Maternal and Child Health

Washington State Department of Health, Prevention and Community Health Division/Office of Healthy Communities
Olympia, Washington

Assignment Description

The Washington State Department of Health (DOH) proposes placing a CSTE Fellow with the Maternal and Child Health Epidemiology Unit of the Surveillance and Evaluation Section. This section is located within the Office of Healthy Communities, Prevention and Community Health Division and provides epidemiologic and assessment services to programs in state and local health, external health-related organizations and agencies, and the public. The Maternal and Child Health Epidemiology Unit has 9 analytic staff that focus on issues related to maternal and child health. The Maternal and Child Health Epidemiology Unit collaborates closely with several surveillance programs, including the Pregnancy Risk Assessment Monitoring System (PRAMS), the Birth Defects Surveillance System (BDSS), the Healthy Youth Survey, and Maternal Mortality Surveillance. The MCH Epidemiology Unit also has a strong partnership with the American Indian Health Commission for Washington State and has collaborated on a number of projects to address Tribal MCH priorities. (The AIHC works on behalf of the 29 federally recognized tribes and two Urban Indian Health Organizations in Washington.)

The MCH Epidemiology Unit will provide a Fellow with the opportunity to develop a high level of proficiency in core applied epidemiology competencies, including surveillance system design and evaluation, study design, epidemiologic methods, data interpretation, using data to inform policy and programmatic decision-making, communication, emergency preparedness, and overall public health practice. The Fellow will have the opportunity to collaborate and network with a wide range of public health leaders within the Department of Health and across Washington State; the opportunity to develop presentations and publications of the their work; and the opportunity for training and developing skills in oral presentations, written communication, developing collaborations, facilitation, leadership and analytic methodology.

The Fellow will work with the mentors to identify projects that are of mutual interest and meet the fellowship requirements. It is expected that Fellows will have the opportunity to work on a wide variety of projects to ensure s/he develops a broad range of skills in applied MCH epidemiology.

Placement in the Surveillance and Evaluation Unit also provides the Fellow with the opportunity to learn from a broad range of epidemiologists and researchers on cross-cutting issues related to both chronic disease and maternal and child health.

Day-to-Day Activities

The placement offers an opportunity for the Fellow to become immersed in issues related to MCH epidemiology on a day-to-day basis. The fellow will be actively engaged in project planning, providing analytic and epidemiologic support to programs within DOH, developing research projects, conducting needs assessments, and conducting program evaluations. Activities include both individual self-directed work and collaboration on workgroups. There will be frequent opportunities to meet and consult with colleagues to review collaborative projects, present materials, and gather feedback. The Fellow will also meet regularly with the mentors to review approaches, discuss questions or challenges, and to learn about the Health Department. The fellow will participate fully in MCH Epidemiology Unit and Surveillance and Evaluation Section activities, including staff meetings,
Department of Health brown bag seminars, trainings, advisory committees, and other workgroups. The Fellow may also have the opportunity to attend state and regional conferences making presentations to both professional and lay audiences.

**Potential Projects**

**Surveillance**  
**Implementing Severe Maternal Morbidity Surveillance Activity**

Pregnancy-related morbidity and mortality significantly impact infant birth outcomes and a child’s long term health. Recently, Washington State passed legislation to implement a Maternal Mortality Review Panel to look more specifically at the causes of maternal mortality in Washington and the first Panel will meet in February of 2017. However, maternal mortality is just the tip of the iceberg. Each year, there are approximately 8-12 pregnancy-related deaths in WA, but there are over 1100 delivery hospitalizations with at least one severe maternal morbidity. For this project, the fellow would work with the Department of Health Maternal Mortality Review Panel committee to expand the Maternal Mortality Surveillance System to include severe maternal morbidity. The fellow would look at data sources, timeliness of data, and how to integrate maternal morbidity surveillance into maternal mortality surveillance. The project would also look at the feasibility of expanding surveillance beyond delivery hospitalizations to include antenatal and postpartum hospitalizations. The fellow would have the opportunity to gather input from leading experts throughout the state to help inform the development and usefulness of the surveillance system. Additional analytic projects to address maternal morbidity might include: 1) associations between maternal morbidity and infant outcomes, 2) exploring co-morbidities associated with maternal morbidity and length of stay, and 3) analyzing the method of delivery and the impact on infant and maternal morbidity, length of stay and re-hospitalization rates.

**Surveillance**  
**Evaluation of the Washington State Birth Defects Surveillance System**

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**Major Project**  
**Perinatal Quality Improvement Initiative â€“ Examination of C-Section and Repeat C-section rates**

Washington States Perinatal Quality Improvement Initiative started in 2008 and has seen a number of major successes in the past few years, including a 93% decrease in early elective deliveries and an 11% decrease in NTSV C-Section rates. This project would utilize our longitudinally linked birth-hospitalization file to look in-depth at changes over time in C-section rates and repeat C-sections, and assess differences by demographics, risk factors, and geography. The fellow would conduct trend analyses to look at changes over time, as well as conduct multivariate longitudinal analyses to assess factors associated with repeat C-sections. Analyses would also look at the impact of induction of labor and pre-eclampsia on outcomes. The fellow may also look at differences in maternal and infant outcomes following C-sections (ie. ICU admissions, blood transfusions, length of stay, unexpected newborn complications, other severe maternal morbidities, infant mortality). The analysis will also use Pregnancy Risk Assessment Monitoring Data to look at a number of issues including: 1) validity of C-section question on PRAMS, 2) reasons for getting a C-section, and 3) social and behavioral factors associated with C-sections. The fellow would also look into the applicability of conducting a Kitagwa or Oaxaca-Blinder Decomposition analysis to look at how changes in factors over time have contributed to decreasing C-section rates.

**Major Project**  
**Improving Infant Mortality through promotion of Safe Sleep Practices**

Decreasing infant mortality is a priority for Washington State and this priority is integrated into multiple statewide initiatives, including Results Washington and our Maternal and Child Health Block Grant. Analyses of infant mortality in WA have shown we have significant race/ethnic and socio-economic disparities in causes of death, particularly for Sudden Unexpected Infant Death and Sudden Infant Death Syndrome (SIDS). Safe sleep practices are significantly associated with reductions in SIDS; however, safe sleep practices have not changed over the past decade in Washington. One of our National Performance Measures (NPM) directly addresses this: NPM 5 - percent of infants placed to sleep on their back. For this project, the fellow would conduct an in-depth analysis of safe sleep practices using data from the Washington Pregnancy Risk Assessment Monitoring System (PRAMS). The analysis would look at factors contributing to sleep position and co-sleeping, as well as assess differences by demographics. This project would also include an in-depth analysis of SUID/SIDS to help understand the impact of safe sleep practices on the SUID/SIDS rates in WA. This project would include the opportunity to develop multiple communication products, including an Infographic, social media posts, press release, data report for providers and other health professionals, and a publishable journal article. The fellow would work with the Department of Health Communications Team to learn the process for developing various communication products, including messaging, data visualization, and working with partners.
**Additional Project**

Healthy Youth Survey: Improving Adolescent Health

The purpose of this project would be to conduct an in-depth analysis of selected child and adolescent health behavior topics using Healthy Youth Survey (HYS) data. The HYS is Washington's youth survey and is analogous to the Youth Risk Behavior Survey. The survey is conducted every other year and is currently being administered to students throughout Washington State during the fall of 2016. The 2016 survey data will be available for analysis in the late spring of 2017. This project would provide the fellow with the opportunity to work closely with our adolescent health team and learn about adolescent health issues. The topic and analytic plan would be developed according to Fellow interests. Potential topics include disabilities, bullying, substance abuse, nutrition, physical activity, school engagement, neighborhood safety, school safety, violence, mental health, abuse, and sexual activity.

**Preparedness Role**

There are several opportunities for involvement in emergency preparedness depending on the interest and expertise of the Fellow. As part of the departments Emergency Preparedness Planning, each division has designated emergency preparedness coordinators. The coordinators work with all staff in their respective divisions to provide training and opportunities to volunteer for specialized response efforts. The Fellow could participate in these activities, in activities related to coordinating emergency preparedness with sovereign nations, extending emergency preparedness plans to specialized populations such as pregnant women, infants or children with special health care needs, or other activities.

**Additional Activities**

Outbreak Investigation: The MCH Epidemiology Unit collaborates with the Communicable Disease-Epidemiology Office and Office of Non-Infectious Conditions Epidemiology. These offices are responsible for infectious and non-infections epidemiologic responses, respectively. These offices will collaborate in providing mentoring for clusters and outbreaks involving MCH issues and populations. Previous collaborations have included pertussis outbreaks, a neural tube defect cluster investigation, and a gastroschisis cluster investigation. The Fellow will work with these Offices to choose an outbreak investigation that is of interest to the Fellow and meets the requirements of the fellowship.

**Mentors**

**Primary**

Katherine Hutchinson, PhD, MSPH  
MCH Epi Unit Supervisor

**Secondary**

Swee May Cripe, PhD, MPH  
Perinatal Epidemiologist