

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

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

From 16 to 22 December 2016, **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 22 December 2016, 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 22 December 2016), Western Pacific Region.**

Country	2003-2010		2011		2012		2013		2014		2015		2016		Total	
	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	56	37
China	40	26	1	1	2	1	2	2	2	0	6	1	0	0	53	31
Lao PDR	2	2	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	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>238</b>	<b>134</b>

From January 2003 to 22 December 2016, 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 16 to 22 December 2016, **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/](http://www.who.int/influenza/human_animal_interface/en/)

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

From 16 to 22 December 2016, seven additional human infections with avian influenza A(H7N9) virus were notified to WHO (source; <http://www.who.int/csr/don/19-december-2016-2-ah7n9-china/en/>, <http://www.who.int/csr/don/19-december-2016-1-ah7n9-china/en/>).

On 12 December 2016, the National Health and Family Planning Commission (NHFPC) of China reported six human infections with avian influenza A(H7N9) virus to WHO. Onset date of symptoms ranged from 6 to 20 November 2016. Cases ranged in age from 32 to 80 years with a median age of 61 years, and all cases are male. All cases were hospitalized and reported to be in severe condition. Five cases reported exposure to live poultry or live poultry markets. One case has no clear history of exposure to live poultry. Cases were reported from three (3) provinces; Jiangsu (4), Fujian (1) and Guangdong (1). No clusters of cases were reported.

On 14 December 2016, the Health Bureau, Macao Special Administrative Region (SAR), China reported a case of human infection with avian influenza A(H7N9) virus to WHO. The case is a 58-year old, asymptomatic male poultry vendor. On 13 December 2016, a batch of poultry from Guangdong province in China was found positive for the H7 antigen in a wholesale market in Macao SAR (China) during routine inspection. Following protocol, an epidemiological investigation commenced and two close human contacts of the infected poultry were identified, including a poultry vendor and driver. The vendor was referred to hospital for further investigation. He tested positive for avian influenza A(H7N9) by RT-PCR.

To date, a total of 807 laboratory-confirmed human infections with avian influenza A(H7N9) virus have been reported through IHR notification since early 2013.

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.

### Public health risk assessment for avian influenza A(H7N9) virus

On 23 February 2015, WHO conducted a public health risk assessment for avian influenza A(H7N9). This assessment found the overall public health risk from avian influenza A(H7N9) viruses has not changed since the previous assessment, published on 2 October 2014. 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:*

[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/en/](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/en/)

*For more information on risk assessment for avian influenza A(H7N9) virus:*

[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/RiskAssessment\\_H7N9\\_23Feb2015.pdf](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_23Feb2015.pdf)

## Animal infection with avian influenza virus

From 16 to 22 December 2016, **no new outbreaks** of animal infection with avian influenza virus from the Western Pacific Region were reported.

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/animal-health-in-the-world/web-portal-on-avian-influenza/>  
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/aq/aqainfo/programmes/en/empres.html>

## 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/en/index.html](http://www.wpro.who.int/emerging_diseases/Influenza/en/index.html)

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

- Epidemiology:  
[http://www.who.int/influenza/surveillance\\_monitoring/updates/latest\\_update\\_GIP\\_surveillance](http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance)
- Virology:  
[http://www.who.int/influenza/gisrs\\_laboratory/updates/summaryreport](http://www.who.int/influenza/gisrs_laboratory/updates/summaryreport)

## Other updates

*Influenza at the human-animal interface — Summary and assessment as of 21 November 2016*

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

*WHO Risk Assessment of human infection with avian influenza A(H7N9) virus*

23 February 2015 posted on WHO website

[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/RiskAssessment\\_H7N9\\_23Feb2015.pdf?ua=1](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_23Feb2015.pdf?ua=1)

*WHO Recommended composition of influenza virus vaccines for use in the 2016-2017 northern hemisphere influenza season—25 February 2016*

[http://www.who.int/influenza/vaccines/virus/recommendations/2016\\_17\\_north/en/](http://www.who.int/influenza/vaccines/virus/recommendations/2016_17_north/en/)

*WHO Recommended composition of influenza virus vaccines for use in the 2016-2017 southern hemisphere influenza season—29 September 2016*

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

*Antigenic and genetic characteristics of zoonotic influenza viruses and candidate vaccine viruses developed for potential use in human vaccines—29 September 2016*

[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) —30 November 2016*

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