

Infectious Disease

Assignment Description

This position will be within the Surveillance and Statistics Section of the California Department of Public Health. The CSTE Fellow will have the opportunity to become familiar with all aspects of general infectious disease surveillance including performing ongoing data collection, quality control, and comparison of different local and state systems, interface between the different systems (web-based and non-web-based), processing, management, analysis, and dissemination of results.

In addition to infectious disease morbidity surveillance data, the Fellow will have the opportunity to analyze other data sources of public health importance such as hospital discharge data to gain in-depth epidemiologic insights and assess other data systems. Such analyses could lead to further epidemiologic understanding of a particular infectious disease, potential presentations and publications, and making recommendations for improving surveillance systems and contributing to vital public health prevention/intervention messages and actions.

Legionellosis, Vibriosis, Staphylococcus aureus, Kawasaki disease, and outbreaks are among the conditions that are of interest to the Section at this point for in depth data analyses.

Day-to- Day Activities

The fellow will be working 8 hours a day, five days a week collaboratively and co-operatively with other Section, Branch, and Division staff as a team member and in some areas as a lead. As soon as the fellow becomes familiar with the Section's surveillance activities and the new electronic California Reportable Disease Information Exchange (CalREDIE), s/he will have the opportunity to conduct quality checks and analyze different data sources, conduct literature search/reviews and assist in writing/preparing reports and publications. The Fellow will also have opportunity to participate/attend informational meetings, conferences and trainings.

Potential Projects

As described above the Fellow will have lots of opportunities to work with various surveillance systems, perform data analyses, and conduct evaluations by comparing multiple data sources to assess completeness, accuracy and timeliness of the surveillance data.

For initial projects, the Fellow can evaluate surveillance for Legionellosis and analyze the 2001-2009 Legionella case report data and Hospital Discharge data. Legionella is an important respiratory bacterial pathogen in the United States, causing many cases of community-acquired pneumonias requiring hospitalization each year. When analyzing California 2001-2008 Confidential Morbidity Report data we observed an increasing trend in the legionellosis case counts and incidence rates, particularly in recent years. In addition to CMR data our surveillance staff has created a 2001-2009 Legionella database based on Case Report Forms, capturing detail information on possible sources of exposure and clinical symptoms. We would like to determine if the observed increase in California represents a true increase in disease activity, detection, reporting, or some combination thereof.

Preparedness Role

The Fellow will be given opportunity to help with the California Department of Public Health emergency preparedness activities. Many of the diseases that are managed by the Infectious Diseases Branch have high hospitalization rates. Rapid and accurate data analysis and data sharing tremendously assist in emergency situations, particularly when dealing with newly emerging infections.

Assignment Location: Sacramento, CA

Primary Mentor: Farzaneh Tabnak, PhD, MS
Chief, Surveillance and Statistics Section
California Department of Public Health

Secondary Mentor: Duc Vugia, MD, MPH
Chief, Infectious Diseases Branch
California Department of Public Health