

**ID: 60566848**

**Maternal and Child Health, Injury - Drug Overdose - Host Site Description**

**Mississippi State Department of Health**

**Assignment Location:** Jackson, US-MS  
Mississippi State Department of Health  
Office of Vital Records and Public Health Statistics/Health Data Operations and Research

**Primary Mentor:** Dorthy Young, PhD in Clinical Health Sciences; Master of Health Services Administration;  
Bachelor of Science  
Chief Health Data, Operations, and Research Officer  
Mississippi State Department of Health

**Secondary Mentor:** Stephanie McLeod, Master of Public Health (Epidemiology & Biostatistics);  
Bachelor of Science in Biological Sciences  
Epidemiologist Team Lead  
Mississippi State Department of Health

**Work Environment**

Hybrid

**Assignment Description**

The CSTE Fellow will be placed in MSDH's Office of Vital Records and Public Health Statistics. In addition to the issuance of vital records for the state, the Office of Vital Records and Public Health Statistics provides scientific integrity and quality assurance in management, surveillance, data analysis, and reporting related to MCH, chronic disease, preventive health, and other programs. The primary mentor is the Chief Health Data, Operations, and Research Officer, which is an executive level position for the agency. The Offices of Health Data and Research serve as the infrastructure which govern and support the collection, analysis, application, technology, and dissemination of public health data at MSDH.

The team of nearly 180 professionals provides data, vital records, and public health statistics to all Mississippians. The Offices of Health Data, Operations and Research include: Data Governance; Health Data and Research; Health Information Technology- Epic, Operations and Programs; Information Technology Security; Revenue Cycle and Centralized Scheduling; and Vital Records and Public Health Statistics. Epidemiologists are located in four of these offices: Data Governance; Health Data and Research; Health Information Technology- Epic; and Vital Records and Public Health Statistics.

This fellowship entails a variety of public health research, surveillance, and evaluation opportunities. These activities will involve close collaboration with governmental entities at the federal, state, and local level, non-profit organizations, and academic institutions. While the State has numerous data sets, staff may have limited capacity to conduct data analyses, research, surveillance, and evaluation above and beyond data requests or work outside of their established roles and responsibilities. The COVID-19 pandemic has had a profound impact on MSDH and other state health departments. The fellow will be integrated into some of the ongoing work of the agency and will have the opportunity to establish new research and surveillance activities of interest to the fellow. With a primary focus on health and well-being of the whole individual across the lifespan, the fellow will have opportunities to conduct specific data analyses to support agency programs. The fellow will work with the mentors to design a work plan that supports the needs of MSDH and allows the fellow the flexibility to explore and develop further expertise in areas of interest. The fellow will attend meetings relevant to the fellow's projects, along with other analysts/epidemiologists and program leads. Additionally, both primary and secondary mentors will seek out opportunities for the fellow to be involved in professional development activities (e.g., CDC MCH Epi Training Courses, CDC MCH Epidemiology Program Team, work in Health Equity) as well as opportunities for exposure to leadership and decision-making efforts across the agency.

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This fellowship offers the fellow a potential leadership role in carrying out analyses, research, or surveillance activities based on their interests, fellowship competency requirements, agency and public needs, equity, and emerging critical issues. While at MSDH, the fellow will be immersed in these activities and work side-by-side with analytic and epidemiologic staff and program staff. Day-to-day activities may include writing/adapting analytic code, conducting analyses, working with staff to optimize/troubleshoot analyses, using analytic results to create data briefs, reports, manuscripts, working with staff to design surveillance systems and evaluation plans, working with staff to ensure equity in state systems, and collaborating with internal and external partners in face-to-face or virtual meetings. The fellow also will have the opportunity to present analyses and results with analytic and program staff and present findings to community stakeholders. The level of complexity of the fellow's projects can be tailored to their skill level. Additionally, projects can be tailored to certain populations (Delta, Appalachian, urban/rural).

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

The Office of Vital Records and Public Health Statistics can provide SAS, SPSS, R, ESRI, PowerBI, Python, Tableau, or other statistical and data analysis software. Statistical software training and support is available on- and off-site. MSDH has over 150 databases, including program-level data, vital records, and surveillance data. These data systems include, but are not limited to vital records, licensure databases (healthcare, food protection, childcare, etc.), hospital discharge data (which includes emergency department, outpatient and inpatient claims), BRFSS, PRAMS, YRBSS, YTS, PMP, NVDRS, syndromic surveillance, and program data such as WIC, tobacco, and lead prevention. The agency also utilizes Epic for an electronic health record and has over 1.4 million patients in their Epic instance.

**Projects**

**Surveillance Activity Title: Approaches to Improve Timeliness and Reporting of Substance Use and Drug Overdose Occurrences**

*Surveillance Activity Description:*

The fellow will work with staff in the Office of Vital Records and Public Health Statistics and the Opioid and Substance Use Program to improve reporting of substance use and drug overdose occurrences using the Hospital Discharge Data System. This will include, but not be limited to, analyzing overdose data using diagnoses and procedural codes and terminology, examining data related to emerging substances (e.g., kratom), and expanding race/ethnicity reporting.

*Surveillance Activity Objectives:*

Objectives include (1) increasing the fellow's knowledge about the Hospital Discharge Data System, including how data are collected, coded, stored, and accessed, (2) reviewing past and current reports of substance use and drug overdose death occurrences, (3) interviewing staff in the Office of Vital Records and Public Health Statistics and the Opioid and Substance Use Program to identify any gaps in current reporting, (4) analyzing data, and (5) producing reports.

Expected deliverables include data reports, suggestions for business process improvements, and development of trainings for stakeholders.

*Surveillance Activity Impact:*

The expected public health impact of this project is increased timeliness and quality of reporting of substance use and drug overdose occurrences in Mississippi.

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**Surveillance System Evaluation Title: Evaluation MS PRAMS Reporting in Relation to Other Data Sources**

*Surveillance System Evaluation Description:*

The fellow will work with staff in the Office of Vital Records and Public Health Statistics to compare data reported by mothers in the MS PRAMS survey to other available data sources for Mississippi, such as birth certificates, the Hospital Discharge Data System, and Medicaid. For some data sources, this may involve matching PRAMS records to another data source (e.g., birth certificates). For other data sources, it may involve comparison of aggregate estimates. Findings will assist the MS PRAMS Program in evaluating how the data reported by mothers compares to data recorded by hospital staff.

*Surveillance System Objectives:*

Objectives include (1) increasing the fellow's familiarity with each of the selected data sources, including how data are collected, coded, stored, and accessed, (2) determining which topics in the MS PRAMS data are also available in other data sources, (3) matching PRAMS participants to the corresponding birth certificate data using birth certificate number, (4) calculating prevalence estimates for selected topics, (5) comparing findings among data sources, and (6) preparing a written report of findings.

Expected deliverables include the development of an information brief that describes the differences and similarities in results among the examined data sources.

*Surveillance System Impact:*

The expected public health impact of this project will be an increased understanding of the differences in reporting capabilities among the examined data sources.

**Major Project Title: Women's Mental and Behavioral Health Across the Lifespan**

*Major Project Description:*

With support from the primary and secondary mentors, the fellow will design a project to explore mental health across the lifespan among Mississippi women. Potential data sources for this project include the YRBSS, BRFSS, PRAMS, Hospital Discharge Data System, Office of Vital Records and Public Health Statistics mortality data, MSTAHRs, Epic, Healthy Moms/Healthy Babies, Mississippi Department of Mental Health, and Medicaid. In addition to examining the prevalence of poor mental health or mental health conditions among women in different life stages, the fellow will seek to understand relationships between mental health status and other factors, such as health behaviors, use of health services, healthcare accessibility and availability, and other health conditions. It is anticipated that this project will be completed in phases and will span the duration of the fellowship. The successful completion of this project will require the development of an analysis plan, mastery of advanced statistical analysis techniques, and the ability to communicate findings to both lay and professional audiences.

*Major Project Objectives:*

Objectives include (1) completion of a literature review to describe what is already known about mental health among women in Mississippi, (2) familiarization with the data sources that will be included in the project, including how the data are collected, coded, stored, and accessed, (3) definition of the life span groups and which data sources are applicable for each group, (4) development of an analysis plan to describe the overall approach to the project, the variables to be analyzed, statistical techniques to be used, and format(s) for reporting, (5) completion of any data requests and data use agreements needed to gain access to the data sets, (6) regular communication with data providers about the status of the project and findings related to their data, and (7) analysis of data and reporting of findings according to the data analysis plan.

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Expected deliverables include the development of (1) data reports, (2) manuscript(s) for publication, (3) presentations for local and national conferences, and (4) written submissions for data to action requirements for federal grants (e.g., PRAMS, BRFSS).

*Major Project Impact:*

It is anticipated that this project will increase knowledge and available information about which factors are associated with mental health status throughout the lifespan among women in Mississippi, which is critical for the development of effective policy and programs related to mental health. This project will also allow for cataloging of the types of mental health data available from each data source. In addition, the emphasis on frequent and high-quality communication with data providers is expected to strengthen the relationships between the Office of Vital Records and Public Health Statistics and the data providers and create opportunities for future collaboration.

**Additional Project #1 Title: Development of a Standardized SDOH Screening Tool for MCH Patients at County Health Departments**

**Project #1 Type: Surveillance Activity**

*Project #1 Description:*

The fellow will collaborate with the Office of Vital Records and Public Health Statistics team, Community Health Workers in the 88 MSDH-operated County Health Departments across the state, and the Office of Health Information Technology- Epic and Applications team to develop a standardized social determinants of health (SDOH) screening tool that will be administered to all MCH patients who visit County Health Departments. At present, patients utilizing the clinics receive disparate screening tools administered by programmatic and clinical staff in the exam room. A new, standardized screening tool could be administered for patient self-completion during the Welcome portion of Epic.

*Project #1 Objectives and Expected Deliverables:*

Objectives include (1) increasing the fellow's knowledge about the survey development process, (2) reviewing the disparate screening tools currently administered by clinical staff, (3) interviewing personnel in the County Health Departments to identify challenges/barriers they have encountered related to administering the current SDOH screening tools or any gaps in SDOH topics in the existing tools, (4) reviewing existing SDOH screening tools, (5) developing and testing the standardized SDOH screening tool, and (6) collaborating with agency leadership and the MSDH Epic team to implement the new screening tool.

Expected deliverables include a new, standardized SDOH screening tool and, long-term, data reports of SDOH factors experienced by MCH patients.

*Project #1 Impact:*

The expected public health impact of this project is increased quality of reporting of SDOH factors experienced by MCH patients in Mississippi.

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

Mississippi public health officials work with other government agencies, communities, hospitals, health care providers, and first responders to be prepared to respond to an array of public health emergencies including extreme weather events. For this project, the fellow would work with Office of Vital Records and Public Health Statistics leadership to assist in the development an office-specific Emergency Response Protocol that would be referenced when Vital Records staff respond to disasters within the state.

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Activities would include, but not be limited to, (1) learning about Vital Records operations and the services provided under normal operations, (2) learning about the services most needed by the public during and immediately following disasters like tornadoes and hurricanes, (3) interviewing staff and leadership in Vital Records to discuss previous responses to disasters, and (4) assisting in developing a written emergency response protocol. Since weather-related disasters are common in Mississippi, it is possible that the fellow will be able to be involved in implementation of the protocol during their 2-year fellowship.

In addition, the fellow will have the opportunity to (1) co-author a report about the deaths that resulted from the 2023 tornado outbreak in Rolling Fork, MS, and (2) analyze Hospital Discharge Data System data about injuries incurred from disasters.

Time allocation: It is expected that this project will span several months.

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

Congenital syphilis is an issue that is of tremendous importance in the field of Maternal and Child Health, both for mothers and infants. MSDH has unique positioning for a fellow to participate actively in congenital syphilis investigations in that it operates 88 health department clinics throughout the state. Not only will the fellow work with the State Epidemiologist, and medically focused leadership, such as the Chief Medical Officer, to direct intervention at clinics, but they will also work on the communicable disease program side to help inform policy and assist with distribution of sub-granted funding to community organizations to directly address cluster- and outbreak-identified locations and populations.

Time allocation: It is expected that this project will span several months.