

Maternal and Child Health, Chronic Diseases

Minnesota Department of Health, Health Promotion and Chronic Disease Division

Saint Paul, Minnesota

Assignment Description

This fellowship is focused on applying a life course perspective to maternal and child health (MCH) problems, addressing shared interests of MCH and Chronic Disease programs at the Minnesota Department of Health. The fellowship will provide the fellow with two different program perspectives on life course issues and allow the fellow to see how the work touches many aspects of public health program activities. The fellow will have opportunity to work on multiple issues that can benefit from a life course perspective. One of these issues which has several projects built around it, gestational diabetes, can illustrate the perspectives different public health programs may have of the work. From the MCH perspective, the fellow will understand how a condition like gestational diabetes mellitus (GDM), occurring in 2-10% of all pregnancies, differentially impacts communities in Minnesota, has implications for women's health during pregnancy and pregnancy outcomes, impacting clinical care and provision of services through programs like WIC. From the chronic disease lens, the fellow will understand how history of gestational diabetes is a marker for increased risk of developing diabetes. (Women with GDM have a 20-60% lifetime risk of developing type 2 diabetes, far greater risk than women without GDM.) Women with a history of gestational diabetes may benefit from programs that can delay or prevent the onset of diabetes, namely the Diabetes Prevention Program that the Diabetes Program promotes.

The MDH Diabetes Program works to build capacity for system change in communities to better prevent and manage prediabetes and diabetes statewide. Our work engages a network of partners in different sectors to affect change. Current efforts focus on changes in clinical, health care access/insurance, and program development and are paired with efforts to improve awareness of diabetes and prediabetes across all sectors. In the clinical arena, we promote use of electronic health records to support clinical best practices and effective care management and clinic redesign to utilize the strengths of each member of the care team to address the individual's needs. Efforts to address access to programs seek to remove barriers to participation which may include lack of coverage for certain services, lack of knowledge of existing benefits, or co-pays and involve providing information about these barriers to partners. In the sphere of program development, seek development of networks of programs accessible to all Minnesotans- in terms of geography, income and culture- and try to connect clinical organizations and community-based organizations with program providers. Our current work focuses on the National Diabetes Prevention Program (NDPP) for people with prediabetes and, for people with diabetes we support clinic-based education called Diabetes Self-Management Education and Training as well as lay-led programs that address day-to-day challenges in managing diabetes and how to address them.

The programs within the MCH Section strive to improve the health status of infants, children and youth, and women and families. The section provides a focal point for influencing the efforts of a broad range of agencies and programs committed to this goal. The role of the section is to: assess the health needs of mothers, children, and their families; use that information to advocate effectively on their behalf in the development of policies concerning organizational and operational issues of health systems; and advocate for programs and funding streams which have the potential to improve their health. The Section provides administrative and technical assistance to community health boards, tribal governments, schools, voluntary organizations, and private health care providers.

The fellow will have opportunity to work with multiple datasets housed at MDH; develop a surveillance system that will be an important support for both MCH and Diabetes program work; and have the opportunity to present data to diverse audiences. This will be complemented by a main project in which the fellow conducts a deeper analysis of issues related to diabetes in pregnancy using vital statistics data. Many other opportunities for learning exist across both programs and additional projects can be identified that align with other interests the fellow may have.

Day-to-Day Activities

- The Fellow's anticipated day-to-day activities would include work on surveillance and main project activities listed in the next section. Other routine activities would include:
- Participation in chronic disease program meetings to better understand ongoing programmatic work that analyses can inform.
- Collaboration with Diabetes and MCH epidemiologists on other diabetes and MCH surveillance activities.
- Participation in regular quarterly meetings of chronic disease epidemiologists to deepen understanding of applied epidemiological work, network, and to learn about new techniques.
- Participation in chronic disease evaluation team meetings and, as appropriate, work on evaluation projects to understand how surveillance system data can be utilized in program evaluation.
- Participation in meetings of the Minnesota Diabetes Collective Impact Initiative, a statewide group of cross-sector organizations committed to changing the story for diabetes in Minnesota, to better understand broad statewide diabetes initiatives and stakeholder perspectives.
- Participation in at least one outbreak investigation in collaboration with infectious disease staff at MDH
- Assisting with program evaluation activities for MCH programs including PRAMS, preconception health, and birth defects.
- Participation in meetings with Maternal and Child Health Advisory Task Force.
- Regular meetings with mentors- minimum of four hours per week during the first month and two hours per week thereafter.

Potential Projects

Surveillance Develop Gestational Diabetes Surveillance System Activity

The fellow will develop a Gestational Diabetes Surveillance System to be incorporated into a Diabetes Surveillance System. Both mentors will support the effort, while the diabetes epidemiologist will take the lead. Key steps the fellow will conduct as a part of developing this system include:

- Assessment of existing diabetes and relevant maternal and child health surveillance systems to identify data elements that already address GDM or related topics. This includes exploring data available through PRAMS, birth records, and hospital discharge data.
- Planning content for a surveillance system to assess GDM, using CDC documents describing evaluation of surveillance systems as a guide for laying out a system with all appropriate elements.
- Engaging internal (MDH Diabetes and Maternal Child Health Programs) and external stakeholders (appropriate Diabetes and MCH Advisory Task Force and, potentially, health plans and health plan foundations) in a dialogue around the proposed Gestational Diabetes Surveillance System measures.

This surveillance system will support diabetes prevention efforts by tracking the number of women who have gestational diabetes and degrees of follow-up testing and care. In addition, subpopulation analyses included in this system will support Minnesota Department of Health efforts to promote health equity. Data will be used to raise awareness of issues and also to track program progress.

Surveillance Custom Surveillance System Evaluation Project Evaluation

The fellow will work with the primary and secondary mentor to identify a surveillance system within the health department that is in need of evaluation. Options are varied and include:

- 1) Evaluation of the Diabetes Surveillance system or Diabetes Dashboard (www.health.state.mn.us/diabetes-dashboard). New data sources are expected to become available in the next year or two and the fellow could assess the potential for these data to enhance or replace current data elements being collected.
- 2) One of the goals of PRAMS is to identify groups of women and infants at high risk for health problems. An evaluation of PRAMS data would focus on the ability to address the health-condition specific surveillance needed to inform specific MCH program strategies.

Major Project Assessing the Contribution of Overweight/Obesity to Gestational Diabetes Prevalence in Minnesota

The fellow will conduct an analysis of vital statistics data to estimate the contribution of overweight/obesity to gestational diabetes prevalence in Minnesota. The goal of this will be to frame what the potential maximum population-health benefit could be if overweight and obesity among women of reproductive age were prevented or reduced dramatically. A secondary goal is to complete analyses stratified by race/ethnicity so this data can be used to support health equity efforts. The fellow may expand the project if he or she wishes to include modeling cost savings.

Surveillance PRAMS Analyses: Translating Data into Action
Activity

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a surveillance project between the Minnesota Department of Health and the Centers for Disease Control. It is a population-based survey designed to collect information on maternal behaviors and experiences before, during and after pregnancy. PRAMS was designed to generate data for planning and assessing perinatal health programs in each state. The objective of PRAMS is to collect population-based data that is of high scientific quality and to translate this data into useable information for the following purposes: to plan programs and policies to improve the health of women and infants; to monitor changes in maternal and child health indicators (e.g., unintended pregnancy, prenatal care, breast-feeding, smoking, drinking, infant health); and to make comparisons among participating states because the same data collection methods are used in all states.

One of the activities the Fellow will engage in, is the translation of this data into various communication products (including fact sheets) that can be distributed to stakeholders and community partners. The fellow will:

- Develop and conduct analyses to be included in fact sheets. Topics of interest that can be presented in a life course framework include: post-partum depression and life stressors.
- Develop fact sheets based on analyses for diverse audiences using plain language principles.
- Develop additional communication products designed to support local MCH initiatives, stakeholders and community partners as needed.

Whenever possible, the fellow will conduct analyses that examine differences by race/ethnicity, income, educational status, and other available social determinants of health will be encouraged to bring a health equity perspective to the work and to discussions linking data to program implementation. This will be in line with growing efforts in the Minnesota Health Department to address health equity as raised in a report to the Legislature.

Surveillance Gestational Diabetes Outcomes
Activity

If of interest, the fellow may work with his/her mentors to develop and conduct an analysis of birth outcomes among women with gestational diabetes. Rates of macrosomia, cesarean births, and other relevant outcomes could be determined using birth records. Potential collaborations could be developed to examine outcomes among Medicaid enrollees as well.

Preparedness Role

The fellow will be provided the opportunity to receive training specific to incident response and recovery. The Section of preparedness provides all staff training recommendations based on their interest and experiences in preparedness. Specifically, the fellow will be engaged in the project below.

Project Name: "Making the most of the planning "P"

Jurisdictional public health staff have been trained in the frameworks of ICS but often struggle with the planning "P" of the ICS system. We are creating and conducting this training to address an identified gap of our key partners in tribal and local public health.

We would like to partner with the program and request a fellow to work with our internal education and exercise team and a Public Health Advisory group to develop and deliver a locally requested training to our tribal and local public health partners. The session will be delivered at least 4 times in greater Minnesota. The focus will be how to use the planning P during response and how that enhances the ICS functions.

Additional Activities

- In addition to the gestational diabetes project, the fellow may choose to work with epidemiologists working on evaluations of diabetes or MCH program activities.
- The fellow may also have additional opportunities to participate in the development and use of data from other surveillance systems such as the Birth Defects Surveillance system.
- To complement the main project, the fellow could explore the prevalence of behaviors among women associated with reduction in type 2 diabetes risk such as engaging in physical activity, breastfeeding, etc among women with GDM. These data could form a baseline and rationale for different intervention strategies.

Mentors

Primary

Renee Kidney PhD, MPH
Epidemiologist, Principal

Secondary

Mira Sheff PhD, MS
State Maternal Child Health Epidemiologist