

Highly Pathogenic Avian Influenza Response in Two Commercial Flocks in Rockingham County, Virginia, 2023



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Background

Highly Pathogenic Avian Influenza (HPAI) A (H5N1)

- Highly contagious and fatal in birds
- Rare instances of human infections¹
- Poultry with symptoms resembling HPAI are depopulated within 24 hours or less²
- In a May 2022 interim report by the Animal and Plant Health Inspection Service (APHIS)
 - HPAI was detected in 174 backyard flocks and 220 commercial flocks
 - Estimated loss of 38 million birds
 - Estimated export loss of \$800 million³



January 2023 HPAI Response

- In January 2023, Virginia encountered its first detection of HPAI in two commercial poultry flocks in Rockingham County
 - Rockingham 01
 - Rockingham 02
- Combined loss of approximately 36,400 birds

Date Confirmed	Site Name	Birds Affected
2023-01-19	Rockingham 01	25300
2023-01-25	Rockingham 02	11100

Methods

Persons Under Monitoring

- Virginia Department of Agriculture and Consumer Services (VDACS) provided a list to VDH of individuals involved with the HPAI response
- Organizations involved:
 - VDACS
 - United States Department of Agriculture (USDA)
 - Farm owners/workers
 - Bird disposal contractors
- Activities performed:
 - Bird depopulation
 - Bird disposal (composting)
 - Other: Decontamination, logistics, etc.



Exposure Assessments

- Paper form was provided
- CSHD staff completed exposure assessments via phone
- Key Questions:
 - Exposure location
 - Activities performed
 - Personal protective equipment (PPE) worn
 - Last exposure date
 - Current symptoms
 - Where would you seek medical care?
- Individuals self-monitored for flu-like symptoms for ten days
 - Instructed to notify the LHD if they developed any symptoms
- CSHD worked with local healthcare providers to forward specimens to DCLS

Creation of a HPAI REDCap Tool

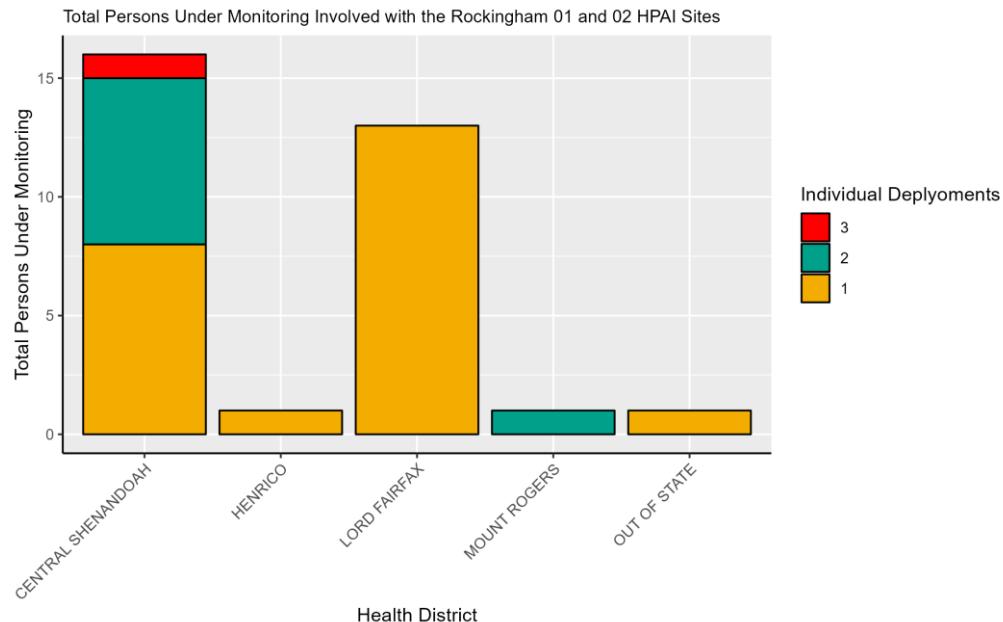
- CSHD developed a REDCap survey tool
 - Record individual exposure assessments
 - Document contact attempts and outcomes
 - Maintain an accurate count of individuals currently under symptom monitoring
- REDCap data was imported into RStudio for data management and analysis



Results

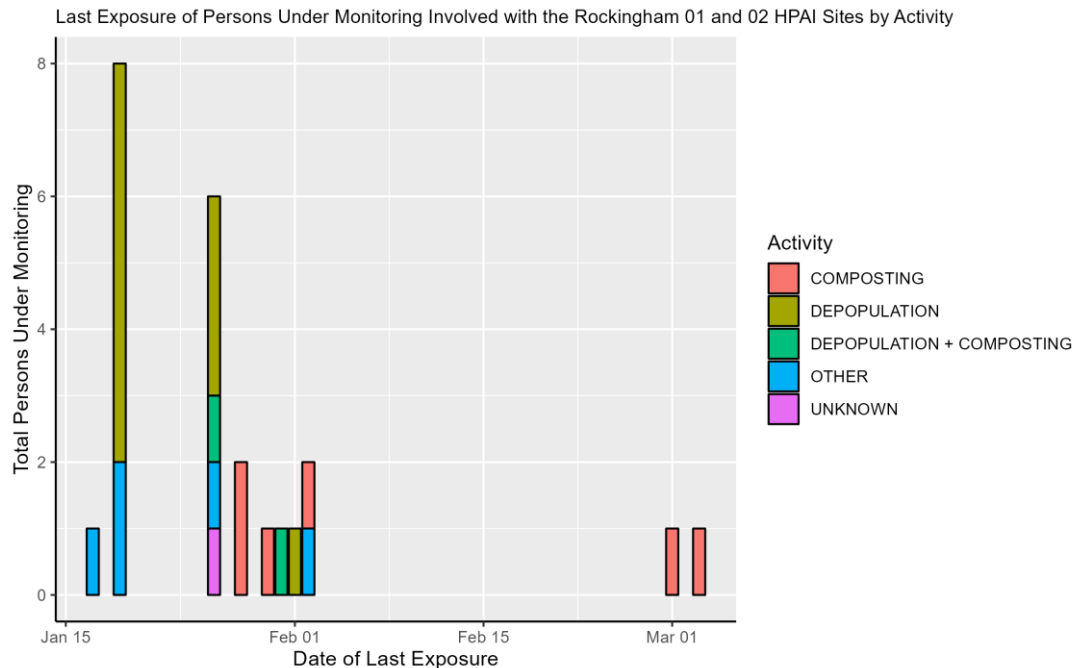
Total Persons Under Monitoring

- Active monitoring of 32 people
 - 16 residents of CSHD
 - 15 residents of other health districts
 - 1 out of state resident
- Of the 16 CSHD residents
 - 8 were deployed multiple times due to their involvement with depopulation and composting



Repeated Exposures and Outcomes

- CSHD monitored 16 residents
 - Completed 25 different exposure assessments due to multiple deployments
- Two individuals developed influenza-like illness
 - Specimens were collected and sent to DCLS
 - Both tested negative for influenza, including H5N1



Discussion

Outcomes

- In January 2023, the CSHD responded to HPAI events at two poultry farms in Rockingham County
- Loss of approximately 36,400 birds
- 32 workers exposed
 - 16 CSHD residents
- Two symptomatic individuals
 - Both negative for influenza, including the influenza strain H5N1

Enhanced Surveillance

- Using a centralized record keeping system in REDCap led to a more streamlined process
 - Exposure assessments
 - Symptom monitoring
 - Data dissemination
- The CSHD REDCap tool has been adapted for statewide use

Acknowledgments

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- **DCLS**

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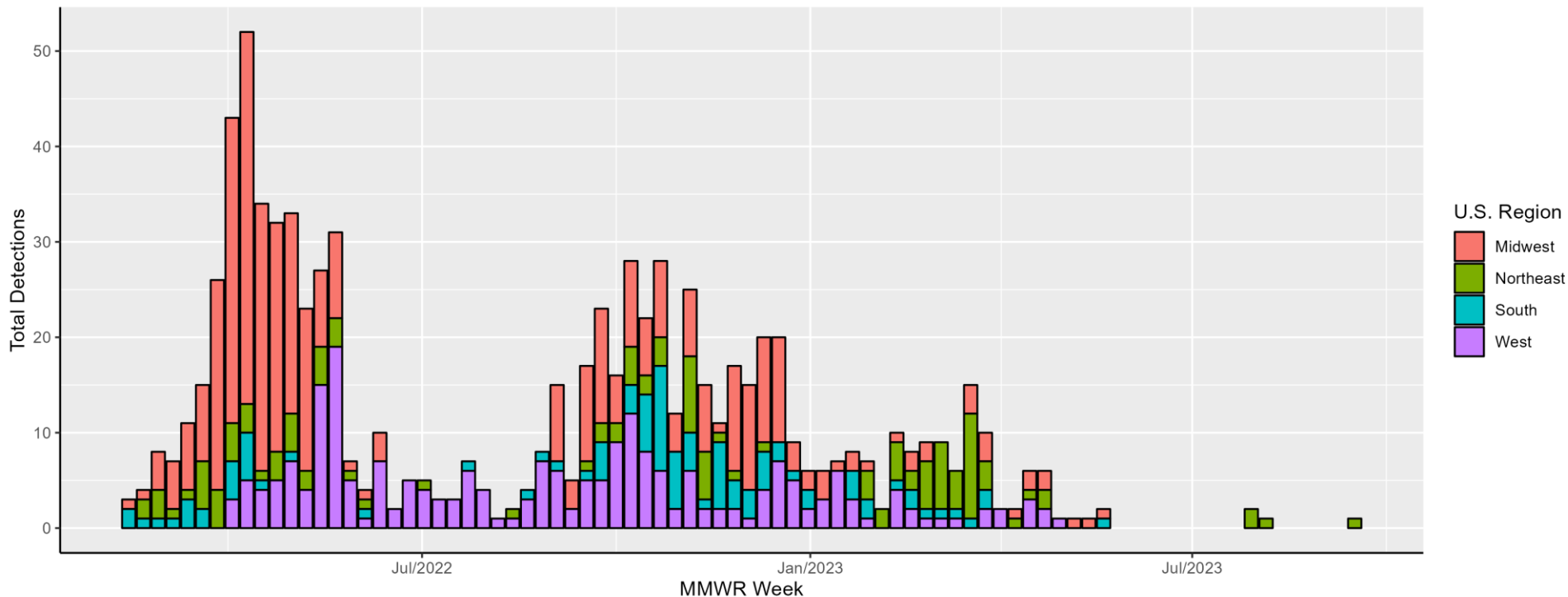
References

1. Centers for Disease Control and Prevention. (2022). *Bird flu virus infections in humans*. Centers for Disease Control and Prevention. <https://www.cdc.gov/flu/avianflu/avian-in-humans.htm>
2. Animal and Plant Health Inspection Service U.S. DEPARTMENT OF AGRICULTURE. (2022). *HPAI Response Response Goals & Depopulation Policy*. Animal and Plant Health Inspection Service U.S. DEPARTMENT OF AGRICULTURE. https://www.aphis.usda.gov/animal_health/emergency_management/downloads/hpai/depopulationpolicy.pdf
3. Animal and Plant Health Inspection Service U.S. DEPARTMENT OF AGRICULTURE. (2022). *2022 HPAI Epidemiological Interim Report Summary*. Animal and Plant Health Inspection Service U.S. DEPARTMENT OF AGRICULTURE. https://www.aphis.usda.gov/animal_health/downloads/animal_diseases/ai/hpai-epidem-interim-rpt-sum-2022.pdf

Extra Slides

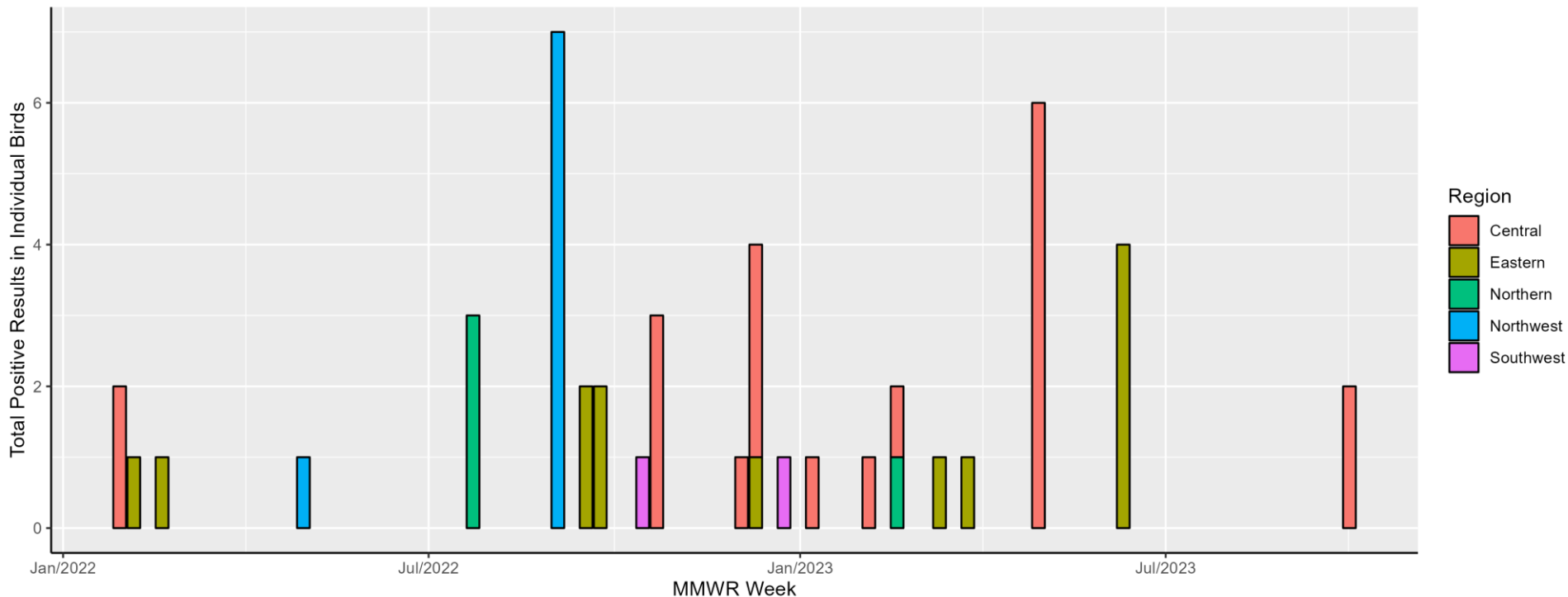
HPAI Detections in Commercial/Backyard Flocks the U.S.

APHIS 2022-2023 Detections of Highly Pathogenic Avian Influenza in Commercial and Backyard Flocks in the U.S. by Region



HPAI Detections in Wild Birds in VA

2022-2023 Detections of Highly Pathogenic Avian Influenza in Wild Birds in VA Since January 2022



HPAI Detections in Commercial/Backyard Flocks in VA

APHIS 2022-2023 Detections of Highly Pathogenic Avian Influenza in Commercial and Backyard Flocks by District

