ID: 59175211
Injury - Drug Overdose - Host Site Description
New Jersey Department of Health

Assignment Location: Trenton, US-NJ
New Jersey Department of Health
Division of Opioid Response and Policy

Primary Mentor: Venita Puerto, Master of Public Health
Research Scientist 2
New Jersey Department of Health

Secondary Mentor: Michele Calvo, Master of Public Health
Director of Opioid Response and Policy
New Jersey Department of Health

Work Environment
Hybrid

Assignment Description

The fellow will be placed at a workstation near other team members within the Office of Opioid Response and Policy (ORP). The fellow will work 3 days in office and 2 days remotely. ORP will be responsible for ensuring availability of space and providing computer equipment and software needed to conduct day-to-day activities.
The day-to-day activities include the following:

- Perform data management and analyses on various health-related databases
- Prepare naloxone administration data for data visualization
- Plan and implement surveillance system evaluation
- Monitor and report on trends on suspected overdoses
- Collaborate with DOH staff and external partners to carry out required activities
- Join webinars to keep abreast of the latest substance use and overdose-related updates. The webinars include the NJ State Police Drug Monitoring Initiative (DMI), CSTE Injury Surveillance Workgroups, and OD2A Drug Overdose Surveillance and Epidemiology (DOSE) calls
- Enroll and attend online Coursera courses that are of interest to the fellow

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

The fellow will be provided with software such as SAS and Tableau. Access to Coursera will also be provided to for unlimited-access to courses related to statistics, epidemiology, GIS, or geographic information systems mapping, among many others. Access to surveillance systems such as ODMAP (Overdose Mapping and Application Program), which is an application that provides near real time suspected opioid overdose data from Emergency Medical Services and law enforcement. Other surveillance systems include EpiCenter, which collects near real time emergency department data; and the Department's internal county naloxone administration data dashboard.

Projects

Surveillance Activity Title: Maintain the NJDOH Naloxone Data Dashboard

Surveillance Activity Description:
The New Jersey Overdose Data Dashboard is a public-facing data visualization tool that presents data from various sources within the DOH and from its partners. It was launched in 2018 to educate users on the overdose epidemic in NJ.

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Users can identify the most affected populations and geographic areas as the data are disaggregated by race/ethnicity, age, sex, and county. The data can be used to monitor overdose morbidity and mortality trends and guide planning of prevention programs or interventions. The NJDOH Office of Emergency Medical Services and NJ State Police bidirectionally share naloxone administration data which NJDOH uses to analyze and disseminate trends on the dashboard. The data elements include age, sex, race/ethnicity, county of incident, city of incident, patient disposition (e.g. treated and transported, refusal of care, expiration), and incident date/time. The fellow will perform data cleaning/standardization and update the public-facing dashboard on a monthly basis as the data are received. The fellow will also notify NJDOH staff of any new trends or anomalies in the data.

Surveillance Activity Objectives:

1. Perform data cleaning/standardization of the naloxone administration data
2. Update the public-facing dashboard on a monthly basis as the data
3. Review updated data for new trends and anomalies.

Surveillance Activity Impact:
The Naloxone Data Dashboard is one the most visited dashboards on the NJDOH Overdose Data Dashboard website as the updates occur more frequently than the other dashboards. In a survey that gathered feedback on the user experience, participants noted using the data to learn more about the overdose epidemic, to improve prevention programs/strategies, to develop new programs/strategies, to support funding requests, and to influence policy and decision makers.

Surveillance System Evaluation Title: Evaluation of NJDOH's Overdose-related Surveillance Systems

Surveillance System Evaluation Description:
The New Jersey Department of Health and Cicatelli Associate Inc (CAI) conducted a Data Needs Assessment of stakeholders to learn about their experiences using various public and restricted DOH surveillance systems such as the NJ Overdose Data Dashboard, EpiCenter Syndromic Surveillance System, Local Health Department Naloxone Dashboard, and the Overdose Detection Mapping Application Program (ODMAP). Participants expressed confusion on the differences of each system and what the data represent. Non-users and new users of the surveillance systems are interested in learning more about how they can incorporate dashboards into their work. Based on the findings, recommendations were put forth to maximize the utility of the surveillance systems. We propose to follow-up on the recommendations by interviewing surveillance system leads to understand a) the objectives, b) anticipated use, c) advantages/limitations, and d) usability of each system.

Surveillance System Objectives:

1. Interview surveillance system leads to understand a) the objectives of each system; b) anticipated use of each system; c) advantages/limitations of each system; and d) usability of each system.
2. Provide recommendations to the surveillance system leads on modifications needed.
3. Develop a resource guide for potential surveillance system users to promote the best use of the systems and ensure the systems are being used to its potential.

Surveillance System Impact:
This project will address some of the gaps identified in the Data Needs Assessment. The findings and recommendations that emerge from the interviews will enhance NJDOH's surveillance systems on overdose-related events. Improvements to the surveillance systems will enable end users to more efficiently use the data for surveillance and prevention purposes to reduce overdoses.

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Major Project Title: Examine social determinants of health associated with drug overdoses

Major Project Description:
One of the priorities of the ORP is to foreground social determinants of health (SDOH) more directly into our overdose surveillance and prevention activities. We have been able to identify geographic and racial/ethnic disparities throughout New Jersey. Overdose Fatality Review Teams have identified themes in social determinant contribution to overdose, such as housing, adverse childhood experiences, and interaction with the criminal-legal system. However, we are limited in our ability to confirm these qualitative themes with our surveillance data. With the impact of the COVID-19 pandemic, the need to incorporate SDOH into our work has become more crucial. The major project the fellow will work on is gathering public and restricted data on SDOH to identify SDOH associated with county and census tracts with high levels of overdoses.

Major Project Objectives:
Project objectives and expected deliverables:

1. Perform literature review to understand what is already known about the relationship between SDOH and substance use/overdose as well as harm reduction, prevention, and treatment initiatives
2. Identify public data sources that contain county and census tract-level SDOH variables
3. Review NJDOH data sources (e.g. hospital discharge billing data, mortality data) to identify county and census tract-level SDOH variables
4. Develop methodology to identify SDOH for counties and census tracts with high overdose rates
5. Perform analysis and generate figures/tables with findings
6. Create map of NJ with findings to visualize data
7. Present and disseminate findings to NJDOH staff and its partners

Major Project Impact:
While the relationship between social determinants of health and substance use have been documented, the findings from this activity will provide a more robust understanding of the association between SDOH and counties/census tracts with high rates of overdoses specific to New Jersey. With its busy international airport, large seaports, miles of interstate and intrastate highways, proximity to New York City and Philadelphia, Washington D.C., and transient populations, NJ has a unique infrastructure well-suited for drug trafficking. Furthermore, NJ has the largest population, per square mile than any other state. The findings from this activity will provide a deeper understanding of the differences among populations, which is essential for reducing disparities in the most impacted areas of the state.

Additional Project #1 Title: Qualitative analysis of Emergency Medical Services (EMS) electronic patient care report (ePCR) narratives on suspected overdoses
Project #1 Type: Surveillance Activity

Project #1 Description:
The NJDOH Office of Emergency Medical Services collects electronic patient care reports (ePCRs) submitted by basic and advanced life support first responders following a patient encounter. ePCRs collect standardized data elements through a series of drop-down lists and checkboxes that provide the opportunity to consistently track demographic and clinical data. It also allows first responders to provide essential details of the patient encounter that may not be collected in the standardized data elements in a free-text narrative field. Although rarely used in our surveillance analysis, the narrative field may contain important information about the circumstances surrounding a drug overdose. The purpose of this project is to qualitatively analyze EMS ePCR narratives for records indicating a suspected opioid overdose, particularly those that occur in known hotspot (geographic areas with high density of suspected overdoses) locations such as hotels, motels, correctional facilities, transportation centers, and apartment complexes.

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Project #1 Objectives and Expected Deliverables:

1. Explore and become familiar with EMS suspected overdose data
2. Develop methodology to perform qualitative analysis on ePCR narratives
3. Perform qualitative/thematic analysis on the narratives including but not limited to encounters that occurred in known hotspot locations
4. Present and disseminate findings to NJDOH staff and its partners

Project #1 Impact:
This project will be one of the first analyses to use ePCR narratives for qualitative analyses in the context of overdoses. The findings will build upon previous EMS data analyses on hotspots and inform existing outreach initiatives.

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

While drastically reduced from the height of opioid prescribing rates in 2015, there are typically about 5-10 practice closures involving opioid and other controlled dangers substances (CDS) prescribers per year in New Jersey. These events can be caused by many factors, such as state, federal, or local civil or criminal actions; death of a prescriber; or licensure actions. The Office of Opioid Response and Policy has developed a close collaboration with CDC's Opioid Rapid Response Program (ORRP) which notifies state trusted contacts of federal actions and provides technical assistance on response. We work closely with state and local trusted contacts to both prepare for practice closures and to respond when they occur by convening and educating stakeholders on practice closures, preparing provider and patient materials, collecting local resources, monitoring surveillance systems, and developing best practice protocols. We are currently in the process of conducting regional preparedness exercises in collaboration with ASTHO and CDC ORRP with every region in NJ. The fellow would join these preparedness exercises and contribute by conducting regional analyses, e.g., on naloxone administrations and hospitalizations for overdose. Additionally, the fellow would join the DOH team that responds in real-time to practice closures and would assist with coordinating the monitoring of surveillance systems for surges. More specifically, when a practice closure occurs the fellow would convene overdose data stewards to query their system on a regular basis (e.g., twice per week) and present findings to the state and local practice closure teams.

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

The fellow will participate in investigations regarding overdose clusters that occur with novel substances. When novel substances are identified as potential clusters, e.g., by the Poison Center, Office of the Chief State Medical Examiner, or through community partners such as harm reduction centers, Opioid Response coordinates investigations of these substances in other data systems to monitor the outbreak and any recurrences. Opioid Response then uses this information to communicate to the public and community partners, e.g., through health alerts and flyers. The fellow will assist with these investigations by 1) coordinating with data stewards and epidemiologists across the Department that analyze data sets containing overdose information, such as EMS data, hospitalization data (syndromic data and discharge data), and death certificates linked to medical examiner reports (SUDORS system); and 2) conducting analyses in EMS data to identify overdoses involving these substances and any demographic/geographic characteristics associated with them. We estimate these activities will take up 5% of the fellow's time.