Group # ????

Geographical Variance in Solid Organ Transplant Patient Characteristics

Motivation

-The Scientific Registry of Transplant Recipients (SRTR) analyzes data on transplant patients that are collected from multiple sources [1]. Its mission is to provide advanced statistical and epidemiological analyses related to solid organ allocation and transplantation in support of the Department of Health and Human Services and its agents in their oversight of the national organ transplantation system [2].

Related Work

-Periodically, the SRTR produces reports on patients who are either recipients of a sold organ transplant or on a waitlist to receive one. However, those reports focus more on national statistics than variation by region.

Initial questions

-To what extend do patient characteristics vary by zipcode?

-To what extent do patient outcomes vary by zipcode?

Data

-SRTR transplant data for multiple organs, August 2020 release.

Exploratory Analyses

-Histogram of kidney transplant center frequency by zipcode.

-Leaflet plot of kidney transplant centers by zipcode.

-Histogram of kidney transplant waitlist patient outcomes by zipcode (i.e. mortality, transfer, etc.).

-Automated exploratory data analysis that was iterated over other organ types.

Additional Analyses

-Scatter plots of demographics, age, gender, blood type, and comorbidities for kidney transplant waitlist patients by zipcode.

-Correlation plots of PRA score with comorbidities.

-Dashboard of waitlist patient characteristics for different organ types.

Discussion

-Minimal variance in waitlist patient outcomes by zipcode.

-Some variation in waitlist patient characteristics by zipcode.

-Variation in patient characteristics by organ.

References:

[1] Leppke S, Leighton T, Zaun D et. al. Scientific Registry of Transplant Recipients: Collecting, analyzing, and reporting data on transplantation in the United States. *Transplantation Reviews*, 27(2):50-56

[2] https://www.srtr.org/about-the-data/the-srtr-database/