

Human infection with avian influenza A(H5) viruses

Human infection with avian influenza A(H5N1) virus

Between 23 December 2022 and 5 January 2023, **no new cases** of human infection with avian influenza A(H5N1) virus were reported to WHO in the Western Pacific Region.

As of 5 January 2023, a total of 240 cases of human infection with avian influenza A(H5N1) virus have been reported from four countries within the Western Pacific Region since January 2003 (Table 1). Of these cases, 135 were fatal, resulting in a case fatality rate (CFR) of 56%. The last case was reported from China, with an onset date of 22 September 2022 and died on 18 October 2022. This is the first case of avian influenza A(H5N1) reported from China since 2015.

Table 1: Cumulative number of laboratory-confirmed human cases (C) and deaths (D) of influenza A(H5N1) virus infection reported to WHO, by date of onset (January 2003 to 5 January 2023), Western Pacific Region

Country	2003-2009		2010-2014		2015		2016		2017		2018		2019		2020		2021		2022		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Cambodia	9	7	47	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	37
China	38	25	9	5	6	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	54	32
Lao PDR	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	2
Viet Nam	112	57	15	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	127	64
Total	161	91	71	42	6	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	240	135

Globally, from January 2003 to 25 November 2022, there have been 868 cases of human infection with avian influenza A(H5N1) virus reported from 21 countries. Of these 868 cases, 457 were fatal (CFR of 53%) ([Source](#)).

Human infection with avian influenza A(H5N6) virus

Between 23 December 2022 and 5 January 2023, **one new case** of human infection with avian influenza A(H5N6) virus was notified to WHO in the Western Pacific Region.

The case is a 54-year-old male from Changsa, Hunan Province. Illness onset was on 2 November 2022 and the case was hospitalized on 5 November 2022 and in a critical condition at the time of reporting with pneumonia. No source of exposure to the virus has been identified at the time of reporting. No family members have developed symptoms at the time of reporting.

To date, a total of 83 laboratory-confirmed cases of human infection with influenza A(H5N6) virus including 33 deaths have been reported to WHO in the Western Pacific Region since 2014.

Human infection with avian influenza A(H5) virus

Between 23 December 2022 and 5 January 2023, **no new cases** of human infection with avian influenza A(H5) virus were notified to WHO in the Western Pacific Region. The last case was reported from Viet Nam, with an onset date of 22 October 2022 (one case, no death). This is the first case of avian influenza A(H5) reported from Viet Nam since 2014; NA subtype could not be determined.

Public health risk assessment for human infection with avian influenza A(H5) viruses

Whenever avian influenza viruses are circulating in poultry, there is a risk for sporadic infection and small clusters of human cases due to exposure to infected poultry or contaminated environments. Therefore, sporadic human cases are not unexpected.

The rise in numbers of reported human cases of A(H5N6) infection may reflect the continued circulation of the virus in birds, and enhanced surveillance system and diagnostic capacity as a direct outcome from the response to the COVID-19 pandemic. The zoonotic threat remains elevated due to the spread of the viruses among birds. However, the overall pandemic risk associated with A(H5) is considered not significantly changed in comparison to previous years. WHO recommends Member States to remain vigilant and consider mitigation steps to reduce human exposure to potentially infected birds to reduce risk of additional zoonotic infection.

For information on risk assessments on Avian Influenza, see: [monthly risk assessment summaries](#) and [Assessment of risk associated with highly pathogenic avian influenza A\(H5N6\) virus](#).

Human infection with avian influenza A(H3N8) virus

Between 23 December 2022 and 5 January 2023, **no new cases** of human infection with avian influenza A(H3N8) virus were reported to WHO in the Western Pacific Region. To date, a total of 2 laboratory-confirmed cases of human infection with influenza A(H3N8) virus with no deaths have been reported to WHO in the Western Pacific Region.

Human infection with avian influenza A(H7N4) virus in China

Between 23 December 2022 and 5 January 2023, **no new cases** of human infection with avian influenza A(H7N4) virus were reported to WHO in the Western Pacific Region. To date, only one laboratory-confirmed case of human infection with influenza A(H7N4) virus has been reported to WHO. This case was reported from China on 14 February 2018.

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

Between 23 December 2022 and 5 January 2023, **no new cases** of human infection with avian influenza A(H7N9) virus were reported to WHO in the Western Pacific Region. To date, a total of 1,568 laboratory-confirmed human infections with avian influenza A(H7N9) virus including 616 fatal cases (CFR: 39%) have been reported to WHO since early 2013. The last case of human infection with avian influenza A(H7N9) reported to WHO in the Western Pacific Region was in 2019.

Of the 1,568 human infections with avian influenza A(H7N9), 33 have reported mutations in the hemagglutinin gene indicating a change to high pathogenicity in poultry. These 33 cases were from Taiwan, China (one case had travel history to Guangdong), Guangxi, Guangdong, Hunan, Shaanxi, Hebei, Henan, Fujian, Yunnan, and Inner Mongolia. No increased transmissibility or virulence of the virus within human cases has been detected related to the HPAI A(H7N9) virus.

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 (1 October 2016 to 30 September 2017) were greater than previous waves and the subsequent 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 is 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.

Human infection with avian influenza A(H9N2) virus

Between 23 December 2022 and 5 January 2023, **three new cases** of human infection with avian influenza A(H9N2) were reported to WHO in the Western Pacific Region.

The first case is a 58-year-old male farmer from Wugang, Hunan province with onset of illness on 19 October 2022. At the time of reporting, the symptoms were severe, and the case was hospitalized on 19 October 2022. The case had exposure to live poultry market. There have been no reported cases in the rest of the family.

The second case is a 5-year-old female from Dingxi, Gansu Province with onset of illness on 23 October 2022. At the time of reporting, the symptoms were reported to be mild. The source of exposure to the virus remains unknown. There have been no reported cases in the rest of the family.

The third case is a 3-year-old male from Hainan, Anhui Province with onset of illness on 13 November 2022. At the time of reporting, the symptoms were reported to be mild. The case had exposure to live poultry market. There have been no reported cases in the rest of the family.

To date, a total of 82 cases of human infection with avian influenza A(H9N2) including two deaths (both with underlying conditions) have been reported to WHO in the Western Pacific Region since December 2015. Of these, 80 were reported from China and two were reported from Cambodia. The last case was reported from China, with an onset date of 20 September 2022 and has since recovered.

Human infection with avian influenza A(H10N3) virus

Between 23 December 2022 and 5 January 2023, **no new cases** of human infection with avian influenza A(H10N3) virus were reported to WHO in the Western Pacific Region. To date, two cases of avian influenza A(H10N3) virus has been reported globally.

Most previously reported human infections with avian influenza viruses were due to exposure to infected poultry or contaminated environments. Since avian influenza viruses, including avian influenza A(H10N3) viruses, continue to be detected in poultry populations, further sporadic human cases could be detected in the future. Currently available epidemiologic information suggests that the avian influenza A(H10N3) virus has not acquired the ability for sustained human-to-human transmission, thus the likelihood of spread among human is low.

Animal infection with avian influenza virus

Between 23 December 2022 and 5 January 2023, there has been one **new outbreak** of high pathogenicity avian influenza among birds reported to WOA from the Western Pacific Region. On 23 December 2022 highly pathogenic avian influenza H5 (N untyped) was detected in an Eastern Buzzard (WILD) in Seiro Town, Niigata, Japan. Surveillance was initiated within and outside of the restriction zone and official disposal of carcasses (Source).

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

- World Organization for Animal Health (WOAH) web page: [Weekly disease information and Latest report on Avian Influenza](#)
- [Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases \(EMPRES\)](#)
- [FAO Global Animal Disease Information System \(EMPRES-i\)](#)

Other updates

- [Influenza at the human-animal interface summary and assessment](#), 11 November 2022
- [WHO issues updated influenza vaccines position paper](#) 1 June 2022
- [WHO SAGE Seasonal Influenza Vaccination Recommendations during the COVID-19 Pandemic Interim guidance](#), 20 September 2020
- [Recommended composition of influenza virus vaccines for use in the 2022-2023 northern hemisphere influenza season](#) 25 February 2022
- [Recommended composition of influenza virus vaccines for use in the 2023 southern hemisphere influenza season](#) 23 September 2022