



Risk assessment of novel highly pathogenic avian influenza A(H5N2) & A(H5N8) in North America – First update

Background

During 2014, several novel highly pathogenic avian influenza (HPAI) of subtype H5 emerged, causing widespread outbreaks in poultry in Europe, North America and East Asia. Since December 2014, two of these HPAI strains, A(H5N2) and A(H5N8), have been identified in both wild birds and poultry in the US and Canada. These two strains of HPAI have caused poultry outbreaks across 17 states of the US, affecting over 11 million birds.¹ Wisconsin and Minnesota have declared a state of emergency due to the outbreaks. The Canadian provinces of Ontario and British Columbia have also reported outbreaks.²

Control efforts in North America are focused on strict biosecurity through quarantine, movement restrictions, culling of infected birds, and enhanced surveillance of flocks.³ Outbreaks have occurred along migratory flyways and many are considered to be due to introductions from wild birds.⁴ Wild birds can be asymptomatic carriers of HPAI, adding further challenges to disease control. A novel reassortant of avian influenza A(H5N1) (distinct from the A(H5N1) known to cause human infections) has also been identified in wild birds in the US, but has not yet been implicated in any poultry outbreaks. To date there have been no reported human infections with this new reassortant virus, but the situation will be monitored closely.

Although avian influenza A(H5N2) and A(H5N8) are highly pathogenic in birds, there have been no human infections reported, despite widespread outbreaks in poultry, related human exposure and follow-up of contacts. Similar avian influenza viruses are known to infect humans, and therefore there is a theoretical risk that human infections with A(H5N2) or A(H5N8) could occur. However, sustained person-to-person transmission of avian influenza viruses has not been demonstrated.

CDC has adopted a precautionary approach to the protection of human health, and have utilised a level of protection largely consistent to that used for avian influenza

known to cause human disease.⁵ The health of persons exposed to infected birds is being monitored for 10-days post exposure, and antiviral prophylaxis is offered where appropriate. Farm workers and workers involved in the culling and clean-up operations are required to use adequate personal protective equipment (PPE).

Risk Assessment

Risk of incursion to the UK

HPAI A(H5N2) and A(H5N8) outbreaks have previously occurred in Europe, and in November 2014 an outbreak of HPAI A(H5N8) occurred on a duck farm in East Yorkshire. There were no human infections related to this outbreak.

Defra and APHA do not consider there to be a specific additional risk of HPAI incursion to the UK due to the outbreaks in North America.⁴ However, 2014/15 has been an exceptional year in terms of the geographic and temporal spread of novel HPAI strains, and a **continual low risk** of incursion into the UK remains.⁴

Risk to the general public

The risk of avian influenza A(H5N2) and A(H5N8) infection to UK residents in the UK is **very low**.

The risk of avian influenza A(H5N2) and A(H5N8) infection to UK residents who are travelling to the US and Canada is **very low**.

Travellers to the US or Canada should follow the advice provided below around reducing exposure to poultry and wild birds. The **NaTHNaC** website provides further travel advice.

Risk to people occupationally exposed

There have been no reported cases of human infection amongst farm workers, or those involved in the culling, clean-up and disposal of infected birds. However, there is a theoretical risk of human infections due to occupational exposure, and a precautionary approach is advised. Individuals who are exposed occupationally should use appropriate PPE, and may be offered antiviral chemoprophylaxis as an added precaution following an appropriate risk assessment.

The risk to persons occupationally exposed to A(H5N2) or A(H5N8) is slightly higher than for the general public, but is considered to be **very low**.

When full PPE has been used correctly throughout exposure, then the risk is considered to be **very low**.

The risk to contacts of people who have been occupationally exposed is **very low**.

Advice for Travellers

No specific restrictions to travel are advised. However, to help reduce the risk of exposure and infection, travellers to the US and Canada should:

- avoid visiting live bird and animal markets and poultry farms
- do not pick up or touch sick, dying or dead poultry or wild birds
- avoid contact with surfaces contaminated with animal faeces
- avoid untreated bird feathers and other animal and bird waste
- do not eat or handle undercooked or raw poultry, egg or duck dishes
- do not attempt to bring any poultry products back to the UK
- maintain good personal hygiene with regular hand washing with soap and use of alcohol-based hand rubs.

Anyone engaging in hunting activities whilst travelling to the US or Canada should follow the CDC **advice for hunters**.

Further Reading

- (1) [USDA APHIS: List of all HPAI outbreaks in US](#)
- (2) [OIE Outbreaks List](#)
- (3) [USDA Q&A HPAI](#)
- (4) [DEFRA/APHA Situation Assessment \(April 2015\)](#)
- (5) [CDC MMWR \(Feb 2015\)](#)

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