

ID: 73017282

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

Assignment Location: Sacramento, US-CA
California Department of Public Health
Substance and Addiction Prevention Branch

Primary Mentor: Jessica Jimenez, PhD in Public Health, MPH, MA
Senior Research Scientist (Research Scientist III)
California Department of Public Health

Secondary Mentor: Catherine Hess, PhD, M.Phil
Substance Use Epidemiology and Evaluation Unit Chief
California Department of Public Health

Work Environment
Hybrid

Assignment Description

The fellow will primarily support the Alcohol Harms Prevention Initiative (AHPI) and Overdose Prevention Initiative (OPI) in SAPB. AHPI was founded in 2020 and is funded by a CDC cooperative agreement to promote population health through increased capacity in alcohol epidemiology. OPI has been funded since 2017 through the Overdose Data to Action (OD2A) cooperative agreement from the CDC and state funds. The fellow's assignments on these initiatives will include conducting statistical analyses and interpreting epidemiological findings from various statewide data sources (e.g., survey, healthcare/administrative, and mortality data), developing user-friendly data products for the public, and analyzing and drafting recommendations for data product improvement based on user/stakeholder feedback.

Working closely with their mentors, the Fellow will establish an implementation plan for each of their projects. Fellows are encouraged to share their work through data briefs, reports, and presentations. The Fellow will be fully integrated into the branch and will attend regular staff meetings for the branch to learn about the full scope of work of a large state health program as well as surveillance staff meetings. There are also presentations, webinars, and seminars available to attend as learning opportunities that are hosted by CDPH, CSTE, and other agencies and organizations. The Fellow can also expect to be invited to different program meetings to learn about the different areas of substance use and addiction that the branch focuses on. Fellows are encouraged to pursue their topic(s) of interest and can be integrated into the ongoing work based on the project needs and capacity. Due to the nature of this work, the Fellow will have the opportunity to work closely with both prevention staff and epidemiology staff.

There may be additional opportunities to work with other programs in SAPB depending upon the Fellow's interest. More information about CDPH-SAPB programs and projects can be found at <https://www.cdph.ca.gov/Programs/CCDPHP/sapb/Pages/default.aspx>

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

SAPB will provide access to SAS for the fellow to conduct analyses. This is the software that our Research Scientists use. Additionally, some research staff use R, which is also available to fellows. SAPB has resources such as SAS books and example code from prior projects that the fellow can use for learning purposes. SAPB has access to several types of data that would be made available to the fellow to analyze. This includes for example: death certificate, patient discharge, emergency department visit, adult and youth survey, and retail licensing data. The fellow would have access to a Research Scientist for peer review on their analyses to provide support and ensure accuracy. If the fellow is assigned to

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work on a data dashboard, we would provide them with access to Tableau. As part of the standard software, the fellow would also have access to Excel, which can be used to create figures.

Projects

Surveillance Activity Title: Alcohol Attributable Deaths in California Due to Excessive Alcohol Consumption

Surveillance Activity Description:

The SAPB Alcohol Harms Prevention Initiative (AHPI) was founded in September 2020 through a CDC cooperative agreement. One of the main components of the cooperative agreement is building a state-wide surveillance system for excessive alcohol use (e.g., binge drinking, heavy drinking, underage drinking, etc.) and related harms and making surveillance findings available to the public.

This project will focus on analyzing statewide trends in alcohol attributable deaths from excessive alcohol consumption in California and producing a data brief that will be published on the SAPB public facing website. This project will include performing data analysis with administrative and surveillance datasets. The AEF will support the Lead Alcohol Epidemiologist with performing statistical analyses, creating data visualizations, and editing the data brief. This project may also require collaboration with AHPI program and policy staff to provide prevention messaging and policy approaches for limiting excessive alcohol use.

Surveillance Activity Objectives:

Project Objectives:

- Conduct statewide surveillance of alcohol attributable deaths from excessive alcohol consumption
- Support the Lead Alcohol Epidemiologist with developing user-friendly documents describing epidemiological trends and prevention messaging for the California public

Expected Deliverables

- One (1) data brief, with multiple data visualizations, on trends in alcohol attributable deaths in California from excessive alcohol use

Surveillance Activity Impact:

Contribute to the surveillance of excessive alcohol use and related harms in California and increase public awareness about the adverse effects of excessive alcohol consumption and how to prevent or reduce its effects in families and communities.

Surveillance System Evaluation Title: Alcohol Dashboard User Experience Study

Surveillance System Evaluation Description:

In 2024, AHPI will roll out a series of interactive data visualizations on alcohol use and related health outcomes. These data visualizations will be part of a Tableau dashboard hosted on the SAPB public-facing website. The purpose of the dashboard is to provide ongoing alcohol surveillance findings to the public and program stakeholders. To ensure that the data visualizations are meeting the needs of AHPI stakeholders (and the public), a user experience study will be conducted with a group of 10 to 15 internal and external stakeholders prior to releasing the dashboard publicly. The dashboard will be piloted with this group of stakeholders, and feedback on the dashboard's content, design, and usability will be collected (e.g., via survey, focus groups, or interviews). This feedback will be written up and presented to the APHI team for integration into the final dashboard design. After the dashboard is released, a feedback survey will be developed and linked on the dashboard to allow for continuous feedback and improvement of the dashboard.

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Surveillance System Objectives:

Project Objectives

- Conduct a user experience study to collect feedback from the stakeholders on the APHI dashboard prior to releasing it to the public.
- Ensure that the dashboard is easy to use and provides the types of data that stakeholders need.
- Develop a feedback survey to inform continuous improvement of the dashboard after release.

Expected deliverables:

- One (1) research design and data analysis plan
- One (1) user experience data collection instrument
- One (1) short report detailing the findings of the study, and recommendations to the APHI program for improvement/changes to the dashboard
- One (1) feedback survey and recommendations for improvement based on additional feedback collected over time

Surveillance System Impact:

We expect that integrating user feedback will result in the increased use and usability of the dashboard by program stakeholders and the public. Thus, increasing public awareness about the adverse effects of excessive alcohol use. It is also our hope that by increasing availability of data on excessive alcohol use that stakeholders can use these data to support funding applications and support their prevention and policy efforts.

Major Project Title: Alcohol Outlet Density Story Map and Spatial Analyses

Major Project Description:

Reducing alcohol outlet density is an evidence-based strategy for limiting excessive alcohol consumption and its association harms. Alcohol outlet density refers to the amount of places that legally sell alcohol within a certain area or among a certain number of people (such as bars, restaurants, and liquor stores). Greater alcohol outlet density has been widely associated increased injuries, violence, and other crimes.

The primary focus of this project is to develop a beta version of a story map on alcohol outlet density for selected cities in California. The story map will include distance and spatial measures (e.g., how close a person is to their nearest outlet and the proximity of the nearest outlet to the nearest school and/or daycare). This analysis will entail categorizing and analyzing alcohol licensing data in SAS, using GIS to geocode, map and perform spatial analyses, and interpreting the findings to inform public health practice. Where possible data will be further analyzed by gender, race & ethnicity, and socio-economic status.

Major Project Objectives:

Project Objectives

- Understand the public health effects of alcohol outlet density
- Build expertise in calculating and interpreting distance and spatial measures of alcohol outlet density
- Interpret and demonstrate how findings can be used to inform public health practice

Expected deliverables

- One (1) research design and data analysis plan, with a brief literature/background section.
- One (1) beta version of a story map in GIS
- One (1) presentation detailing the findings of the analyses, with data visualizations, for the Alcohol Harms Prevention Initiative team

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- One (1) final report detailing a reproducible methodology, key functions of the story map, key findings, and public health implications.

Major Project Impact:

This project will build on work that a previous CDC Public Health Associate conducted on alcohol outlet density in 2023. It will also raise public awareness around the importance of addressing alcohol outlet density, and provide valuable insights on where to focus prevention messaging and public health policy.

Additional Project #1 Title: Alcohol Attributable Cancer Deaths in California

Project #1 Type: Surveillance Activity

Project #1 Description:

The Dietary Guidelines for Americans, 2020-2025 recommends non-drinking or no more than 2 drinks for men or 1 drink for women in a day. However, the recent Surgeon General's warning details evidence showing that even light alcohol consumption can increase the risk of developing certain cancers.

The project's primary focus is to develop a brief report on the mean number of alcohol-attributable deaths from any alcohol consumption among decedents aged ≥ 20 years in California from 2020-2025. This project will include performing data analysis with administrative and surveillance datasets. The AEF will perform statistical analyses, use CDC's Alcohol-Related Disease Impact Application, create data visualizations, interpret findings, and write a brief report. This project may also require collaboration with AHPI program and policy staff to provide prevention messaging and policy approaches for reducing alcohol consumption.

Project #1 Objectives and Expected Deliverables:

Project Objectives

- Conduct statewide surveillance of alcohol attributable cancer deaths
- Understand the mechanisms of how alcohol consumption increases the risk of certain cancers

Expected deliverables

- One (1) research design and data analysis plan, with a brief literature/background section.
- One (1) brief report, with data visualizations
- One (1) presentation detailing the findings of the analyses, with data visualizations, for the Alcohol Harms Prevention Initiative team

Project #1 Impact:

Contribute to the surveillance of alcohol-related harms in California and increase public awareness about alcohol use and increased risk of certain types of cancer.

Additional Project #2 Title: Alcohol-Related Emergency Department Visits and Hospitalizations Data Page

Project #2 Type: Surveillance Activity

Project #2 Description:

The project's primary focus is to conduct trend analyses on alcohol-related emergency department (ED) visits and hospitalizations using administrative data and communicate these results on the Alcohol Harms Prevention Initiative (AHPI)'s public-facing website. The project includes: 1) creating data visualizations in Tableau: Graphs, maps, and infographics will be designed to support clear communication of the findings to the public; and 2) Create a data page: The interpretation and data visualizations will be combined to create a data page on AHPI's public-facing website. This project will include managing internal and CDC reviews and working with a CDPH web creator to create and post the data page.

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Project #2 Objectives and Expected Deliverables:

Project objectives

- Analyze administrative data on state-wide and county trends in alcohol-related emergency department visits by county, sex, and age
- Analyze administrative data state-wide and county trends in alcohol-related hospitalizations county, sex, and age

Expected deliverables:

- One (1) research design and data analysis plan
- One (1) draft of findings
- Two (2) data visualizations on trends in alcohol-related emergency department visits
- Two (2) data visualizations on trends in alcohol-related hospitalizations
- One (1) approved data page ready for upload to the AHPI public-facing website.

Project #2 Impact:

Contribute to the surveillance of excessive alcohol use and related harms in California and increase public awareness about the adverse effects of alcohol use and how to prevent or reduce its effects in families and communities.

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

The Fellow will work with the SAPB Overdose Prevention Initiative on cluster and outbreak investigations related to drug overdose. Recent California legislation requires Coroners/Medical Examiners (C/MEs) to start reporting suspected drug overdose deaths into ODMAP, which provides near real-time suspected overdose data across jurisdictions to support efforts to mobilize response to a sudden increase, or spike, in overdose events. The Fellow will be tasked with 1) requesting line-level data from three to five C/MEs, 2) monitoring suspected overdoses reported into ODMAP by C/MEs, 3) assessing the quality of this data by comparing trends in suspected overdoses reported through ODMAP to trends in death certificate data, 4) communicating with counties about their case definition for suspected overdoses, 5) identifying clusters and spikes in suspected overdose, and 6) communicating with the SAPB prevention team about clusters and spikes to facilitate spike response. It is anticipated that this work will represent 20 to 30% of the fellow's time each week.

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

The Fellow will work with the SAPB Overdose Prevention Initiative on cluster and outbreak investigations related to drug overdose. Recent California legislation requires Coroners/Medical Examiners (C/MEs) to start reporting suspected drug overdose deaths into ODMAP, which provides near real-time suspected overdose data across jurisdictions to support efforts to mobilize response to a sudden increase, or spike, in overdose events. The Fellow will be tasked with 1) monitoring suspected overdoses reported into ODMAP by C/MEs, 2) assessing the quality of this data by comparing trends in suspected overdoses reported through ODMAP to trends in death certificate data, 3) communicating with counties about their case definition for suspected overdoses, 4) identifying clusters and spikes in suspected overdose, and 5) communicating with the SAPB prevention team about clusters and spikes to facilitate spike response. It is anticipated that this work will represent 20 to 30% of the fellow's time each week.