

ID: 60232581

Infectious Diseases - Host Site Description

Oregon Health Authority

Assignment Location: Portland, US-OR
Oregon Health Authority
Acute and Communicable Disease Prevention

Primary Mentor: Shannon O'Brien, MD, MPH
Public Health Physician and Program Director
Oregon Health Authority

Secondary Mentor: Tasha Martin, MPH
Epidemiologist 3
Oregon Health Authority

Work Environment

100% Virtual

Assignment Description

The CSTE Applied Epidemiology Fellow will be a member of the Acute and Communicable Disease Prevention (ACDP) section of Oregon Health Authority's (OHA) Public Health Division, Oregon's state public health department. The primary placement for the fellow will be on the Active Bacterial Core (ABCs) team led by lead epidemiologist and secondary mentor, Ms. Tasha Martin. This team completes disease surveillance and grant deliverables associated with CDC's Emerging Infections Program (EIP) providing the fellow with the opportunity to learn first-hand about key applied epidemiology skills: chart abstraction, case report form completion, surveillance system management and evaluation, as well as collaboration with local, state, tribal and federal partners. The fellow will also have the opportunity to work with the Viral Hepatitis team led by primary mentor, Dr. Shannon O'Brien. Through this work the fellow will learn about the nuances of state-level reportable disease surveillance and have the opportunity to engage on special projects. Additionally, a core component of the viral hepatitis work is collaboration with community-based organizations focused on reducing viral hepatitis and increasing linkage to care for people who use drugs. There may also be opportunities to engage on Healthcare-Associated Infections projects depending on availability and interest. Of note, ACDP and mentors will make a point to include the fellow in unique response situations as they arise.

The fellow will be integrated into ACDP as a staff level epidemiologist which also involves participation in the day call answering service and outbreak response teams. The day call answering service requires 1-2 weeks of training followed by day call averaging two days per month. While on call, the fellow will field questions from members of the public, local public health officials, laboratorians, and clinicians among others, and provide technical assistance or redirection to another point of contact as appropriate. Colleagues and teammates are always available to support the fellow while on call as needed; however, the fellow is expected to become increasingly independent over the course of their fellowship. Similarly, the fellow will serve on outbreak response teams known as the urgent epi response team (UERT). UERT involves participation for an average of one week a month with alternating primary and secondary epidemiologists. This team supports local outbreak responses as needed. Finally, the fellow will be expected to attend reoccurring and ad-hoc team and section meetings such as our monthly ABCs team meeting, daily ACDP meetings, and other important partner meetings.

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

Oregon's main surveillance databases are Filemaker Pro, an Apple innovation platform. These databases house current and historical data on communicable disease cases and disease outbreaks. These are the source of data for many data projects and routine data reporting via Tableau dashboards. ACDP also uses Enterprise ArcGIS for disease mapping and ESSENCE for syndromic surveillance. ACDP uses Rhapsody for data integration and GIS or Tableau for data visualization.

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There is variation in preferred statistical software programs, but fellows would have access to SAS, SPSS, STATA, R Studio, and Epi Info. Some projects may require use of a specific program or translation into a specific program language for on-going use. However, when no specific program is required, the fellow may choose their preferred program.

Projects

Surveillance Activity Title: Assess the Prevalence of Recent Otitis Media Infection and Antibiotic Usage in Invasive Haemophilus influenzae and Streptococcus pneumoniae and the Association with Antimicrobial Resistance

Surveillance Activity Description:

Use chart abstraction and case report forms to assess the prevalence of recent otitis media infection and antibiotic usage in a subset of invasive Haemophilus influenzae and Streptococcus pneumoniae infections. Perform statistical analyses to determine whether there is an association between recent infection involving antibiotic usage and antimicrobial resistance in the incident invasive bacterial pathogen. This is part of a special project for our Emerging Infections Program Active Bacterial Core grant with CDC.

Surveillance Activity Objectives:

1. Identify ABCs cases meeting inclusion criteria.
2. Assess for prior otitis media and antibiotic use using medical records chart abstraction.
3. Compile and manage data.
4. Perform data analysis including basic descriptive statistics and tests of association.
5. Communicate results via written and oral presentations.

Surveillance Activity Impact:

Analyze potential risk factors for antimicrobial resistance in invasive bacterial infections.

Surveillance System Evaluation Title: Evaluate the Effectiveness of the Hepatitis C Outbreak Surveillance Report

Surveillance System Evaluation Description:

The fellow will evaluate ACDP's new hepatitis C outbreak surveillance report. The intent of the report is to assist local public health officials in identifying potential hepatitis C outbreaks. There are many limitations to available hepatitis C data making it difficult to identify outbreaks in the community. This surveillance report flags trends in case counts that may warrant additional investigation into the potential for an outbreak. Evaluation of the surveillance system should include assessments of system effectiveness, ease of use, and comparisons to other surveillance methodologies.

Surveillance System Objectives:

1. Compile list of various methodologies used to assess for hepatitis C outbreaks in the community.
2. Engage stakeholders on current system and evaluation process.
3. Assess system effectiveness, ease of use, and comparisons to other surveillance methodologies.
4. Communicate results via written and oral presentations.

Surveillance System Impact:

Improve identification of potential hepatitis C outbreaks in the community.

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Major Project Title: Develop Multi-year and Annual Epidemiologic Reports for Active Bacterial Core Pathogens

Major Project Description:

Use our surveillance data to generate multi-year and annual epidemiologic reports for various active bacterial core pathogens. Potential pathogens include Group A streptococcus, Group B streptococcus, Haemophilus influenzae, Neisseria meningitidis (meningococcal disease), and Streptococcus pneumoniae. Reports typically include incidence and mortality rates, cases across demographic variables, and may go into additional detail on pathogen-specific topics of interest.

Major Project Objectives:

1. Review existing reports in Oregon and other jurisdictions.
2. Develop plan for report structure and data analyses.
3. Complete and present report.
4. Update published report as needed.

Major Project Impact:

Improved public dissemination of timely surveillance data and pathogen specific information to support data to action goals.

Additional Project #1 Title: Report on Viral Hepatitis-Associated Extrahepatic Cancers in Oregon

Project #1 Type: Major Project

Project #1 Description:

The fellow will perform a comprehensive literature review to collate existing understanding of hepatic (liver) and extrahepatic (non-liver) cancers associated with hepatitis B and C infection. Based on the literature, the fellow will calculate Oregon estimates for extrahepatic cancers associated with hepatitis infection. The fellow will make use of communicable disease surveillance data for viral hepatitis and state cancer registry data to perform this analysis. Additional analyses involving morbidity and mortality associations in extrahepatic cancers may be considered.

Project #1 Objectives and Expected Deliverables:

1. Perform comprehensive literature review on extrahepatic cancers associated with viral hepatitis infection.
2. Using viral hepatitis surveillance data and cancer registry data, develop Oregon-specific estimates of viral hepatitis-associated extrahepatic cancers.
3. Communicate results through written and oral reports.

Project #1 Impact:

Increase awareness of the association viral hepatitis infection with extrahepatic cancers, identify previously unquantified health impacts of viral hepatitis in Oregon, and contribute to data to action work.

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

The fellow will be trained in the Incident Command System and the emergency response structure in Oregon. The fellow will have the opportunity to participate in table-top and full-scale exercises through the Preparedness Surveillance & Epidemiology Team as available. The fellow will also be expected to learn and implement appropriate response activities as needed while serving as the on-call epidemiologist and on Urgent Epidemiology Response Team.

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

The fellow will participate in cluster and outbreak investigations as they serve on the Urgent Epidemiology Response Team. In this role the fellow will be on-call approximately one week per month and take lead or secondary lead representing the state in outbreak investigations. Because Oregon has a decentralized public health system, the local public health officials take point on response with the support of the state as needed.

Please Describe the Fellow's Anticipated Role in the COVID-19 Response – Include Activities and Time Allocation

There is no requirement for the fellow to complete COVID-19 special projects. However, the fellow will develop some subject matter expertise to respond to COVID-19 needs during on-call and outbreak response work.

Please Describe Opportunities for Fellows to Work in Health Equity as well as Incorporating Diversity, Equity, and Inclusion into their Work

Oregon Health Authority has adopted health equity as one of its core values and has committed to its strategic goal of eliminating health inequities by the year 2030. As such, health equity is a critical consideration in the work of ACDP and should be a priority for the fellow in the work they complete during the fellowship. Reports and projects completed by the fellow should analyze and acknowledge any health disparities indicated by the data. Additionally, the work of the viral hepatitis team is very closely aligned with health equity initiatives and requires cultural competency, a whole-person health mindset, and a respectful, non-judgmental approach to interpersonal communication. The fellow will also have the opportunity to join ACDP's Health Equity Work Group, an employee-run group seeking to infuse our workplace with health equity topics, trainings, and projects.