

Infectious Disease

Information about the program area

The California Department of Health Services (CDHS) Tuberculosis Control Branch collaborates with large urban jurisdictions as well as with rural and small health jurisdictions on diverse statewide activities in the prevention and control of tuberculosis (TB). These activities include surveillance, research and evaluation, and outbreak investigation. There are 50 staff in the TB Control Branch, including epidemiologists, clinical specialists, program liaisons, communicable disease investigators, and other professional and support staff. California contributes the most TB cases of any state, approximately 20% of the nation's 14,000 annual cases.

The Surveillance and Epidemiology Section is specifically responsible for collecting case data for a national TB registry, conducting field studies and other research, and evaluation. The section provides substantial support to an innovative program evaluation initiative called the Tuberculosis Indicators Project.

The Tuberculosis Indicators Project (TIP) is a partnership between the state-level TB Control Branch and the 16 local TB programs with the highest TB morbidity in California. It is a formal process for using indicators and other available data to evaluate and improve program performance. Implemented in 2000, it is a mature project that is associated with measurable improvements in local indicator performance. TIP has received national recognition: the Centers for Disease Control and Prevention (CDC) is modeling its national TB indicator reports on California's system, and TIP staff are members of the CDC Division of TB Elimination's Evaluation Workgroup.

Proposed Activities

Program and surveillance system evaluation: The CSTE Fellow would serve as the epidemiologist on multidisciplinary teams from the state, partnering with local health jurisdictions in the TB Indicators Project (TIP), the program evaluation and improvement process that uses performance indicators to measure key aspects of TB control activities. The Fellow would present and interpret local data, explain indicator methods and limitations, and work with state and local staff to design a feasible and useful evaluation component of the resulting improvement plan. There would be additional opportunities to be involved in program evaluation activities at the state and national level.

Because the indicators are based on surveillance data, the Fellow would become adept at understanding the uses and limitations of the extensive TB surveillance data sets, and would be able to conduct an assessment of the utility of using the TB surveillance data system for program evaluation in California. The Fellow would also conduct original analyses with the data sets to help understand and evaluate particular questions and interventions indicated by these data. The Fellow would design and review tools needed for additional data collection to answer specific questions or to check assumptions.

Data analyses: The Fellow would work closely with the primary mentor to conduct a field study and match drug, physician, and hospital discharge data with data from the registry of TB cases to determine hospitalization costs of MDR-TB. Specifically, we would determine how to represent the full costs of “outlier” patients, including surgical resections and patients who will leave the state. The Fellow will assist in the full cycle of the study, from the field study component design, database matching, and statistical analyses to manuscript preparation and dissemination of findings.

Interdisciplinary teams: Work in both of these areas (TIP, MDR-TB research) provides an opportunity to work on teams whose members include medical officers, program liaisons, biostatisticians, health educators, and epidemiologists.

Collaboration with other epidemiologists: The Fellow would attend monthly meetings of the Surveillance and Epidemiology Section, as well as the entire TB Control Branch. Together with the other eleven epidemiologists, the Fellow would prepare and interpret analyses for the yearly state data review, which directly informs activities for TB control in California. The Fellow would be encouraged to participate in other learning opportunities available at the TB Control Branch, such as attending and presenting at a monthly journal club; and local and state events such as the biannual California TB Epidemiologists Network meetings, and the quarterly meeting of state public health epidemiologists.

State Emergency Preparedness: The Fellow would work actively in collaboration with the Branch medical epidemiologist representative in developing the TB Control portion of the State Emergency Preparedness Plan. Activities may include helping to determine how to incorporate lessons learned from TB outbreak investigation into bioterrorism/emerging pathogen response protocols, and how to plan for continuity of government operations (keeping state and local TB programs running in an emergency).

Assignment Location:	Richmond, CA
Primary Mentor:	Travis Porco, Ph.D., M.P.H. Senior Epidemiologist
Advanced Degrees:	Ph.D., University of California, Berkeley (1994) M.P.H., University of California, Berkeley (1997)
Secondary Mentor:	Melissa Ehman, M.P.H. Epidemiologist/Assistant Section Chief
Advanced Degrees:	M.P.H., University of California, Berkeley (2000)