infection with avian influenza A(H5N6) virus

Between 27 December 2017 and 4 January 2018, **no new cases** of human infection with avian influenza A(H5N6) virus were reported to WHO in the Western Pacific Region. The onset date of the last reported case was 7 November 2017. To date, a total of 17 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 continued incidence of avian influenza due to existing and new influenza A(H5) viruses in poultry, there is a need to remain vigilant 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 continued to detect human cases and 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/](http://www.who.int/influenza/human_animal_interface/en/)

For information on monthly risk assessments on Avian Influenza, visit:

[http://www.who.int/influenza/human\\_animal\\_interface/HAI\\_Risk\\_Assessment/en/](http://www.who.int/influenza/human_animal_interface/HAI_Risk_Assessment/en/)

## Human infection with avian influenza A(H7N9) virus in China

Between 27 December 2017 and 4 January 2018, **no new cases** of human infection with avian influenza A(H7N9) virus were reported to WHO in the Western Pacific Region. The onset date of the last reported case was 21 November 2017. This was the first reported case of the 6<sup>th</sup> epidemic wave. As of 4 January 2018, a total of 1,565 laboratory-confirmed human infections with avian influenza A(H7N9) virus, including 40 two to three person clusters, have been reported to WHO since early 2013.

Between 27 December 2017 and 4 January 2018, China CDC has not reported any additional human cases with highly pathogenic avian influenza (HPAI) A(H7N9) virus, which have mutations in the hemagglutinin gene indicating a change to high pathogenicity in poultry. The total number of human cases with HPAI A(H7N9) virus during the 5<sup>th</sup> wave remains at 31. These 31 cases were from Fujian, Guangdong, Guangxi, Hebei, Henan, Hunan, Shaanxi, and Taiwan (the case had travel history to Guangdong). Since October 2017, there has been one case of human infection with HPAI A(H7N9) virus, in a person from Yunnan. No increased transmissibility or virulence of the virus within human cases has been detected related to the HPAI A(H7N9) virus.

(source: <http://www.chinaivdc.cn/cnic/en/Surveillance/WeeklyReport/>)

WHO is continuing to assess the epidemiological situation and will conduct further risk assessments as new information becomes available. The number and geographical distribution of human infections with avian influenza A(H7N9) viruses in the fifth epidemic wave (since October 2016) is greater than previous waves.

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. However, 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 transmission behaviour to humans as this may have serious public health impacts.

*For more information on human infection with avian influenza A (H7N9) virus reported to WHO:*  
[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/en/](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/en/)

## Human infection with avian influenza A(H9N2) in China

Between 27 December 2017 and 4 January 2018, **no new cases** of human infection with avian influenza A(H9N2) virus were reported to WHO in the Western Pacific Region. The onset date of the last reported case was 27 November 2017. There have been five human cases of avian influenza A(H9N2) reported from China to WHO in 2017.

## Animal infection with avian influenza virus

Between 27 December 2017 and 4 January 2018, outbreaks in birds with avian influenza virus were reported in Cambodia, China and Republic of Korea.

### Highly pathogenic avian influenza A(H5N6) virus infection in poultry in Republic of Korea

On 28 December 2017, two outbreaks of avian influenza A(H5N6) at two duck farms in Jeollanam-Do province, Republic of Korea were notified to OIE. Among 27,236 susceptible birds, 268 died and the rest have been culled.

[http://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=25537](http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=25537)

### Highly pathogenic avian influenza A(H5N6) virus infection in a wild bird in Hong Kong SAR, China

On 29 December 2017, one wild bird case of avian influenza A(H5N6) in Hong Kong SAR, China was notified to OIE. A dead black-faced spoonbill was found on 21 December 2017. There are two poultry farms located within three kilometres of where the bird was found. No abnormalities or signs of avian influenza were found in the two poultry farms.

[http://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=25538](http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=25538)

### Highly pathogenic avian influenza A(H5N2) virus infection in poultry in Taiwan, China

On 29 December 2017, three outbreaks of avian influenza A(H5N2) at two duck and one chicken farms in Yunlin county, Taiwan, China were notified to OIE. Among 12,783 susceptible birds, 1,357 died and the rest have been culled.

[http://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=25533](http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=25533)

### Highly pathogenic avian influenza A(H5N1) virus infection in poultry in Cambodia

On 30 December 2017, an outbreak of highly pathogenic avian influenza A(H5N1) at a chicken farm in Kampong Cham province, Cambodia was notified to OIE. Among 342 susceptible birds, 189 died and the rest have been culled.

[http://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=25567](http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=25567)

### Highly pathogenic avian influenza A(H5N6) virus infection in poultry in Republic of Korea

On 30 December 2017, two outbreaks of avian influenza A(H5N6) at two duck farms in Jeollanam-Do province, Republic of Korea were notified to OIE. Among 58,000 susceptible birds, 12 died and the rest have been culled.

[http://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=25568](http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=25568)

### Highly pathogenic avian influenza A(H5N6) virus infection in poultry in Republic of Korea

On 3 January 2018, an outbreak of avian influenza A(H5N6) at a duck farm in Jeollanam-Do province, Republic of Korea was notified to OIE. All of the 8,300 susceptible birds have been culled.

[http://www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=25582](http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=25582)

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

- *World Organization of Animal Health (OIE) web page:*  
[http://www.oie.int/wahis\\_2/public/wahid.php/Diseaseinformation/WI](http://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI)  
and <http://www.oie.int/animal-health-in-the-world/update-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/>
- *EMPRES:* <http://www.fao.org/ag/againfo/programmes/en/empres.html>

## Other updates

WHO Risk Assessment of human infection with avian influenza A virus. 7 December 2017

[http://www.who.int/influenza/human\\_animal\\_interface/Influenza\\_Summary\\_IRA\\_HA\\_interface\\_12\\_07\\_2017.pdf?ua=1](http://www.who.int/influenza/human_animal_interface/Influenza_Summary_IRA_HA_interface_12_07_2017.pdf?ua=1)

Recommended composition of influenza virus vaccines for use in the 2018 southern hemisphere influenza season. 28 September 2017

[http://www.who.int/influenza/vaccines/virus/recommendations/2018\\_south/en/](http://www.who.int/influenza/vaccines/virus/recommendations/2018_south/en/)

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

[http://www.who.int/influenza/vaccines/virus/recommendations/2017\\_18\\_north/en/](http://www.who.int/influenza/vaccines/virus/recommendations/2017_18_north/en/)

Antigenic and genetic characteristics of zoonotic influenza viruses and candidate vaccine viruses developed for potential use in human vaccines. 28 September 2017

[http://www.who.int/influenza/vaccines/virus/characteristics\\_virus\\_vaccines/en/](http://www.who.int/influenza/vaccines/virus/characteristics_virus_vaccines/en/)

H7N9 situation update (FAO). 19 December 2017

[http://www.fao.org/ag/againfo/programmes/en/empres/h7n9/situation\\_update.html](http://www.fao.org/ag/againfo/programmes/en/empres/h7n9/situation_update.html)

TIPRA Frequently Asked Questions. March 2017

[http://www.who.int/influenza/areas\\_of\\_work/human\\_animal\\_interface/tipra\\_faqs/en/](http://www.who.int/influenza/areas_of_work/human_animal_interface/tipra_faqs/en/)