Maternal and Child Health

Illinois Department of Public Health, Office of Women's Health and Family Services
Chicago, Illinois

Assignment Description

The Fellow would be primarily placed in the Chicago office of the IDPH Office of Women’s Health and Family Services (OWHFS). The OWHFS is one of six programmatic offices with IDPH, with a Deputy Director that reports directly to the IDPH Director. OWHFS houses three divisions: the Division of Maternal, Child, and Family Services, the Division of Women's Health, and the Division of Population Health Management. These divisions work together closely and are united by a common vision and mission. The work of OWHFS covers the life course for women and families, including: infant and maternal mortality reduction, perinatal hospital regionalization, school-based health centers, teen pregnancy prevention, family planning services, breast and cervical cancer screening, and women’s cardiovascular disease. The Division of Maternal, Child, and Family Services is the administrator of the state Title V (MCH Services) Block Grant, which funds a wide array of public health programs and initiatives, including: asthma education initiatives, newborn hearing and genetic/metabolic screening, services for children with special healthcare needs, and funding of case management services through the Illinois Department of Human Services.

Secondarily, the Fellow would work closely with the Adverse Pregnancy Outcomes Reporting System (APORS) program within the IDPH Division of Epidemiologic Studies. The purpose of APORS is to conduct surveillance on birth defects and other adverse outcomes, guide public health policy in the reduction of adverse pregnancy outcomes, and identify and refer children who require special services to high-risk case management services. Mandated statewide data collection began in August 1988; all licensed Illinois hospitals are required to report adverse pregnancy outcomes to APORS. More than 40 specific birth defects are validated through chart review.

Day-to-Day Activities

The Fellow would function as an entry-level epidemiologist supporting maternal and child health programs and policies in Illinois and be integrated into the work of OWHFS. This would entail working with internal programs and supporting other MCH initiatives with relevant partners in other IDPH divisions, other state agencies, and external partners. Broadly, the day-to-day activities of the Fellow would include functions related to needs assessment, program evaluation, disease surveillance, and data infrastructure building. Supporting these functions within OWHFS would include many opportunities for data analysis, survey development, quality improvement support, data linkage, and database design/development. There are opportunities for the Fellow to be involved in a diverse array of projects and to select projects that will enhance their epidemiologic skills and further their professional development.

Specifically, day-to-day functions of the Fellow would include:

- Attend weekly progress meeting with mentors
- Attend quarterly OWHFS staff meetings and collaborate across MCH and women’s health programs
- Attend bi-monthly meetings of the IDPH Chicago office epidemiology group
- Participate in state workgroup and advisory committee meetings, such as the Perinatal Advisory Committee, Illinois Perinatal Quality Collaborative data team, and State Health Improvement Plan Implementation committee
- Choose one or more epidemiologic projects and follow them from development to investigation to data collection to analysis to report or manuscript completion
- Develop skills in indicator development, data management, database linkage, GIS mapping, epidemiologic methods, and evidence-based public health
- Create data products for a wide range of lay and professional audiences
- Make presentations in various settings, including learning sessions at DPH, in external partner meetings, and at scientific conferences
- Participate in evidence-based policy development and implementation
- Identify partnership opportunities with other offices and programs within IDPH
- Support performance measure analysis and grant reporting requirements for the Title V MCH block grant

**Potential Projects**

**Surveillance Activity  Maternal Mortality and Morbidity Surveillance**

Illinois has a statewide Maternal Mortality Review Committee (MMRC) that reviews deaths related to pregnancy to identify major causes of deaths, factors influencing the outcome, and opportunities for prevention. Additionally, severe maternal morbidity (SMM), is also important to study because these represent cases of women with severe pregnancy complications who did not die. There is a Title V national outcome measure on SMM that must be reported annually in the Title V block grant, but Illinois does not yet have a system in place to make surveillance of SMM routine or systematic. The Fellow would develop the procedures and methodology to conduct ongoing, quarterly surveillance of SMM and to assess for changes over time in the overall measure and in specific conditions of interest. Data sources that may be used for this project include: vital records, hospital discharge, and state maternal mortality review findings. The fellow would also create a surveillance report that summarize the analysis findings. In addition, the fellow would have ample opportunity to present this work at scientific conferences and to interested stakeholders, such as the state MMRC, the Illinois Perinatal Quality Collaborative, or the regionalized perinatal system.

**Surveillance Evaluation of Perinatal Hospital Reporting System**

Illinois has a robust regionalized perinatal system including 10 regional administrative centers, and 122 birthing hospitals in Illinois and Missouri. This regionalized system is the backbone of ensuring risk-appropriate care for high-risk women and infants, as well as monitoring the quality of care. The “e-Perinet” data system has been developed as an electronic management and reporting system for hospitals and regional administrative perinatal centers. Through e-perinet, hospitals report to IDPH on data such as: volumes of deliveries by birthweights, maternal and neonatal inter-facility transports,
and maternal and perinatal deaths. Throughout 2016, there has been a planning process to give e-Perinet the capabilities of performing automated uploads from the hospital electronic medical records. It is anticipated that the change to the system could greatly improve the timeliness, accuracy, and completeness of the hospital data. The pilot of this process is currently underway and is expected to roll-out during 2017.

The Fellow will engage in an evaluation of the surveillance functions of e-Perinet, assessing the timeliness, validity, and usefulness of the data collected from birthing hospitals. This statewide database has never undergone a comprehensive evaluation for its potential as a surveillance system and there is much potential when it comes to assessing and reviewing the system’s components. The recommendations generated by the Fellow will help with further systems improvements and inform the regional perinatal program how to better capitalize on existing resources, improve data quality, and analyze/use the data in meaningful ways.

**Major Project**

*Data Linkage: Adverse Pregnancy Outcome Registry and Hospital Discharge Data*

The fellow will create a methodology for linking the Adverse Pregnancy Outcomes Reporting System (APORS) with state hospital discharge data. The fellow will develop and implement a process for the linkage of these two data systems. This will include meeting with relevant stakeholders and data stewards, researching data linkage methods/standards, developing and implementing linkage algorithms, pilot testing the algorithms, and finalizing a linked data file. As time allows, the fellow will then use the linked dataset to perform one or more cost-benefit analyses that demonstrates the utility of the new dataset. The newly linked data set will enable Illinois to conduct cost-focused analyses relating to adverse pregnancy outcomes and specific birth defects and neonatal conditions.

The APORS program is managed by the IDPH Division of Epidemiologic Studies with the purpose of conducting surveillance on birth defects, guiding public health policy in the reduction of adverse pregnancy outcomes, and identifying and referring children who require special services to correct and prevent developmental problems and other disabling conditions. Mandated statewide data collection began in August 1988; all licensed Illinois hospitals are required to report adverse pregnancy outcomes to APORS. APORS includes the birth defects registry, and is also a registry for other adverse pregnancy outcomes, including serious infections, metabolic and immune disorders, intrauterine growth retardation, seizures, intra-ventricular hemorrhage, prematurity and neonatal death. Reports are obtained from multiple sources, primarily hospital reporting. More than 40 specific birth defects are validated through chart review.

**Additional Project**

*Child Health Fact Sheets*

For the first time in five years, National Survey of Children’s Health will be released during 2017. The new data file will allow for analysis of state-level child health indicators, and new NSCH data will continue to be released annually thereafter. Several of the Illinois MCH Block Grant performance and out measures are based on indicators derived from NSCH data, such as developmental screening,
children’s medical home, transition from pediatric to adult care, family centered care, and mental health services for children.

The fellow will analyze the newly available NSCH data to assess changes from the 2011-2012 baseline, describe relevant disparities within Illinois, and compare Illinois’ performance to other states in the nation. The fellow will then create a series of short “fact sheets” that summarize the data for distribution to professional and community partners working on child health issues.

**Surveillance | Zika Virus Outcome Surveillance Activity**

The fellow will undertake an analysis of data related to outcomes resulting from Zika infection, both in adults (using hospital discharge data) and in neonates (using rapid ascertainment data collected by APORS staff as part of the Illinois Zika response). The APORS program is undertaking rapid ascertainment of head and brain anomalies as part of the national efforts to better understand these conditions. The program is also contributing data to the US Zika Pregnancy Registry. Reports are obtained from multiple sources, primarily hospital reporting. And the specific birth defects are validated through chart review. The fellow will collaborate with relevant stakeholders and data stewards, to obtain data files. The fellow will then use these datasets to assess the prevalence of Zika-virus related conditions and compare the information to the baseline study already undertaken.

**Preparedness Role**

To gain a background in basic principles of emergency preparedness, the fellow will complete relevant National Incident Management System (NIMS) trainings through the Federal Emergency Management Agency (FEMA). The Fellow will then have the opportunity to provide input and expertise to emergency preparedness activities at IDPH as they relate to women, children and families. Such activities may include: participating in task forces implementing policies affecting preparedness among MCH populations, advising OWHFS about how to include MCH-sensitive preparedness into office programs, and working with the Illinois Emergency Medical Services for Children on provider resources related to emergency medical care or disaster preparedness among pediatric populations. There will also be the opportunity to collaborate with other IDPH divisions and offices to participate in an outbreak investigation, emergency responder drills, and contributing to summaries that evaluate IDPH’s performance in responding to outbreaks and emergency situations.
Additional Activities

There are a myriad of opportunities for the Fellow to be involved in other projects that align with their interests and professional development goals. This may include:

- Analysis and mapping of indicators related to the ten Title V Block Grant MCH priorities
- Analysis of PRAMS data on a topic of interest to the Fellow
- Analysis of vital record and hospital discharge data related to drug overdose deaths, hospitalizations, and ED visits
- Collaborating with the state Children with Special Healthcare Needs (CSHCN) program on a project related to care coordination
- MCH Policy analysis and development of policy briefs
- Outbreak investigation (in conjunction with Division of Infectious Diseases) for a disease relevant to maternal and child health (e.g., measles, listeria)

Mentors

Primary: Amanda Bennett, PhD, MPH
Senior MCH Epidemiologist / CDC Assignee

Secondary: Jane Fornoff, D.Phil, MS
Perinatal Epidemiologist & APORS Manager