Maternal Child Health/Injury

Assignment Description

The fellow will have the opportunity to work in a highly productive MCH Epidemiology program that has a long history of providing reliable data on maternal and child health issues for use in planning and evaluating programs, preventing poor health outcomes, and guiding public health policy. The MCH Epi Unit has approximately 15 positions and six programs including the Maternal-Infant and Child Death Review, Pregnancy Risk Assessment Monitoring System, Childhood Understanding Behaviors Survey, Surveillance of Child Abuse & Neglect, the MCH Indicators Project, and the Alaska Birth Defects Registry. In addition to these ongoing original source data programs, the unit provides data support to other MCH programs in the Section of WCFH, such as Newborn Metabolic Screening, Perinatal Health, Adolescent Health, and School Nursing. We routinely link data from our surveillance programs with data collected elsewhere, such as vital statistics, WIC, child protective services, and Medicaid. The Unit was recognized with a national award for Effective Practice at the 2009 National MCH Epidemiology conference, has produced dozens of peer-reviewed articles, and has been on the cutting edge of MCH epidemiology practice with programs such as the Alaska Surveillance of Child Abuse and Neglect. For more information about the Unit and our programs, prospective fellows can visit our website at http://dhss.alaska.gov/dph/wcfh/Pages/mchepi/. The unit will welcome a CSTE fellow as a full member of the scientific team, including them in decision-making and strategic planning processes.

As an MCH Epi fellow, the applicant will have the freedom to work on a wide variety of topics of interest and will have access to data from all of the surveillance programs run by the unit as well as other datasets routinely used by the unit epidemiologists. Some unique professional development opportunities that will be available to the fellow include attending the International Congress on Epidemiology, which will be held in Anchorage in August 2014, working with the CDC Arctic Investigations Program, located in Anchorage and a past collaborator with our unit, and potentially traveling to remote Alaska villages to assist with disease investigation, special studies, or to present data. Due to the relatively small size of our health department and city, the public health and epidemiology community generally collaborates very well together, and fellows are welcomed by not only our unit, but other colleagues as well, including those in the Alaska Section of Epidemiology, the Alaska Native Tribal Health Consortium, and the CDC AIP.

This assignment will provide the applicant with the opportunity to live in Alaska. Every imaginable outdoor activity exists including skiing (downhill and cross-country), climbing, hiking, kayaking, sailing, camping, rafting, hunting, fishing, snow machining, and dog sledding, all within a short distance of Anchorage. Anchorage has a variety of cultural activities including a large and well-supported performing arts center, a local opera company and symphony, numerous concert venues, and plenty of ethnic restaurants. Residents of Anchorage are from around the country and the world, giving the city a quasi-international feel. In fact, it was recently recognized as having the most languages spoken in the public school system as any city in the country. Winters are moderate (average temperature in Anchorage is 20oF), and are usually not as cold or dark as people expect when they first come here. We have had numerous fellows and EIS officers and most have chosen to remain in this amazing place.

Day-to-Day Activities

A fellow's day-to-day activities working with us may include designing studies and programs, writing protocols, evaluating databases, writing reports and peer-reviewed manuscripts, attending meetings with stakeholders throughout the state, and responding to media and public inquiries. An example of activities for a single day might include running analyses in a statistical program such as SAS, creating charts or graphs in Excel for a presentation or report, attending a staff meeting, and reviewing literature in PubMed.

Potential Projects

Potential MCH and injury projects for the fellow include:

- Evaluate the current Maternal Infant and Child Mortality Review program's capacity to implement a near-death review for children and mothers in Alaska, and implement the process.
- Evaluate the impact of the transition to electronic medical records on the Maternal Infant and Child Mortality Review and develop mitigating processes.
- Progress the Alaska Surveillance of Child Abuse and Neglect program (SCAN), by expanding to include sentinel surveillance sites across the State.
- Conduct a study of Adverse Childhood Experiences (ACE) and Resiliency scores among Child Advocacy Center (CAC) clients compared with an appropriate substitute population.
- Conduct a linkage between the Prescription Drug Bio-monitoring program and Child Protective Services data to assess the association of parental controlled substance abuse and maltreatment.
- Develop a community-level historical trauma scale by organizing a statewide action team and constructing a research tool. Bring the action team together to score all communities and then compare community outcomes (e.g. suicides, child maltreatment, all-cause mortality…).
- Assess the association between hospital-admitted gastric issues and a history of child maltreatment.
- Assess the association between a history of running away and child maltreatment.
- Utilize data from the Alaska Birth Defects Registry and Alaska SCAN to assess the association between Fetal Alcohol Spectrum Disorders (including Fetal Alcohol Syndrome) and child maltreatment.
- Quantify the incidence of sports-related injuries among adolescents using appropriate exposure-based denominators.
- Develop and test a hypothesis for the association between community alcohol status (damp, wet or dry) and child injury and other outcomes including suicide, child maltreatment, educational attainment and resilient behaviors.

Potential MCH projects for the fellow include:

- Conduct an evaluation of the Alaska Infant Safe Sleep project.

- Conduct an evaluation of baby friendly hospital implementation in Alaska.
- Conduct a descriptive analysis of fetal deaths in Alaska.
- Assess the association between increased PM2.5 levels and asthma admissions in Alaska.
- Conduct an evaluation of the Early Hearing and Detection Intervention Program.
- Evaluate the impact of changes to the 2003 birth certificate version on key MCH trends for Alaska. (These were just implemented in Alaska in 2013.)

Preparedness Role

There are a couple of different roles that the fellow could have related to emergency preparedness. As previously stated, the Section of WCFH has an MCH-Pediatric Disaster Planning and Emergency Preparedness program, and the fellow could work with the program manager to evaluate the program, develop trainings, conduct needs assessments, or other data-related projects that may arise. Alaska PRAMS added supplemental questions related to emergency preparedness to the survey in 2012 and 2013, and the fellow could develop a study using these data to help inform emergency preparedness programs in Alaska. Finally, the Alaska Division of Public Health participates in a statewide training exercise in emergency preparedness (collaborating with the military, the municipality, and other partners) every other year, and the fellow would be encouraged to actively participate in this, including taking the mandatory training to learn about Emergency Operations Centers and the role of the health department in a disaster. The fellow will be put in touch with staff of the Section of Emergency Preparedness to discuss other opportunities that may arise.

Assignment Location: Alaska Division of Public Health
Anchorage, AK

Primary Mentor: Cheryl Prince, PhD, MPH, MS, BS
Public Health Specialist II

Secondary Mentor: Jared Parrish, MS
Health Program Manager III