

Maternal and Child Health

The Minnesota Department of Health's (MDH) Data Epidemiology (DE) Unit is applying to host a masters- or doctoral-level CSTE Fellow in Maternal & Child Health (MCH) epidemiology and surveillance. Located in the Division of Community and Family Health (CFH), the DEU supports the Division's overall mission of providing collaborative public health leadership that supports and strengthens systems to ensure healthy families and communities. DEU staff collaborate department-wide to provide epidemiological, statistical, and technical support on assessment, research, program planning and evaluation, and policy development for key MCH programs: WIC, MN Children with Special Health Care Needs (MCSHN), Adolescent Health, Maternal & Child Health, Women's Health, Mental Health, Oral Health, School Health, Family Planning, Newborn Bloodspot (NBS) and Hearing Screening (NBHS), the Birth Defects Surveillance System, and the Pregnancy Risk Assessment Monitoring System (PRAMS), and others.

Day-to-Day Activities:

The Fellow would be housed in the DEU and his/her day-to-day activities will contribute to the collaborative work of the unit. The Fellow's actual work activities will depend on funding availability as well as mutual interest/benefit. To ensure a varied and rich experience, we plan to collaborate with academic, interagency and interdivisional partners, including: the University of Minnesota, School of Public Health; MN Department of Human Services (DHS); Minnesota Department of Education (MDE); Office of Emergency Preparedness (OEP, MDH); Section of Chronic Disease and Environmental Epidemiology (CDEE, MDH); Infectious Disease & Epidemiology Prevention & Control Division (IDEPC, MDH); Division of Environmental Health (EH, MDH), and the Center for Health Statistics (CHS, MDH), and local public health departments throughout MN.

Potential Projects:

- **Designing Surveillance Systems, Understanding/Interpreting Surveillance Data:** The reported rise in prevalence of autism spectrum disorders (ASDs) combined with an unknown etiology make responding to ASDs a compelling public health problem without easy answers. MDH is examining the feasibility of establishing a public health surveillance system for ASDs and other developmental disabilities. The Fellow would have opportunities to assist in this effort, evaluating and documenting the strengths and limitations of potential ASD data sources. Opportunities also exist in the Environmental Tracking Program. These efforts would entail identifying and evaluating data sources and relevant health indicators for tracking either adverse birth outcomes or child development.
- **Designing & Analyzing Studies to Address Public Health Problems:** Health disparities are an ongoing concern in MN. Examples of recent studies include: efforts to better understand the influence of culture on the access/utilization of developmental disability screening, evaluation, and early intervention services, and an examination of the underlying factors contributing to high infant mortality rates in Minnesota's American Indian population. Additional studies may be needed to inform ongoing efforts to develop culturally competent public health programs and improve health systems overall for MN's populations of color.

- **Data Analyses:** Analyses of secondary data are needed for evidence-based public health planning, programming, and policy development. To implement 'Data to Action' goals aimed at reducing infant mortality and low birth weight, analyses of MN PRAMS data regarding practices and attitudes regarding breast feeding and cigarette smoking, and access/barriers to health care and related services are needed. To develop new policies regarding suicide ideation among children with chronic diseases/conditions, analyses from the Minnesota Student Survey (MSS) are needed. This survey is similar to the CDC's Youth Risk Factor Behavior Surveillance System but samples 100% of grade-eligible MN children. Other analyses are possible from the National Survey of Children with Special Health Needs (NSCHN) and the National Survey of Children's Health (NSCH).
- **Program/Systems Analysis/Surveillance System Evaluation:** There is a need for a statewide evaluation of participants' satisfaction in the Family Home Visiting (FHV) Program. Tasks needed to complete this evaluation would include: learning about existing satisfaction surveys implemented at the local level, developing a meaningful metric of satisfaction for the state, and collecting and analyzing data. Another potential evaluation project would support MDH efforts to establish interoperability between child health information systems to link data across programs, divisions and agencies, and between the state and local public health agencies. The Fellow would have opportunities to collaborate with other state public health and information technology professionals in developing an evaluation plan for the new system. The Fellow could choose to evaluate quality improvement (QI) activities undertaken in private clinical settings for the Minnesota Child Health Improvement Partnership (MNCHIP), a public/private partnership including MDH that uses continuous QI to assure family-centered pediatric care. Data collection via chart reviews and/or the administration of provider/patient satisfaction surveys would likely be needed in this effort. Finally, qualitative data analyses are needed in evaluating MN's Positive Alternative Program, a program that supports and encourages women to have healthy birth outcomes.
- **Acute Disease/Time Sensitive Investigations:** The IDEPC Division has agreed to develop a project with relevance to women and children's health (e.g., E. coli outbreaks in child care settings, hospitalizations of children with influenza, Guillian-Barre syndrome surveillance following vaccination with a new meningococcal vaccine, etc.)

Emergency Preparedness Role:

The Fellow will be expected to participate in emergency preparedness training and offered the opportunity to assist the MDH's OEP in developing emergency preparedness policy/programs that focus on the particular needs of maternal and child populations (e.g., the needs of children and pregnant women, and delivering and new mothers, or the needs of children with special health needs such as those with chronic health conditions like asthma and diabetes). Participating in ongoing MDH efforts to respond to the current H1N1 epidemic are likely.

Assignment Location:

St. Paul, Minnesota

Primary Mentor:

Judy Punyko, PhD, MS
State MCH Epidemiologist
Minnesota Department of Health

Secondary Mentor:

Jean Johnson, PhD, MS
Epidemiologist, Principal and Director of Environmental Public
Health Tracking and Biomonitoring