

OFFLU H3N8 TECHNICAL STATEMENT

June 2022

Chinese health authorities have reported the first two human infections with A(H3N8) influenza virus in Henan¹ and Hunan Provinces on the 25th April 2022 and 19th May 2022 respectively. These infections are not epidemiologically linked, are a result of separate bird to human transmission events and have been detected due to the strong human surveillance capacities of the local governments.

Despite low pathogenic H3N8 viruses being commonly detected by active surveillance in wild birds there is relatively little information on their current circulation in wild birds and poultry as LPAI viruses are not subject to mandatory reporting and tend not to be associated with disease. Each of the two reported human infections is from different avian-origin reassortants with internal gene segments from Eurasian-lineage H9N2 viruses. This genetic composition has not yet been reported in wild birds nor poultry, however, other avian H3N8 viruses have been detected in live poultry markets in multiple countries including China as well as in wild bird populations^{2 3}.

As is the case with these A(H3N8) viruses detected in humans, other zoonotic avian influenza viruses have acquired internal protein genes from H9N2 viruses such as gs/GD/1/96-lineage A(H5N1) and Anhui/1/13-lineage A(H7N9) viruses⁴. The A(H9N2) genes in the zoonotic H5 and H7 viruses almost certainly contributed to their virulence in humans. It is not yet known if this is the case with these A(H3N8) viruses.

Due to the capabilities of H3N8 viruses to reassort and acquire H9N2 genes, as well as the evidence of genetic adaptations in wild bird-origin viruses to exhibit adaptation in mammalian hosts⁵, OFFLU calls upon its experts, contributors and technical working groups to reiterate the importance of monitoring for low pathogenicity avian influenza viruses in poultry and wild birds that have proven to be transmitted naturally to humans and sharing such sequence information. We continue to encourage surveillance for avian influenza in poultry and wild bird populations where this is economically and technically feasible. We emphasize the importance of rapid sharing of relevant outbreak information incorporating epidemiological-context data that allows meaningful interpretation at regional or global level. OFFLU takes the lead in collecting, analysing and sharing influenza data from the animal health sector to public health agencies.

This collaborative effort between human and animal influenza laboratory networks serves to strengthen the data available for analysis and contributes to more informed decisions being made for influenza issues impacting public health.

Useful links:

[OFFLU website](#)

[H3N8 Tripartite joint risk assessment](#)

[Second human H3N8 case in China](#)

[FAO Global AIV with Zoonotic potential](#)

[WOAH Monitoring of low pathogenicity avian influenza in poultry populations](#)

References:

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5. Li, Y. *et al.* Wild bird-origin H3N8 avian influenza virus exhibit well adaptation in mammalian host. *J. Infect.* **84**, 579–613 (2022).