Human infection with avian influenza A(H5) viruses

Human infection with avian influenza A(H5N1) virus

Between 24 November and 30 November 2023, two new cases of human infection with avian influenza A(H5N1) virus from Kampot Province, Cambodia were reported to WHO in the Western Pacific Region.

The first case was a 21-year-old female. She developed symptoms on 19 November and passed away on 26 November. The second case was a four-year-old female. She developed symptoms on 23 November and was in isolation in the respiratory ward undergoing treatment at the time of reporting. Both cases had exposure to sick and dead poultry in their village. An epidemiological investigation did not reveal any epidemiological link between the two cases, no evidence of close contact between them has been established, other than residing in the same village. (More information: Disease Outbreak News, 29 November 2023).

From 1 January 2003 to 1 November 2023, a total of 246 cases of human infection with avian influenza A(H5N1) virus have been reported from four countries within the Western Pacific Region (Table 1). Of these cases, 138 were fatal, resulting in a case fatality rate (CFR) of 56%. The last cases in the Western Pacific Region were reported from Cambodia on 24 and 25 November 2023.

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 (1 January 2003 to 1 November 2023), Western Pacific Region

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NB: This table is updated on a monthly basis following the updates from the Source

Globally, from 1 January 2003 to 1 November 2023, 880 cases of human infection with avian influenza A(H5N1) virus were reported from 23 countries. Of these 880 cases, 460 were fatal (CFR of 52%) (Source).

Human infection with avian influenza A(H5N6) virus

Between 24 November and 30 November 2023, no new case of human infection with avian influenza A(H5N6) virus was reported to WHO in the Western Pacific Region. The last case was reported from Chongqing Municipality in Southwest China, with an onset date of 5 August 2023.

To date, a total of 88 laboratory-confirmed cases of human infection with influenza A(H5N6) virus including 34 deaths (CFR 39 %) have been reported to WHO in the Western Pacific Region since 2014.

Human infection with avian influenza A(H5) virus

Between 24 November and 30 November 2023, no new case of human infection with avian influenza A(H5) virus was reported 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 the number 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 of 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 that Member States remain vigilant and consider mitigation steps to reduce human exposure to potentially infected birds to reduce the 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 24 November and 30 November 2023, no new case of human infection with avian influenza A(H3N8) virus was reported to WHO in the Western Pacific Region. The last case was reported from China with an onset of illness of 22 February 2023. To date, a total of three laboratory-confirmed cases of human infection with influenza A(H3N8) virus with one death have been reported to WHO in the Western Pacific Region.

Human infection with avian influenza A(H7N4) virus in China
Between 24 November and 30 November 2023, no new case of human infection with avian influenza A(H7N4) virus was 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 24 November and 30 November 2023, no new case of human infection with avian influenza A(H7N9) virus was reported to WHO in the Western Pacific Region. To date, a total of 1568 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 1568 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 a 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 related to the HPAI A(H7N9) virus has been detected.

Human infection with avian influenza A(H9N2) virus
Between 24 November and 30 November 2023, no new case of human infection with avian influenza A(H9N2) virus was reported to WHO in the Western Pacific Region. To date, a total of 92 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, 90 were reported from China and two were reported from Cambodia.

**Human infection with avian influenza A(H10N3) virus**

Between 24 November and 30 November 2023, no new case of human infection with avian influenza A(H10N3) virus was reported to WHO in the Western Pacific Region. To date, two cases of avian influenza A(H10N3) virus have been reported globally. The last case was reported from Zhejiang, China with an onset date of 11 June 2022.

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 humans is low.

**Animal infection with avian influenza virus**

Three reports were reported to the World Organization for Animal Health WOAH from the Western Pacific Region. On 27 November 2023, new outbreaks of highly pathogenic avian influenza A(H5N1) involving 14 wild birds were reported in Japan. In total, there have been 19 wild birds reported since 4 October 2023 (source). On 28 November 2023, one outbreak of highly pathogenic avian influenza A(H5N1) involving 322 domestic birds at poultry backyard farms in Kampot Province, Cambodia was reported (source). In addition, two new outbreaks of highly pathogenic avian influenza A(H5N1) involving 110,265 domestic birds at poultry farms in Japan were reported on 28 November 2023 (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. 1 November 2023
- Assessment of risk associated with recent influenza A(H5N1) clade 2.3.4.4b viruses. 21 December 2022
- Recommended composition of influenza virus vaccines for use in the 2023 southern hemisphere influenza season. 23 September 2022
- Recommended composition of influenza virus vaccines for use in the 2024 southern hemisphere influenza season. 29 September 2023
- WHO issues updated influenza vaccines position paper. 1 June 2022
- Recommended composition of influenza virus vaccines for use in the 2023-2024 northern hemisphere influenza season. 24 February 2023
- WHO SAGE Seasonal Influenza Vaccination Recommendations during the COVID-19 Pandemic Interim guidance. 20 September 2020