

Title: Opioid Abuse: Are Doctors Creating the Problem?

Student: Stephanie Tran

Mentor: Susan Mathews Hardy

Opioid abuse and overdose are serious health problems in the United States. Current research has concentrated on the treatment and prevention of opioid abuse. Using data from the Controlled Substance Utilization Review and Evaluation System (CURES) for California zip codes, my research focuses on the causes of opioid overdose by considering the relationships between the following variables within each zip code: population size, average number of prescriptions per doctor, percentage of people who receive opioid prescriptions, percentage of people receiving the same prescription drug from 3 or more doctors, average number of opioid pills per prescription and number of people receiving more than 100 Morphine milligram equivalency (MME) per day.

My research considers multiple relationships. Does an increase in population size in the zip code predict an increase in the average number of opioid prescriptions per doctor as well as an increase in the number of patients with the same prescription drug from 3 or more doctors? Does the proportion of people in the zip code who are prescribed more than 100 MME per day predict the proportion of people who receive the same prescription drug from 3 or more doctors? Does the proportion of prescriptions for opioid drugs and the mean number of opioid pills per prescription in a zip code predict the proportion of patients receiving the same prescription drug from 3 or more doctors?

To investigate these relationships, nonparametric and parametric hypothesis tests will be used with post hoc comparisons. Stratified boxplots and scatterplots will be used to display the findings.