Agency: Spokane Regional Health District

Project Title:
Establishing a Real-Time Opioid Overdose Dashboard in Spokane County

Project Description:

Opioid overdoses are a growing public health crisis in Spokane County, Washington. In 2021, the number of individuals who died from opioid overdoses doubled as compared to 2020. Specifically, the amount of fentanyl overdose deaths increased five-fold [1]. Opioid overdosing has wide-reaching community consequences in Spokane County, including for infants. Relative to other counties in Washington State, Spokane County had among the highest rate of Neonatal Abstinence Syndromes (NAS)[2] and among the top three highest number of newborns removed from parental care due to parental substance use[3]. The Data Center Program at Spokane Regional Health District (SRHD) accesses and provides the community with reliable data from various sources to inform decision makers and the public. To support the Spokane Regional Opioid Task Force’s efforts, the Data Center developed an opioid surveillance dashboard that is updated annually. We seek to enhance this dashboard to include more timely data on opioid events and more details about the type of opioids being used.

SRHD has access to emergency room and inpatient hospitalization records through the ESSENCE system. ESSENCE includes near real-time data and covers 100% of hospital and emergency department visits in Spokane County. Our team has been trained on the ESSENCE application. However, to use the system more efficiently, skill development is needed in using R to automate data acquisition using API functionality, developing regular expressions for open-text field analysis, and calling R from Tableau with the acquired data to perform non-native analysis, such as significance testing among different subgroups. Searchable text fields allow for syndromic surveillance on many new or emergent health-related topics like fentanyl overdoses. Increasing the Data Center’s proficiency in working with the ESSENCE system will also allow for a more real-time view of current health issues and include information on topics not previously available.

The DSTT program’s data science training and mentorship would allow our team to develop the necessary skills to efficiently use the ESSENCE system. Additionally, one of our team members works in SRHD’s Opioid Treatment Program and serves on the Opioid Task Force. He is our clinical subject matter expert who will provide expertise to the project for quality assurance (e.g., ensuring the use of appropriate analysis codes and search terms) and ensure the data and findings are communicated in a way that the larger substance use treatment community can understand and use in their work.

[1] Death certificate
[2] Hospital Discharge Data
[3] DCYF