**Replication Materials for Brill, Ganz, and O’Brien (2020)**

**Index:**

The zip file contains four folders:

1. R
2. data
3. out
4. Graphs

R

The “R” folder contains all of the R code required to replicate all figures in the paper. R-3.6 was used to produce the paper; however, any recent version of R should reproduce the output faithfully.

data

The “data” folder stores the raw data used to generate the model. Information on data sources is available in the Technical Appendix.

out

The “out” folder is a repository for the output for the tables and graphs in the text. Once you run the Rmd file, new spreadsheets will be created that output the state and county results.

Graphs

The “Graphs” folder contains the graphs and maps used in the report.

**Replication Instructions:**

The following packages must be installed on your machine prior to running the code: knitr, cairo, lubridate, mosaic, dplyr, readr, readxl, tidyr, stringr, choroplethr, choroplethrMaps, sas7bdat, tidycensus, lme4, glmmTMB, RColorBrewer.

Open and knit “opioid\_distributional\_analysis.Rmd”. In addition, the data used to create the tables in the paper are outputted to the “out” folder.

You will need an API key from tidycensus to download the ACS data. Key sign-up information can be found [here](https://walker-data.com/tidycensus/articles/basic-usage.html).

Code for replicating the graphs and maps can be found in “graphs.R”.

To recreate the inflation factors from Ruhm (2018) you will need the CDC micro data, which can be downloaded [here](https://www.cdc.gov/nchs/data_access/vitalstatsonline.htm).

**Technical Appendix**

The Word doc “Technical Appendix” contains detailed methodology and information on data sources.