

**ID: 87410811**

**Maternal and Child Health - Host Site Description**

**South Carolina Department of Public Health**

**Assignment Location:** Cayce, US-SC  
South Carolina Department of Public Health  
Maternal and Child Health - Population Health Surveillance

**Primary Mentor:** Carlos Avalos, MSPH, PhD(c)  
Interim Senior MCH Epidemiologist  
South Carolina Department of Public Health

**Secondary Mentor:** Paige Jones, MSE  
Epidemiologist II  
South Carolina Department of Public Health

**Work Environment**

Hybrid

**Assignment Description**

The daily tasks of a fellow or intern in the Division of Population Health Surveillance of the Bureau of Maternal and Child Health usually involve a combination of organized and practical tasks that assist with maternal and child health surveillance initiatives. The fellow may prepare tables or dashboards for internal/external use, help track important indicators like maternal risk factors, prenatal care utilization, and birth outcomes, and clean, analyze, and validate data from surveillance systems on a daily basis. They frequently assist in creating data briefings that provide program personnel and leadership with understandable, useful information based on findings. Fellows also will respond to data requests, work with epidemiologists and program managers on ongoing projects, attend team meetings on a regular basis, and assist with evaluations of maternal and child health programs, all of which provide them with hands-on experience in how population health data influences public health decisions.

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

The fellow will have access to The Pregnancy Risk Assessment Monitoring System (PRAMS), SAS, and Power BI enabling maternal and child health surveillance while assisting a fellow in strengthening their analytical and communication abilities. The fellow gains expertise with weighting, variable generation, and data validation while using SAS to clean, manage, and analyze PRAMS survey data. Statistical approaches are applied to investigate patterns in maternal behaviors, health problems, and pregnancy outcomes. PRAMS findings are then made available to program staff and leadership through interactive dashboards and visualizations created using Power BI, which facilitates data-driven decision-making. In order to prepare the fellow for future positions in public health surveillance, epidemiology, or program assessment, PRAMS delivers real-world public health data, SAS develops epidemiologic analysis abilities, and Power BI improves data storytelling.

**Projects**

**Surveillance Activity Title: Annual Maternal and Child Health Brief**

*Surveillance Activity Description:*

The fellow will have the opportunity to build upon an annual PRAMS brief for South Carolina. SC has historically had higher rates of maternal problems, infant mortality, and preterm delivery. PRAMS records experiences and actions that

**ID: 87410811**

**Maternal and Child Health - Host Site Description**

**South Carolina Department of Public Health**

directly affect these results prior to, during, and following pregnancy. SC's existing PRAMS brief uses PRAMS data to illustrate what the data shows for internal and external useage.

This surveillance activity will enable the selected fellow to gain experience and participate on the continuation of a national public health surveillance system. The fellow will aid and combine information from the data collection phase to data analyzation and data dissemination.

*Surveillance Activity Objectives:*

The primary objective of this activity is to successfully complete a maternal and child health (PRAMS) brief, that will overall help benefit the program and division of maternal and child health in SC. To achieve this objective, the following deliverables will be required:

- Regularly meet with the PRAMS SC Team and contractors for updates
- Provide bi-monthly epidemiologic summary of the main health issues mothers and infants face in SC
- Collect, analyze, and report on data and findings
- Develop the MCH brief while using PRAMS data and including bi-monlthly epidemiologic summaries
- Establish a social media info graphic for public display using information from the brief

*Surveillance Activity Impact:*

This MCH brief for SC will have a lasting impact on the health of SC and provide a deeper understanding around the risk pregnant mothers and infants face. Having a written and concise report for the state of SC could help bring more awareness for the need of change within maternal and child help and help bridge the healthcare gaps for mothers and infants in South Carolina.

**Surveillance System Evaluation Title: SC PRAMS Process Evaluation**

*Surveillance System Evaluation Description:*

The evaluation will look at current PRAMS workflows, such as survey administration, data processing, analysis, and reporting methods, to identify strengths, gaps, and opportunities for improvement. The evaluation will evaluate how PRAMS data are gathered and transformed into useful insights for mother and child health initiatives using a combination of process mapping, stakeholder engagement, and data review. The evaluation's conclusions will guide suggestions and possible pilot enhancements meant to fortify PRAMS data systems and facilitate quicker, data-driven decision-making in all mother and child health programs.

*Surveillance System Objectives:*

The overall goal of this project is to provide data-informed insights for the enhancement of SC PRAMS. To achieve this objective, the following deliverables will be necessary:

- PRAMS Process Map documenting current data collection, management, analysis, and reporting workflows
- Evaluation Summary Report outlining methods, key findings, and actionable recommendations
- Data Quality Assessment Brief assessing data completeness, timeliness, and consistency
- Recommendations and Improvement Plan prioritizing short- and long-term enhancements to PRAMS processes
- Updated Data Products such as revised tables, dashboards, or reporting templates to enhance data accessibility and interpretation

**ID: 87410811**

**Maternal and Child Health - Host Site Description**

**South Carolina Department of Public Health**

*Surveillance System Impact:*

The evaluation of the Pregnancy Risk Assessment Monitoring System (PRAMS) will improve the quality, timeliness, and relevance of maternal health data utilized to help South Carolina mothers and newborns. The assessment will assist PRAMS to better correctly represent women's experiences before, during, and following pregnancy by pointing out shortcomings in data collection and processing. Public health initiatives will be able to effectively target resources, provide evidence-based interventions, and address health inequities with stronger and more trustworthy data. Making better use of PRAMS results can help make better program and policy choices for maternal and child health efforts. In the end, this assessment will lead to better birth outcomes, healthier pregnancies, and increased assistance for families throughout the state.

**Major Project Title: Community-Based Health Equity Project for MCH**

*Major Project Description:*

Because persistent gaps in maternal and infant health outcomes persist despite decades of surveillance and intervention, a community-based, equity-centered study focused on minority moms and infants is desperately needed. The higher rates of maternal illness, death, preterm birth, and infant mortality among minority mothers, especially Black women, reflect institutional and systemic obstacles rather than personal choices. These disparities are documented by data sources like PRAMS, but without community-informed action, data by itself has not produced significant change. The most impacted populations are not directly involved in the design of many maternal health programs, which reduces their efficacy, relevance, and trust. This project is centered around providing the fellow with direct community engagement to help reduce challenges that mothers in South Carolina face.

*Major Project Objectives:*

This project is centered around reducing mother and infant health inequalities in minority populations. The fellow will contribute to this outcome by collaborating directly with communities to identify barriers, elevate lived experiences, and co-design culturally appropriate solutions. The fellow will have access to South Carolina data surrounding maternal and child health and be given contacts with local health departments to help with this project. The fellow will have access to South Carolina data surrounding maternal and child health and be given contacts with local health departments to help with this project.

- Create and sustain a Community Maternal Health Advisory Group made up of local partners, community health professionals, and minority moms to direct the planning, execution, and assessment of the initiative.
- Conduct community listening sessions with minority moms to explore perceived barriers, needs, and priorities related to prenatal, postpartum, and baby care.
- Determine the main structural and systemic causes of inequality while combining quantitative PRAMS results with qualitative community input.
- Use equity-focused measures, such as stratified outcomes, participant satisfaction, and engagement indicators, to assess pilot treatments.
- Include findings from community project into Annual PRAMS Brief

*Major Project Impact:*

In this health equity community-based project, the needs assessment will establish the process that is taken and with this additional engagement and data incorporation will be redefined to assess the needs of that particular community population. In hopes with a baseline from PRAMS and community involvement, SC DPH and the fellow will be able to determine measures that are impactful to help mothers and infants. The fellow is directly closing the gap between state and local health centers, by providing knowledge of what is needed from the affected community members to state leaders. PRAMS provides not only numerical data but stories from mothers, however it does not capture the needs of mothers from one specific demographic, and this project will provide that insight.

**ID: 87410811**

**Maternal and Child Health - Host Site Description**  
**South Carolina Department of Public Health**

**Additional Project #1 Title: Mapping Maternal Mortalities**

**Project #1 Type: Other**

*Project #1 Description:*

Significant progress has been made since legislation supporting MMMRC in SC was passed in 2016, but no thorough assessment of the procedures utilized to collect the data has been carried out. At the moment, maternal deaths are found using a variety of methods, examined by nurse abstractors, and examined by committee members to ascertain whether each death was related to pregnancy, how to prevent it, and the circumstances surrounding it. There is room for improvement even if this program has produced useful insights and changes throughout the state.

The fellow will have the chance to learn about MMMRC, offer suggestions for improving the program, map avoidable causes of maternal fatalities, and pinpoint areas where interventions were overlooked.

*Project #1 Objectives and Expected Deliverables:*

The fellow will provide the MMRC team with an insight on these deliverables:

- Maternal Mortality Pathways Map: A graphic representation that highlights avoidable causes of maternal fatalities.
- Case Analysis Report: An overview of maternal death cases that have been analyzed, together with important conclusions about contributing variables and chances for intervention that were overlooked.
- Interactive visualizations that show trends, high-risk groups, and potential areas for action are known as data dashboards or Tableau/Power BI visualizations.
- Recommendations Brief: Practical ways to close gaps to stop maternal fatalities in the future for legislators, programs, and healthcare providers.
- Stakeholder Presentation: An overview of findings and recommended interventions for DPH employees, partners, and community organizations.

*Project #1 Impact:*

By identifying avoidable causes of maternal fatalities and identifying lost opportunities for intervention, this initiative will significantly improve maternal health in South Carolina. The study will give policymakers, public health initiatives, and healthcare professionals practical knowledge to execute focused measures that lower maternal mortality by mapping pathways and analyzing cases. Prioritizing resources, enhancing care coordination, and addressing disparities especially among high-risk populations will all be made easier by the findings. The ultimate goals of this program are to improve maternal health systems, save lives, and encourage safer pregnancies and better outcomes for mothers throughout the state.

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

Within our birth defects program, we house the Set-Net system which monitors pregnancy outcomes among mothers with experiences of select diseases such as COVID-19 and Zika. This system will be made available to the fellow to analyze and assess the potential of any existing or new conditions having an impact on the maternal and child health populations. Time commitment would be about 10% of time.

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

The fellow will have the opportunity to utilize Lead Surveillance data to identify clusters of elevated blood lead levels in order to work with environmental and nurse counterparts on assessing root causes of the identified clusters. Time commitment is expected to be 5%.