

ID: 76966030

Injury - Host Site Description

Allegheny County Health Department

Assignment Location: Pittsburgh, US-PA
Allegheny County Health Department (ACHD)
Bureau of Data, Reporting, and Disease Control

Primary Mentor: Stephen Strotmeyer, MPH, PhD
Lead Epidemiologist
Allegheny County Health Department

Secondary Mentor: Sierra Lookabill, MPH
Applied Epidemiologist
Allegheny County Health Department

Work Environment

Hybrid

Assignment Description

The fellow would work within the Chronic Disease Epidemiology (CDE) program in DRDC, which handles surveillance for maternal and child health, environmental health, vital statistics, and injury. Day-to-day activities within the CDE program include providing data support to ACHD's chronic disease and injury prevention program, data analysis and publication of research assignments, communicating findings to community groups and partners, and collaborating with other epidemiologists on the CDE team.

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

The fellow will be working with all available data sources to build a full scope of unintentional injury morbidity and mortality throughout Allegheny County. This includes vital statistics, in-patient hospitalization, emergency department, and survey data. DRDC staff primarily work with SAS, R, SPSS, or Tableau Prep to complete data cleaning and analyses. This software will be provided in addition to an ArcGIS license for any GIS analyses that may be required. The fellow will have the opportunity to work with senior epidemiology staff and mentors to design and conduct these analyses.

Projects

Surveillance Activity Title: Strengthening Unintentional Injury Prevention through Enhanced Surveillance in Allegheny County

Surveillance Activity Description:

Unintentional injuries (e.g., falls, motor vehicle crashes, poisoning, drowning, burns) are a significant public health concern in Allegheny County, contributing to morbidity, disability, and mortality across all age groups. Effective prevention strategies rely on robust and timely surveillance data to understand the burden of these injuries, identify high-risk populations and geographic areas, and monitor the impact of interventions. This fellowship project aims to enhance ACHD's capacity for unintentional injury surveillance by conducting comprehensive data collection, analysis, and dissemination activities. The fellow will play a crucial role in strengthening the evidence base for injury prevention efforts within the county.

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Surveillance Activity Objectives:

The primary goal of this fellowship is to improve the understanding of unintentional injury patterns and trends in Allegheny County through enhanced surveillance activities. Fellow Responsibilities:

Under the guidance of experienced public health professionals at the ACHD, the fellow will be responsible for:

- Conducting literature reviews on unintentional injury epidemiology and surveillance methods.
- Developing and implementing data collection protocols.
- Managing and analyzing large datasets using statistical software.
- Creating tables, graphs, and maps to visualize data.
- Preparing written reports and presentations summarizing findings.
- Participating in meetings with ACHD staff and community partners.
- Contributing to the development of data-driven recommendations for injury prevention strategies.
- Presenting project findings at relevant internal and external forums.
- Other duties as assigned to support the injury prevention efforts of the ACHD.

Expected Outcomes:

Upon completion of the fellowship, it is expected that:

- A comprehensive assessment of available unintentional injury data sources in Allegheny County will be completed.
- Enhanced data collection and management processes for unintentional injuries will be established or improved.
- A detailed analysis of unintentional injury patterns, trends, and disparities in Allegheny County will be conducted and documented.
- Key risk factors and high-risk areas for specific types of unintentional injuries will be identified.
- Data-driven recommendations for strengthening unintentional injury prevention efforts in Allegheny County will be developed.
- ACHD staff and community partners will have access to timely and relevant unintentional injury surveillance data.
- The fellow will gain valuable experience in public health surveillance, epidemiology, and injury prevention.

Surveillance Activity Impact:

This fellowship offers a unique opportunity to contribute to the public health of Allegheny County by strengthening the evidence base for unintentional injury prevention. The fellow will gain valuable practical experience in public health surveillance and epidemiology while working alongside dedicated professionals at the Allegheny County Health Department. By enhancing our injury surveillance, the fellow will also be to enhance the capacity of the chronic disease and injury prevention team.

Surveillance System Evaluation Title: Evaluating the Use of SDOH Codes for Injury Surveillance

Surveillance System Evaluation Description:

Integrating Social Determinants of Health (SDOH) ICD codes into unintentional injury data provides the ACHD with valuable insights for targeted prevention and addressing health equity. By revealing the social factors associated with injuries, this approach can enhance resource allocation and foster collaboration. However, there are several challenges to consider, such as underreporting, inconsistent coding practices, limitations in data linkage, and difficulties in establishing causality. To overcome these issues, more detailed SDOH coding and modifications to existing systems are necessary.

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ACHD should prioritize provider education, explore data linkage opportunities, conduct pilot studies, promote collaboration within the healthcare system, improve analytical skills, and advocate for enhanced SDOH data in surveillance

Surveillance System Objectives:

A key deliverable would be the development of a comprehensive report that outlines recommendations for integrating SDOH codes, highlights best practices from pilot studies, and serves as a resource for training healthcare providers.

Surveillance System Impact:

This report will support the creation of a more effective and equitable strategy for injury prevention.

Major Project Title: Fall-Related Morbidity and Mortality among Older Adults in Allegheny County

Major Project Description:

Falls constitute a primary source of unintentional injury and mortality among the elderly demographic. In light of the aging population within Allegheny County, dedicated surveillance of fall-related incidents is imperative to ascertain key demographic groups and communities requiring focused fall prevention measures. This analysis shall be conducted independently of the general unintentional injury report, employing emergency department, hospitalization, and mortality records to determine the morbidity and mortality rates associated with falls, specifically within Allegheny County residents aged 55 years and above.

Major Project Objectives:

A storymap will be developed to highlight the key findings and potential public health impact. This visual narrative will not only emphasize the key findings but also delve into the potential ramifications these findings may hold for public health. By presenting the information in an engaging and accessible format, the storymap will facilitate a deeper understanding of the research's significance and its implications for the well-being of the population.

Major Project Impact:

The Storymap will also allow the ACHD Injury Prevention team to identify and target key populations and locations to better focus their planned fall prevention efforts aimed at reducing morbidity and mortality across Allegheny County within this vulnerable population.

Additional Project #1 Title: TBI Surveillance in Allegheny County

Project #1 Type: Surveillance Activity

Project #1 Description:

Focusing on Traumatic Brain Injuries (TBIs) requires special attention due to their potentially severe and long-lasting effects. Effective TBI surveillance involves collecting and analyzing data from various sources, such as hospital records, emergency medical services, and death certificates. This data helps track the incidence, severity, and causes of TBIs—such as falls among older adults and sports-related injuries in youth—as well as demographic patterns across Allegheny County.

Project #1 Objectives and Expected Deliverables:

A comprehensive report outlining the findings from TBI data analysis, including trends, demographics, and recommendations for public health initiatives. This report will serve as a resource for local health authorities and community organizations to implement effective strategies for TBI prevention and management.

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Project #1 Impact:

The insights gained from this data inform targeted public health interventions, safety campaigns, and resource allocation aimed at reducing TBI incidence and improving outcomes for affected individuals in the county.

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

DRDC works closely with the emergency preparedness team at ACHD. The CSTE fellow will have opportunities to work with emergency preparedness staff on protocols for the public health response to environmental hazards or emerging infections and will participate in training exercises as they arise.

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

All members of the epidemiology team are expected to participate in outbreak responses. The Fellow will review training in foodborne illness outbreak investigation and response and will be asked to assist with outbreak survey development, review, and analysis.