

ID: 44108029

Maternal and Child Health, Infectious Diseases - Host Site Description

Tennessee Department of Health

Assignment Location: Nashville, US-TN
Tennessee Department of Health
Division of Family Health and Wellness

Primary Mentor: Elizabeth Harvey, PhD, MPH
Senior Maternal and Child Health Epidemiologist
Tennessee Department of Health/Centers for Disease Control and Prevention

Secondary Mentor: Julie Traylor, MPH
Director of Strategic Initiatives
Tennessee Department of Health

Work Environment

Hybrid

Assignment Description

The Tennessee Department of Health (TDH) is the state public health agency based in Nashville. The mission of the Department is to protect, promote and improve the health and prosperity of people in Tennessee. The Tennessee Department of Health employs more than 3,000 people who work in state, regional and local facilities in each of the 95 counties across the state. In addition to personnel housed at four state-level facilities, seven regional health offices and the 89 county health departments who report to the Commissioner of Health, other members of the public health workforce are employed by their local governments including those who work in the six metropolitan health departments. This Fellow would work at the state level in the Division of Family Health and Wellness (FHW), which is comprised of multiple sections including:

- Reproductive and Women’s Health
- Perinatal, Infant and Pediatric Care
- Early Childhood Initiatives
- Supplemental Nutrition (including WIC)
- Children and Youth with Special Healthcare Needs
- Injury Prevention and Detection
- Chronic Disease Prevention and Health Promotion

Each section leads multiple programs such as home visiting, newborn screening, family planning, WIC, tobacco prevention and control, and injury prevention. With a staff of more than 150, the division manages programs totaling over \$150 million. Currently, FHW is operating in a hybrid work environment.

The fellow will:

- Complete CSTE AEF Competencies
- Conduct applied analyses of MCH data in Tennessee through SAS and other software programs
- Synthesize findings and form recommendations
- Summarize MCH analyses to partners through reports (legislative reports, fact sheets, infographics, dashboards), which emphasize health equity
- Present analyses and recommendations, including submission of abstracts to national conferences and manuscripts to peer-reviewed journals
- Engage in professional development opportunities

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- Increase software and analysis skills, including SAS, ArcGIS, REDCap
- Increase data visualization skills, including Canva and Tableau
- Increase communication and presentation skills
- Maintain situational awareness of TDH and National MCH activities
- Attend quarterly FHW Division meetings, quarterly MCH Regional Director Meetings, quarterly AMCHP Region IV meetings, bi-monthly FHW Epidemiology meetings, monthly CDC MCH Epidemiology Program team meetings, and bi-annual Tennessee MCH Partnership meetings
- Attend weekly CEDEP surveillance meetings: to review week- and year-to-date reportable disease statistics, discuss notable public health occurrences, and hear a presentation on the “Disease of the Week”

Describe Statistical and Data Analysis Support, Such as Databases, Software, and Surveillance Systems Available to the Fellow

The Fellow will have access to the following databases and surveillance systems:

- Birth file, provisional and final
- Death file, provisional and final
- Fetal death file, provisional and final
- Hospital discharge data, provisional and final
- PRAMS data, final
- BRFSS and YRBS data, final
- Population estimate data, final
- ESSENCE data
- And others, depending on project selection

The Fellow will have access to the most recent versions of the following software:

- SAS
- ArcGIS
- Tableau
- Canva
- REDCap
- SQL Server Management

The Fellow will be provided with data analysis and statistical support through our Technical Training Office. These include trainings on ArcGIS, Tableau, SAS. The Fellow will also be able to pursue SAS Certification. Additionally, TDH will match the CSTE Professional Development funding so the Fellow can pursue additional statistical and analytical training, as needed.

Projects

Surveillance Activity Title: Maternal and Neonatal Levels of Care

Surveillance Activity Description:

The CSTE Fellow will lead the reimplementation of the CDC Levels of Care Assessment Tool (LOCATe) in Tennessee birthing facilities, which was last conducted in 2018. LOCATE allows jurisdictions to create standardized assessments of levels of maternal and neonatal care to assess risk-appropriate care in the state. Risk-appropriate care is a key strategy to improve maternal and neonatal morbidity and mortality rates by ensuring high-risk pregnant people and infants receive care at a birth facility that is best prepared to meet their needs. CDC LOCATe is based on the most recent

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guidelines and policy statements issued by the American Academy of Pediatrics, the American College of Obstetricians and Gynecologists, and the Society for Maternal-Fetal Medicine. The Fellow will lead LOCATe REDCap implementation and monitor data collection and the overall response rate of 58 birth facilities and 2 birthing centers through collaboration with the Perinatal and Infant section in Family Health and Wellness. After data collection and cleaning, the CSTE Fellow will partner with CDC Division of Reproductive Health to assess maternal and neonatal levels of care. The Fellow will have opportunities to lead analyses to understand discordance between facility self-report and LOCATe maternal and neonatal results. Further, the CSTE Fellow will have the opportunity to analyze the LOCATe data with maternal and neonatal morbidity and mortality data to inform recommendations to strengthen risk-appropriate care in Tennessee.

Surveillance Activity Objectives:

The Fellow will implement LOCATe in Tennessee birthing facilities, which will include data management in REDCap and follow-up with facilities to maximize response rate. The Fellow will analyze data and present to results to the statewide Perinatal Advisory Committee to further identify recommendations for action. The Fellow will have opportunities to develop abstracts and manuscripts.

Surveillance Activity Impact:

This project will identify opportunities to improve risk-appropriate care in Tennessee.

Surveillance System Evaluation Title: Evaluation of Pregnancy Identification through Syndromic Surveillance

Surveillance System Evaluation Description:

At the Tennessee Department of Health, Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE) tracks patient chief complaints and discharge diagnoses from 105 emergency departments across the State within 24 hours of a patient encounter. Syndromes in ESSENCE provide pre-diagnostic estimates of health conditions being reported from emergency departments. Syndromes are combinations of words that may be related to a patient's medical condition but are not confirmation of a clinical diagnosis. The pre-diagnostic information obtained from syndromes help estimate whether an abnormal number of patients are seeking care with similar illnesses upon registration at the emergency department. It is unclear how well queries and checkboxes accurately identify pregnancy in Tennessee ESSENCE. This project would evaluate how pregnancy is identified in ESSENCE compared to emergency department and birth certificate data.

Surveillance System Objectives:

The Fellow will evaluate pregnancy identification in Tennessee's syndromic surveillance system, ESSENCE. The Fellow will create a report and present findings to partners, including TDH Office of Emergency Preparedness and Response and the Division of Family Health and Wellness. The Fellow will have opportunities to develop abstracts and manuscripts.

Surveillance System Impact:

This project will inform the feasibility of using syndromic surveillance to identify pregnant patients. With new emerging threats, surveillance of impacts to pregnant patients is critical. This surveillance evaluation will inform both the TDH Emergency Preparedness and Response Program and the Division of Family Health and Wellness.

Major Project Title: Maternal and Child Health Title V Needs Assessment

Major Project Description:

Every five years, Tennessee engages in a statewide needs assessment to determine priorities for the maternal and child health (MCH) population. The Fellow would direct data collection and analysis among the Division of Family Health and Wellness epidemiologists and program staff. The Fellow would synthesize quantitative data sources as well as qualitative

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data collection through focus groups and key informant interviews to identify high priority and emerging MCH issues in the state. There are strong partnerships with MCH stakeholders and community members throughout the state and the Fellow would be expected to present at bi-annual partnership meetings to actively engage and receive feedback on priority selection for MCH populations. The Fellow would work closely with senior leadership to create frameworks for each sub-population to write SMART objectives and select evidence-based strategies to advance MCH population health in Tennessee for the next Block Grant cycle.

Major Project Objectives:

The main objective is to lead the MCH data collection, analysis, and synthesis of the needs assessment for the Block Grant and communicate those needs to partners. Deliverables would include templates and frameworks to inform the priority selection process and presentations to partners as well as the final needs assessment document.

Major Project Impact:

This project will form the strategic direction of maternal and child health programming and initiatives over the next five years in Tennessee. The Maternal and Child Health federal grant is over \$12 million per year.

Additional Project #1 Title: National Survey of Children's Health Race/Ethnicity Oversample Analysis

Project #1 Type: Major Project

Project #1 Description:

The National Survey of Children's Health (NSCH) provides rich data on multiple, intersecting aspects of children's lives. The NSCH provides key child health data used to inform our Title V Maternal and Child Health Block Grant performance measures, including developmental screening, physical activity, bullying, preventive medical visit, medical home, and transition to adult health care. Key outcome measures in NSCH include tooth decay, children with special health care needs, autism, ADD/ADHD, mental health treatment, overall health status, obesity, and forgone health care. A previous limitation in Tennessee's ability to comprehensively analyze NSCH data were sample size limitations. Starting with 2022 data, Tennessee has worked with the US Census and the NSCH administrative team to oversample TN survey participants by race/ethnicity. Leading up to the 2025 Tennessee Title V MCH Block Grant Needs Assessment, the Fellow will analyze the oversample data to inform racial and ethnic disparities in performance and outcome measures, with a specific focus on children and youth with special health care needs. The analysis will compare TN data to other Region 4 states as well as the US overall. The Fellow will familiarize themselves with NSCH sampling methodology to correctly adjust for complex survey design. Analyses will inform state Title V priority selection, strategies, and evidence-based strategy measures for the next 5-year cycle. Additionally, the Fellow will evaluate the effectiveness of the oversample to inform estimates in Tennessee compared to previous years.

Project #1 Objectives and Expected Deliverables:

The main objective of this analysis will be an analysis of NSCH TN key MCH performance and outcome indicators by race/ethnicity to inform the Tennessee Title V Block Grant Needs Assessment. Expected deliverables include a PowerPoint presentation at the Maternal and Child Health statewide partnership meeting and an infographic communicating public health implications for a general audience.

Project #1 Impact:

Analyses will inform Tennessee's Title V priority selection, strategies, and evidence-based strategy measures for the next 5-year cycle.

Please Describe the Fellow's Anticipated Role in Preparedness and Response Efforts – Include Activities and Time Allocation (Required Competency of Fellowship)

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The Fellow will be working closely with the Emergency Preparedness and Response team on the ESSENCE pregnancy surveillance system evaluation. The Fellow will also attend monthly Emergency Preparedness and Response and Family Health and Wellness meetings to keep apprised of current and planned activities, including active responses. The Fellow will be included EPR table-tops and exercises with the expectation to provide maternal and child health perspectives and feedback. The Fellow will have the opportunity to work closely with the MCH Emergency Preparedness and Response Program Director to determine priority areas for additional projects, as needed.

Please Describe the Fellow’s Anticipated Role in Cluster and Outbreak Investigations – Include Activities and Time Allocation (Required Competency of Fellowship)

The Fellow will attend weekly Communicable and Environmental Disease and Emergency Preparedness meetings. The Fellow will work closely with the State Epidemiologist and Deputy State Epidemiologist to have a leading role on a cluster or outbreak investigations during their Fellowship.

Please Describe the Fellow’s Anticipated Role in the COVID-19 Response – Include Activities and Time Allocation

At this time, there is no anticipated role for the Fellow in the COVID-19 response; however, if this is of interest, the Fellow will be connected to the COVID-19 team for further collaboration.

Please Describe Opportunities for Fellows to Work in Health Equity as well as Incorporating Diversity, Equity, and Inclusion into their Work

The Fellow would participate in the Division of Family Health and Wellness’s Health Equity Working Group. Additionally, the Fellow will be connected with the Office of Health Disparities Elimination for their weekly educational and community engagement sessions. Professional development opportunities to further explore health equity and diversity, equity, and inclusion would be strongly supported.