

**ID: 45333292**

**Injury - Drug Overdose, 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:** Grace Douglass, MPH  
Epidemiologist | MVDRS & SUDORS  
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 supervision of the Bureau Director and Center Chief. 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). The fellow will meet weekly with the primary and secondary mentor, and physically co-located with the Center with the secondary mentor and the Overdose Data to Action (OD2A)/SUDORS team. Initially, the Fellow will be given limited discrete tasks tailored to the primary focus area (OD2A/SUDORS). Over time, as the Fellow's competency and skills increase, additional responsibilities may be added related 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 SUDORS, MVDRS, and injury more broadly such as preparation of death certificate data for inclusion in MVDRS and SUDORS, and response to other data requests.

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

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

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## **Projects**

### **Surveillance Activity Title: Fatal Injury Surveillance in Maryland -- County Profiles**

#### *Surveillance Activity Description:*

The Fellow will use MVDRS, SUDORS and other relevant data to create county specific profiles for fatal injuries (including overdose), focused primarily on circumstance variables and descriptors contained in the SUDORS and MVDRS databases. The profiles will be created so that they can be updated on a regular basis from 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. Analyze MVDRS/SUDORS circumstance data, select variables to be included in the county profiles
2. Create a template for the county profiles -- consider possible public display options, including GIS/mapping
3. Work with MVDRS/SUDORS health educators, mentors and MVDRS/SUDORS team to create profile "look and feel"
4. 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 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: Occupational suicide and overdose prevention**

*Major Project Description:*

This project involves an effort to prevent fatal overdose and suicide in workers in selected industries in Maryland, a collaboration between OD2A and the National Institute for Occupational Safety and Health (NIOSH)-funded Occupational Health and Safety Surveillance Project (MD OHSSP). The fellow will participate in and lead one part of this project, related to the use of syndromic surveillance (the state's ESSENCE system) and identification of potential clusters of overdose/suicide in different geographic areas of the state.

*Major Project Objectives:*

The objectives are:

1. Identification of a useful ESSENCE query for suicide/overdose that may be related to work or a work location
2. Validation of the query
3. Development and validation of a tool for cluster identification

*Major Project Impact:*

There is currently an excess of deaths among workers in construction and selected other industries that may be either related to suicide or overdose or both. Use of the ESSENCE system could more quickly identify potential clusters of such deaths and/or attempts, and provide an opportunity for early intervention in collaboration with local health departments, businesses, and labor organizations.

**Additional Project #1 Title: Cluster Investigation**

**Project #1 Type: Surveillance Activity**

*Project #1 Description:*

One of the responsibilities of environmental/injury epidemiologists is to evaluate potential disease or injury clusters. During the fellowship, the fellow will be responsible for at least one complete cluster investigation. Typically, these involve one of the following: (a) a suspected cancer cluster; (b) a suspected non-cancer disease cluster linked to a potential environmental exposure; or (c) an injury cluster related to some potential exposure or condition.

*Project #1 Objectives and Expected Deliverables:*

The fellow will be expected to conduct a complete cluster investigation, using appropriate analytic techniques. In particular, if associated with a potential cluster of cancers, the fellow will use the newly released Guidelines on Unusual Patterns of Cancer, the Environment, and Community Concerns to respond to the concerns.

*Project #1 Impact:*

The anticipated impact is a better informed public with more information about cancer risks and their potential relationship to the environment.

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

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**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.

**Please Describe the Fellow's Anticipated Role in the COVID-19 Response – Include Activities and Time Allocation**

At this time the Department is scaling back its extraordinary COVID-19 response activities and transitioning them to "normal" operations within the various public health services. This includes epidemiology/surveillance, outbreak response, vaccinations, testing, treatment, and PPE. While there are still opportunities for fellows in each of these areas, they are fortunately not so frequent or so all-consuming as in the past years. We do anticipate that the fellow will participate in and understand all aspects of the continuing response work related to surveillance, diagnostics, treatment, PPE and other prevention measures, and vaccination. This activity is anticipated to take up to 2 weeks per year if there is another spike in COVID-19 cases in the state.

**Please Describe Opportunities for Fellows to Work in Health Equity as well as Incorporating Diversity, Equity, and Inclusion into their Work**

Assessing equity of reach, addressing racial health inequities, and advancing health equity are Departmental priorities that have been incorporated into surveillance, epidemiological, and programmatic functions of the Department's Prevention and Health Promotion Administration and the Environmental Health Bureau, which houses this fellowship. As such, the fellow is expected to incorporate equity considerations into all aspects of their work. As an example, the current fellow's major project is an effort to evaluate equity of reach and impact in one of the Bureau's programs (asthma home visiting).