Program Area Information: The Minnesota Department of Health's (MDH) Integrated Support for Cross Divisional Activities Section (ISCDAS) 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 ISCDAS' Data/Epi Team supports the Division's overall mission of providing collaborative public health leadership that supports and strengthens systems to ensure healthy families and communities. The Data/Epi Team collaborates department-wide to build CFH staff capacity and provide epidemiological, statistical, and technical support on assessment, research, and program planning and evaluation to key programs for women and children: 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 Fetal Alcohol Syndrome (FAS) Prevention & Surveillance Program, 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 ISCDAS and his/her day-to-day activities will contribute to the collaborative work of the Data/Epi Team, as described above. 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: the University of Minnesota, School of Public Health; MN Department of Human Services (DHS); Office of Emergency Preparedness (OEP, MDH); Infectious Disease & Epidemiology Prevention & Control Division (IDEPC, MDH); Division of Environmental Health (EH, MDH), and the Center for Health Statistics (CHS, MDH).

Potential projects include:

* Designing & Analyzing Studies to Address Public Health Problems: Studies are needed to characterize the relationships between planned pregnancies, prematurity, low birth weight, and racial/ethnic disparities in health outcomes of mothers and infants. Other possibilities: investigating the impact of methamphetamine and other drug use on infant health and pregnancy outcomes; estimating the prevalence of prenatal and postpartum depression; studying the effect of chronic neglect on children among families with children ages 0-3; characterizing different parenting approaches in minority populations to develop trainings for local public health and tribal agencies; and gathering stories and/or conducting key informant interviews and focus groups to develop approaches to domestic violence.
* Designing Surveillance Systems: Reports of increasing incidence combined with an unknown etiology make autism a compelling problem without easy answers. We are taking initial steps to lay the groundwork for establishing a public health surveillance system to assess the burden of autism in MN, develop appropriate public heath and other responses to meet the needs of these children and their families, and to support etiologic investigations. Assuming these efforts are successful, the Fellow would have opportunities to collaborate in implementing pilot studies to establish MN's methodology and approach.
* Data Analyses: Analyses of secondary data are needed for evidence-based public health planning, programming, and policy development. For instance, analyses of the MN PRAMS dataset are needed for implementing the CDC's 'From Data to Action' goals aimed at reducing infant mortality and low birth weight. Analyses of child health surveys are also needed. Datasets include, among others: the National Survey of Children with Special Health Needs (NSCHN),

the National Survey of Children's Health (NSCH), and the Minnesota Student Survey (MSS), which is similar to the CDC's Youth Risk Factor Behavior Surveillance System but samples 100% of grade-eligible MN children.

* Program/Systems Analysis/Surveillance System Evaluation: There are numerous opportunities to conduct program or systems evaluations. For example, within the MCSHN Program, there is a need to evaluate tools and approaches, such as 'developmental wheels' or 'Child Find' methods used in Follow Along program. Systems analyses are needed for the Follow Along Program and the system of MN's Developmental and Behavioral Clinics. The Fellow could evaluate the NBHS tracking or FAS surveillance systems, using the CDC's Guidelines for Evaluating Surveillance Systems. Finally, the MDH has begun work to establish an Interoperable Child Health Information System to link data across MN programs, divisions and 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.
* Emergency Preparedness Plan: 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).
* 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.)

Assignment Location: St. Paul, Minnesota

Primary Mentor: Judy Punyko, PhD, MS
State Maternal & Child Health Epidemiologist

Advanced Degrees: PhD, University of Minnesota (2004)
MS, University of Minnesota (1990)

Secondary Mentor: Caroline Dunn-O'Brien, PhD, MA
Research Scientist

Advanced Degrees: PhD, University of Minnesota (2000)
MA, University of Kentucky (1993)