

ID: 73377632

One Health, Infectious Diseases - Host Site Description

Utah Department of Health and Human Services

Assignment Location: Salt Lake City, US-UT
Utah Department of Health and Human Services
Division of Public Health

Primary Mentor: Willy Lanier, DVM, MPH
Utah State Public Health Veterinarian
Utah Department of Health and Human Services

Secondary Mentor: Leisha Nolen, MD, PhD
Utah State Epidemiologist
Utah Department of Health and Human Services

Work Environment

Hybrid

Assignment Description

Our AEF will primarily work with the UDHHS Office of Communicable Diseases. The mission of the Office of Communicable Diseases is to prevent sickness and death from infectious diseases and environmental hazards through surveillance, investigation, response, preparedness, data analysis, education, and health policy change. The Office monitors and responds to communicable disease outbreaks, epidemics, potential bioterrorism threats/events, and other unusual occurrences of illness. This Office has a vision to utilize scientific principles and knowledge to foster healthy communities free of preventable diseases. In addition to DHHS, our AEF will have the opportunity to work with and learn from partners in many allied organizations.

Our fellow will be allowed a substantial amount of ‘protected time’ to work on fellowship projects. Our AEF will also participate in meetings with supervisors and others to plan for how to tackle projects and complete critical fellowship learning activities. Much of our fellow’s day-to-day work will involve applied epidemiology activities in an office setting, such as: writing, reading, and editing reports of surveillance and investigations; coordinating with partners via email; and meeting (in-person and virtual) with partners to collaborate and strategize on prevention strategies. However, we will prioritize opportunities for our fellow to participate in field investigations. After an introductory orientation period, we will encourage our fellow to propose projects, seek out/develop projects independently, and collaborate with a wide array of partners.

Describe Statistical and Data Analysis Support, Such as Databases, Software, and Surveillance Systems Available to the Fellow

Multiple staff at UDHHS are skilled in R and SAS and can train and support our fellow in statistical analysis.

Projects

Surveillance Activity Title: Comparison of Utah rabies postexposure prophylaxis administration data capture from three datasets

Surveillance Activity Description:

Rabies postexposure prophylaxis (PEP) administration is a reportable event in some states, but not in Utah. Tracking PEP would help us detect trends in usage, better gauge the economic burden of PEP in Utah, and justify increased funding for rabies exposure prevention efforts to reduce avoidable PEP administrations. Currently, Utah does not have an

ID: 73377632

One Health, Infectious Diseases - Host Site Description

Utah Department of Health and Human Services

established surveillance system for tracking PEP. However, three datasets with PEP administration data exist, which, together, likely constitute a fairly comprehensive surveillance picture: 1) the Utah Statewide Immunization Information System; 2) healthcare facilities and all-payer databases; and 3) syndromic emergency department data. Our fellow will compare and contrast the three and make recommendations about which one or which combination would be best to utilize for tracking PEP administration in Utah.

Surveillance Activity Objectives:

Compare and contrast the three rabies PEP administration datasets and deliver recommendations about which one or which combination would be best to utilize for tracking.

Surveillance Activity Impact:

Findings from this surveillance evaluation will inform improved tracking of rabies PEP administration, which will help justify increased funding for rabies exposure prevention efforts to reduce avoidable PEP administrations.

Surveillance System Evaluation Title: Utah rabies exposure assessment tool

Surveillance System Evaluation Description:

During 2023-24, Utah established an online rabies exposure assessment tool to automate risk assessment of exposures and delivery of preventive recommendations, including postexposure prophylaxis administration, animal quarantine/isolation, and animal testing. Automating this process force-multiplies our rabies response capacity and provides efficient and consistent guidance statewide. So far, the tool has been used nearly 1,000 times. Our fellow will evaluate the new tool as a surveillance system for possible rabies exposures, assess data completeness, and follow up to determine the effectiveness of the tool at connecting people to care and prevention resources. Following assessment, our fellow will provide recommendations to improve the system.

Surveillance System Objectives:

Evaluate Utah's new online rabies exposure assessment tool as a surveillance system for possible rabies exposures and provide recommendations for improvement.

Surveillance System Impact:

Our fellow's evaluation will strengthen rabies exposure surveillance in Utah. Additionally, this will be the first comprehensive assessment and summary of possible rabies exposures in Utah.

Major Project Title: Raw milk consumer focus groups

Major Project Description:

Utah is one of the top states in terms of numbers of illness outbreaks associated with consumption of raw milk, which is legal to sell in Utah. Little is known about raw milk consumers' attitudes or values, but conventional public health messaging seems to be ineffective in influencing behavior. Recently, Utah public health and agriculture partners have taken a more neutral approach in posting online information about raw milk (see rawmilk.utah.gov). In order to gauge the impact of this change and to better understand the perspectives of people who drink raw milk, our fellow will facilitate focus groups of raw milk consumers. Results will inform illness prevention efforts.

Major Project Objectives:

Facilitate focus groups of raw milk consumers, summarize feedback, and make recommendations regarding effective prevention strategies.

ID: 73377632

One Health, Infectious Diseases - Host Site Description

Utah Department of Health and Human Services

Major Project Impact:

Results of the focus groups will inform efforts to prevent illnesses associated with raw milk consumption.

Additional Project #1 Title: One Health vaccination clinic

Project #1 Type: Major Project

Project #1 Description:

In October 2024, we held the first large-scale One Health vaccination clinic in Utah. The clinic was very successful, with over 60 pets and around 30 humans vaccinated. Clinic participants gave positive feedback. This concept leverages the power of the human-animal bond and has since gained popularity among animal and human health professionals in Utah. Our fellow will help facilitate one or more additional One Health vaccination clinics in Utah.

Project #1 Objectives and Expected Deliverables:

Facilitate one or more One Health vaccination clinics

Project #1 Impact:

This project will provide vaccinations for additional people and pets, protecting them from rabies, flu, and other diseases. Additionally, this project will further develop a model for One Health vaccination, which could be adapted nationally.

Additional Project #2 Title: Human and animal antimicrobial resistance (AMR) surveillance in Utah

Project #2 Type: Surveillance Activity

Project #2 Description:

AMR is a concern in both human and animal medicine. Additionally, resistant pathogen strains and gene segments that confer resistance can be found and transmitted in the environment. Utah does not have a comprehensive approach to addressing this One Health issue. In Utah, laboratories currently collect AMR data, including the Utah Public Health Laboratory (UPHL; human data) and the Utah Veterinary Diagnostic Laboratory (UVDL; animal data). Our fellow will help establish an AMR data-sharing connection between UPHL and UVDL. Further, our fellow will assess the available human, animal, and environmental AMR data, analyze trends, and make recommendations regarding future AMR surveillance, investigation, and prevention in Utah.

Project #2 Objectives and Expected Deliverables:

AMR data analysis and recommendations regarding surveillance, investigation, and prevention

Project #2 Impact:

This project will help us understand AMR in Utah from a One Health perspective and could lead to prevention of AMR infection.

Additional Project #3 Title: Assess vector-borne disease risk among migrant and seasonal workers in Utah

Project #3 Type: Major Project

Project #3 Description:

The incidence of vectorborne diseases, such as West Nile Virus infection, increases in Utah during summer-fall. Migrant and seasonal workers might be at increased risk of infection due to increased outdoor exposure. However, little is known about the true incidence or risk in these populations due to multiple factors, including barriers regarding education, healthcare access, and language, as well as limited understanding of exposure and protective factors (e.g., mosquito repellent). To assess vectorborne infection risk, risk perception, and incidence in migrant and seasonal

ID: 73377632

One Health, Infectious Diseases - Host Site Description

Utah Department of Health and Human Services

workers, our fellow will analyze relevant data, conduct surveys, and interview various partners, including those in healthcare and agricultural entities. Using the findings from this project, our fellow will provide recommendations to inform surveillance and prevention.

Project #3 Objectives and Expected Deliverables:

Assess infection incidence and perceived risk of vectorborne illness in migrant and seasonal workers and provide recommendations for surveillance and prevention.

Project #3 Impact:

A better understanding of vectorborne infection risk and disease knowledge among migrant and seasonal workers will help us provide better and more targeted recommendations for prevention and education.

Please Describe the Fellow's Anticipated Role in Preparedness and Response Efforts – Include Activities and Time Allocation (Required Competency of Fellowship)

We will encourage our fellow to complete One Health projects to bolster public health response preparedness (One Health preparedness). For example, our fellow will assist local health departments and animal health partners prepare to respond to future outbreaks of highly pathogenic avian influenza. On a more routine basis, our fellow will also participate in monthly public health preparedness coordination meetings. This work is expected to comprise approximately 10% of our fellow's time.

Please Describe the Fellow's Anticipated Role in Cluster and Outbreak Investigations – Include Activities and Time Allocation (Required Competency of Fellowship)

For every outbreak we become aware of and as often as possible, we will facilitate opportunities for our fellow to lead and assist in the investigation. This might include outbreaks of foodborne, vectorborne, zoonotic, or nonzoonotic infections. Outbreak investigations will be a major focus of the fellowship and will be expected to comprise at least 20% of the fellow's time.