

Infectious Disease

Description:

Information about the program area: The Fellowship offers mentoring through the Connecticut Department of Public Health Infectious Diseases Section working in the Tuberculosis (TB) Control and Sexually Transmitted Diseases (STD) Programs. The TB and STD Programs' responsibilities include developing and providing education for healthcare providers, assisting local health departments, working with regional public health programs, developing guidelines, implementing disease surveillance and analyzing data, conducting epidemiological studies, investigating outbreaks, interacting with providers to manage patients, and assisting in the development of public health policy. The Fellowship provides a variety of practical, hands-on experiences that will expand the Fellow's knowledge and skills in applied epidemiology and public health practice. This experience will help prepare the Fellow for a career with a state or local health department. The Fellow will be considered an integral member of the TB and STD Programs. Our goal is to further the Fellow's professional growth and expand access to public health practitioners and leaders. The proposed projects are collaborative and emphasize prevention interventions, the use of data for decision-making, evaluating programmatic outcomes, and building program capacity. Both the TB and STD programs are also involved in projects with other programs in the New England region. The Fellow will have an assortment of options to develop and demonstrate core competencies in epidemiologic methods, communication, public health practice, and program evaluation. Opportunities exist to attend and present at public health meetings.

Day-to-Day Activities:

The fellow's day-to-day activities will revolve around the projects that he/she is working on at the time. The fellow will also participate in regular meetings that occur in the Infectious Diseases Section during the week including TB case review meetings, syphilis case review meetings and Epidemiology Program meetings. The fellow will also be asked to participate in other meetings and trainings that are expected to benefit the fellow or where the fellow can contribute, again based on their current projects and experiences. The goal is to integrate the fellow as much as possible into the Infectious Diseases Section. The fellow can expect to meet with the mentors formally on a weekly basis and will interact with the mentors on a daily basis as needed.

Potential Projects:

- New diagnostic tests for earlier diagnosis of TB disease or latent TB infection are important tools for TB control. Despite commercial availability, their use has not been well studied at the state level. A study involving collecting, analyzing, and interpreting data on the use of nucleic acid amplification tests and interferon-gamma release assays is a possibility. The Fellow will also have opportunities to present the findings publicly.
- The Fellow can play a key role in the public health response to increasing cases of gonorrhea. The STD program has a need for close follow-up of cases reported from urban centers especially among African-Americans. The Fellow will help develop a social marketing campaign in high-

incidence cities. The Fellow would also provide assistance by interfacing with private and public providers, health department staff, and the community, to get their buy in. A special issue to address is how to reach hospital emergency departments with possible screening and treatment initiatives. Data analysis including the use of geocoding cases will be part of the public health response by determining the communities where cases are coming from.

- The Fellow will have opportunities to help plan and coordinate TB and STD educational efforts in the state and the New England region. Education is targeted to providers, public health nurses, and others. Contact and outbreak field investigations
- The TB Program assists local health departments in conducting public health investigations in the community and periodically in congregate settings (e.g. prisons, long-term care facilities). The TB Program would like to learn how to improve outcomes of stepwise process indicators such as start of treatment for contacts and other high-risk individuals with latent TB infection. The Fellow will acquire cultural awareness and sensitivity as the majority of patients are from other countries and gain an understanding of HIPPA issues.
- The STD Program is investigating syphilis transmission among gay men; 40% of reported syphilis cases in the state are also HIV-infected. This is an excellent opportunity for a Fellow to apply a diversity of epidemiologic methods to describe the epidemiology and risk factors related to this outbreak. Fellows can be involved in partner notification, developing a social network analysis to display patterns of transmission especially among HIV-infected men, and take the lead on creating prevention messages. It would be very helpful to the STD Program for the Fellow to prepare recommendations for prevention among persons who persist in engaging in high-risk sex.
- Assisting on outbreaks such as H1N1 influenza, food or waterborne outbreaks, and other infectious agents is possible and encouraged.
- An opportunity exists to analyze surveillance data and make recommendations to the Program. The Fellow would design the analysis and create a surveillance report and special reports including temporal and spatial trends analysis to define the changing patterns of TB transmission. Previous analyses and publications include TB in the foreign born and outcomes from contact investigations.
- Connecticut has been working with CDC and other states in developing surveillance for neonatal herpes. The Fellow would have the opportunity to continue work began by the current Class VI Fellow and potentially expand the current surveillance system by doing a retrospective study of cases at the two largest children's hospitals in the state.
- The TB Program periodically is asked by local health departments to find residence for patients who require isolation. As part of a regional and national effort to define the best legal and public health practices involving isolation, the Fellow will investigate existing Connecticut State law related to quarantine and isolation, possibly seek an opinion from the State Attorney General on isolation of patients in a facility in another state, and make recommendations on the use and costs involved in out-of-state isolation.
- The TB Program has embarked on an evaluation of programmatic outcomes (National TB Indicators Project). Program evaluation is an ongoing process in which the Fellow can make an

important contribution. The evaluation will guide the Program on defining needed improvements. Findings are reported to CDC.

- Evaluation of the completeness of TB case reporting to the state surveillance system is an important program function. This evaluation will take place through a laboratory record review to find potentially unreported TB cases. The evaluation may include a review of medical records, physician or local health staff contact or patient interviews. Reasons for non-reporting of TB cases should be determined and a plan for improvement developed and implemented.

Emergency Prep Role:

Possible activities may include working with bioterrorism/emerging pathogen response protocols, and planning for continuity of program operations in an emergency. Fellows may participate in a table-top exercise. The fellow will be able to take part in preparedness planning and can be integrated into emergency operations (e.g. H1N1) as needed.

Assignment Location: Hartford, Connecticut

Primary Mentor: Mark Lobato, MD
New England-region Medical Officer
Division of Tuberculosis Elimination, CDC

Secondary Mentor: Lynn Sosa, MD
Deputy State Epidemiologist
Connecticut Department of Public Health