

Info Note: A publication on Eurasian Avian-like H1N1 Swine Influenza Virus from China

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In June 2020, the China Institute of Microbiology, Center for Influenza Research and Early-Warning, published a report entitled '*Prevalent Eurasian avian-like H1N1 swine influenza virus with 2009 pandemic viral genes facilitating human infection*'*.

The article described swine influenza viruses detected through swine surveillance from 2011-2018 in China – the viruses with genes from Eurasian avian-like A(H1N1) lineages and internal genes from the human, seasonal A(H1N1)pdm09 virus and swine influenza triple reassortant viruses. These swine influenza viruses were classified based on their genetic make-up and termed genotypes G1-G6.

The paper focuses on the zoonotic potential of the genotype G4 which emerged in 2013 and became predominant in swine population since 2016.

The paper reported elevated seroprevalence rate (10.4%) of the G4 viruses identified in some swine workers, and efficient direct contact and respiratory droplet transmission of the viruses in a ferret model.

Risk assessment

The viruses discussed in paper are **not new**, and have been circulating in China since 2016 (Yang H et. al. 2016).

The seroprevalence results among swine workers need to be looked into carefully. The increased rate (10.4%) may also be attributed to other factors, such as study design and context. This highlights the importance of swine influenza surveillance in risk groups, including swine workers.

Sporadic zoonotic infections in humans with G4 genotype swine influenza viruses have been reported (WHO Collaborating Centre (CC), China CDC).

Risk assessments into the transmissibility of G4 genotype swine viruses have also been performed and demonstrated by the US CDC Influenza Division.

A candidate vaccine virus (CVV) from a closely related virus has been developed by WHO CC at China CDC. There is an urgent need to evaluate cross reactivity of recent G4 viruses with available CVVs by WHO CCs of the Global Influenza Surveillance Response System (GISRS).

Influenza viruses are continuously evolving. WHO, in collaboration with partners from the animal health sector, will continue monitoring their evolution and assess the associated risks for a potential influenza pandemic.

Animal influenza viruses continue to challenge human public health; surveillance of swine influenza viruses is as equally important as avian influenza viruses. Effective surveillance of these viruses significantly improves pandemic preparedness.

*Sun H, Xiao Y, Liu J, et al. *Proc Natl Acad Sci U S A.* 2020;201921186. doi:10.1073/pnas.1921186117