Maternal and Child Health, Birth Defects and NAS

Montana Department of Public Health and Human Services, Family and Community Health Bureau
Helena, Montana

Assignment Description

The CSTE Applied Epidemiology Fellow will be housed within the Montana Department of Public Health and Human Services (DPHHS), Public Health and Safety Division’s (PHSD) Family and Community Health Bureau’s (FCHB) Maternal, Child, and Adolescent Health Epidemiology Section. The Montana Department of Public Health and Human Services (DPHHS) is Montana’s public health agency. The mission of the Montana Department of Public Health and Human Services (DPHHS) is to improve and protect the health, well-being, and self-reliance of all Montanans. In 2016, the DPHHS Public Health and Safety Division (PHSD) was awarded a five-year accreditation from the Public Health Accreditation Board (PHAB). In addition to housing an accredited public health division, the agency is a trauma-informed department, with all staff being trained in Adverse Childhood Experiences (ACEs), and how ACEs impact the health and wellbeing of the Montanans the agency services.

The Family and Community Health Bureau (FCHB) is part of the PHSD and will house the CSTE Applied Epidemiology Fellow. The FCHB houses a total of 12 programs, including the Maternal, Infants, and Early Childhood Home Visiting (MIECHV) program, the Women Infants and Children (WIC) Supplemental Nutrition program, Title X Family Planning Program, and the Title V MCH Block Grant program. FCHB employs over 50 staff, with a total of approximately $40,000,000 of federal and $3,000,000 in state funds administered by the bureau to support services to women, children, adolescents, and their families.

The Maternal, Child, and Adolescent Health Epidemiology Section within the FCHB provides epidemiological support to the FCHB with its team of Epidemiologists, Data Managers, Data Support Specialist, and GIS Analyst. Section activities include: data collection and management; data systems integration; needs assessment; continuous quality improvement; evaluation; and state and federal reporting.

Day-to-Day Activities

The Fellow’s day-to-day activities will include:

- Analyzing surveillance data such as health indicators, risk factors, and disease surveillance information;
- Analyzes programmatic and service-related data;
- Conducting data linkages and analysis using statewide surveillance systems;
- Design, coordinate, and manage special surveillance and/or evaluation procedures where there is no other existing data available;
- Meeting with program partners to determine data needs and uses;
- Participating in agency, bureau, and section meetings, including but not limited to: one-on-one meetings with primary and secondary mentors (weekly); section meetings with other MCAH epidemiologists (bimonthly); division meetings with epidemiologists (monthly); bureau meetings with other FCHB staff (monthly); and division meetings (quarterly).
Potential Projects

Surveillance Activity  State-Specific Children and Youth with Special Health Care Needs (CYSHCN) Survey

The National Survey of Children’s Health (NSCH) is a key source of data for the Title V Maternal Child Health Block Grant (MCHBG). The NSCH is the data source for 9 of the 15 MCHBG National Performance Measures and 7 of 25 National Outcome Measures. However, the utility of this survey for Montana-specific analysis is very limited. Due to the under sampling of American Indian children and children living in rural or frontier areas, the survey does not accurately reflect Montana’s child population. In addition, the survey sample size is too small to enable geographic comparisons at the state level.

The Montana Children’s Special Health Services (CSHS) Section (which houses the state’s CYSHCN program) has the interest and resources to administer a state-specific survey of children’s health and would like to place an emphasis on gathering data on the state’s CYSHCN population. The CSTE Applied Epidemiology Fellow will work in partnership with the FCHB Senior Epidemiologist Supervisor and the CYSHCN Epidemiologist to design and implement a state-specific children’s survey. Activities for this project will include: research on the sample and survey design of the NSCH; drafting of a survey sampling design for a Montana Survey of Children’s Health; developing a survey questionnaire; and drafting a weighting procedure for the finalized dataset.

Surveillance Evaluation  Montana Pregnancy Risk Assessment Monitoring System (PRAMS) American Indian Mothers Contact and Response Rates

The Montana Pregnancy Risk Assessment Monitoring System (PRAMS) oversamples American Indian mothers to have greater analytic capabilities when examining racial disparities for maternal and infant health outcomes. However, the response rate for American Indian mothers was 35% in 2018, approximately half the response rate of the sampling stratification with the highest rate and well below the CDCs target response rate. Montana needs an evaluation of the contact and response rates among American Indian mothers, and potential avenues for increasing the contact and response rates among this population.

The CSTE Applied Epidemiology Fellow will work in partnership with the FCHB Senior Epidemiologist Supervisor (the PRAMS Principal Investigator) and the PRAMS Data Support Specialist to conduct an in-depth analysis of American Indian PRAMS participants and non-participants, to determine if there are demographic patterns between American Indian respondents and non-respondents. Specifically, the Fellow will link PRAMS operational data to other departmental data sources (e.g. Medicaid, WIC, TANF) to do an exploratory analysis of the factors that may correlate to success rates for contacting American Indian mothers and for survey participation. Following this exploratory analysis, the CSTE Fellow will work with PRAMS staff to administer an operations experiment to increase the response rate among American Indian mothers. The proposed experiment will be developed based on the CSTE Fellow’s evaluation findings.

Major Project  Maternal Child and Adolescent Health Data Visualizations Dashboard
The Maternal Child and Adolescent Health Epidemiology Section is committed to increasing MCAH data access and use for projects, programs, and initiatives statewide. To meet this aim, the section would like to develop a comprehensive, publicly available data dashboard that includes data visualizations. The CSTE Applied Epidemiology Fellow will work in partnership with all MCAH Epidemiology Section staff to compile and analyze data, design the dashboard using data visualization software (e.g. Tableau), and publish the dashboard on the section’s website. The Fellow and MCAH Epidemiology staff would present the dashboard to FCHB program staff, and to MCAH professionals at the state’s annual MCAH conference (i.e. Great Beginnings, Great Families).

**Surveillance Evaluation**  
Adolescent Health Program Evaluation Support
The Adolescent Health section of the Family Community Health Bureau is a newly formed section encompassing many grants, predominately supporting teen pregnancy prevention and sexual violence prevention. Each of the Adolescent Health section’s grants has a program evaluation at various stages of implementation and completion. The CSTE Fellow would assist on an as-needed basis in support of the program evaluations in collaboration with the Adolescent Health Epidemiologist. Activities will include, but are not limited to, program evaluation design, analysis, data quality review, and analyzing data for outcomes and surveillance.

**Surveillance Activity**  
Pregnancy Risk Assessment Monitoring System (PRAMS) for Fathers
The Montana Pregnancy Risk Assessment Monitoring System (PRAMS) is exploring the potential to expand their current surveillance system to include a PRAMS-like survey for new fathers. To better understand reproductive health holistically and within families, PRAMS Montana would like to begin collecting data on new fathers utilizing the methods currently in place for PRAMS and guidance from the CDC PRAMS for Dads pilot project. The CSTE Applied Epidemiology Fellow will work in partnership with the FCHB Senior Epidemiologist Supervisor (the PRAMS Principal Investigator) and the PRAMS Data Support Specialist to develop the sampling methodology, survey design, conduct the survey, and compile and analyze the results.

**Preparedness Role**
In the event of a public health emergency or outbreak the fellow would partner with the Montana DPHHS Public Health Emergency Preparedness (PHEP) Program. For example, the recent illnesses and deaths associated with vaping have had a disproportionate impact on Montana adolescents. If the fellow were placed on site during the ongoing investigations, they would partner with the FCHB Adolescent Health Epidemiologist, Public Health and Safety Division Senior Epidemiologists for the Family and Community Health Bureau, Chronic Disease Bureau, and the State Epidemiologist to initiate surveillance projects and responses to this emerging issue.
**Mentors**

**Primary**
Miriam Naiman-Sessions PhD
Senior Epidemiologist Supervisor

**Secondary**
Kristen Rogers PhD
Family and Community Health Bureau Chief