Power outage simulation code summary:

* There’s code in here to clean the power outages US data. That’s from Vivian’s paper and we’ll use it in the next paper w these data
* Simulation data creation: code for creating exposure data
  + The first script in the folder pulls manipulates the real data to enable us to pull empirical distributions
  + The second pulls those distributions and saves them
  + The third creates 400 datasets with 25 simulated counties of fake exposure data – hourly counts of customers out and customers served. This takes a couple hrs to run. It doesn’t contain any parameters. It only uses empirical distributions to get realistic numbers of customers served and customers out.
* Simulation data cleaning:
  + Folder contains two scripts. Meant to make exposure data for different scenarios in the simulations
  + Script 1: Clean simulation data at different outage lengths: this script cleans data and marks days as exposed based on customers out being above a threshold for a certain number of hours. It uses a threshold of .1% of customers out, because the thresholds depend on the size of the spatial unit and counties are large, so we use a small threshold. This is what we used in Vivian’s paper. It creates three datasets of outages for each of the 400 25-county sets: outages of 4 hrs, 8 hrs, and 12 hrs.
  + Script 2: clean simulation data add missingness: this script adds missingness. Want to create datasets where there are 10%, 30%, 50%, and 70% of obs missing. It creates these four datasets for each of the 400 25 county sets, by removing obs randomly by city-utility. It operates on the same .1% threshold and cleans for 8-hour outages.
* Outcome data creation:
  + First three datasets create hospitalization outcome data based on the ‘different lengths’ data, using a 10% increase. Need to make that a 1% increase, and iterate over a few different effect sizes – probably .5%, 1%, 5%
  + The next script does this for the missing data, with 10%. Need to add a 70% and also change the effect sizes.
* Models: