

Maternal and Child Health and Chronic Disease

Description:

The Division of Genomics, Perinatal Health and Chronic Disease Epidemiology (DGPHCDE) has three Sections-Genomics and Genetic Disorders Section, Maternal and Child Health Epidemiology Section (MCH Epi Section) and Chronic Disease Epidemiology Sections. This Division offers the unique opportunity for interaction and collaborative work/projects among different epidemiologists providing support to birth defects follow up program, MCH and Chronic disease programs, NBS follow up program as well as Genomics.

Furthermore and more important, there is strong collaboration with the MCH and Chronic Disease programs housed within the Bureau of Family, Maternal and Child Health and Bureau of Health Promotion and Disease Control. The MCH Epidemiology Section currently has four full-time epidemiologists assigned as it follows: Pregnancy Risk Assessment Monitoring System (PRAMS), Women, Infant and Children Nutrition Program (WIC), Newborn Screening Follow Up, Early Hearing Detection and Intervention and Birth Defects Follow Up programs. The Chronic Disease Epidemiology currently has six staff epidemiologists assigned to cover a variety of areas: MI BRFS (Michigan Behavioral Risk Factor Survey), asthma, obesity/cardiovascular, stroke registry, lupus/arthritis. cancer genomics. Each epidemiologist takes on other assignments that relate to their main responsibilities. For instance, the MCH epidemiologists also work on infant mortality, Michigan Maternal Mortality Surveillance (MMMS), Title V, etc. The chronic disease epidemiologists provide assistance to developing quality assurance measures or information on racial disparities as needed. The sharing and learning process has led to a productive interaction and improved collaborative products.

A few example of analytic projects either in process or recently completed:

- Hospitalization during pregnancy and resulting birth outcomes of women with diabetes mellitus, Michigan 1999-2004;
- The Association Between Breastfeeding and Preschool Age Overweight in Children of Mothers With Gestational Diabetes in a Low Income Michigan Population;
- Overweight in early childhood among term and pre-term WIC participants;
The need and use of family planning and preconception health services (PRAMS);
- Collaboration between Birth Defects Registry and Early Hearing Detection And Intervention program: Better case identification, reporting and referral services;
- Exploring the parental stress and medical home in children with special health care needs population; 6/ Assessing the risk factors for preterm births in ten counties with highest IMR in Michigan;
- SIDS decrease and changes in Infant Death Coding: is there a shift?;
- Perinatal survey: sharing the results and planning for future actions.
- Reliability study of stroke case record abstraction for statewide stroke registry;

- The association between status as a primary stroke center and performance on 10 quality of care measures;
- A study of fast food consumption prevalence and the association with overweight and obesity;
- Knowledge of tissue plasminogen activator (TPA) treatment for acute stroke;
- Mortality review: sudden cardiac death of the young;
- A multi-state collaborative to generate a standard analytic approach for measuring asthma control;
- Development of a home environment score to determine the potential risk of the indoor environment to persons with asthma;
- A study to understand the association between race and asthma control;
- Development of surveillance indicators for monitoring the burden and the clinical management of asthma for the Medicaid population;
- An intervention study of an in-home Asthma Case Management program;
- A study of racial disparities in the knowledge of heart attack and stroke risk factors and warning signs;
- Development and analysis of preconception health indicators;
- Study of characteristics of adults with depression;
- Study of the health status of adults with disabilities. The mission of DGPHCDE is "To provide statewide leadership and expertise essential for integrating genomics and epidemiologic science into maternal, child health, chronic disease and other related public health programs." Each of the two Sections, MCH and Chronic Epidemiology, provides epidemiological leadership & expertise to assure translation of research & evidence-based prevention strategies into public health policy & practice.

Day-to-Day Activities:

Activities will be driven by the fellow's goals and interests but focused on desk work at the office with some field work meetings and consultations. A work plan will be developed by the two supervisors to thus assure that the fellow will work on projects related to both fields, MCH and chronic disease. On a daily basis, the fellow will learn the data sets available, how to access and use them. The study design and different methods will follow with the focus on the projects assigned. The fellow will have access to each of the two supervisors with who will meet on a regular basis. The Division Director has an open door policy to thus assure that each of the staff members is able to seek input and find answers right away. The same policy will apply to the CSTE fellow. The CSTE fellow will be also encouraged to attend the Sections meetings and to actively participate as appropriate and related to the work assigned.

Potential Projects:

Some of the potential projects for the CSTE Fellow include:

- Analyze trends in asthma enrollment in the Children with Special Health Care Needs program;
- Evaluate sensitivity of Chief Complaint data to identify asthma visits using existing emergency department discharge data from four hospitals to inform syndromic surveillance efforts;

- Assess the impact of gestational diabetes on subsequent pregnancy outcomes;
- Analyze the trends of C-section in association with different maternal co-morbid conditions;
- Investigate the pattern of medication among children and adults with asthma, to further understand the use of rescue and long-term control medications and how they relate to asthma control, access to care, and healthcare utilization patterns;
- Assess the pregnancy outcomes to women diagnosed with sickle cell and PKU;
- Evaluate the stroke registry;
- Explore the association between the history of Peripartum Cardiomyopathy and subsequent pregnancy complications (i.e., eclampsia) Each of the above projects will allow access to large data sets as well as linked files, data manipulation and management as well as statistical analysis. The fellow will be also encouraged to participate in developing surveys as well as new surveillance system (i.e. for sickle cell or infertility) in Michigan. Learning to conduct an outbreak investigation as well as gaining knowledge in bioterrorism preparedness will also be considered.

Emergency Preparedness Role:

The fellow will be encouraged to participate in trainings and exercises related to emergency preparedness and provide support to the MDCH office of Public Health preparedness as needed.

Assignment Location:	Lansing, MI
Primary Mentor:	Violanda Grigorescu, MD, MSPH Division Director, State MCH Epidemiologist Michigan Department of Community Health
Secondary Mentor:	Elizabeth Wasilevich, PhD, MPH Asthma Epidemiologist Michigan Department of Community Health