

Maternal and Child Health

Assignment Description:

This CSTE fellowship is located at the US-Mexico Border Health Commission (BHC) in El Paso, Texas and is offered by the Maternal and Child Health Epidemiology Program (MCHEP) in the Division of Reproductive Health at CDC in Atlanta. Dr. Jill McDonald, the primary mentor for the Fellow, is a senior MCHEP epidemiologist and Assignee to the US-Mexico Border Region. She is located at the BHC and is responsible for developing MCH data and epidemiologic capacity throughout the bi-national border region.

Administrative and technical support for the fellowship is provided by MCHEP, BHC, and the Texas Department of State Health Services (DSHS) Office of Border Health, where the fellow's secondary mentor, Dr. Allison Abell Banicki, is based. Dr. Banicki is an epidemiologist with cross-cutting responsibility for health concerns in the Texas border region. She works on a variety of infectious and chronic disease topics impacting the border region, including maternal and child health issues such as teen pregnancy and breast feeding practices.

Fifteen million persons live in the US-Mexico Border Region, which includes 44 US counties and 80 Mexican municipalities within 100 kilometers of the international boundary. MCHEP works closely with US and Mexican states, health institutions, the Mexican Secretariat of Health and other partners on initiatives like BorderMACH (Maternal and Child Health) and other activities to develop MCH infrastructure and epidemiologic data capacity across this geographically diverse and culturally unique region.

El Paso is an exciting location for public health professionals who want to make a difference. There is much to learn, need is great, and many opportunities exist to initiate partnerships, projects and analyses that will have an impact. El Paso is home to a variety of public health organizations, including the El Paso del Norte Health Foundation, the Pan-American Health Organization Field Office, the regional headquarters of Texas DSHS Health Service Region 9&10, the CDC El Paso Quarantine Station, the University Of Texas School of Public Health EL Paso campus, the University of Texas at El Paso, Texas Tech University Health Sciences Center, and the BHC. Four CSTE Fellows have been based in El Paso including one MCH Fellow, who was awarded the Class VII Hilary B. Foulkes Memorial Award for her outstanding achievements. All El Paso Fellows assumed state or federal health agency positions after their fellowships. El Paso is both a comfortable and exciting place to live. It has ranked as the number #1 safest US city over 500,000 (CQ Press) for most of the last 15 years and number #1 in quality of life improvements (Newsweek magazine, September 2011). For outdoor enthusiasts, it offers access to stunning state and national parks, and contains the nation's largest urban wilderness park within its city limits.

Day-to-Day Activities:

This fellowship entails a variety of research, surveillance and capacity-building activities. The latter activities involve close collaboration with governmental, non-governmental and academic institutions, providers and epidemiologists in the region. The BHC guides and convenes border state representatives to address public health priorities and improve health and thus provides a strategic location for MCHEP to work across political and health entities to build effective and sustainable MCH partnerships in the region. The Fellow can anticipate providing technical assistance to community partners to help strengthen MCH infrastructure in the region. There is also a critical need for analysis of regional and bi-national MCH data in the region; the Fellow will likely spend a majority of his/her time immersed in such

analyses. The CSTE fellow will have access to many CDC and state-based surveillance systems and surveys in order to fill this gap. Analysis of timely US and Mexican vital statistic data is an especially important priority. The MCHEP program in El Paso also collaborates closely with the El Paso Quarantine station. Several ongoing projects focus on the intersection between infectious disease and MCH in the region and there are also opportunities for the Fellow to become involved in those activities. Whichever specific activities the fellow chooses to take on, he or she will contribute to improving MCH in the region through establishing and nurturing key partnerships, building epidemiological capacity, and conducting needed research. In addition, the fellow will participate in monthly MCHEP team meetings with other field assignees and fellows and in regular conference calls and meetings with partners across a range of program areas.

Potential Projects:

Potential data analysis projects:

- Map MCH indicators to U.S. counties and Mexican municipalities in the border region, using data from a variety of sources.
- Using NVSS (US) and SINAIS (Mexican) data, explore disparities in low birth weight, preterm birth, early term birth or other birth outcomes across (1) geographic subpopulations (US versus Mexican border communities, between border states, within border states) and (2) racial/ethnic subpopulations (Hispanic versus non-Hispanic, Native American versus Caucasian, etc.)
- Examine trends in the US border region for selected birth outcomes.
- Using ENSANut data, explore changes between 2006 and 2012 in weight status and selected risk behaviors.
- Analyze combined BRFSS and Mexican ENSANut datasets to describe and assess reproductive health and chronic disease risk behavior in the region.
- Use BMSCP data (bi-national risk factor data from one pair of sister city communities the region) to describe dietary and physical activity patterns among young mothers and identify similarities between US and Mexican communities that may suggest possible bi-national interventions.
- Conduct a review of the international port of entry emergency medical incident log database (IOIL) to understand the clinical risk profile of women and families who cross the US-Mexico border for emergency obstetrical services or other conditions (infectious, trauma-related and chronic disease conditions).
- Review medical records of pregnant women who obtain emergency obstetrical services in the region and work with local providers to design and conduct a follow-up study of these women.
- Conduct a qualitative study to assess the validity of standard MCH and demographic survey measures in the border population.
- Link regional birth and death records to conduct analyses of perinatal periods of risk (PPOR)
- Use border data and a variety of software packages, including no- and low-cost packages such as Epi Info, to conduct similar analyses and compare results across packages
- Evaluate the effectiveness of public health messaging interventions at ports of entry for travelers with medical health conditions, such as the importance of seasonal Influenza prevention measures/ vaccination in prenatal travelers.

Potential surveillance system evaluation projects:

- Evaluate border population coverage in the SINAIS birth registry database.
- Assess the use of combined NVSS and SINAIS birth files to monitor birth outcomes in the bi-national border region.
- Assess the availability of regional resources to describe and monitor indicators of intimate partner violence.

- Assess the potential usefulness of pooling other US and Mexican data systems records, such as maternal/infant/child mortality reviews, as bi-national surveillance tools in region.
- Conduct an evaluation of PRAMS (NM and TX) and MIHA (CA) as effective reproductive health surveillance systems for the border population
- Assess birth defects surveillance in the border region

Other potential capacity-building projects:

- Develop curriculum to improve effective use of MCH data at the community level and provide technical support to a local BorderMACH team as they develop and carry out a bi-national MCH project and analysis.
- Work with bi-national partners to develop strategies to increase dissemination of MCH research findings bilaterally.
- Work with sister city teams of epidemiologists and program experts to evaluate the impact of local and regional MCH programs

Preparedness Role:

The Fellow may be asked to participate in one or more of the following activities:

- Conduct a survey among health departments with jurisdiction in the border area to evaluate overall MCH capacity for disasters.
- Participate in Texas state trainings and exercises for emergency public health preparedness. The Fellow may be asked to deploy for a large exercise or actual disaster along the Texas-Mexico border, such as the annual Operation Lone Star exercise that provides free health services to medically underserved residents of the Rio Grande Valley or after natural events such as flooding.
- Assist in a CDC Epi-Aid outbreak investigation at the local or state level.
- Through integration into CDC El Paso US-Mexico Unit Quarantine Station activities, participate in one or more passive, active and syndromic surveillance systems that emphasize public health preparedness and bi-national, state, and local infectious disease surveillance and response.

Assignment Location: El Paso, TX

Primary Mentor: Jill McDonald, PhD, MS
Senior Epidemiologist/US-Mexico Border Region CDC Assignee
CDC/National Center for Chronic Disease Prevention and Health Promotion

Secondary Mentor: Allison Abell Banicki, PhD
Epidemiologist
Texas Department of State Health Services