

Substance Abuse

Assignment Description:

The fellow will work with mentors in two divisions: the Division of Environmental Health (DEH) and the Lifecourse Epidemiology and Genomics Division (LEGD). These two divisions have been integrating staff functions for many years, particularly in addressing asthma, healthy homes, and substance abuse work. The DEH's programs are primarily concerned with human health effects from intentional and unintentional exposures to chemicals in the environment, but also encompass work with injury and substance abuse. The LEGD provides statewide leadership and expertise essential for integrating both genomics and epidemiologic science into maternal, child health, chronic disease and other related public health programs. Both divisions are located within the Bureau of Disease Prevention, Control, and Epidemiology (BoE) of the Michigan Department of Community Health whose staff work on projects ranging from acute surveillance of and response to infectious and environmental exposures to provision of public health services in Michigan. BoE's other two divisions include Immunization, and Communicable Disease. The BoE has approximately 180 professional staff trained in epidemiology, statistics, toxicology, industrial hygiene, nursing, health education, other public health-related disciplines and physicians, veterinarians with graduate degrees in epidemiology, and doctoral-level epidemiologists.

Day-to-Day Activities:

The CSTE fellowship position will specifically focus on one of the leading causes of death and disability in Michigan and in the U.S.: excessive alcohol consumption. The CSTE Fellow who fills this position will play a vital role in strengthening the science base for the prevention of excessive drinking, including binge and underage drinking, while building their epidemiologic expertise. Furthermore, since excessive drinking is related to many other public health problems, the CSTE Fellow will have the opportunity to collaborate with many other state health programs as well.

During the two-year assignment, the CSTE Fellow will learn principles of chronic disease, injury, maternal and child health and environmental epidemiology; gain experience working with large datasets that are managed by the state health or education departments, including vital statistics, hospital discharge data, the Behavioral Risk Factor Surveillance System (BRFSS), Pregnancy Risk Assessment Monitoring System (PRAMS) and the Youth Risk Behavior Survey (YRBS); develop expertise in alcohol-related health effects and prevention strategies; and have the opportunity to work collaboratively with scientists in other state health agencies, at CDC and local community groups.

Potential Projects:

The CSTE Fellow will have the opportunity to:

- Measure the impact of legislation changes, such as the repeal of Sunday morning alcohol sales, implementation of the Dr. Ron Davis Smoke-Free Air Law and its impact on on-premise retail alcohol sales, and stricter drunk driving laws
- Monitor future deregulation activities and measure their impact on Michigan residents and other policy work
- Study binge and heavy drinking frequency and associated body mass index/obesity using Michigan behavioral risk factor survey data.
- Conduct spatial analyses of alcohol outlet density and its relationship to crime, motor vehicle crashes, socioeconomic factors, etc.
- Analyze maternal mortality records for risk factors and trends related to excessive alcohol consumption and substance abuse

- Explore the Michigan Violent Death Reporting System for identifying potential associations between alcohol use and injury (homicide/suicide/mental illness) related mortality
- Explore potential of the Michigan Health Insurance Exchange Network or Great Lakes Health Information Exchange to conduct surveillance of acute events related to excessive alcohol consumption

Surveillance Evaluation:

The CSTE Fellow will evaluate the usefulness of state or county-level data in one of the following survey or surveillance systems: Michigan Profile for Healthy Youth, Michigan EMS Information System, Michigan Inpatient Database or Michigan Disease Surveillance System, or Michigan Violent Death Reporting System for assessing alcohol-related information. This will involve an assessment of the representativeness, completeness and timeliness of the reporting of alcohol data in the surveillance system(s), and the development of recommendations to improve the reporting of this information as well.

Preparedness Role

The Fellow will participate in trainings and exercises, through the BoE and the MDCH Office of Public Health Preparedness. This may involve communicable disease, chemical, natural disaster, and radiological events. If a real emergency event takes place in communicable disease or environmental health, the Fellow will be assigned an epidemiology function within the Incident Command Structure. (Note: one of the previous Fellows spent three weeks in a Command Center under EPA direction following a large oil spill in Michigan.) All of MDCH's EIS and CSTE Fellows and other CDC assignees participated in Michigan's first implementation of a Community Assessment for Public Health Emergency Response (CASPER) during September, 2012, which involved door-to-door surveys using CASPER methodology. MDCH plans to perform at least one CASPER in 2013, which will give the Fellow another opportunity to be directly involved with a Preparedness activity.

Assignment Location: Lansing, MI

Primary Mentor: Dave Wade, PhD
Director, Environmental Health Division
Michigan Department of Community Health

Secondary Mentor: Sarah Lyon Callo, MS
Director, Lifecourse Epidemiology and Genomics Division
Michigan Department of Community Health