Assignment Description

The Ohio Department of Health serves the nation’s 7th most populous state; we protect and improve the health of more than 11.6 million Ohioans. The fellow will be placed in the Violence and Injury Prevention Section (VIPS) located in the Bureau of Health Improvement and Wellness. The VIPS is charged with monitoring unintentional and intentional injury among Ohioans and using that data to inform programmatic efforts developed to reduce the burden of injury. In 2018, there were more than 10,000 injury-related deaths, 1.2 million injury-related emergency department visits and 62,000 injury-related hospitalizations.

The VIPS epidemiology staff include an Epidemiology Investigation Supervisor (primary mentor), a Data Administration Manager (secondary mentor), and five Epidemiology Investigators. In addition, the VIPS staff also includes administrators and program managers, researchers, data abstractors and topic area specific program consultants; in total, the VIPS currently comprises 42 full-time positions. The VIPS utilizes a robust variety of data sources to monitor the injury morbidity and mortality burden in Ohio. We put this data to action by collaborating with a number of internal and external partners to identify at risk groups and inform program interventions. General injury topics include (but are not limited to) suicide/self-harm, unintentional fall, motor vehicle traffic crash, homicide, intimate partner violence, sexual assault and traumatic brain injury.

The VIPS is dedicated to providing the fellow with quality, well-rounded applied epidemiologic experience that is driven by the fellow’s interests. We will work to create opportunities that are mutually beneficial and align with those interests.

Day-to-Day Activities

- The fellow’s day-to-day activities will depend on topic areas of interest and experience of the fellow. Initially, the fellow will work closely with the primary and secondary mentors, as well as other VIPS epidemiologists, to become acquainted with the different surveillance systems the VIPS utilizes. The fellow will spend time reviewing current and past VIPS projects. These initial activities will help the fellow and mentors assess the fellow’s specific interests and work together to choose projects that align with those interests while providing quality applied epidemiology experience that will exceed AEF program competencies and requirements. As the fellow becomes comfortable, more independent projects will be encouraged.

- The VIPS is very supportive of developing conference abstracts and manuscripts for peer-reviewed publication. The fellow will have sufficient time for these activities, if interested.

- The fellow will become an active member in several CSTE workgroups and subcommittees, including the injury surveillance workgroup and substance use and mental health
subcommittee. They will also be an active member of the Ohio Injury Prevention Partnership’s (OIPP) Data Action Group, Child Injury Action Group and Ohio Older Adults Falls Coalition.

- The fellow will have an opportunity to participate in committees with external partners, including the Ohio Brain Injury Advisory Committee and the Pregnancy Associated Mortality Review Committee.

- Columbus is the most populous city in Ohio and one of the fastest growing cities nationwide. Evenings and weekends provide an excellent opportunity to visit one of the many wonderful restaurants, theaters and other nightlife downtown Columbus has to offer. Home to the Ohio State University Buckeyes, the Columbus Blue Jackets and the Columbus Crew, sporting events are a must. Columbus is also a great place to opt outside! It is bike and kayak friendly, offers over 230 miles of trails across 19 free Metroparks and is just a short drive from excellent hiking (e.g. Hocking Hills).

Potential Projects

Surveillance Activity  Injury Morbidity Dashboard

The VIPS is working to improve the availability and timely reporting of data to inform injury prevention programs around the state. Part of this initiative is to design and publish public-facing dashboards that allow state and local partners to easily access data. As one mechanism of monitoring the injury morbidity in Ohio, the VIPS utilizes emergency department and hospital discharge data (ICD-10-CM codes). These data are large and complex, and often there is limited ability at the local level to analyze these data. A morbidity dashboard using discharge data would include visualizations for emergency department visits and hospitalizations related to 1) unintentional falls, 2) firearm, 3) assault, 4) unintentional motor vehicle traffic crashes, 5) intentional self-harm and 6) traumatic brain injury. Data visualizations, which would be updated on an annual basis, would help streamline surveillance for these topic areas. Visualizations would include demographic breakdowns (age, sex, race/ethnicity, county of residence) and would be a rich resource for local and state partners to identity high risk groups for each injury and better inform prevention activities statewide.

Surveillance Evaluation  Evaluation of the Ohio Violent Death Reporting System (OH-VDRS)

In response to the recognition that violent deaths, despite being preventable, were a major contributor to overall mortality throughout the United States, Congress allocated $1.5 million to fund the development of the National Violent Death Reporting System (NVDRS) in 2002. The system was designed to track the incidence of violent deaths (e.g. homicides, suicides, and undetermined deaths) and capture detailed information from death certificates, coroner reports, and law enforcement reports to better understand the circumstances and risk factors associated with violent deaths, ultimately informing violence prevention programs. The Ohio Violent Death Reporting System (OH-VDRS) was established in 2009 and is housed within the VIPS. Data collection was initiated in the 2010 data year.

Since then, the VIPS has been able to link OH-VDRS data to Medicaid claims data, criminal justice data, Ohio’s prescription drug monitoring program and child welfare data, offering an incredibly rich and unique data source.
The fellow will work with a team of OH-VDRS abstractors and researchers to conduct a comprehensive evaluation of OH-VDRS based on CDC published guidelines for evaluating public health surveillance systems. Evaluation attributes include usefulness, simplicity, flexibility, data quality, acceptability, sensitivity, predictive value positive, representativeness, timeliness and stability. OH-VDRS has been evaluated twice since data collection began in 2010. However, the system continues to evolve (e.g. update of the NVDRS 2.1 platform), and periodic evaluations are critical to ensure that the system yields useful, timely data that can help create effective public health interventions and that resources required for surveillance are adequate. Previous evaluations can serve as a guide for the fellow (e.g. help in developing project logistics and establishing goals and a timeline for completion). This data source could also be used for the fellow’s major project.

**Major Project**  
**Comprehensive Analysis of Child Injury**

This project would utilize a variety of data sources to yield a comprehensive look at child injury morbidity and mortality in Ohio. Childhood injuries are the leading cause of death among children/young adults ages 1-24 in Ohio. Each year there are nearly 1,200 injury-related deaths, 450,000 injury-related emergency department visits and 7,500 injury-related hospitalizations among Ohioans 0-24 years (all intents and mechanisms). This project would further characterize these data by intent and mechanism and by demographic and geographic groups as well as examine additional data sources to gain a more complete picture of child injury in Ohio. These data would inform prevention priorities led by state and local members of the OIPP’s Child Injury Action Group in addition to informing the VIPS activities.

Data sources available to the fellow include the Youth Risk Behavior Surveillance Survey (seatbelt use, suicide ideation, substance use), syndromic surveillance (near real-time data for nonfatal suspected self-directed violence and unintentional drug overdose encounters), emergency department and hospital discharge data, Ohio Department of Public Safety Crash Report Statistics (car seat and seat belt use in motor vehicle crash incidents), vital statistics mortality files and OH-VDRS. This project would include a collaboration with the VIPS child injury prevention program staff and members of the OIPP’s Child Injury Action Group to identify specific topics/population groups to explore. The format for this project can be determined based on the fellow’s interests and skills, with possibilities including dashboards, a written report or a series of fact sheets. This project would provide the fellow with a well-rounded experience accessing and analyzing a wide variety of data sources culminating in a comprehensive examination of childhood injuries in Ohio.

**Additional Project**  
**Veteran Suicide in Ohio**

Under Ohio Revised Code 3705.16, funeral directors or other persons in charge of the final disposition of the remains have the responsibility to obtain the personal and statistical information in the death certificate from the best qualified persons or sources available. Unfortunately, in the cases where a next of kin is unavailable, certain demographic information (e.g. veteran status) may be underreported. Given the limitations of the veteran status variable captured in death certificate data obtained from the Bureau of Vital Statistics, ODH VIPS is currently in the process of linking Ohio death certificate data to
the US Department of Veterans Affairs data. This will provide us with an opportunity to more accurately describe veteran suicides in Ohio. Data regarding veteran suicide are increasingly important and will be used to better inform suicide prevention efforts targeting Ohio’s veteran population.

Examples of analysis might include 1) characterizing suicides among the veteran population in Ohio (e.g. age, sex, race/ethnicity, mechanism of injury, etc.) and examining how this compares to suicides among Ohio’s general population, 2) examining veteran-specific factors (e.g. military branch, deployment, service years, years after discharge from active duty, etc.) and 3) assessing the trend of suicides among the veteran population in Ohio: overall and by demographic characteristics to identify temporal changes over time.

Additional Project    Behavioral Risk Factor Surveillance System (BRFSS) Analysis

The VIPS has been successful in advocating for the inclusion of injury-related modules on the Ohio BRFSS. The 2020 survey will include modules on anxiety and depression, drinking and driving, falls, firearm safety, intimate partner violence, marijuana use, Ohio’s concussion law, prescription pain medication, seatbelt use, suicide ideation and traumatic brain injury. BRFSS will provide the fellow with a great opportunity to learn and utilize complex design survey analysis.

Preparedness Role

ODH VIPS, in collaboration with CDC, recently completed an Epi-Aid following a youth suicide cluster in Stark County, Ohio. If there is a need to initiate an injury-related Epi-Aid during the fellow’s tenure, they will be fully incorporated into the work. Additionally, ODH VIPS oversees syndromic surveillance to monitor suspected nonfatal drug overdose, which can help identify sudden increases in drug overdoses around the state. The fellow will be trained to respond to such increases, coordinating with both local and state partners to mobilize resources (e.g. naloxone), if necessary. Based on the fellow’s interest, the State Epidemiologist also serves at the Chief of the Bureau of Infectious Diseases and fully supports incorporating the fellow into an infectious disease outbreak investigation.

Like all Ohio Department of Health employees, the fellow will be trained on FEMA’s Incident Command System. Additionally, the fellow will be invited to participate in trainings, tabletop exercises and other elements of Ohio’s emergency preparedness plan.

Mentors

Primary    Abby Hagemeyer PhD, MPH
Program Manager

Secondary    Kara Manchester MS
Data Administration Manager