

ID: 58401239

**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: Erika Pinsker, PhD in Social/Behavioral Epidemiology and MPH in Behavioral Science
Substance Use Research and Evaluation Section Chief
California Department of Public Health

Secondary Mentor: Jessica Jimenez, PhD in Public Health (Health Behavior), MPH (Epidemiology), MA (International Development and Social Change)
Lead Alcohol Epidemiologist (Research Scientist III)
California Department of Public Health

Work Environment

100% Virtual

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 purchase SAS for the fellow to conduct analyses. This is the software that our Research Scientists use. 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.

ID: 58401239

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

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 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: Youth and Adult Factsheets on Trends in Alcohol Use and Harms in California

Surveillance Activity Description:

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 ensuring that the findings are available to the public. This project will focus on analyzing statewide trends in alcohol use and related harms for youth and adults in California, and producing two factsheets that will be published on the SAPB public-facing website. This project will include performing data analysis with statewide survey, healthcare, and mortality datasets. When available, statistics can be pulled from publicly available sources, such as motor vehicle crashes due to drinking and driving on the Fatality Analysis Reporting System (FARS) dashboard and drinking during pregnancy from the CDPH Prenatal Substance Use dashboard. Findings will be interpreted, and data visualizations will be created for a lay audience. This project may also require collaboration with program and policy staff to provide prevention messaging and policy approaches for limiting excessive alcohol use in the factsheets.

Surveillance Activity Objectives:

Project Objectives:

- Conduct statewide surveillance of alcohol use and related harms across multiple health outcomes
- Develop user friendly documents describing these trends and prevention messaging for the California public
- Expected Deliverables:
- One (1) factsheet on Adult Alcohol Use and Associated Harms in California using the timeliest data available
- One (1) factsheet on Underage Drinking and Associated Harms in California using the timeliest data available

Surveillance Activity Impact:

Contribute to the surveillance of excessive alcohol use and related harms in California. Increase public awareness of the adverse effects of alcohol use 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.

Surveillance System Objectives:

ID: 58401239

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

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: Trends in Co-Occurrence of Excessive Alcohol Use and Mental Health Outcomes

Major Project Description:

One of the main areas of interest for SAPB is monitoring the co-occurrence of substance use and mental health outcomes. There is a bi-directional relationship whereby substance use can worsen the course of mental health conditions and untreated mental health conditions can increase the risk of substance use and/or developing a substance use disorder. The primary focus of this project is to explore statewide trends in excessive alcohol use and mental health outcomes among adults using data from the California Health Interview Survey (CHIS). Specifically, this project will focus on binge drinking and heavy drinking stratified by mental health outcomes, such as psychological distress, suicidal ideation, and negative affect symptomology (e.g., depression, anxiety and hopelessness). Where possible data will be further analyzed by gender, race & ethnicity, and socio-economic status. A secondary focus of this project may include analyzing alcohol-related emergency department discharge data and alcohol attributable deaths related to suicide attempts and fatalities.

Major Project Objectives:

Project Objectives

- Understand the magnitude of the problem
- Provide a snapshot of the frequency of co-occurring excessive alcohol use and mental health outcomes in California
- Understand the trends over time between excessive alcohol use and mental health outcomes
- Focus Prevention Efforts
- Identify at-risk populations and areas for intervention

Expected deliverables

- One (1) research design and data analysis plan
- One (1) presentation detailing the findings of the analyses, with data visualizations, for the Alcohol Harms Prevention Initiative team

ID: 58401239

Substance Use/Mental Health, Injury - Drug Overdose - Host Site Description

California Department of Public Health

- One (1) report based on the findings for program stakeholders to be posted on the SAPB website

Major Project Impact:

This will be the first time that SAPB is conducting an analysis on the co-occurrence of excessive alcohol use and mental health outcomes. This report will provide valuable insights on where to focus prevention messaging and public health policies. It will also raise public awareness around the importance of addressing excessive alcohol use in the context of mental health conditions.

Additional Project #1 Title: Alcohol-Related Emergency Department Visits and Hospitalizations Data Page

Project #1 Type: Surveillance Activity

Project #1 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) Apply a health equity lens to data analysis: Trends in alcohol-related ED visits and hospitalizations overtime will be calculated and stratified by socio-demographic variables and geographic location (e.g., urban, suburban, and rural) to assess which populations may be disproportionately affected by alcohol-related harms; 2) Literature review on root causes of alcohol-related health disparities: Findings will be interpreted for the public using the literature to communicate root causes of health disparities in alcohol-related harms; 3) Create data visualizations: Graphs, maps, and infographics will be designed to support clear communication of the findings to the public; and 4) Create a data page: The interpretation and data visualizations will be combined to create a data page on AHPI's public-facing website. This will include managing internal and CDC reviews and working with a CDPH web creator to create and post the data page.

Project #1 Objectives and Expected Deliverables:

Project objectives

- Analyze administrative data on state-wide and county trends in alcohol-related emergency department visits
 - Stratify trends by socio-demographic and geographic variables
- Analyze administrative data state-wide and county trends in alcohol-related hospitalizations
 - Stratify trends by socio-demographic and geographic variables
- Identify sub-populations who are, and geographic regions that are disproportionately affected by alcohol related harms
- Apply health equity best practices for interpreting findings by using health disparity literature to identify root and modifiable causes for differences in alcohol-related harms across sub-populations

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 #1 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.

ID: 58401239

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

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

In a large and diverse state like California, the Fellow will have the opportunity to serve in a variety of emergency situations. SAPB has worked with the Medical and Health Coordination Center (MHCC) at CDPH and the Fellow can be involved in these efforts. The MHCC conducts regular trainings on the Incident Command System and Standardized Emergency Management System to prepare individuals to serve on incident response teams (IRTs). In the past, the MHCC has been opened for continuous situational awareness on the opioid epidemic and e-cigarette and vaping related lung injury. Fellows at SAPB are encouraged to attend the training and serve on one of the numerous IRTs in the MHCC. Further, previous Fellows have taken part in community surveys in the field using the tools for Community Assessment for Public Health Emergency Response (CASPER), received general and public health emergency preparedness trainings, outbreak response training, and served as members of various IRTs. Previous department fellows have participated in the COVID response in 2020-2022 and joined the field team for infectious disease surveillance related to the wildfires in 2018 in Northern California, conducting surveillance for norovirus and influenza-like illness in emergency shelters. Past fellows in the department have also participated in CASPERs related to the 2022 Oak Fire and winter storms, 2017 wildfires in Sonoma County, ongoing drought in the Sierra foothills in 2016, and the 2014 Napa County earthquake. In terms of time allocation, this would likely be a short-term, full-time assignment for the response effort with additional time for trainings. For instance, if the fellow participated in a CASPER they would be in the field for around 1 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.

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

The fellow is not anticipated to be involved 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

All content and materials that are developed by the CSTE AEF will be culturally appropriate and take into account diversity and health literacy. Our Branch has a Diversity, Equity, and Inclusion (DEI) Workgroup that works on several projects that the CSTE AEF could participate in (e.g., a project where we are seeking stakeholder input through surveys and focus groups on incorporating DEI principles into our work and a project where we are developing health equity data indicators to track related to substance use and health outcomes). In addition, their major project will likely include a health equity component since the data on excessive alcohol use and mental health outcomes will be further analyzed by demographic characteristics, where possible.