

ID: 45333292

Environmental Health, Injury - Host Site Description

Maryland Department of Health

Assignment Location: Baltimore, US-MD
Maryland Department of Health
Environmental Health Bureau

Primary Mentor: Clifford Mitchell, MS, MD, MPH
Director, Environmental Health Bureau
Maryland Department of Health

Secondary Mentor: Georgette Lavetsky, MHS
Chief, Center for Environmental, Occupational, and Injury Epidemiology
Maryland Department of Health

Work Environment

Hybrid

Assignment Description

The Fellow will be administratively located in the Environmental Health Bureau's Center for Environmental, Occupational, and Injury Epidemiology under the mentorship of the Bureau Director, Center Chief, and environmental epidemiologist. The Center includes 4 full-time epidemiologists and 5 full-time data abstractors who work on the State Unintentional Drug Overdose Reporting System (SUDORS), the Maryland Violent Death Reporting System (MVDRS), core injury epidemiology, the Maryland Environmental Public Health Tracking project (MDEPHT), and the Occupational Health and Safety Surveillance Project (OHSSP). In addition, the Center produces an extensive array of data products, analyses, and reports on environmental, occupational, and injury surveillance. The Center supports projects across the Department of Health as well as the Department of the Environment with both data and data analyses.

The fellow will meet weekly with the primary, secondary, and/or tertiary mentors, and is physically located with the Center. Initially, the Fellow will be given limited discrete tasks tailored to the primary focus area. Over time, as the Fellow's competency and skills increase, additional responsibilities will be added to a broader range of public health epidemiology areas. The Fellow will be exposed to the entire range of Bureau and Departmental activities during the fellowship, and fellows are provided opportunities to work across program areas, including infectious disease outbreak response, maternal and child health surveillance and prevention activities, cancer cluster investigations, behavioral health epidemiology, and more. The fellow will also complete routine functions in support of Environmental Public Health Tracking, SUDORS, MVDRS, and injury more broadly.

Describe Statistical and Data Analysis Support, Such as Databases, Software, and Surveillance Systems Available to the Fellow

MDH epidemiologists primarily use SAS as analytic software, but increasingly also use R for specific projects. MDH data systems have recently been significantly upgraded and migrated to more secure environments, which has resulted in greater integration with the Office of Enterprise Technology (OET). The epidemiology staff are also upgrading their computer resources in response to more teleworking. MDH and the Environmental Health Bureau are also leading an effort to provide more data to the public through innovative tools such as the new Maryland Environmental Public Health Tracking (MDEPHT) portal, which provides expanded access to data across multiple platforms (from desktops to tablets to phones) and affords more open data access. Other systems that the fellow will have access to include: the State Unintentional Drug Overdose Reporting System (SUDORS); the Maryland Violent Death Reporting System (MVDRS); Behavioral Risk Factor Surveillance System BRFSS); the National Electronic Disease Surveillance System (NEDSS); Research Data Electronic Capture (REDCap); the state's premier health information exchange the Chesapeake

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Regional Information System for our Patients (CRISP); the Childhood Lead Registry; the National Outbreak Reporting System (NORS); and other public health surveillance systems.

Projects

Surveillance Activity Title: Community Profiles Associated with Environment, Health, Environmental Justice

Surveillance Activity Description:

The Fellow will use Environmental Public Health Tracking, MVDRS, SUDORS, BRFSS, and other relevant data to create county specific profiles for various communities, focused primarily on meaningful profiles that can be used by community planners. The profiles will be created so that they can be updated on a regular basis from EPHT, and MVDRS/SUDORS data, and will be available online through the Environmental Health Bureau website. These profiles will complement, but not duplicate, other county overdose data already produced publicly by the Department.

Surveillance Activity Objectives:

- 1) Use existing environmental, occupational, injury data to create county- and community-level profiles
- 2) Create a template for the county profiles -- consider possible public display options, including GIS/mapping
- 3) Produce profiles after testing and approval

Surveillance Activity Impact:

This will provide local health departments and the public with a better idea of the circumstances involving fatal injuries (homicide, suicide, overdose and undetermined deaths) in Maryland.

Surveillance System Evaluation Title: Evaluation of Maryland's Occupational Injury and Illness Surveillance

Surveillance System Evaluation Description:

Maryland conducts surveillance of work-related injury and illness through Bureau of Labor Statistics requirements for injury and illness reporting in the workplace. Other potential data sources include workers' compensation data, as well as administrative data bases that collectively are used to construct indicators reported by the Maryland Department of Health (MDH). This project will evaluate the sources of data for work-related injury and illness and consider ways in which surveillance for occupational illness and injury could be strengthened.

Surveillance System Objectives:

The project objectives include:

- 1) Characterization of the current state of the occupational illness/injury surveillance system in Maryland
- 2) Identify the characteristics and attributes of occupational injury and illness surveillance that would be ideal for the state
- 3) Identify the gaps in the current system

The deliverable will be a gap analysis of the current occupational injury and illness surveillance system.

Surveillance System Impact:

This project will provide a needed evaluation of the occupational illness and injury surveillance system in Maryland, and provide valuable input for a subsequent effort to improve the Department's surveillance efforts.

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Major Project Title: Implementation of New Heat Injury and Illness Surveillance Case Definition

Major Project Description:

The Primary Mentor (Dr. Mitchell) is engaged in a project to create a surveillance case definition for heat-related illness and injury. It is anticipated that the Fellow will, as a major project, begin to look at heat-related illness and injury applying the new case definition, as a means both of validating and evaluating the case definition, and to better understand the epidemiology of heat-related illness and injury in Maryland.

Major Project Objectives:

The objectives of the project include:

- 1) Numerating heat-related illness and injury cases in Maryland on an ongoing basis
- 2) Evaluating the feasibility of the surveillance case definition in a real-world setting
- 3) Working with the primary and secondary mentors and other pilot states to evaluate the new proposed surveillance case definition

Major Project Impact:

This project is important to environmental health epidemiology for a number of reasons:

- 1) Heat-related injuries are expected to increase with climate change
- 2) There is particular interest in looking at vulnerable groups such as outdoor workers

Additional Project #1 Title: Update Maryland Climate and Health Profile Report, Create Ongoing Climate Surveillance System

Project #1 Type: Surveillance Activity

Project #1 Description:

This project involves updating the 2016 Maryland Climate and Health Profile Report, which was a product of the Maryland Department of Health and University of Maryland, along with the Maryland Department of the Environment. This project will prepare an update to that report, in part to create an ongoing surveillance system for climate related indicators in the context of the Maryland Environmental Public Health Tracking Project.

Project #1 Objectives and Expected Deliverables:

The objectives of this project are:

- 1) Update existing analyses from the original 2016 report
- 2) Add new outcomes of interest to those included in the original report
- 3) From among those outcomes, select a number of outcomes to report prospectively and longitudinally as part of Maryland Environmental Public Health Tracking for climate surveillance

Project #1 Impact:

The anticipated public health impact of this project is to create a climate and health report and system that can be used longitudinally by the Department and other agencies, community-based organizations, and other stakeholders to incorporate health considerations into climate adaptation activities.

Please Describe the Fellow's Anticipated Role in Preparedness and Response Efforts – Include Activities and Time Allocation (Required Competency of Fellowship)

All fellows are expected to complete training successfully in incident command and the National Response Framework (IS-100, 200, 700, 800). In addition, fellows will be asked to participate in any preparedness and response activities that

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occur during the fellowship (previous fellows have participated in Ebola response, COVID-19, the opioid crisis, and other responses).

Please Describe the Fellow's Anticipated Role in Cluster and Outbreak Investigations – Include Activities and Time Allocation (Required Competency of Fellowship)

Fellows are provided an opportunity and an expectation of participation in at least one cluster and one outbreak investigation during the fellowship. Fellows routinely attend the weekly Outbreak meetings on Friday mornings, and are expected to take the epidemiologist on-call phone at least once, working with the physician on call to respond to rabies calls, foodborne outbreaks, and other infectious disease or environmental questions called into the Department's on call system. As noted above, the fellow will also work with the primary mentor and the Maryland Cancer Registry on responses to public questions about potential cancer clusters. Typically, the fellow spends a week on an outbreak and a week on a cluster investigation.