

Infectious Disease

We have enjoyed the opportunity to host two Fellows in infectious disease epidemiology since the inception of the CSTE Fellowship program and look forward to another excellent experience with a future Fellow. The Fellow will be part of the Communicable Disease Division, Bureau of Epidemiology and be integrated with activities funded under two CDC public health initiatives within the Surveillance and Infectious Disease Epidemiology Section: The Epidemiology and Laboratory Capacity (ELC) Program and the Public Health Preparedness Cooperative Agreement. These programs are responsible for surveillance, prevention, and control of conditions in the areas of enteric, respiratory, waterborne, zoonotic, vectorborne, and neurologic diseases. The Fellow would specifically work in the Foodborne Disease area with broad opportunities for cross training. Michigan continues to provide a rich learning environment for public health professionals in the CDC Epidemic Intelligence Service and the University of Michigan Preventive Medicine Residency Program. Staff in these programs shares experiences with the staff of the Communicable Disease Division in interactions that contribute to the professional growth of all parties. The integration of these partners offers a unique opportunity for exposure to a broader range of public health experience for participating Fellows.

The ELC Program assists Michigan local health departments (LHD's) in strengthening their basic capacity in the above-mentioned areas of infectious disease threats. There are forty-five (45) local health jurisdictions that serve the 10 million residents of the state. Five epidemiologists currently staff the core for this program that is also supported by a network of eight regional epidemiologists who are physically based in local health jurisdictions across the state. The geography of Michigan is unique in that it is bordered by four Great Lakes and comprised of two peninsulas, the Upper and the Lower. A high-level need also exists for capacity building in outbreak response among the many rural health jurisdictions across the state where there has historically been limited epidemiologic expertise. Assistance with foodborne outbreaks is particularly needed because of the frequent occurrence of these events at all times of the year. Michigan has a robust state health reference laboratory with highly trained staff scientists. Interactions between the epidemiology and laboratory staffs occur on a daily basis. The state also shares an international border with Canada, which may be traversed at three principle crossings, creating special concerns around international health issues. As a component of the preparedness award, Michigan has become a regional leader in cross-border public health issues with the implementation of the Great Lakes Border Health Initiative. Recently, public health leadership from regional border states and the Province of Ontario has solidified this relationship with the signing of documents that describe the content and triggers for cross border data sharing. Partnership with agents of the Detroit Federal Quarantine Station and border security officials has resulted in a more complete understanding and cooperation on international public health issues. Because of these programs and partnerships, the Fellow will have opportunity to participate in investigations that involve international issues.

The CD Division organizes and hosts an annual statewide Communicable Disease Conference each spring to provide updated information and guidance on communicable disease topics and emerging disease threats. The target audience includes all Local Health Departments, as well as infection control practitioners and clinical laboratory directors from healthcare systems and nursing homes. Our previous Fellows have had the opportunity to present their work at this and other statewide meetings.

2) Day to Day Activities

The Michigan Infectious Disease Fellow would have a truly unique opportunity to act as a member of Michigan's infectious disease epidemiology team, with special emphasis on foodborne and emerging infectious disease opportunities. On a daily basis, the CSTE Fellow would assist in monitoring enteric illness patterns throughout the state and using epidemiologic and laboratory data to identify clusters and outbreaks both within and across jurisdictions. The CSTE Fellow would 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, data analyses, 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 Fellow would provide consultation and technical assistance to local health authorities regarding enteric illness case reporting rules and case definitions, pathogen identification and interpretation of laboratory test results, and disease control measures. Many of these consultations routinely involve control measures for pathogens with high transmissibility and/or high morbidity. Other frequent consultations would concern high-risk situations and high-risk groups such as enteric outbreaks involving food handlers, schools, daycare centers, and other institutionalized populations.

3) Potential Projects

The CSTE Fellow could choose among several focused activity areas to tailor experiences leading to advanced skills in applied epidemiology as well as policy and program development. The Fellow, together with both mentors will be able to choose a project suited to the background of the Fellow and current needs of the Division. Past projects have included collaborations with EID laboratory Fellows on laboratory-oriented endeavors. Other opportunities for collaboration on 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), collaboration with the National Food Safety and Toxicology Center at

Michigan State University, the Michigan Department of Agriculture and the University of Michigan Center for Public Health Preparedness.

4)Program or surveillance system evaluation

The Fellow will be expected to review a surveillance system currently in place for one or more selected notifiable diseases in the state.

5)Role of Fellow in Michigan Emergency Preparedness plan

Michigan has an established Office of Public Health Preparedness which has drawn staff from both the epidemiology and laboratory programs of the health department and thus maintains close ties with both of these programs. The Fellow would have many opportunities to participate in trainings, tabletop exercises, discussions and projects with the Office of PH Preparedness in Michigan. Among these would be:

Incident Command Training:

The availability and completion of Incident Command System trainings for better integration with the National Incident Management System structure employed throughout Michigan's public health community in responding to emergent public health issues. This structure is mandated for incident response at the federal, state and local level.

Foodborne Annex to Michigan Emergency Operations Plan:

The Fellow will be integrated into the planning activities and coordination with the Michigan Department of Agriculture as this plan is a component of the state's Emergency Operations Plan.

Bioterrorism Education:

The Fellow would also be encouraged to take advantage of the many Bioterrorism-Preparedness education opportunities and exercises offered through the Michigan Center for Public Health Preparedness based at the University of Michigan campus, which is part of a national network of centers established to support preparedness efforts of state and local health departments nationwide.

Assignment Location: **Lansing, MI**

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

Advanced Degrees: DVM, Michigan State University (1994)
MPH, University of Illinois (1999)

Secondary Mentor: Sally Bidol, RN, MPH
Senior Communicable Disease Epidemiologist

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Michigan Department of Community Health

Advanced Degrees:

MPH, University of Michigan School of Public Health (1991)