**Executive Summary**

The American healthcare system has undergone some of the most sweeping, industry-wide regulatory changes over the last eight years with the introduction of the Affordable Care Act in 2010. One of the most influential elements of the law is the MLR (medical loss ratio), which requires insurers to spend 80% of the premiums they collect no matter the outcome of the actual services rendered.

**Motivation**

My motivation to pursue this topic primarily stims from direct experiences dealing with the frustrations seen at my current position at a health insurance brokerage. Because of the dramatic rate increases being seen in the small business, fully-insured market across the country, the firm I work at has begun developing strategies focused on subverting the fully-insured cycle and moving towards reference-based pricing models and self-funding methods, demanding more transparency and accountability beyond the veil of secrecy draped over the industry.

**Data Question**

At its root, my motivation to explore this topic comes from the desire to explore the misaligned incentives of the modern, American healthcare system. More specifically, the Affordable Care Act’s MLR (medical loss ratio) effect on the rapidly changing landscape of the industry.

*How do price discrepancies between providers within similar markets highlight the lack of transparency experienced by all parties of the healthcare complex: consumers, providers, and insures?*

Articles and broader research that have sparked my thinking:

1. <https://www.huffingtonpost.com/2013/05/08/hospital-prices-cost-differences_n_3232678.html>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4693848/>
3. <http://content.time.com/time/subscriber/article/0,33009,2136864,00.html>
4. <https://www.economist.com/news/leaders/21736138-welcome-doctor-you-revolution-health-care-coming>

**Schedule (February 15 – March 10)**

1. Get the Data (2/14/2018)
2. Clean & Explore the Data (2/24/2018)
3. Build & Deploy your Shiny App (3/3/2018)
4. Document/Pitch your Shiny App with a Presentation (3/8/2018)
5. Individual presentations (includes presentation & demonstration of your app)

**Data Sources**

1. The primary source of my data will come from the CMS (<https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/index.html>), comprising of national Medicare data in a variety of diagnostic categories from 2011 – 2015.
2. CMS also hosts their own database (<https://data.cms.gov>).
3. An auxiliary source of information may be AHRQ’s, Agency for Healthcare Research and Quality, *Healthcare Cost and Utilization Project*(<https://hcupnet.ahrq.gov/#setup>)

**Known Issues and Challenges**

Just from personal experience with my current job, I know that sifting through the landscape of the healthcare system’s lingo/codes can be can trying and time consuming. Since I’m unfamiliar with Shiny, I expect to have some troubles creating the web application.