

Infectious Disease

Description:

The primary assignments for the CSTE Fellow are as the infectious diseases epidemiologist for Kentucky Department of Public Health (KY-DPH) programs related to:

- (1) Surveillance, reporting, and investigation of healthcare-associated infections (HAIs) and infectious diseases outbreaks in healthcare settings and
- (2) Surveillance, reporting and investigation of foodborne outbreaks in Kentucky.

Other KY-DPH opportunities in applied epidemiology or infectious diseases epidemiology may be available for projects related to tuberculosis, sexually transmitted diseases, or viral hepatitis prevention. All of the primary activities and projects for the CSTE Fellow would involve “hands-on” public health infectious diseases activities involving KY-DPH, other public health agencies, hospitals, and other external partners. Activities and projects will include the full spectrum of program planning, organization and administration of these activities or projects. The effective CSTE Fellow in this position will carry initiatives and projects from the idea stage through the planning process to the implementation phase, through evaluation, and finally, through reporting of results.

Day-to-Day Activities:

The CSTE Fellow’s day to day activities will vary with each project. A typical day could involve meeting with mentors, meeting with KY-DPH or State Lab staff individually or in groups, and in having interactions with staff at Local Health Departments, Hospital Preventionists, or external partners.

Interactions outside of KY-DPH could be via telephone, email, videoconference, Webinars, or in person meetings. Activities will generally be related to KY-DPH ongoing work and CSTE Fellow projects related to infectious diseases surveillance, reporting, and investigation of outbreaks. KY-DPH staff, Regional Epidemiologists, and LHDs use a multi-step approach to outbreak investigations. These steps include preparation for the investigation, confirmation of an outbreak being identified, establishing case definitions, case finding and data collection, preparation of epidemic curves, hypothesis generation, data analysis and interpretation, implementation of control measures, and preparation / distribution of reports. Final reporting can be through presentations at conferences or training programs, or submitting manuscripts for publication.

Potential Projects:

- Provides epidemiological expertise for surveillance, reporting, and investigation of healthcare-associated infections (HAIs) and infectious diseases outbreaks in healthcare settings. Conducts epidemiological studies to prevent and control the spread of infectious diseases and other health conditions and to plan health programs.

- Conducts epidemiologic investigations. Conducts field investigations, designs surveys and questionnaires, and collects data on specific reportable diseases and conditions. Uses advanced epidemiologic methods to analyze data and interpret findings. Prepares reports, and recommends interventions and control measures. Epidemiologic and statistical analyses are conducted using spreadsheets, database, statistical and other software, e.g. Excel, Business Objects, SAS, SPSS, and GIS programs.
- Provides assistance and consultations for epidemiologic investigations. Consults with and assists to Infection Preventionists, local health departments, medical providers, KDPH staff, Regional Epidemiologists, and others health professionals on surveillance, reporting, and investigation of suspected, probable, and confirmed cases of HAIs.
- Coordinates National Healthcare Safety Network (NHSN) activities and training. Lead coordinator or co-coordinator for NHSN enrollment, recruiting, user training, and group user functionality for Kentucky LTC facilities and other healthcare setting participating in NHSN. Plans, organizes, and implements training courses and conferences related to HAIs and NHSN. Prepares educational materials on HAIs, and on epidemiological and surveillance issues.
- Assists in the implementation and maintenance of epidemiology databases including the linking of HAIs to other risk factors, e.g. Disease Surveillance Module of the Kentucky Electronic Public Health Record System, PFGE database, and NHSN. Acquires/develops expertise in analysis and reporting of aggregate or individual facility data in NHSN. Prepares and distributes reports about HAIs, e.g. annual report.
- Develops curriculum, arranges training, conducts training, and participates in training on HAI prevention and control strategies, including surveillance, identification of cases, reporting, and outbreak management, for nurses and other health professionals at KDPH and in health care settings (e.g. acute care hospitals, long term care facilities, and local health departments), and for other professionals.
- Attend trainings and meetings on epidemiology as a representative of the Division of Epidemiology and Health Planning. Teaches other healthcare professionals about epidemiology, biostatistics, and database principles and methods. Main job functions related to foodborne outbreaks: Provides epidemiological expertise for surveillance, reporting, and investigation of foodborne outbreaks in Kentucky. Conducts epidemiological studies to prevent and control the spread of foodborne diseases.
- Principal coordinator for enrollment and training for CDC National Outbreak Reporting System (NORS) reporting system for the KY-DPH. Collaborates with Regional Epidemiologists for data entry into NORS; performs quality assessments with Foodborne Outbreak Database Search Tool (FODST) and other tools.
- Assist KY-DPH and LHDs with developing a standardized foodborne questionnaire for investigation of foodborne outbreaks in Kentucky. Develops SPSS or SAS analytical technique for analysis and reporting of foodborne outbreaks. Incorporates GIS analysis and geomapping principles into analysis and reporting of foodborne outbreaks.
- Deploys to Local Health Departments to coordinate foodborne outbreak investigations and provides mentorship and training on field epidemiology principles and practices to LHD staff and

Regional Epidemiologists. Assures food and patient specimens are collected and shipped to the State Lab for proper identification of suspected foodborne pathogens...

- Collaborates on foodborne outbreaks with state Food Safety and Environmental sections in Public Health Protection and Safety Division.
- Serves as a member of the state Epidemiology Rapid Respond Team Coordinating Committee to coordinate training and competence development for ERRTs at LHDs. Principal advocate for curriculum areas related to foodborne outbreak investigations.
- Coordinates training programs for workforce development of KY-DPH and LHD staff regarding foodborne outbreaks via video conference, Webinars, and state or regional conferences.
- Identifies data sets for foodborne outbreaks and formulates an annual foodborne outbreak summary report for Kentucky.

Emergency Preparedness Role:

The CSTE Fellow will have an active role in emergency and public health preparedness activities that are ongoing in the KY-DPH. The Department Operations Center (DOC) has been activated in the past year because of severe winter storms and pandemic influenza. The CSTE Fellow will participate in any activated DOC operations during the fellowship. The CSTE Fellow will receive training provided to new staff related to Emergency and Public Health Preparedness. The CSTE Fellow will attend the training programs provided for new members of Local Health Department Emergency Rapid Response Teams (ERRTs). Then, as a member of the KY-DPH Planning Committee for the ERRTs, the CSTE Fellow will participate in revising the training agenda and will be an instructor for future ERRT training events. KY-DPH Programs have ongoing joint planning sessions with the Public Health Preparedness Branch. The CSTE Fellow will participate in these planning sessions with one or more Sections in the Infectious Disease Branch.

Assignment Location: Frankfort, Kentucky

Primary Mentor: Robert Brawley, MD, MPH
Chief, Infectious Disease Branch
Kentucky Department of Public Health

Secondary Mentor: Douglas Thoroughman, PhD, MS
CDC Career Epidemiology Field Officecr
Kentucky Department of Public Health