

ID: 84822824

Maternal and Child Health - Host Site Description

Tennessee Department of Health

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

Primary Mentor: Emily Lumley, MPH
Epidemiologist
Tennessee Department of Health

Secondary Mentor: Carissa Rodriguez, MSPH
Epidemiologist
Tennessee Department of Health

Work Environment

Hybrid

Assignment Description

- 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)
- Present analyses and recommendations, including submission of abstracts to national conferences and manuscripts to peer-reviewed journals
- Engage in professional development opportunities
- Increase software and analysis skills, including SAS, ArcGIS, REDCap
- Increase data visualization skills, including Canva and Tableau
- Improve 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, bimonthly FHW Epidemiology meetings, monthly CDC MCH Epidemiology Program team meetings, and bi-annual Tennessee MCH Partnership meetings
- Attend weekly Communicable and Environmental Diseases and Emergency Preparedness (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
- Linked birth-death file, 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

ID: 84822824

Maternal and Child Health - Host Site Description

Tennessee Department of Health

- 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 receive data analysis and statistical support from our Technical Training Office. These include training on ArcGIS, Tableau, and SAS. The Fellow will also have the opportunity to pursue SAS Certification. Additionally, TDH will match the CSTE Professional Development funding, allowing the Fellow to pursue further statistical and analytical training as needed.

Projects

Surveillance Activity Title: Landscape Analysis of Midwifery Services in Tennessee

Surveillance Activity Description:

An area of focus for the Division of Family Health and Wellness has been understanding maternity care throughout the state. Projects assessing home birth trends, obstetric unit closures, and perinatal regionalization have been completed or are underway. This project aims to add to this work by comprehensively analyzing midwifery services in Tennessee, examining accessibility, availability, and utilization across the state. By mapping the distribution of midwifery care providers and evaluating factors influencing the use of midwifery services, this study will provide critical insights into the state of maternal care and its potential gaps and opportunities for improvement.

Surveillance Activity Objectives:

Objectives:

- Assess the geographic distribution of midwifery services across Tennessee using ArcGIS Pro.
- Identify urban and rural trends of midwifery services, including identifying areas with limited or no access to maternal care.
- Analyze social, economic, and other factors associated with the utilization of midwifery services in Tennessee.

Deliverables:

- A report on midwifery services in Tennessee with actionable insights for partners.
- A visual map of midwifery service coverage across the state, highlighting areas of unmet need.
- Recommendations to enhance midwifery care access and ensure equitable maternal healthcare for all populations.

Surveillance Activity Impact:

Midwifery care has been associated with improved birth outcomes, such as lower rates of preterm births, fewer interventions (like C-sections), and reduced maternal and infant mortality. By assessing the landscape of midwifery services, the Fellow will help identify areas where midwifery services are effectively improving maternal and child health. This will help reduce health gaps and improve overall birth outcomes.

ID: 84822824

Maternal and Child Health - Host Site Description

Tennessee Department of Health

Surveillance System Evaluation Title: Evaluation of the Perinatal Regionalization System in Tennessee

Surveillance System Evaluation Description:

Perinatal regionalization is a critical component of maternal and infant health systems, ensuring that high-risk births occur in facilities equipped to provide appropriate levels of care. In Tennessee, perinatal regionalization has traditionally been assessed using a single indicator: the percentage of very low birth weight (VLBW) infants born in Level III or Level IV neonatal intensive care units (NICUs). While this measure provides a high-level view of system performance, it does not fully capture the complexity or effectiveness of the perinatal care system.

To address this gap, the Tennessee Department of Health has begun compiling a broader set of indicators to evaluate the strength and functionality of the state's perinatal regionalization system. These indicators include, but are not limited to:

- Births by facility level of care
- Transfers of high-risk mothers and neonates
- Geographic access to Level III/IV facilities
- Facility self-designation and verification data
- Neonatal and maternal outcomes by facility level

The Fellow will support the evaluation of this evolving surveillance system by assessing data quality, completeness, and utility across these indicators. The Fellow will also help identify gaps in data collection, propose improvements to indicator definitions or data sources, and contribute to the development of a framework for ongoing monitoring.

Surveillance System Objectives:

Objectives:

- Evaluate the current set of indicators used to monitor perinatal regionalization in Tennessee.
- Assess the quality, completeness, and timeliness of data sources used in the report.
- Identify strengths and limitations of the surveillance system and recommend improvements.
- Support the development of a standardized framework for ongoing evaluation and reporting.

Deliverables:

- A written evaluation of the perinatal regionalization surveillance system, using CDC's surveillance system evaluation guidelines.
- A summary of findings and recommendations for system improvement.
- Updated or proposed indicator definitions and data source documentation.
- Presentation materials for internal partners and leadership.

Surveillance System Impact:

A more comprehensive and accurate evaluation of Tennessee's perinatal regionalization system will support better decision-making, resource allocation, and policy development. By identifying gaps and strengthening the surveillance infrastructure, this project will help ensure that high-risk mothers and infants receive care in the most appropriate settings, ultimately improving maternal and neonatal outcomes across the state.

ID: 84822824

Maternal and Child Health - Host Site Description

Tennessee Department of Health

Major Project Title: Title V Maternal and Child Health Block Grant Ongoing Needs Assessment

Major Project Description:

The Title V Maternal and Child Health (MCH) Services Block Grant is a federal program administered by the Health Resources and Services Administration (HRSA) that provides states with funding to improve the health and well-being of mothers, infants, children (including those with special healthcare needs), and families. In Tennessee, the Title V Block Grant supports a wide range of public health programs and services, including home visiting, newborn screening, adolescent health, and care coordination for children with special healthcare needs.

To receive this funding, states are required to conduct a comprehensive statewide needs assessment every five years to identify priority areas and guide program planning. In the years between these major assessments, states must continue to monitor progress, assess emerging needs, and update their strategies accordingly.

The Fellow will support Tennessee's ongoing needs assessment process by coordinating data collection and analysis efforts across the Division of Family Health and Wellness. This includes assisting with the design and implementation of community surveys, focus groups, and key informant interviews, as well as compiling and analyzing data from national and state-level sources such as PRAMS (Pregnancy Risk Assessment Monitoring System), YRBS (Youth Risk Behavior Survey), vital records, and the National Survey of Children's Health.

The Fellow will work closely with epidemiologists and program staff to synthesize findings and identify trends relevant to MCH populations. They will also support priority teams in refining their strategies and activities, contribute to the development of narrative sections for the annual Title V Block Grant application, and assist with preparing and submitting required forms and documentation.

Additionally, the Fellow will present findings and updates at bi-annual MCH partnership meetings, which bring together partners from across the state to provide input and feedback on MCH priorities and strategies.

Major Project Objectives:

Objectives:

- Support the coordination and execution of ongoing needs assessment activities, including qualitative and quantitative data collection.
- Analyze and synthesize data to identify priority issues and inform program planning.
- Assist priority teams in refining strategies and writing SMART objectives.
- Contribute to the preparation of the Title V Block Grant application, including narrative sections and required forms.
- Present findings and updates to internal leadership and external partners.

Deliverables:

- Cleaned and analyzed datasets from community surveys and other data sources.
- Templates and frameworks to support strategy development.
- Drafted narrative sections for the Title V Block Grant application.
- Presentation materials for MCH partnership meetings and leadership meetings.

Major Project Impact:

This project will directly support the strategic direction of maternal and child health programming in Tennessee. The Fellow's work will contribute to identifying emerging needs, refining program strategies, and completing the annual Title V Block Grant application. The Block Grant provides over \$12 million annually to support MCH services across the state, and the Fellow's contributions will help ensure these resources align with current needs and priorities.

ID: 84822824

Maternal and Child Health - Host Site Description

Tennessee Department of Health

Additional Project #1 Title: Title V Maternal and Child Health Block Grant Data Dashboard

Project #1 Type: Other

Project #1 Description:

The Title V Maternal and Child Health Block Grant Data Dashboard will serve as a centralized, interactive tool to support internal monitoring and planning for maternal and child health (MCH) programs in Tennessee. Built in Tableau or Power BI, the dashboard will visualize key indicators from the Title V national and state performance measures, allowing users to explore trends, compare across populations, and track progress toward established goals.

Rather than duplicating the broader needs assessment process, the dashboard will serve as a living resource to support interim-year updates, program reviews, and leadership decision-making. It will also help streamline the communication of data insights to internal teams and external partners.

Project #1 Objectives and Expected Deliverables:

Objectives:

- Design and build a Tableau or Power BI dashboard that displays Title V performance measures and related MCH indicators.
- Integrate data from multiple sources to provide a comprehensive view of maternal and child health trends.
- Develop tools and visualizations that support program staff in identifying areas for improvement.

Deliverables:

- A fully developed dashboard with user-friendly navigation and filtering options.
- A brief user guide or walkthrough for internal staff.

Project #1 Impact:

The Title V Maternal and Child Health Block Grant Data Dashboard will enhance Tennessee's ability to monitor maternal and child health outcomes in real time and support data-informed decision-making across programs. By providing a clear and accessible view of performance measures and trends, the dashboard will help identify gaps, guide resource allocation, and improve the effectiveness of Title V-funded initiatives. Ultimately, this tool will strengthen the state's capacity to improve health outcomes for mothers, children, and families across Tennessee.

Additional Project #2 Title: Maternal and Neonatal Transfer Patterns in Tennessee

Project #2 Type: Other

Project #2 Description:

This project will analyze maternal and neonatal transfer patterns across Tennessee's perinatal regions and facility levels to better understand how high-risk patients are routed through the state's perinatal care system. Transfers are a critical component of perinatal regionalization, ensuring that patients receive care in facilities equipped to manage their level of risk.

The Fellow will conduct a descriptive analysis of maternal and neonatal transfers using linked administrative and clinical datasets. The analysis will focus on:

- Frequency and distribution of transfers by region and facility level (I-IV)
- Directionality of transfers (e.g., from lower- to higher-level facilities)
- Regional variation in transfer patterns

This work will help establish baseline metrics for monitoring the effectiveness of Tennessee's perinatal regionalization system and inform future planning efforts.

ID: 84822824

Maternal and Child Health - Host Site Description

Tennessee Department of Health

Project #2 Objectives and Expected Deliverables:

Objectives:

- Describe maternal and neonatal transfer patterns across perinatal regions and facility levels.
- Identify common transfer pathways and assess alignment with levels of care.

Deliverables:

- A cleaned and documented analytic dataset.
- Tables and visualizations summarizing transfer patterns.
- A summary report of findings with recommendations for future analysis or system improvements.
- Presentation materials for internal partners and the Perinatal Advisory Committee.

Project #2 Impact:

This project will provide valuable insight into how maternal and neonatal transfers function within Tennessee’s perinatal care system. By identifying patterns and potential gaps in transfer practices, the findings will support efforts to improve coordination, ensure appropriate care placement, and strengthen the overall effectiveness of perinatal regionalization in the state.

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

The Fellow will work closely with the Maternal and Child Health Emergency Preparedness and Response Coordinator, who coordinates activities with our Emergency Preparedness and Response Division. Potential projects include strengthening the syphilis/congenital syphilis surveillance and case investigation, assisting in the development of a statewide public health recovery plan, and supporting activities and data analyses for the MCH Block Grant priority on childhood vaccinations. The Fellow will also have the opportunity to participate in emergency preparedness and response tabletop exercises, with the expectation of providing maternal and child health perspectives and feedback. The Fellow may have opportunities to participate in other emergency response activities as they arise.

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 and will play a leading role in cluster or outbreak investigations during their fellowship.