

ID: 35110491

Infectious Diseases, Substance Use/Mental Health - Host Site Description

Los Angeles County Department of Public Health

Assignment Location: Los Angeles, US-CA
Los Angeles County Department of Public Health
Acute Communicable Disease Control/Viral Hepatitis Unit

Primary Mentor: Prabhu Gounder, MD, MPH
Medical Director, Viral Hepatitis Unit
Los Angeles County Department of Public Health

Secondary Mentor: Mirna Jewell, MPH, MA
Supervising Epidemiologist
Los Angeles County Department of Public Health

Work Environment

Hybrid

Assignment Description

The fellow will be based in the Viral Hepatitis Unit (VHU) that is nested within the Acute Communicable Disease Control (ACDC) Program. The fellow will report to the Medical Director and work with the Supervising Epidemiologist. The fellow's primary project will be to help maintain a person-level registry of chronic HBV, which is a top priority for VHU; through this project, fellows will gain experience in data management and analysis of surveillance datasets. Because the registry project is long-term, not time sensitive, and supported by other epidemiologists within VHU, the fellow will have opportunities to take on other projects as they arise, such as participating in viral hepatitis outbreak investigations and response. So the day-to-day activities will have a base of data management activities but the exact nature of the activities will vary based on the other special projects/investigations as they arise. Additionally, there are opportunities to collaborate with other units within ACDC and create bridging projects across those units such as correlating hepatitis A wastewater data with clinical surveillance data or matching the Homeless Management Information System data with the viral hepatitis registries.

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

One major advantage of LA County is our large, mobile and diverse population of 10 million people leading to high incidence of numerous diseases and events lending to analytic power to confidently answer important population and public health questions of interest. We provide the fellow with access to SAS, R, Tableau, and ArcGIS as standard issue as well as some basic training and work with the fellow to facilitate other tools they may need to complete analytic projects. The LA County Department of Public Health has many doctoral level epidemiologists available to provide consultation on any questions that arise. The fellow will have access to IRIS, the core surveillance system at LA County Public Health that receives and integrates all reports from providers and laboratories on all reportable infectious diseases.

Projects

Surveillance Activity Title: Assist with maintaining the hepatitis B registry and linkage to care activities;

Surveillance Activity Description:

The viral hepatitis B registry is comprised of persons with confirmatory electronic and manual lab results from 2008 to now. The registry has been deduplicated and is in the final stages of identifying the current case status based on the lab

ID: 35110491

Infectious Diseases, Substance Use/Mental Health - Host Site Description

Los Angeles County Department of Public Health

results from those years. The result of the integration will be to describe the true prevalence of HBV among Los Angeles residents tested. Additionally, the fellow will be able to create a care cascade according to CDC guidance that will lay the foundation for case managers to connect persons with a positive HBV test result to treatment.

Surveillance Activity Objectives:

The objective of the activity is to create a hepatitis B care cascade to use for linkage to care. Expected deliverables include a report summarizing the epidemiology of hepatitis B in LA County and developing a care cascade for case management.

Surveillance Activity Impact:

The hepatitis B registry will have several impacts 1) assist with identifying cases of hepatitis B; 2) provide information to community stakeholders on the hepatitis B care cascade to help measure progress towards elimination; 3) support linkage to care for persons with known untreated hepatitis B; 4) provide data for annual reports on the epidemiology of hepatitis B

Surveillance System Evaluation Title: Evaluate the Perinatal Hepatitis C Surveillance System

Surveillance System Evaluation Description:

The perinatal hepatitis C surveillance system is comprised of multiple data sources for identification and management of perinatal hepatitis C cases. The first source is positive lab data for children less than 3 years old and the second is cases identified through vital records of birth mothers that are matched with the hepatitis C registry. Following case identification is a care cascade that will improve early case detection, testing and management. This is a new surveillance system that will benefit from assessment using the CDC framework for evaluating surveillance systems.

Surveillance System Objectives:

The objective of this assessment is to apply the CDC framework for evaluating surveillance systems and 1) describe the surveillance system and the goals; 2) evaluate data quality and case identification methods; 3) utilize various evaluation metrics for confirming and defining cases such as predictive positivity; and 4) demonstrate trends in reporting and cases. An expected deliverable will be a report summarizing the surveillance evaluation and making recommendations for improvement

Surveillance System Impact:

To improve the identification and management of perinatal hepatitis C.

Major Project Title: Analyze death certificate data to describe characterize HBV- and HCV-associated deaths

Major Project Description:

The fellow will integrate the HBV & HCV registry with vital records to analyze HBV & HCV mortality of persons with a positive HBV or HCV test versus those that have HBV or HCV listed as a cause of death on the death certificate. The fellow will be able to document trends in HBV & HCV mortality and among persons with a positive test.

Major Project Objectives:

The objective of this project will be to analyze the MCODE dataset and HCV/HBV registry to describe HCV/HBV mortality and mortality in persons with HCV/HBV in Los Angeles County. The deliverable will be a report summarizing the results.

Major Project Impact:

To better understand HCV/HBV mortality and HCV-/HBV-related mortality in Los Angeles County to tailor interventions aimed at reducing mortality among persons with HCV/HBV.

ID: 35110491

Infectious Diseases, Substance Use/Mental Health - Host Site Description

Los Angeles County Department of Public Health

Additional Project #1 Title: Aggregate the HBV and HCV registries to describe individuals co-infected with HBV and HCV

Project #1 Type: Surveillance Activity

Project #1 Description:

The HCV and HBV registries have been recently created and the next step is to aggregate them to describe the epidemiology and identify persons with HCV who may potentially co-infected with HBV.

Project #1 Objectives and Expected Deliverables:

- Identify and describe co-infected persons with HCV/HBV
- Cross-reference the list with persons flagged for follow up and share findings to ensure HBV management when being treated for HCV

Project #1 Impact:

To reduce the incidence of an HBV flare when being treated for HCV.

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

As part of a CDC grant for viral hepatitis, the VHU will have to develop a plan for acute hepatitis A, B and C outbreak detection and response. The fellow will have the choice of leading the development of one of the following protocols that are currently missing from our overall viral outbreak response plans: 1) community-wide hepatitis A outbreak response 2) detection of and response to clusters of hepatitis B and C. For the community-wide outbreak response plan, the fellow will have access to documents prepared during the local hepatitis A outbreak response among persons experiencing homelessness in 2017-2018; those documents provide a roadmap that can be synthesized into a protocol for future response. For the detection of and response to hepatitis B and C clusters, the fellow will reach out to CDC and other jurisdictions to learn how they are currently doing this surveillance, assess the feasibility of establishing a similar response locally, and, if feasible, develop a local protocol for response. We anticipate that developing either of these protocols could 80-120 hours distributed over the first year of the fellowship.

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

The VHU regularly responds to two categories of outbreaks: 1) hepatitis A infection in a food handler 2) suspected healthcare associated transmission of hepatitis B or C.

In these outbreaks, the fellow (supported by the medical director) will take a leading role in organizing all key aspects of the response including detection/investigation of additional, conducting site visits to assess potential sources of transmission, developing data collection tools (e.g., line lists and case interviews), conducting data analysis when needed to assess between multiple potential sources of transmission, organizing meetings (including setting agendas and tracking action items) between the different units with Public Health involved in the response (e.g., laboratory, environmental health, health facilities licensing and certification, press office), and helping to develop communications intended for the lay public. The typical hepatitis A in a food handler response will require a fellow to work full-time on the response for 1-2 weeks. The initial response to suspected healthcare associated transmission event will take 1 week of full time effort to gather/review medical records, conduct additional interview, and conduct site visits. If healthcare associated transmission is confirmed, then the broader response involved public notification and coordinating testing for additional case detection can take 4-6 weeks of full-time support. The VHU is staffed to conduct these investigations

ID: 35110491

Infectious Diseases, Substance Use/Mental Health - Host Site Description

Los Angeles County Department of Public Health

independent of the fellow so it is not required for fellows to participate and there are many opportunities for getting outbreak experience from one of the 70+ other reportable infectious diseases managed within the broader Acute Communicable Disease Control program