

Infectious Diseases/ID-HAI

Assignment Description:

The CSTE Fellow will be working at the Kentucky Department for Public Health (KDPH) located in Frankfort, Kentucky. Frankfort is the capital of Kentucky and is approximately 30 minutes from Lexington and 60 minutes from Louisville.

The CSTE Fellow will work primarily as an infectious disease epidemiologist and can expect to have a multifaceted experience in a state health department. The fellow will have the opportunity to choose from a variety of epidemiologic activities, spanning the gamut of infectious diseases to preparedness to vital statistics. Beyond involvement in outbreaks as they occur, and several defined infectious disease projects, a number of non-infectious disease projects are available. The fellow is encouraged to develop additional projects in their own particular areas of interest during their assignment in Kentucky. We have identified a menu of key initiatives from which the fellow can select projects to give the widest exposure to applied public health and epidemiology (see “Potential Fellow Projects” description box below) but also match the fellow’s areas of interest and career goals. We want to promote maximum flexibility for the fellow in choosing projects, and which projects to engage in more deeply. We believe this flexibility with projects will facilitate epidemiology competency development that will be competitive for future employment in applied public health roles.

All of the primary activities and projects for the CSTE Fellow would entail “hands-on” public health activities involving KDPH, other public health agencies, hospitals, and other external partners. Activities and projects will include the full spectrum of program planning, organization, administration, and reporting 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 or any part of that spectrum depending on the timing of the project and the fellow's tenure in Kentucky.

Day-to- Day Activities:

The CSTE Fellow’s day-to-day activities will vary with each project but will generally be related to KDPH ongoing work and CSTE Fellow projects related to infectious disease surveillance, reporting, and investigation of outbreaks. A typical day could involve meeting with mentors, meeting with KDPH or other state and local staff individually or in groups, or interacting with staff at Local Health Departments, hospital Infection Preventionists, or external partners. Interactions outside of KDPH could be via telephone, email, videoconference, Webinars, or in-person meetings. Daily activities will also include analyzing data, participating in field investigations, preparing surveys or reports, and preparing findings for conference presentations or manuscript publication. We have had numerous public health responses in the past year, so involvement in department incident command structure will likely be a part of this experience.

Potential Projects:

A number of infectious disease projects are available and depending on the interests of the fellow, more projects may be developed in such topics as tuberculosis (TB), sexually transmitted diseases (STDs), foodborne diseases, healthcare associated infection prevention, surveillance for reportable diseases, and HIV/AIDS.

The fellow will also have the opportunity to engage in field outbreak investigations, including hospital-based outbreaks, as they arise. Many outbreaks occur in Kentucky annually in a variety of situations

(foodborne, hospital associated, multi-state or nationwide outbreaks, vaccine-preventable disease outbreaks, etc.). The fellow is encouraged to participate, possibly as an investigation lead, and gain an understanding of field outbreak investigations. Examples of potential infectious disease projects include:

- Infectious Disease Epidemiology practice at KDPH. The CSTE fellow could be integrated with the Reportable Diseases Section staff and assigned a list of reportable diseases (e.g., shigellosis, hepatitis A) to respond to. In this possibility, the fellow would be responsible for coordinating surveillance, case investigations with local health departments, case determinations, and other activities for three to six to 12 months.
- Evaluation of enteric disease outbreak reporting in Kentucky: The prior CSTE fellow worked with the state's Reportable Disease section to establish routine evaluation of the effects of efforts toward improving the state's ability to identify and respond to enteric illness outbreaks including publication of the "Kentucky Foodborne and Waterborne Outbreak Investigation Manual." The incoming fellow may choose to lead ongoing evaluation efforts which are needed.
- Evaluation of human papillomavirus (HPV) vaccine administration in Kentucky counties with the highest incidence of cervical cancer versus HPV vaccine administration in counties with the lowest incidence of cervical cancer.
- Comparison of the epidemiology of cases of tuberculosis (TB) in Kentucky in the last decade of the 20th Century vs. the first decade of the 21st Century.
- Survey of mandatory influenza immunization policies for healthcare workers at Kentucky hospitals, long-term care facilities, and local health departments.
- Comparison of the epidemiology of cases of Sexually Transmitted Diseases (STDs) in Kentucky in the last decade of the 20th Century vs. the first decade of the 21st Century.
- Epidemiology of cases of infectious diseases in Appalachian counties in Kentucky vs. infectious diseases cases in non-Appalachian counties.
- Epidemiology of the syndemics (two or more diseases that, in combination, interact to exacerbate negative health effects of one or more of the diseases) of STDs, TB, HIV, viral hepatitis, and drug/alcohol abuse in Kentucky.
- Viral hepatitis prevention activities, including establishing baseline epidemiological data for viral hepatitis cases by Kentucky county in the last decade of the 20th Century vs. the first decade of the 21st Century with geo-mapping related to incidence. Money is being requested from the CDC and the legislature to fund laboratory testing for hepatitis C virus infection at local health departments in 2013. If funded, the fellow could also geo-map hepatitis C prevalence by county based upon those laboratory results.
- Foodborne disease-related activities include deploying to local health departments to coordinate outbreak investigations, participating in and coordinating workforce development training programs for KDPH and LHD staff regarding foodborne outbreaks, and assisting in preparation of foodborne-disease grant funding opportunities.

The Healthcare Associated Infections (HAI) Prevention Program in Kentucky was established in 2010 and is currently funded for 4 full-time positions and an incoming CDC Career Epidemiology Field Officer will supplement the program with 50% of their assignment. Potential activities or projects in collaboration with HAI Prevention Program staff include:

- Deployment to hospitals or long-term care facilities to assist with and later coordinate HAI outbreak investigations in healthcare facilities;
- Assisting with the implementation of a long-term care collaborative for prevention of HAIs;
- Creation of a healthcare facility "validation process" for HAI data being collected and submitted to the National Healthcare Safety Network (NHSN) (a national database at the CDC for the reporting and collection of HAI data)

- Training Infection Preventionists on the application of the CDC data definitions for HAI surveillance,
- Deployment to hospitals or long-term care facilities for on-site HAI data collection validation/reviews and creation of a validation report to be submitted to KDPH.

Role of Emergency Preparedness:

Incoming fellows will engage in preparedness projects and activities throughout the tenure of their fellowship and are encouraged to participate in emergency public health response activities. In recent history, Kentucky has experienced several large-scale natural disasters and outbreak investigations requiring public health response. Previous fellows have been integrated into all aspects of emergency public health response ranging from pre-event planning to training to fulfilling Emergency Operations Center roles to field data collection during actual responses (e.g. 2009 KY Ice Storm), planned mass gatherings (e.g. 2010 World Equestrian Games and annual NASCAR Sprint Cup events), and training exercises (e.g., USPHS Training Missions in 2010). The CSTE fellow may also participate with local health department preparedness operations for annually-scheduled large scale events (e.g., the Kentucky Derby in Louisville). The Fellow's role in emergency preparedness can be as large or as small as the fellow desires.

Assignment Location:	Frankfort, KY
Primary Mentor:	Robert Brawley, MD, MPH, FSHEA Infectious Disease Branch Chief Kentucky Department for Public Health
Secondary Mentor:	Doug Thoroughman, PhD, MS CDC Career Epidemiology Field Officer Kentucky Department for Public Health