

Infectious Disease

1) The Infectious Disease Surveillance and Epidemiology (IDSE) Branch of the Texas Department of State Health Services (formerly the Texas Department of Health) is responsible for the surveillance and reporting of reportable infectious diseases and unusual occurrences of disease, as well as initiating or coordinating the epidemiologic investigation and control of outbreaks of infectious disease in Texas.

2) Day-to-day activities will include the oversight and surveillance of selected infectious diseases; outbreak investigations; preparation of reports concerning investigative activities, findings, and recommended control measures; and selection of long-term projects for study (see below).

Potential Projects:

1) As a part of a longstanding study of risk factors for the development of neural tube defects (NTDs) in the lower Rio Grande Valley, some 26 hypotheses were explored. Of these, with both individual and multivariate analyses, diarrheal disease appeared most associated with the development of NTDs. Further study is now needed to explore how diarrheal illness may play a role in this, including decreased absorption of folic acid from the gastrointestinal tract. In addition, water quality data by location are available that could be incorporated into the overall investigation.

2) Texas is the site of many endemic "tropical" and parasitic infections, as well as having endemic murine typhus. The extent of murine typhus has never been adequately defined as most infections are not reported and simply treated by primary care providers without laboratory confirmation or reporting to the public health system. A similar opportunity for defining the epidemiology of an infectious disease may also exist with endemic Chagas' disease in Texas. Sporadic cases occur, the insect vector and trypanosomes are widely distributed throughout central and south Texas, but risk factors and factors related to vectors and human exposure and expression of disease have yet to be defined. *In addition to murine typhus, south Texas is also at risk for arboviral infections such as dengue.*

3) The IDSE Branch is responsible for the entry of infectious disease reporting data into the statewide National Electronic Disease Surveillance System (NEDSS). Transition from the former surveillance systems has occurred and will continue to occur. This represents a unique opportunity to study the dynamics of disease surveillance systems and evaluate their effectiveness. Study of the surveillance of individual reportable diseases is part of the routine activities of the branch members and can be extended to the Fellow.

4) The IDSE Branch is located within the Community Preparedness Section, which has overall responsibility for the State Public Health Preparedness Plan. In addition to the overall state response plan, plans have been developed at the regional and local health department levels. These plans are living documents and are being updated as the state becomes more experienced in implementation of Incident Command Systems and developing these within the context of the required National Incident Management System construct. *With the impact*

of 3 hurricanes on Texas (Emily, Katrina, and Rita), implementation and modification of state, regional, and local plans has been extensive. The IDSE Branch has played a major role in these response efforts. Fellows have an opportunity to participate in the development of these response plans and are encouraged to do so if this is an interest. In addition, the State has developed disease specific response plans for Pandemic Influenza and SARS, and these plans also require periodic review and updating.

- 4) Pandemic Influenza response planning has become an increasingly important activity for the Branch and will continue to be so in the upcoming years. Coordination with various partners, including the Texas Animal Health Commission and the Texas Parks and Wildlife Department, is underway and Prepandemic planning based on improving seasonal flu activities is ongoing.

Assignment Location: Austin, TX

Primary Mentor:	Thomas Betz MD, MPH Manager, Infectious Disease Surveillance and Epidemiology Branch
Advanced Degree:	MPH, University of Texas Health Science Center at Houston (1984) MD, University of Michigan Medical School (1969)
Secondary Mentor:	Marilyn Felkner, DrPH, MPH Epidemiologist III, Infectious Disease Surveillance and Epidemiology
Advanced Degrees:	DrPH, University of Texas Health Science Center at Houston (2001) MPH, UTHSC-Houston School of Public Health (1982)
Secondary Mentor:	Jeffery Taylor, MPH Manager, Infectious Disease Surveillance and Epidemiology
Advanced Degrees:	MPH, Tulane University (1981)