

Master of Public Health Applied Practice Experience

by

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MPH Candidate

submitted in partial fulfillment of the requirements for the degree

MASTER OF PUBLIC HEALTH

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April 2022 – Oct 2023

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2023

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Chapter 1 - Portfolio Products

The focus of this study was to identify how avian wildlife rehabilitation workers in Florida were prepared for an Avian Influenza outbreak in wild birds in 2022-2023, how this outbreak impacted them, and how to better prepare this population of workers for future potential infectious disease outbreaks in Florida. I worked with Dr. Mark Cunningham, Florida Wildlife Commission (FWC), Wildlife Research Laboratory Veterinarian, in the Gainesville, FL offices to understand Highly Pathogenic Avian Influenza (HPAI) H5N1 in the state of Florida, the scope of disease, and how HPAI H5N1 impacted avian rehabilitation operations. Work consisted of 1) participation in collection of samples from potentially impacted birds during two separate residencies (one 10-day session in April 2022 and one 12-day session in April 2023) 2) monitoring the scope of HPAI H5N1 across the state of Florida 3) characterizing how HPAI H5N1 impacted avian rehabilitators operations 4) understand the tools and processes used to provide information to avian rehabbers across the state and 5) provide recommendations and tools to help improve communications and training to people who might be exposed to potentially dangerous infectious diseases in Florida. In addition to the two site visits to Gainesville, FL, I worked with Dr. Cunningham to craft a survey tool designed to characterize rehabber understanding of disease, preparation for disease, and impact of disease on operations before, during, and after HPAI H5N1 that occurred across the state of Florida from January 2022 until June 2023. This applied practical experience (APE) provided insight into an economically important zoonotic disease and helped provide training tools to reduce the risk of humans contracting avian influenza or other zoonotic diseases.

Table 1.1 Summary of Portfolio Products

Portfolio Product		Description
	Survey Tool	Comprehensive survey tool developed with the Florida Wildlife Commission veterinarian. The survey was designed specifically for avian rehabilitation specialists across the state of Florida to characterize their preparedness, how it impacted them, and how they would like to

	Florida Wildlife Commission (FWC) Rehabber Communication Guide	An avian-specific guide for use by FWC personnel to provide mission-critical communications to the avian rehabilitation personnel community regarding infectious diseases.
	Florida Wildlife Commission (FWC) Rehabber Avian Influenza Communication Guide	An avian-specific guide for use by FWC personnel to provide mission-critical communications to the avian rehabilitation personnel community regarding Highly Pathogenic Avian Influenza H5N1.
	Florida Avian Rehabilitation Community Presentation	Update for the Florida Avian Rehabber Community on HPAI H5N1, survey results, and updates on future communication advances.

Table 1.2 Portfolio Products and Competency Addressed

Portfolio Product		Number and Competency Addressed	
	Survey Tool	4, 19	Interpret results of survey tool
	Florida Wildlife Commission (FWC) Rehabber Communication Guide	13, 16, 19, 21	Develop recommendations for FWC education. Develop training strategies to influence PH outcomes. Fostering collaboration between KSU, FWC, and rehabbers.
	Florida Wildlife Commission (FWC) Rehabber Avian Influenza Communication Guide	13, 16, 19, 21	Develop recommendations for FWC education. Fostering collaboration between KSU, FWC, and rehabbers. Develop training strategies to influence PH outcomes.
	Florida Avian Rehabilitation Community Presentation	13, 19, 21	Develop recommendations for FWC education. Develop training strategies to influence PH outcomes. Fostering collaboration between KSU, FWC, and rehabbers

Chapter 2 - Competencies

Table 2.1 Summary of MPH Foundational Competencies

Number and Competency		Description
4	Interpret results of data analysis for public health research, policy, or practice	Development, distribution, and evaluation of survey tool to characterize preparedness of avian rehabilitators in Florida to help update and optimize Florida Wildlife Commission education practices.
13	Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	Working with the Florida Commission of Wildlife, was able to utilize the Freedom of Information Act to comprehensive and up-to-date lists of registered rehabilitators in Florida. Cross-referenced this list with the list curated by Dr. Cunningham and active avian rehabbers to target the most likely impacted group for exposure to potential zoonotic wildlife disease.
16	Apply principles of leadership, governance, and management, which include creating a vision, empowering others, fostering collaboration, and guiding decision making	Led the creation of a vision for improved management of information distribution in collaboration with the Florida Commission of Wildlife for Florida avian rehabilitators. Aligned capabilities of the FWC with the preferred methods of communication of the rehab group to create novel guidelines for communications.
19	Communicate audience-appropriate public health content, both in writing and through oral presentation	Developed written guidelines for the FWC to improve communications on management of zoonotic infectious diseases for avian rehabilitators, and prepared presentation for virtual information sharing to the leading avian rehabilitation constituency in Florida.
21	Interprofessional and/or Intersectional Practice - Integrate perspectives from other sectors and/or professionals to promote and advance population health.	Worked with Florida Wildlife Commission professionals and veterinarians, members of the USDA, veterinary pathologists from the Disney Animal Kingdom, and soldiers of the US Army Reserve (USAR) to train on, and collect samples from, affected birds in north central Florida.

Competency 4: Interpret results of data analysis for public health research, policy, or practice.

A quantitative and qualitative survey tool was developed in coordination with mentor, Dr. Mark Cunningham, Florida Wildlife Commission, to help understand the how the Highly Pathogenic Avian Influenza H5N1 outbreak impacted avian rehabbers across Florida. While there are approximately 585 individuals registered with the state as rehabilitators, there is a much smaller number of organizations that specialized in the rehabilitation of birds. The goals of the survey were to better understand individuals' knowledge of HPAI H5N1, how their facilities were prepared before the outbreak, how they responded to the outbreak, to what level were they impacted, how they received information about the disease outbreak, and how they wanted to receive their education in the future. While the overall response rate was low due to the large number of non-avian rehabbers who were included in the distribution list, the overall completion rate allowed for interpretation with percentiles of respondents for each question. Based on the survey results following the mailing and two reminders to achieve an appropriate response rate, guidelines were crafted to help guide FWC policy for the future communications with the rehabilitation community to optimize information transfer the appropriate individuals as quickly and efficiently as possible.

Competency 13: Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.

The public health outcomes of interest are to reduce the potential risk of human exposure of Highly Pathogenic Avian Influenza, to minimize the spread of disease between birds and from birds to humans, and to optimize the education of potential populations of exposed individuals. To achieve the goals, affected stakeholders were identified in collaboration with the Florida Wildlife Commission. USDA, a key partner, measures and maintains rates of HPAI H5N1 cases in wild and domestic birds and was consulted during necropsy training sessions. A Freedom of Information Act request for rehabbers identified all rehabbers, and this list was cross referenced with avian specific rehabbers provided by Dr. Cunningham. Preventive medicine veterinarians of the US Army Reserve were also consulted and utilized for collection and sampling of some populations of wild birds in collaboration with the FWC.

Competency 16: Apply principles of leadership, governance, and management, which include creating a vision, empowering others, fostering collaboration, and guiding decision making.

Principles of leadership, governance, and management were applied to coordinate conversations and goals among the Florida Wildlife Commission, the requirements of the MPH project, and the capabilities and limitations of the avian rehabilitation individuals. Careful management of communication and expectation setting were done in preparation of the project,

face-to-face meetings on two separate residencies with the FWC, and via electronic communications in support of the development, implementation, and interpretation of the survey results to craft guidelines for improved communication.

Competency 19: Communicate audience-appropriate public health content, both in writing and through oral presentation

The end-user audiences of the developed communications are both the Florida Wildlife Commission (FWC) and the Florida avian rehabbers. The written FWC guidelines are produced in alignment with FWC standards and intended for use by internal FWC individuals to help guide future education and training updates with the avian rehabbers. A presentation of the lessons learned and future actions to optimize training and education was required for the rehabilitation community as this cohort has different capabilities, education, and needs.

Competency 21: Interprofessional and/or Intersectional Practice - Integrate perspectives from other sectors and/or professionals to promote and advance population health.

I worked to lead and coordinate efforts of this project as a member of Kansas State, the U.S. Army Reserve, and the Florida Wildlife Commission. Addition training on Avian Influenza was delivered by the USDA, the University of Florida College of Veterinary Medicine, the Florida Extension Service, and the Animal Kingdom at Disney.

Table 2.2 MPH Foundational Competencies Course Mapping

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
Evidence-based Approaches to Public Health					
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	x		x		
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	x	x	x		
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	x	x	x		
4. Interpret results of data analysis for public health research, policy or practice	x		x		

Public Health and Health Care Systems					
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings		x			
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels					x
Planning and Management to Promote Health					
7. Assess population needs, assets and capacities that affect communities' health		x		x	
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs					x
9. Design a population-based policy, program, project or intervention			x		
10. Explain basic principles and tools of budget and resource management		x	x		
11. Select methods to evaluate public health programs	x	x	x		
Policy in Public Health					
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence		x	x	x	
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes		x		x	x
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations		x			x
15. Evaluate policies for their impact on public health and health equity		x		x	
Leadership					
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making		x			x
17. Apply negotiation and mediation skills to address organizational or community challenges		x			
Communication					
18. Select communication strategies for different audiences and sectors	DMP 815, FNDH 880 or KIN 796				
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	DMP 815, FNDH 880 or KIN 796				
20. Describe the importance of cultural competence in communicating public health content		x			x
Interprofessional Practice					
21. Interprofessional and/or Intersectional Practice - Integrate perspectives from other sectors and/or professionals to promote and advance population health.		x			x
Systems Thinking					
22. Apply systems thinking tools to a public health issue			x	x	