









# Qualitative studies on farmers' perception of risk from HPAIV and implementation of biosecurity measures on UK poultry farms

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#### **Background**

The current epizootic of high pathogenicity avian influenza virus (HPAIV) H5N1 in the United Kingdom (UK) has dwarfed all previous incursions. The scale of the incursions between 2020 and 2023 drove the need to review gaps in our understanding of the virus incursion onto premises.

This study used qualitative methodologies to evaluate human behaviours on poultry farms that impact upon biosecurity and farmers experiences of disease management in relation to HPAIV.

#### **Research Question:**

What are farmers' perceptions of biosecurity measures and how do they implement them?

## Aims & Objectives:

- To explore biosecurity and disease management practices on commercial poultry farms.
- To investigate farmers' experiences and perceptions of HPAIV.
- To explore farmers use and/or misuse of biosecurity on farms.

#### Methods

**13** commercial poultry farms were visited in England and Wales between May and September 2023.

- Premises included farms that had an HPAIV outbreak since 2021 (case farms) and those that had not (non-case farms).
- Recruitment of farm managers was undertaken through companies and trade associations.
- Semi-structured interviews were used to enable in-depth discussions.
- Ethnographic observations were made to assess the reported experiences of farmers when facing incursions of HPAIV and physical evidence of biosecurity practises.

#### **Data analysis**

Interviews, observation notes/diary entries and other information gathered during the study were analysed to generate codes, patterns and themes amongst the data using qualitative data analysis software (NVivo 12).





#### **Findings**

Certain biosecurity measures were more likely to be adhered to across all farms

e.g., foot dips, limiting people entering sheds, changing wellington boots and using disinfectio n regimes regularly.

Other biosecurity measures were less frequently followed or observed



e.g., lack of fencing or gates; poor location of visitor buildings; improvements required to changing facilities.

Distinction between clean and dirty areas was unclear on some premises. Poor provision for wild bird

incursions.

Similar beliefs surrounding the spread of HPAIV found amongst farmers

Most farmers believed that HPAIV was highly likely to spread through airborne transmission via dust particles, droplets and direction of wind.

High levels of stress and anxiety were experienced by farm managers

Feelings of stress, blame and anxiety were commonly cited by all farmers, particularly those that experienced an outbreak.

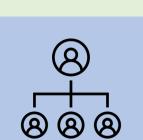
### **Financial** limitations

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Improvements to buildings and wild bird proofing would require significant financial investment.

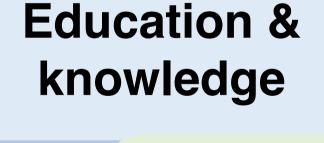


Farm managers were more likely to follow biosecurity measures that they personally believed reduced the risk of an incursion.



Responsibility & autonomy

Certain farms had better **opportunities** to make decisions surrounding biosecurity improvements.





Farm managers felt they would benefit from **learning more** about the transmission of HPAIV.

What factors influence these findings?



#### Relationship with stakeholders



**Communication** with owners, companies and veterinarians on biosecurity matters varied.



Age/experience of farmers

Some younger members of staff were **less likely** to follow biosecurity effectively.

#### Control

Farm managers did not feel they could control risk of HPAIV from wild birds or airborne transmission.

# **Recommendations & future** work

- ☐ Further qualitative research is needed to better understand the sociostructural factors impacting upon incursion potential.
- ☐ Guidance and support services would benefit farmers who have had an outbreak, particularly surrounding mental health.
- ☐ Access to **educational materials** on the risks associated with HPAIV, tailored for all ages and language requirements, and updated more frequently, would be of great utility.

We will be following up on these findings in further research during the next phase of the study: FluTrailMap.

#### **Acknowledgements**

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