

Project Proposal

In this project, I will try to track whether the change in homelessness in Los Angeles has to do with the changes to the healthcare system and availability of healthcare after Obamacare ended, while controlling for changes in housing costs, healthcare costs, and general cost price changes. I plan to use the following datasets: healthcare per state, housing price data, homelessness changes per state per year, CPI index, population per state, and housing availability. It can be difficult to track whether Federal policy changes have any direct impact on local level problems. Moreover, as study of the Regan legacy's effects on social welfare indicate, much of the work and cost of providing social insurance for the poor was passed onto state governments.¹ In lieu of a precise study that tracks individuals, monitors specific state responses, and has an actual control group, I will be generating and training a model to predict outcomes in homelessness based on pre-ACA implementation to compare to actual post-ACA outcomes. While these measures will not be indicative of direct impacts from federal to local levels, it will be an opportunity to wrangle and combine multiple datasets, optimize a complex pipeline to model and predict outcomes, and to see whether it seems plausible that the difference observed in reality is due to political policy.

In this project the criterion for success is not a statistically important difference between the model and reality, because there are far too many confounding factors and smaller incremental changes that could have unpredictable effects. Thus, the criteria for success will be the optimization of the pipeline in terms of variables selected, quantity of variables, correlation, and other statistical indicators. In regards to the "solution" space, it will be determined by the strength of my statistical analysis and ability to expand a skill base in this arena. I think the constraints are the challenges of using large-scale data to model individual outcomes, no precise

¹ Combs-Orme, Terri and Guyer, Bernard (1992) "America's Health Care System: The Reagan Legacy," *The Journal of Sociology & Social Welfare*: Vol. 19: Issue 1, Article 6. [Available at: <https://scholarworks.wmich.edu/jssw/vol19/iss1/6>]

indicators will be found here and general trends with substantial overlap will have compounding effects to be acknowledged when looking at predictions. I am using data that is available online and is free either through federal or state government sources.

I do not have any specific “client” in consideration for this project, but it is widely agreed upon by people from any political party that health care costs are spiraling out of control. It is a much larger and more complex problem to begin reforming or restraining these costs. On the World Bank website there are multiple indicators of the present out-of-pocket healthcare costs for people as compared to their income, suggesting that it is already acknowledged to be a major problem across the globe. In the public health field, even dating back to the Regan era changes, hospital closures are acknowledged to have led specifically to homelessness amongst former residents, specifically those with mental health issues. The state-wide data available online does not have corresponding data regarding mental health status, but the issue of healthcare provisions and ability to find/sustain employment are obviously connected.² A look at widespread trends might be useful to forecast data on future homelessness, even if a specific causal mechanism cannot be found. Therefore, the primary deliverable in this project will be the pipeline. I also plan to produce a project report, Jupyter notebook, and slide deck.

² Hunt, Joseph M. "Reversing productivity losses from iron deficiency: the economic case." *The Journal of nutrition* 132.4 (2002): 794S-801S.