

ID: 60350075

Injury - Drug Overdose, Substance Use/Mental Health - Host Site Description
Illinois Department of Public Health

Assignment Location: Springfield, US-IL
Illinois Department of Public Health
Office of Health Promotion/ Division of Emerging Health Issues

Primary Mentor: Leslie Wise, Ph.D.
Opioid Epidemiologist
Illinois Department of Public Health

Secondary Mentor: Indira Giri, MBBS, MPH
Overdose Fatality Review Program Coordinator
Illinois Department of Public Health

Work Environment

Hybrid

Assignment Description

The Fellow will be placed within the Division of Emerging Health Issues in the Office of Health Promotion. The Division is responsible for surveillance of substance use and overdoses and response to overdose clusters occurring in Illinois.

Day-to-day activities of the Fellow will include group meetings, individual work, and sharing work products within IDPH and with external agency partners, health stakeholders, and others.

Duties and responsibilities will include:

1. Documenting data methods wherein existence, and developing methods where none exist (such as the use of syndromic surveillance)
2. Assisting with data methods, protocols, and analysis
3. Reporting key findings from the alcohol-related fatality surveillance system and communicating these to a variety of stakeholders
4. Reporting key findings from the health outcomes of non-fatal drug overdoses project and publishing the findings in a peer-reviewed journal
5. Consulting with the community, state, and federal partners on additional surveillance needs
6. Communicating analyses data, through written reports, briefs, oral presentations to diverse professional and lay audiences.

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

The fellow will have access to SAS for statistical analyses, Tableau for creating visualizations, and ArcGIS Pro for mapping projects. These are in addition to the basic programs such as Microsoft Office. The fellow will have access to ESSENCE, the National Syndromic Surveillance Program, for near-real time emergency department surveillance projects.

Additionally, the fellow can request data from databases such as our Hospital Discharge database, Emergency Medical Services database, Behavioral Risk Factor Surveillance System, Vital Statistics, Pregnancy Risk Assessment Monitoring System, and others. For projects involving substance use, the fellow can also request data from Statewide Unintentional Drug Overdose Reporting System and the Illinois Prescription Monitoring Program.

Projects

Surveillance Activity Title: Surveillance of alcohol-related fatalities in Illinois

Surveillance Activity Description:

In 2022, alcohol-positive overdose deaths in Illinois showed an increase for the fifth straight year. 16% of all drug overdose fatalities tested positive for alcohol in addition to another substance. These data are suggesting a concerning trend of increasing alcohol and polysubstance use in Illinois. However, IDPH lacks a baseline understanding on alcohol morbidity. A reliable system for surveillance of alcohol-related fatalities will be developed at IDPH. The Fellow will develop the analysis plan for vital records death certificates to identify both acute alcohol-induced overdoses and deaths from alcohol-related chronic illness (i.e. alcoholic liver failure). An important aspect of this surveillance activity will be to identify the disparities present in alcohol-related fatalities and the interaction with social vulnerability and social determinants of health.

Surveillance Activity Objectives:

1. Utilize vital records data to identify the full burden of alcohol-related fatalities in Illinois, both with acute overdose and long-term illness.
2. Implement the alcohol-related illness surveillance system.
3. Provide presentations to key stakeholder groups.
4. Assist in creation of an additional tab on the substance use data dashboard to share the results on the public website.
5. Write abstract for and present findings at the CSTE annual conference.

Surveillance Activity Impact:

A complete surveillance of alcohol-related fatalities in Illinois will allow IDPH to allocate resources to areas with the highest burden and address disparities present in the data. IDPH opioid work has led to a robust data dashboard that is expanding to include other substances of concern as polysubstance use has increased. The addition of alcohol-related fatalities to the IDPH substance use data dashboard will allow stakeholders and the general public to utilize the data for public health education.

Surveillance System Evaluation Title: Evaluation of Current Alcohol-related Fatality Surveillance in Illinois

Surveillance System Evaluation Description:

The surveillance of alcohol-related deaths in Illinois is limited to deaths where alcohol was a direct cause of death as indicated on death certificates. Deaths attributed to alcohol-induced chronic illnesses, such as alcoholic liver disease or alcoholic cardiomyopathy are not currently under surveillance by IDPH. The full burden of alcohol use in Illinois is not understood by the current surveillance system.

Surveillance System Objectives:

1. Evaluate the current alcohol-related fatality surveillance system.
2. Identify areas where surveillance could be improved to encompass all alcohol-related deaths to depict full burden of excessive alcohol use in Illinois.
3. Create recommendations that can be implemented in Illinois to ensure full surveillance of all alcohol-induced fatalities.

Surveillance System Impact:

Alcoholism is the number one reason that individuals called the Illinois Helpline in 2023. However, IDPH does not have a surveillance system that accurately describes the full extent of the burden within Illinois. Evaluation of the current

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system will allow IDPH to modernize and enhance alcohol-related fatality surveillance. With the more detailed data surrounding fatalities due to alcohol, IDPH can promote additional awareness around excessive alcohol consumption.

Major Project Title: Longitudinal follow-up of severe, hospitalized non-fatal drug overdose patients in Illinois

Major Project Description:

The majority of the data regarding drug overdoses are reported as fatal and non-fatal. However, there is limited understanding of the health outcomes related to non-fatal overdoses. In January 2023, IDPH was notified through Illinois Poison Control of a cluster of young adults who had reportedly ingested Xanax. However, the counterfeit Xanax was actually bromazolam, a highly dangerous benzodiazepine that is not approved for human use. The young adults survived the overdose; however, all three were left with neurological deficits in a range of severity. One individual is no longer able to care for herself and was transferred to a skilled nursing facility. Details of the cluster were published in an MMWR: <https://www.cdc.gov/mmwr/volumes/72/wr/mm725253a5.htm>. The purpose of this study is to characterize the health outcomes resulting from or following non-fatal drug overdoses. The intention is to investigate the discharge diagnoses of individuals after the overdose and within the following 365 days after the overdose.

Major Project Objectives:

1. Analyze statewide hospital discharge data.
2. Identify the health outcomes from non-fatal drug overdoses, including variability by drug types, age, gender, geographic location, etc.
3. Report the findings on the IDPH website and present the findings at CSTE's annual conference.
4. Prepare the results for publication.

Major Project Impact:

While the danger of a fatal overdose is commonly publicized, the health outcomes from non-fatal drug overdoses are not as well understood. We hope this project will provide data for public health education and be the beginning of a more in-depth analysis of the costs associated with non-fatal drug overdoses.

Additional Project #1 Title: Analysis of drug checking and overdose data to characterize polysubstance use in Illinois
Project #1 Type: Surveillance Activity

Project #1 Description:

National drug surveillance data has shown an increase in polysubstance use. There are claims that the increase in polysubstance use has attributed to the increase in overdose fatalities. Preliminary data shows increased polysubstance use in Illinois as well. However, the data have not been fully explored. Using Statewide Unintentional Drug Overdose Reporting System (SUDORS), Vital Records, and drug checking data, the Fellow will conduct a full analysis to determine the extent and impact of polysubstance use.

Project #1 Objectives and Expected Deliverables:

1. Obtain and analyze overdose data from SUDORS, Vital Records, and drug checking efforts.
2. Create a data brief to be shared with stakeholders.
3. Create Tableau visualizations to add data to IDPH substance use data dashboard.

Project #1 Impact:

The extent of polysubstance use in Illinois will be useful for public health education campaigns to engage the public in the importance of safe drug use and the dangers of using multiple drugs.

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

The fellow will assist IDPH in creating a protocol to guide a multi-agency response to a large-scale overdose cluster. This protocol will include input from IDPH’s Office of Preparedness and Response, local health departments, Illinois Emergency Management Agency, and external healthcare systems (5% time allocation).

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

The fellow will be included in data team meetings and agency responses to abnormal overdose clusters. The activities include review of data, meeting with team members to discuss further actions, drafting and sending communications to external partners. When a cluster requires additional investigation, the fellow will be included in the opportunities for outreach and interviewing. (5% time allocation).

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

IDPH has transitioned to a respiratory illness surveillance and the data flows are automated. We do not anticipate the fellow having a role in the COVID-19 response.

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

The Fellow will be encouraged to participate in IDPH's Diversity, anti-Racism & Equity (DaRE) staff development opportunities (for more, see: <https://dph.portal.illinois.gov/hec/Pages/DaRE-Campaign.aspx>). One-on-one mentoring is available through this programs' office hours which provide expert consultation to help the Fellow and other staff think through integrating health equity issue into their work. The Department also uses a Health Equity Checklist to evaluate grant and project applications, which the Fellow will utilize.