Infectious Disease

Assignment Description

The Maine Center for Disease Control and Prevention (Maine CDC) develops and delivers services to preserve, protect and promote the health and well-being of the residents of Maine. This CSTE Fellowship assignment will be located within the Division of Infectious Diseases (DID) of the Maine CDC. The mission of the DID is to decrease morbidity and mortality through the prevention and control of infectious disease. Maine has a centralized public health system where disease investigations and outbreak response activities are coordinated centrally. The Fellow in this assignment will have the opportunity to participate in a wide range of epidemiologic, surveillance, disease control and preparedness activities across the various programs within the Division.

Day-to- Day Activities

Daily activities will consist of planned epidemiological studies, acute outbreak investigations, and developing and integrating prevention initiatives. The Fellow will participate in daily epidemiology meetings with Division epidemiologists where current case and outbreak investigations are discussed. The Fellow will also participate in weekly epidemiology case review with epidemiologists from our Medical Epidemiology and Infectious Disease Epidemiology Programs to review surveillance case classification and reporting procedures utilized for notifiable diseases and to monitor trends. The Fellow will have the opportunity to assist the on-call epidemiologist on a rotating basis.

Potential Projects

The Fellow's projects will be determined by the individual's interests in combination with the priorities and needs of the DID. Potential activities include, but are not limited, to the following:

• The Early Warning Infectious Disease Program (EWIDS) is a unique collaboration of state, federal and international partners who collaborate to provide rapid and effective laboratory confirmation of urgent infectious disease case reports in the border regions of the United States, Canada, and Mexico. Maine is a partner in the Eastern Border Health Initiative in collaboration with New Hampshire, Vermont and New York on the U.S. side, and New Brunswick, Nova Scotia and Quebec on the Canadian side. The Fellow will have the opportunity to play a key role in this collaboration including work on such activities as enhancing syndromic surveillance in hospitals and improving electronic sharing of laboratory information and syndromic surveillance data among the participating jurisdictions.

• Maine CDC initiated syndromic surveillance in the fall of 2007 and has grown from receiving emergency department data from one hospital to twenty hospitals. Syndromes included in the syndromic surveillance system include both infectious and environmental health conditions. The system has not had a major evaluation and a potential project for the Fellow would be to conduct an evaluation of the syndromic surveillance system.

• Analyze data collected on Campylobacteriosis and Giardiasis cases among children aged < 5 years. These cases are investigated by field staff, but no analysis has been conducted to date to examine potential differences in demographics, risk factors and the impact of refugee screening among children compared with adults.

• Over the past 15 years, the number of Lyme disease cases identified in Maine has increased dramatically, with 970 case reports received in 2009 compared with only 71 in 2000. The Fellow would have the opportunity to analyze data collected on Lyme disease cases in Maine children to assess potential differences in symptomatology, risk behaviors, and testing compared with adults. The results of this analysis would be used to recommend control measures and prevention interventions. The Fellow could work with various programs within Maine CDC to target education and interventions for children, such as with the WIC program.

• In recent years cryptosporidiosis cases have increased. From 2005 to 2009 cases have doubled from 30 to 67 cases. So far in 2010 there have been over 80 cases. The fellow would be assisting with a project to determine explanations for the increase in cases. This would include working with the state laboratory to increase awareness of cryptosporidiosis PCR testing and genotyping; conducting enhanced surveillance activities including GIS mapping of cases; and working with the Division of Environmental Health to overlay maps of water regions and land management.

• The Advisory Committee on Immunization Practices (ACIP) recently revised its recommendations for the prevention of invasive pneumococcal disease among adults and added current smokers to the list of persons for whom pneumococcal polysaccharide vaccine is recommended. The Fellow would have the opportunity to analyze data from the Behavioral Risk Factor Surveillance System (BRFSS) to assess the impact of this policy change on the prevalence of pneumococcal vaccination among smokers. BFRSS data could also be used to assess the prevalence of seasonal influenza vaccination among persons who report having conditions that put them at risk for severe complications from influenza (e.g., asthma, diabetes, cardiovascular disease).

• Maine has information on reported latent tuberculosis infection (LTBI) cases starting in 2005. The fellow will have access to this data and be able to examine case counts, risk factor information, treatment completion information and other available data. Additionally the fellow will have the opportunity to be involved in developing a more robust surveillance system for collecting and tracking case information.

The Maine CDC is small enough to offer a CSTE Fellow a high level of responsibility with minimal bureaucracy. A Fellow will complete his/her time in Maine with an excellent working knowledge of field epidemiology, surveillance, and state public health practice. The Fellow would have the opportunity to present their work to programs within Maine CDC, to external partners, at national meetings, and in peer-reviewed journals and government publications (MMWR).

Preparedness Role

DID is the lead response unit for surveillance, epidemiology, and disease control activities related to emergency preparedness and response. The Fellow will participate in general infectious disease surveillance and attend all trainings involving Infectious Disease Epidemiology staff regarding Emergency Preparedness issues. The fellow will become knowledgeable about the roles both the Infectious Disease Epidemiology and the Office of Public Health Emergency Preparedness have during a public health emergency.

Assignment Location: Augusta, Maine

Primary Mentor:	Susan Manning, MD, MPH Medical Epidemiologist Maine CDC
Secondary Mentor:	Amy Robbins, MPH Epidemiologist/Data Manager Maine CDC