Maternal and Child Health

Assignment Description:
The CSTE fellow would be a valuable member of the ODH MCH epidemiology team and a member of OCPIM and its data/metrics workgroup. He or she would work on the teams that monitor and plan around Title V block grant performance measures that relate to infant mortality (i.e. decreasing smoking, increasing breastfeeding, and improving preconception health) and the fellow would contribute to developing epidemiologic capacity to support some or all of these priorities.

ODH has an ongoing commitment to reducing health disparities and achieving health equity. This includes ODH's membership in a national Action Learning Collaborative (ALC) that is an effort to eliminate the negative effects of racism on birth outcomes. The ODH Office of Health Equity was formed in 2009 to develop intra and interagency policy and interventions to eliminate health disparities and achieve health equity. To further support these goals, ODH contracted with Dr. Arthur James, MD who is nationally-known for his efforts in addressing racism and reducing the negative effects of infant mortality disparities in Michigan. The fellow's work will contribute to the department's developing capacity to measure and change health disparities, racism, and the social determinants of health, especially as they relate to existing and proposed program interventions.

Columbus, Ohio is a growing, culturally diverse city with many excellent schools, including colleges and universities, and a variety of affordable housing options. Greater Columbus is a thriving metropolitan area of 1.8 million people (Columbus is the 16th largest city in the U.S.). It is home to The Ohio State University, four major healthcare systems, nightlife, family attractions, and diverse sporting events and cultural arts.

Day-to-Day Activities:
The fellow's day to day activities will contribute to infant mortality priorities of importance to the agency and interest to the fellow. Activities include conducting special investigations, communicating within and outside of the department, and opportunities to participate in meetings, local conferences and site visits that will enrich the internship experience. Specifically, the fellow will:

- Be a member of the State Epidemiology Office and participate in weekly updates of important department happenings related to MCH, infectious disease, EIS activities, and other timely events.
- Contribute to statewide efforts to prevent infant mortality by actively participating in the epidemiologic workgroup of a statewide infant mortality collaborative (OCPIM data and metrics workgroup). This will be accomplished by collaborating with academic, clinical, programmatic and public health partners across the state.
- Lead the implementation of the newly released "State Infant Mortality (SIM) Toolkit" from CDC in partnership with the Association of Maternal & Child Health Programs (AMCHP), and the March of Dimes. The Toolkit's purpose is to provide a structured approach for analyzing infant mortality data by a diverse team to determine underlying factors associated with infant deaths. It provides practical guidance on applying epidemiologic methods to studying infant mortality as an indicator of population health; provides a framework for selecting appropriate infant mortality indicators; illustrates methodological and statistical approaches to analyzing data, interpreting findings, and translating findings into programs and policies to reduce infant mortality.

- Further efforts to understand disparate risk factors, including preconception health indicators, and birth outcomes in Ohio, particularly among black and Appalachian women in Ohio.
- Advice the Office of Health Equity staff on the application of epidemiologic and surveillance data and analyses to intra-agency/interagency policy formulation, program decisions and resource allocation to combat health disparities.
- Explore the use of market research data to better understand communities with high infant mortality burden and apply that understanding to the development of prevention programs including policy, systems or environmental changes. This may include creating profiles of households or communities that experience infant death by using vital statistics and market research segmentation data systems.

Potential Projects:
The majority of the fellow's projects will be completed with interdisciplinary teams. Defining a public health problem, planning and completing a project, and communicating results will require that the fellow work with staff across the department and partners outside of the department. The fellow is encouraged to publish the results of projects and will be supported in doing so.

Statistical analyses will be supported by supervisors and possibly through a contract with an Ohio College or University. The fellow's interests, strengths, and individual training needs will influence the specific analysis projects undertaken. Proposed projects include:

- Identifying risk factors for birth in a non-level III hospital among VLBW babies and birth outcomes for VLBW babies born in non-level III hospitals;
- Monitoring and evaluating prenatal smoking cessation initiatives. Ohio has one of the highest smoking rates in the nation and it is particularly high among young and Appalachian mothers. In 2007, Ohio began training volunteer local WIC sites on implementing brief evidence-based smoking cessation counseling.
- Identifying risk factors for lack of breastfeeding initiation or duration. Ohio has one of the country's lowest breastfeeding rates. However, WIC is actively promoting breastfeeding and it is a new priority for ODH. Data are needed to guide and support these efforts.
- Evaluating the relationship between birth outcomes and social determinants of health (the conditions in which people are born, grow, live, and work, including the health system) to establish connections and make recommendations with the Office of Health Equity in the form of reports or policy briefs.
- Evaluate and monitor disparities in infant mortality and related outcomes in Ohio using multiple summary measures of absolute and relative disparity using the Health Disparity Calculator (HD*Calc) statistical software (http://seer.cancer.gov/hdcalc/index.html). ODH has generally only described disparities in terms of rate differences or ratios. Applying expanded measures will help ODH to better understand and address health inequities.
- There are three major opportunities for evaluating surveillance systems:
- Evaluate vital statistics for surveillance of fetal death. The state began to use the NCHS 2003 fetal death certificate in January of 2011.
- Evaluate the child fatality review (CFR) for monitoring of infant deaths in Ohio.
- Evaluate vital statistics as a tool for monitoring breastfeeding initiation in Ohio. Ohio began collecting breastfeeding data on the birth certificate in 2006 when the 2003 NCHS birth certificate was adopted. However, the accuracy of this information has not been evaluated. Birth certificate information could be compared to PRAMS data or to medical records.

Preparedness Role:
The State Epidemiology Office (SEO), through the State Epidemiologist in coordination with the Division of Prevention can provide the CSTE fellow opportunities to participate in infectious disease outbreak investigations. Both have extensive experience supervising Epidemic Intelligence Service (EIS) officers in outbreak investigation. In addition, the CSTE supervisor has outbreak investigation experience.

The fellow will be invited to participate in trainings, planning meetings (such as the Bioterrorism Steering Committee Meeting), desktop exercises, and other elements of Ohio's emergency preparedness plan such as school emergency planning. The Division of Prevention and the State Epidemiologist have committed to providing additional support and opportunities for the fellow's involvement in emergency preparedness.

Assignment Location:	Columbus, Ohio
Primary Mentor:	Elizabeth Conrey, PhD, MS, RD State Maternal and Child Health Epidemiologist Ohio Department of Health
Secondary Mentor:	Amy Davis, MPH Assessment and Planning Section Supervisor, Bureau of Child and Family Health Services Ohio Department of Health