Infectious Diseases, Infectious Diseases-Foodborne

Clark County Public Health, Infectious Disease Program

Vancouver, Washington

Assignment Description

The Fellow will be based at the CCPH Office in Vancouver, Washington and be an active member of our Infectious Disease Unit. This team is responsible for the investigation of all notifiable conditions identified in the community; clinical management of active tuberculosis cases and evaluation of associated contacts; detecting and responding to community and facility-based outbreaks; and providing outreach, education, and guidance to various community stakeholders. This role will provide the Fellow with an opportunity to engage directly with members of the community, healthcare, schools and local/state public health partners on topics of communicable disease investigation, prevention, education, and response. The Fellow will also have the opportunity to engage with other programs within CCPH based on the fellow’s interest and departmental need for support.

CCPH offers a broad experience in applied epidemiology. The Fellow will have numerous opportunities to fulfill fellowship core competencies, while also developing comprehensive skills through active participation in investigative fieldwork, surveillance system design and implementation, statistical analysis, and interdisciplinary and interagency teamwork. Both mentors will oversee all Fellow activities including on-boarding, training and professional development, research and special project design with strong support from other members of the Infectious Disease team including our Epidemiologists and Public Health Nurses.

Day-to-Day Activities

Daily activities, particularly early in the Fellowship, will be related to infectious disease surveillance and outbreak response. The Fellow will have the opportunity to conduct patient interviews during routine investigations. With progressive gains in expertise, the Fellow will be encouraged to expand their scope of work into longer term projects of interest, which may include, but are not limited to, those outlined in the following Potential Projects section of this application. The Fellow will also be supported and encouraged to engage in educational opportunities such as conferences, trainings, and certification programs.
Potential Projects

Surveillance Activity  Assess and Disseminate Communicable Disease Data to Support Evidence-Based Decision Making

The Fellow will participate in infectious disease surveillance activities almost daily, with access to data collected through case investigations and supplemental projects to describe trends in disease transmission across the community, with particularly focus on high-risk populations. These types of analysis activities will be used to inform program priorities and possible intervention design. Special emphasis will be placed on developing innovative approaches to sharing program generated data with both technical and non-technical community partners (ex. healthcare, schools, Clark County Board of Health, community-based organizations) in order to support evidence-based decision making.

The Fellow will have flexibility to drive analysis projects based on interest and identified need, across a spectrum of subject areas including vaccine-preventable diseases, foodborne and waterborne illness, sexually transmitted infections, and disease prevention among clients of the county-sponsored syringe services program. These activities may also extend beyond analysis. Where appropriate, the Fellow will participate in or lead actions developed as a result of surveillance findings, including outbreak response, enhanced surveillance programs, outreach and education, and the development of protocols, guidelines, and resources.

Surveillance Evaluation  Evaluation of County-Level Hepatitis C (HCV) Surveillance

Each year, Clark County identifies an average of 500 cases of previously undiagnosed (or previously unreported) hepatitis C infections among residents. For some people, hepatitis C is a short-term illness but for 70%-85% of people who become infected with hepatitis C virus (HCV), it becomes a long-term, chronic infection. The true burden of chronic verses acute HCV infections is not well understood due to a variety of surveillance system limitations including: potential for asymptomatic infections, limited available case medical history used to determine case classification, hard to engage high risk populations and sheer volume of reported cases which exceeds public health’s capacity for investigation.

The primary aim of this surveillance evaluation project is to identify strategies to strengthen the characterization of HCV disease burden within Clark County. Improved surveillance data could then be used to identify potential high-risk groups, detect outbreaks, and inform the design for targeted interventions. In order to fully understand the data collection process from beginning to end, the Fellow will be engaged in every stage of the investigation and surveillance process including interviews of newly identified HCV cases in targeted individuals and medical record chart review in order gather all information necessary for case classifications. A critical piece of this evaluation will include an assessment of the recently rolled out Washington state disease reporting system for HCV and proposing opportunities for system improvement that could facilitate a more effective and efficient investigation process at the local level.
Major Project  Using Epidemiology to Inform Hepatitis C Community Outreach and Response

Hepatitis C is a growing and largely underfunded public health crisis both nationally and in Washington State. At the beginning of 2018, an estimated 59,100 Washingtonians were living with HCV. In 2019, Washington State launched the Hepatitis C Free Washington plan, with a goal of Hepatitis C elimination by 2030. This ambitious yet timely plan hopes to combine public health efforts with a new medication purchasing approach to achieve this goal. Clark County Public Health recognizes the need for identifying practical strategies for reaching high risk populations and developing targeted public health interventions for improving client outcomes.

This project would be driven by the Fellow in three core stages, with support from the Infectious Disease team:

- Develop a State of the County HCV assessment using local surveillance data to characterize the burden of chronic vs. acute HCV, high risk populations, risk factors, access to treatment, and other epidemiologic trends in Clark County. This assessment will be used to inform the development of the enhanced surveillance process as well as guide evidence-based conversations with community partners with a potential role in linkage to care services.

- Conduct a stakeholder and gap analysis that identifies key community partners and availability of care and treatment, and other community-based prevention services. Based on this analysis, the Fellow will develop an outreach and collaboration plan to partner with local healthcare organizations, infectious disease providers, and other community partners serving high-risk populations to improve linkages to services depending on where the client falls on the continuum of care. This may include material and guidance development, training, and presentations aimed to drive clinical support for Hepatitis C testing, care, and treatment in the community.

- Develop an enhanced surveillance process with the aim to (1) evaluate a subset of cases and access to testing, treatment, and other prevention services; (2) determine where newly reported HCV cases fall on the continuum of care (i.e. initial positive test to cure); and (3) provide education on availability of community based resources for harm reduction, transmission prevention, and connection to care. This will include development of an interview questionnaire, data management tools, materials to share with cases and community providers, and an overarching guidance document for internal Infectious Disease staff use and training.

Surveillance Activity  Strengthening Regional Influenza Surveillance through Resource Identification and Collaboration

Since 2014, CCPH has conducted basic influenza surveillance in Clark and neighboring Cowlitz County, a small, primarily rural county to the north. This partnership in epidemiology services was initially undertaken to more widely describe community influenza trends and provide healthcare partners in that jurisdiction with more information specific to their population to drive decision making. Since this time, Dr. Melnick has expanded his Health Officer role to include Clark, Cowlitz, Skamania and Wahkiakum counties. With this comes an opportunity to expand influenza surveillance in the Southwest Washington region. In addition to conducting routine influenza season surveillance and reporting for Clark and Cowlitz counties, the Fellow will also work to establish new partnership with surrounding LHJs, identifying data sources for influenza surveillance in their communities and outlining valuable reporting
metrics. These metrics would then be incorporated into weekly surveillance updates throughout influenza season, as well as would be provided back to LHJ partners for their use in education and outreach.

**Additional Project TBD**

Depending on the Fellow’s area of interest and department need, there are opportunities for project development in other areas of the Infectious Disease program including immunizations, sexually transmitted infections, syringe services program, and emerging infectious disease issues.

**Preparedness Role**

The Fellow will have the opportunity to be a member of the CCPH Incident Management Team (IMT) and participate in exercises, drills, and actual response events as they occur. Completion of ICS 100, 200, 700, 800, will be required.

CCPH collaborates with the Portland metro area Health Preparedness Organization Steering Committee and is a member of the Portland Urban Areas Security Initiative (UASI) and the Washington Region IV Governing Council, which oversees public health preparedness planning efforts in southwest Washington.

**Mentors**

**Primary**  
Alan Melnick MD, MPH, CPH  
Health Officer & Agency Administrator

**Secondary**  
Monica Czapla MPH  
Infectious Disease Program