Assignment Description

The CSTE Fellow will have opportunities to experience and contribute to applied epidemiology in an emerging topic, behavioral health epidemiology, which cuts across multiple areas of public health. He/she will be based in the bureau, which provides epidemiology support throughout MDCH. The bureau has four former EISOs, all of whom are either serving or have served as CSTE Fellow mentors. There are staff with doctoral degrees in all divisions who have been mentors to a variety of fellows or interns and other professional staff (PhD, MPH, MS) are available to help support a Fellow in terms of analysis of large data systems, such as the hospital discharge data or complex surveys. Su Min Oh, PhD, the substance abuse analyst in the Behavioral Health and Developmental Disabilities Administration, will meet regularly with the Fellow and help him/her develop collaborative projects. All these individuals can provide technical support to the Fellow in accessing and manipulating data and in understanding case definition and coding issues. Kim Hekman, our former CSTE Applied Epidemiology Fellow in Substance Abuse had developed a number of resources for her successor to draw upon. Because of the collaborative structure of the bureau, the Fellow can also get access and assistance in using data systems managed by other sections such as Chronic Disease and HIV/AIDS. Please visit our website at www.michigan.gov/epi

Day-to-Day Activities

The BDCPE is building its capacity for substance abuse and mental health epidemiology and surveillance and are often called upon to support the Governors’ Policy Academy activities in addressing pharmaceutical drug abuse. On a daily basis, the Fellow will learn to use data sets of varying size and complexity, link data files, edit data and maintain quality control, and manage projects. He/she will participate in the design of studies, in data collection, in the analysis and interpretation of results, and in their dissemination.

The BDCPE works with the Behavioral Health and Developmental Disabilities Administration (BHDDA) to develop ongoing public health surveillance of key mental health and substance abuse measures. BHDDA has federal funding to build prevention capacity through the use of state and local data for prioritizing substance abuse problems and assessing the impact of interventions. To implement the program, BDHHA organized a State Epidemiology Outcomes Workgroup (SEOW) formerly chaired by Dr. Corinne Miller, assisted by Dr. Lorri Cameron. The SEOW has compiled a wealth of data resources that are being used to develop state and community plans for prevention and funds a State Epidemiology Outcomes Workgroup (SEOW). The Fellow would participate in the SEOW and work with BHDDA analyst Dr. Su Min Oh to develop in-depth analyses of data sources of interest. The Fellow would act as point of contact for questions about mental health, drug overdose and substance abuse epidemiology and would assist in the investigation of ‘outbreaks’ of new substance abuse problems as detected by the State’s Poison Control Center or reported from local health departments, law enforcement or providers.
Potential Projects

Surveillance Evaluation of the Michigan Maternal Mortality Surveillance System for Mental Health and Substance Abuse

Systematic surveillance of pregnancy-associated mortality began in Michigan in the 1950s as collaboration between the Michigan Department of Public Health (now the Department of Community Health), the Committee on Maternal and Perinatal Health of the Michigan State Medical Society and the Chairs of the Department of Obstetrics and Gynecology of the medical schools in Michigan. Pregnancy-associated mortality is considered a primary indicator of the overall health status of women, the effectiveness of obstetrical care and the health care system. Pregnancy-associated mortality is increasing across the US and may be associated with a number of factors including co-morbidities of mental health and substance abuse. Information is captured from death certificates and expert panel reviews based on medical records. The Fellow as part of the evaluation could participate and/or observe the medical and injury subcommittee as they review the deaths.

Surveillance Activity Use of linked birth, hospital and discharge data using Michigan’s prescription monitoring system

Michigan’s Automated Pharmacy Surveillance System (MAPS) has collected controlled substances prescription data for several years but only recently have epidemiologists been allowed to examine its records. The Fellow can build on recent analyses that linked birth records and hospital discharge data supplemented with MAPS data to examine the impact of prescription drugs on neonatal outcomes. The Fellow could also use the linked file to examine the impact of mental health among pregnant women. Linked files are complete through 2013.

Major Project Examination of the population impacts of mental health and substance abuse using the Pregnancy Risk Assessment Monitoring Survey (PRAMS) or HIV surveillance, depending on the Fellow’s interests

The HIV Medical Monitoring Project is a surveillance project designed to learn more about the experiences and needs of people with HIV. It is designed to identify how many people with HIV are receiving care and how easy it is to access care and prevention and support services. Using these data, the Fellow could design a study to examine use of drugs prescribed for mental health purposes among those with HIV who are and are not receiving needed HIV care. Another project could focus on HIV behavioral surveillance. HIV behavioral surveillance is conducted among those at risk for infection, including heterosexuals at high risk. Data collected include testing behaviors, behaviors that put an individual at risk for HIV infection, and access to prevention services. Stigmatization can be examined as a component of whether or not an individual seeks testing services, for example.

PRAMS is a survey of women who have recently had a live birth. The sampling frame is all women with a live birth thus data collected on the birth certificate can supplement data collected by the survey. The Fellow could design a project to examine life stressors and pregnancy outcomes among women responding to the PRAMS survey.
Additional Project: Responding to ‘Outbreaks’ of drug abuse in Michigan

For a number of years, MDCH has partnered with the Children’s Hospital of Michigan Regional Poison Control Center (PCC) to respond to new clusters of drug-related morbidity and mortality, whether due to abuse of prescription or street ‘designer’ drugs. The Fellow would be expected to work with the PCC and our local public health and substance abuse prevention partners to provide epidemiology support during any such incidents occurring in Michigan during their Fellowship. A prior CSTE Substance Abuse Fellow worked on a ‘bath salts’ outbreak which led to an MMWR and a synthetic marijuana incident which was used to support legislation to change to the state public health code.

Preparedness Role

The Fellow is encouraged to participate in trainings and exercises through the bureau’s emergency preparedness activities. The Fellow will participate in trainings and exercises involving the bureau’s communicable disease or environmental health staff and the MDCH Office of Public Health Preparedness. If a real emergency event takes place in environmental or communicable disease, the Fellow may be assigned an epidemiology function within the Incident Command Structure and/or shadow at the State Emergency Operation Center. In addition, the Michigan Department of Community Health’s Office of Public Health Preparedness has several workgroups that focus on mental health issues. The Fellow could participate in the Disaster Behavioral Health Advisory Committee or the At-Risk Populations Engagement Committee.

Additional Activities

There are other data sources available to the Fellow for additional exploration of substance abuse and mental health issues, including hospital discharge data, state and local traffic crash death and injury data, and Medical Examiner and Death Review data for selected topics or areas; also behavioral data such as the Behavioral Risk Factor Survey (BRFS), Youth Risk Behaviors Surveillance System (YRBS), Michigan Profile of Healthy Youth (MiPHY), Michigan Youth Tobacco Survey (YTS), the National Survey of Drug Use and Health (NSDUH) and other special surveys. The Fellow may be able to help assess the use of syndromic surveillance data for substance abuse or mental health conditions.

The Fellow will be invited to join one or more of the substance abuse subcommittees. The CSTE’s Drug Overdose Subcommittee (formerly chaired by Dr. Cameron) or the Alcohol Epidemiology Subcommittee and will participate in the analytic activities of those subcommittees as desired. Additionally, the CSTE is developing a behavioral health indicators workgroup and the Fellow will be expected to participate on that actively.

There is the opportunity for the Fellow to work with a local health department or substance abuse treatment coordinating agency on a local or regional project of interest.

He/she is also welcome to participate in other bureau activities as time permits, including communicable disease or environmental field investigations.
| Mentors | Corrine Miller, PhD  
          | State Epidemiologist |
|---------|----------------------|
| Primary | Lorraine Cameron, PhD, MPH  
          | Senior Environmental Epidemiologist |