Practical Data Science: Team 1 Project Strategy

Impact of Opioid Control Policies

Team members: Joseph Hsieh, Joao Mansur, Xiaomeng Han, Jaryl Ngan

1. Variables Required

a. Final Dataset

FIP	State	Year	Volume of Opioid Prescriptions per capita	Drug overdose deaths per capita	Post Policy Change

b. Intermediate Datasets

FIP	State	Year	Volume of Opioid Prescriptions

FIP	State	Year	Drug overdose deaths

FIP	State	Year	Population

c. Source File 1 (Opioid Prescriptions)

Drug code	Drug Name	Quantity	Strength	Buyer - County	Buyer - State	Transaction date

d. Source File 2 (Cause of Death)

County	CODE (state)	Year	Drug/Alcohol Induced Cause	Cause Code	Deaths

e. Source 3 (Population)

State	County	Population

f. Crosswalk (State, County, FIP)

State	County	FIP

2. Sample

Years	2003 - 2015
States required for Study	Washington, Texas, Florida
Control	USA as an aggregate
States possibly for Control (Neighboring states of states required for study)	Washington: Idaho, Oregon Florida: Georgia, Alabama Texas: Louisiana, New Mexico

3. Task Assignment

a. Source Data Cleaning

i.	Source File 1 (Opioid Prescriptions)	**In-charge**: Joseph	**Support:** Joao
ii.	Source File 2 (Cause of Death)	**In-charge**: Jaryl	**Support:** Joseph
iii.	Source File 3 (Population)	**In-charge**: Xiaomeng	**Support:** Jaryl

Possibly Aggregate for the whole of USA

Filter out irrelevant states

b. Merging   **In-charge**: Joao   **Support:** Jaryl

i. Merge on year, FIP, state for all source datasets

c. Analysis   **In-charge**: Xiaomeng   **Support:** Everyone

i. Pre-post analysis for all relevant states for volume of opioid prescriptions per capita and drug overdose deaths per capita

ii. Difference-in-difference analysis for all relevant states for volume of opioid prescriptions per capita and drug overdose deaths per capita