

Infectious Disease

Assignment Description

The Foodborne Program of the Michigan Department of Community Health (MDCH), Division of Communicable Disease, Surveillance and Infectious Disease Epidemiology Section monitors statewide enteric illness activity and responds to those outbreak investigations that are multijurisdictional. Epidemiologists within the Foodborne Program work to strengthen basic disease detection and investigation capacity at the local public health level by providing epidemiologic and lab support and consultation when potential clusters of food-related illness are detected. Rapid response to follow-up once a disease has been reported or a cluster identified is critical for capturing information that is timely and relevant to the investigation. Delays in response not only compromise the quality of data collected due to waning food history recall and cooperation but also may mean that suspect foods are no longer available for testing. The Foodborne Program is developing protocols for a Rapid Outbreak Response Team to coordinate and streamline Michigan's response to multijurisdictional enteric disease outbreaks, and to be deployed when health jurisdictions are lacking epidemiologic capacity.

The CSTE Fellow will assist with the development and implementation of a Rapid Response Outbreak Team within the Foodborne Program. The primary focus of the rapid outbreak response team will be to monitor Salmonella, Shiga toxin E coli, and Listeria cases in Southeast Michigan (Detroit and Wayne County) reported into the Michigan Disease Surveillance System, PulseNet, or StarLims to ensure that case follow-ups are completed quickly and that appropriate specimens are collected for testing. Michigan has participated in a number of national high profile foodborne outbreak investigations, including E coli O145 and Romaine lettuce (first detected in Michigan) and Salmonella Typhimurium in peanut butter products.

Day-to- Day Activities

The CSTE Fellow will provide support to acute outbreak investigations requiring immediate public health response, under the guidance of the lead ELC epidemiologist. This would include working first-hand with the CDC and federal regulatory partners on multi-state investigations, assisting with development of study design, construction of case definitions and line listings, development of hypotheses and hypothesis-testing questionnaires, interviewing cases and controls, data analysis, contact with MDCH laboratory staff and coordinating appropriate and timely laboratory specimen testing requests and submissions. Other support activities may include guidance with database structure, data entry, participating in conference calls, and report-writing guidance and review. Creation and delivery of presentations of investigative methods and findings would also be supported. The CSTE Fellow would be encouraged to spend time at a local health department to observe public health response activities and/or to offer epidemiologic assistance.

Potential Projects

The CSTE Fellow will be expected to review a surveillance system currently in place for one or more selected notifiable diseases in the state. Together with both mentors, the Fellow will choose a project suited to the interests of the Fellow and to the current needs of the Division. Past projects have included collaborations with EID Laboratory Fellows on laboratory-oriented endeavors. Opportunities for joint projects with interdisciplinary teams include the ELC workgroup (a statewide task force of epidemiologists, sanitarians, laboratorians, and physicians devoted to improving local health

department applied epidemiologic knowledge and skills and providing the state with feedback on tools and resources under development) and the Michigan Department of Agriculture.

Future projects could include 1) comparisons of outbreak response measures before and after implementation of the rapid outbreak response team; 2) evaluations of case investigations of selected foodborne pathogens; and 3) foodborne illness in infants.

Preparedness Role

The Fellow will be expected to participate with staff in ongoing activities toward enhancing the preparedness of MDCH to respond to any public health emergency, natural disaster, chemical, biological, radiological, nuclear or explosive event. These activities may include attending preparedness exercises and completing any Incident Command training that may be offered.

Assignment Location: Lansing, Michigan

Primary Mentor: Melinda Wilkins, DVM, MPH, PhD
Director, Communicable Disease Division
Michigan Department of Community Health

Secondary Mentor: James Collins, MPH
Manager, Surveillance
Michigan Department of Community Health