Position Statement

September 2025

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H5N1 or H5Nx Zoonotic Influenza A (not seasonal Influenza virus)

Background

Avian influenza viruses (H5N1 and related H5Nx) are widespread in wild birds, with sporadic outbreaks in domestic poultry, and increasingly in mammalian species, including cattle. Sporadic zoonotic infections in humans continue, with most cases linked to close animal contact with severity ranging from mild conjunctivitis to severe pneumonia and high mortality. There is little evidence of human-to-human transmission.

H5N1 remains one of the most pathogenic influenza A viruses, though recent cases show variable severity; in the outbreaks seen in the USA between 2024 and early 2025, cases linked to animal husbandry were mild and resolved without treatment, except for one death. As per World Health Organization (WHO) assessment, the risk to the public remains low. National and International surveillance is in place, to detect changes in the virus that allows it to spread more easily between people. The exact characteristics of the new strain will have to be assessed if this was to occur.

Epidemiology, pathogenesis, infection dynamics and clinical characteristics relevant to the safety of substances of human origin (SoHO)

Influenza viruses are closely adapted to particular host species so it is difficult for an avian influenza virus to infect a human. Therefore, despite the very high levels of H5N1 infection in wild and farmed birds, human infections with this virus are extremely rare, and normally only occur in people who have close contact with infected birds. Infection in mammals such as cattle and seals has been well documented.

Clinical outcomes range from mild conjunctivitis and respiratory illness to severe pneumonia with high mortality. Viraemia has been observed in severe human cases but the duration and dynamics of infection remain poorly defined, particularly for mild or asymptomatic infections.

No transfusion-transmitted cases have been documented but the presence of virus in blood in early acute infection before the appearance of symptoms suggests a theoretical risk. The current UK blood donor population has no known H5N1 infections; risk would increase only in the context of widespread human-to-human transmission.

Risk mitigation

(as applicable, e.g. measures adopted by UK blood, haematopoietic stem cells and tissue establishments, if any; availability of efficacious preventative measures, prophylaxis or treatment)

Donor deferral based on clinical symptoms remains appropriate. Exposure history could be considered in the containment phase of an outbreak setting.

NAT-based screening assays could be rapidly deployed if needed, and analysis of the outbreak situation, including pathogen dynamics and pathogenesis would inform a preferred strategy.

Standard viral inactivation and pathogen reduction methods for plasma derivatives and platelets are effective for Influenza viruses.

In the event of an outbreak or a pandemic, recipient susceptibility will be high due to lack of population immunity. Stockpiled or purposedly developed vaccines and antivirals should provide partial mitigation.

Pathogenesis of the specific outbreak strain will have to be assessed in order to consider risks linked to specific substances of human origin.

Conclusion and recommendations

The current blood transfusion and tissue transplantation safety risk is negligible in the UK.

This risk may change if human-to-human transmissibility emerges in the context of widespread outbreaks. Health protection agencies carefully monitor for any signs of human-to-human transmission around any detected human case; if the virus evolves to become better adapted for growing in humans this is expected to be spotted in a timely manner.

Further data are needed on viraemia dynamics, transfusion transmissibility, and organ and tissue tropism. These are characteristics that may be intrinsic to the newly emerged strain and although existing knowledge will be applied, new information will be acquired in the event of an outbreak.

Continued surveillance and readiness to implement appropriate donor deferral measures and/or NAT screening, following a situational assessment, is recommended.

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