

Healthcare Data Analytics and Visualization Team

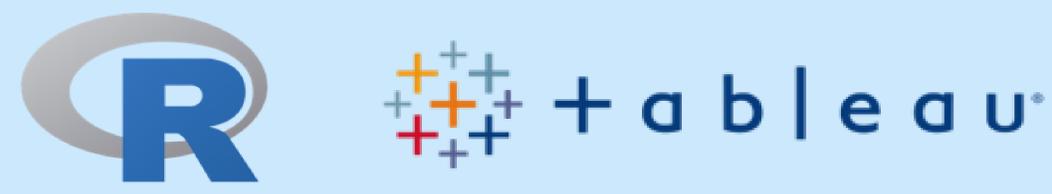


Large amounts of data in the healthcare industry are being collected every day. How can we use this data, and display it in a way that everyone can easily follow?

- Our team's original focus was to work directly with a company, TeamHealth, to look at their record hospital data, and determine what factors impact the propensity to pay.
- However, the project ended up working on a broader scale. We instead utilized the databases from the following:
 - Healthcare Cost and Utilization Project's (HCUP)
 - National Inpatient Sample (NIS)
- Our goal was to identify trends and correlations within these sets in order to learn about what patient attributes has the most impact on the healthcare industry. Then put this information in a format that everyone can easily comprehend.



- Our team utilized two primary software's: R and Tableau. We used them to
- Clean the data
 - To build predictive models for certain attributes within the data
 - To visualize all our findings from working with the predictive models.



Model Results/Visualizations



About Our Data Set

- It is provided by Healthcare Cost and Utilization Project (H-CUP) through the Agency for Healthcare Research and Quality (AHRQ).
- It is the largest publicly available all-payer inpatient database in the U.S.
- It represents a 20% stratified sample of U.S. hospitals
- It contains 7 million hospital stays per year.
- There are 100+ clinical and non-clinical variables.
- There are 3 files: Core, Severity, and Hospital.



- These models can be **applied** in the healthcare industry by:
- Predicting Hospital Capacity
 - Predicting a Patient's Propensity to Pay
 - Help Inform Where the Hospital Should Focus Manpower & Resources