

Infectious Disease

The Texas Department of State Health Services (TDSHS), Office of Border Health (OBH) at Health Service Region 9/10 (HSR 9/10) was established to promote and protect the health of border residents along the US-Mexico border in a binational effort which coordinates with local communities and US and Mexico health entities. It has been noted that the U.S.- Mexico border consist of a 2,000-mile boundary which is considered one of the busiest internationally. Although it is recognized that there is an international boundary, there is neither restrain on social and economic interactions nor the transmission of infectious diseases among residents on each side of the border. The OBH utilizes a multidisciplinary public health workforce to address public health issues. This is done by developing health service strategies based on the unique population characteristics and epidemiological disease patterns in the border region. For this reason, the OBH has structured its major activities to include disease surveillance, needs assessments, health education and health promotion, outbreak investigation and management, as well as binational preparedness.

To provide the best hands-on skills and experiences, the fellow will serve as a member of the Regional Epi & Surveillance Team. The team is responsible to identify community needs, determine appropriate interventions, develop protocols for response, and contribute to projects related to detecting and monitoring and acting on infectious diseases. The fellow will have the opportunity to become part of a tri-state (New Mexico, Texas, and Chihuahua) Border Epidemiology and Surveillance Team (BEST) collaborative workgroup. Thus, the activities may include communicating with public and healthcare providers, collecting and analyzing epidemiology data, collaborating with local, state, federal, and Mexican health entities, preparing reports for significant findings, and presenting the findings to the public and professionals.

OBH is initiating an active surveillance project to estimate the prevalence of gastrointestinal-like-illness (GLI) and influenza-like-illness (ILI) among arriving bus passengers in the U.S.- Mexico border. The fellow will be able to assist in the data analysis to establish morbidity trends for GLI and ILI among domestic and international bus passengers. The findings will serve to identify the necessary response measures needed to detect, prevent, and delay the introduction of infectious diseases into the United States.

Another on-going project will be focusing on tuberculosis (TB) treatment response and transmission along the border utilizing Project Juntos' database, a binational directly observed therapy program in Ciudad Juarez, Chihuahua funded by TDSHS. The data shows that 17% of the TB patients with Project Juntos had diabetes, making it the highest co-morbidity. It has been well documented that co-morbidity such as HIV/AIDS can increase the chance of acquiring active TB and is also an important factor that complicates response to TB treatment. However, there is still much to be learned about the relationship between diabetes and TB treatment. The fellow will have the opportunity to access the database and determine the effects of co-morbidities on treatment outcomes for patients with TB and diabetes.

Along with understanding effects of co-morbidities on treatment outcomes for patients with TB and diabetes, the fellow will also have opportunity to participate in an international consortium of TB where various US/Mexican academic institutions worked together. The research aim is to conduct studies to identify patterns of the spread of TB in the border region by utilizing molecular fingerprints and existing contact investigation data.

The HSR 9/10 takes an interdisciplinary team approach to manage unusual disease clusters or outbreaks. As part of the outbreak protocol the fellow will be included in the disease notification distribution list. The fellow will participate in conference calls to discuss the situation, provide feedback, and help with investigation and implementation of control measures.

OBH is working with staff from Epidemiology Response Team and Immunization Program to establish the regional influenza surveillance system that is necessary to implement preventing measures. The fellow will assist with the implementation of the school-based, physician sentinel sites, and Paso Del Norte Region (the area include El Paso, Texas; Juarez, Mexico; and Las Cruces, New Mexico) influenza surveillances. The fellow will also assist with the data analysis and program evaluation to provide recommendations for improving quality, efficiency, and usefulness.

In addition, the fellow will work actively in collaboration with the Epidemiology Response Team to enhance surveillance activities in the region as well as participate in exercises.

Assignment Location:	El Paso, Texas
Primary Mentor:	Luis Gerardo Escobedo, MD, SM, MPH Regional Director Texas Department of State Health Services
Advanced Degrees:	MD, Stanford Medical School (1979) SM, Harvard (1982) MPH, Harvard (1981)
Secondary Mentor:	Hsin-I Lin, ScD, MSPH Epidemiologist, Epidemiologic Response Team Texas Department of State Health Services
Advanced Degrees:	ScD, Tulane University (2004) MSPH, Tulane (1999)
Secondary Mentor:	Adriana Corona, MBA, BCH Office of Border Health Manager Texas Department of State Health Services
Advanced Degrees:	MBA, University of Phoenix (2003)

Texas_Escobedo