

Chronic Disease/Maternal and Child Health

Assignment Description:

The primary assignment for this fellow will be creating surveillance and epidemiological study infrastructure for youth, adolescent, and maternal/child health in Texas. This assignment will partially focus on School-Based Health Centers (SBHCs). SBHCs are used throughout Texas to provide health services to children in the school setting. These services include management of chronic diseases such as diabetes and asthma. The School Health Program within the Health Promotion Chronic Disease Prevention Section oversees the coordination of SBHCs.

The fellow will be responsible for the design and implementation of epidemiological studies to measure associations between student risk factors and disease outcomes and evaluate the effectiveness of SBHCs in preventing complications of chronic diseases in school children. We expect study methods will include prospective cohort studies, retrospective cohort studies, and nested case-control designs.

The fellow will also design and implement surveillance data infrastructure to support maternal, child, adolescent and youth health in Texas, including usage of electronic data collection systems and identification of coordinated chronic disease measures. Topic areas will range from mental health and substance abuse to obesity. The fellow will also be asked to design and implement data dissemination infrastructure for related findings that addresses data usage needs of both internal and external partners.

Day-to-Day Activities:

The average day for this fellow will be performing tasks related to the assignment (described above) and additional projects (described below) as well as functioning as an integrated member of the Health Promotion Chronic Disease Prevention (HPCDP) Section. The fellow will meet frequently with mentors and have daily interaction with members of the Office of Surveillance, Evaluation, and Research (OSER). The fellow will also participate in OSER and HPCDP Section events, including section meetings, OSER staff meetings, journal clubs, brown bag presentations, and OSER weekly work-in-progress meetings. We anticipate training opportunities, including use of statistical software (Stata, SAS), geospatial analysis (ArcGIS), understanding of health disparities, and strategic planning. The fellow would also be involved in abstract and manuscript preparation occurring under OSER.

Activities will also include meetings with external partners, including Governor and Legislature appointed Councils, site visits throughout Texas to meet with school health partners, and community groups addressing maternal, child, adolescent and youth health in Texas. Frequent interaction will also occur with Title V and Mental Health Substance Abuse partners. If the fellow joins us during a legislative session, there will be opportunities to participate in related activities such as bill analyses and preparing written testimony on public health issues. There will also be opportunities to network with epidemiologists across DSHS and attend public health conferences and events.

Additional projects include:

Providing epidemiological support to the Community Transformation Grant:

CTG is a \$50 million investment in chronic disease prevention in Texas. It is considered one of the largest investments in rural health ever made in the United States. The fellow will participate with other epidemiologists in OSER in supporting the data needs of CTG. This will include analyses of a variety of

chronic disease data sources (eg, BRFSS, hospital discharge data, mortality) and measurement design for outcome evaluation. The fellow would assist with meta-analysis and meta-synthesis of outcome data needed to determine whether a 5% reduction in death and disability has resulted from, CTG activities. The fellow would research how the 5% reduction can be categorized across a spectrum of health measures with particular focus on cross-cutting measures that have been identified through the Coordinated Chronic Disease Initiative.

Examining multi-morbidity disease patterns using claims databases:

Current surveillance data collection systems for the HPCDP Section conceptualize general chronic disease conditions as separate diseases. The fellow would use Medicaid and Medicare claims data for Texas with a 5% national sample included to detect and characterize multi-morbidity patterns using factor analysis. Expanded diagnostic clusters will be used to represent clinical, diagnostic, and therapeutic similarities between diseases. It is expected major conditions of interest will be the following: cardiovascular diseases, obesity, diabetes, gout, osteoporosis, osteoarthritis, dementia, COPD, chronic pain, hypertension, dyslipidemia, and thyroid disease. Identification of factors will be further stratified by sex and age groups (18-39 years, 40-64, ≥65). Results will be utilized to formulate specific recommendations for incorporation of new surveillance data sources, usage of new analytic surveillance methods, and opportunities for better coordination between prevention programs to target overlapping chronic conditions.

Analyzing childhood obesity data:

The overall goal of School Physical Activity and Nutrition Project (SPAN) is to establish a surveillance system to monitor the prevalence of overweight/obesity in school-aged children in Texas. This surveillance system allows researchers to identify and track trends in childhood obesity. In addition, SPAN identifies factors in Texas students that may underlie obesity, including dietary behaviors, nutrition knowledge and attitudes, and physical activity. SPAN assesses the behaviors and perceptions of 4th, 8th, and 11th graders about nutrition and physical activity, including body image and other social-emotional indicators associated with childhood obesity. The fellow would be responsible for collaborating with SPAN partners (including Maternal and Child Health Services) to design, conduct, and disseminate analytic projects using these data.

Participating in the Texas Title V Five-Year Needs Assessment:

The fellow will have opportunities to support the Needs Assessment process for maternal and child health activities in Texas, specifically the Title V Needs Assessment Planning Group. This may include reviewing a variety of resources and examples of other state needs assessments. The fellow may assist in gathering stakeholder input during the community-based roundtable discussion and also developing multi-stage designs to select, refine, rank, prioritize, and finalize a list of needs. The fellow will work closely with the Office of Program Decision Support (OPDS) within the Office of Title V and Family Health. OPDS works to inform, develop, and implement evidence-based practices to improve understanding and response to the health-related needs of women and children in Texas.

Preparedness Role:

We could involve a fellow in disaster response, such as for a hurricane or wildfire, if deemed appropriate by the CDC/CSTE supervisor.

Assignment Location:

Austin, TX

Primary Mentor: Lisa Wyman, PhD, MPH
Medical Research Specialist
Texas Department of State Health Services

Secondary Mentor: Lucina Suarez, PhD, MS
Assistant Commissioner
Texas Department of State Health Services