**Project 1\_v3\_Proposal**

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**Scope of our research (highlighted in RED items I added for group discussion/comments)**

* The objective of our study is to explore relationships between Patient Experience rating, Mortality rate, and Total Hospitals (per capita) by County (Total Hospitals/Estimated Population) (VS: We need to try to find Total Hospital Beds as well to capture differences in size of Hospitals)
* Summary will be presented by County and by Year (2016).
* (VS: We need a Summary that includes Glossary)

**Create a short 1 page proposal listing out each of the following:**

* Project Title : Relationship between Patient Experience rating, Mortality rate, and Total Hospitals (per capita) by County
* Team Members: Rabia Otry, Vilma Santos, Rohan Mohindroo, Angang Li
* Project Description/Outline (see jupyter notebook from Rabia for details)
  1. Aggregate data from multiple sources to create one Data Frame (DF).
  2. Add Patient Experience summary rating by Hospital from HCAPHS survey into DF (Rabia)
  3. Add mortality rate from CSV file into DF (Rohan)
  4. Add population size into DF (Vilma)
  5. Print Data Frame
  6. Create visuals in Matplotlib, Seaborn, Tableu, etc.
     + Hospitals in Counties (heat map)
     + Total Hospitals (per capita) by County
     + Patient Experience vs Total Hospitals (per capita) by County
     + Mortality vs Total Hospitals (per capita) by County
* Research Questions to Answer

Is there compelling relationship between Total Hospitals and Hospital Patient Experience? Total Hospitals and Mortality Rate?

Specifically,

* 1. Does # of Hospitals serving the population affect Hospital Patient Experience?
     + Does Population Size alone affect Hospital Patient Experience?
     + Does # of Survey Responders alone affect Hospital Patient Experience?
  2. Does # of Hospitals serving the population affect Mortality Rate?
     + Does Population Size alone affect Mortality Rate?
     + Does # of Hospitals alone affect Mortality Rate?
  3. Is there a direct relationship between # of Hospitals and Population Size?

Note : Evolvement over time not possible since we only have 2016 data

* Data Sets to be Used
  1. HCAPHS data, queried by hospital name from data.gov
  2. Google maps
  3. Mortality data
  4. Census data