

CAPSTONE FINAL PROJECT PROPOSAL REPORT – WEEK 8/9

Project Overview:

This week, I focused on analyzing the 2024 Medicare Report Card, which includes performance data on various healthcare measures. The main goal was to assess trends in preventive care, chronic disease management, and member satisfaction across different Medicare Advantage plans.

What We Did:

I analyzed key healthcare measures, such as **Breast Cancer Screening (C01)**, **Flu Vaccines (C03)**, and **Diabetes Care (C09)**, to assess plan quality and performance over time. My analysis involved cleaning and merging data from different periods, visualizing the trends, and calculating key metrics to evaluate changes in care delivery.

Steps Taken:

- **Data Cleaning:**
I cleaned the data by identifying and handling any inconsistencies or missing values, ensuring the datasets were complete and accurate. This process helped standardize the data and prepared it for further analysis.
- **Merging Data:**
I merged datasets from two periods (01/01/2022 – 12/31/2022 and 03/2023 – 06/2023) to compare the performance across different timeframes. This allowed me to track changes over time and identify any seasonal or year-to-year variations.
- **Creating Visualizations:**
I created a range of visuals, including bar graphs, pie charts, and trend lines. These visuals helped showcase the percentage of individuals receiving preventive care such as breast cancer screenings and flu vaccinations. I also used them to compare performance across different healthcare measures.
- **Calculating Percentages:**
I calculated the participation rates for various healthcare measures, such as the percentage of patients who received breast cancer screenings or flu vaccinations. This metric was useful to identify how much the participation rates had changed compared to previous years and assess the effectiveness of different plans.

What we Found:

- **Preventive Care Trends:**
I observed that there were noticeable increases in preventive care measures, particularly in breast cancer and colorectal cancer screenings. However, some regions had a lower

participation rate, indicating that certain areas may need more targeted outreach to increase engagement.

- **Chronic Disease Management:**

When analyzing chronic disease management, I found significant differences in how health plans managed conditions like diabetes and high blood pressure. Some plans were successful in improving patient outcomes, while others showed less progress, possibly due to varying strategies or resources across plans.

- **Member Satisfaction and Experience:**

The analysis of member satisfaction surveys (CAHPS) revealed significant insights into how patients rated their overall healthcare experiences. Positive experiences were generally correlated with higher ratings in preventive care and chronic disease management. However, there were some complaints about customer service and drug plan issues, which were reflected in the member experience ratings.

Next Steps:

- **Deeper Data Analysis:**

In the coming weeks, I plan to perform deeper statistical analyses to explore the relationships between plan quality, patient satisfaction, and healthcare outcomes. I'll focus on examining how the type of plan (e.g., HMO vs. PPO) impacts performance in these areas.

- **Refine Data Visualizations:**

I will work on improving the clarity and effectiveness of the visualizations, ensuring that the data is easily interpretable for stakeholders and healthcare providers.

- **Interactive Dashboard Creation:**

I will begin developing an interactive Tableau dashboard to make the data more accessible. This will include visualizations that stakeholders can explore to get detailed insights into specific measures and trends. The dashboard will allow for deeper exploration of Medicare Advantage plan performance.

Conclusion:

The initial analysis has provided valuable insights into how Medicare Advantage plans are performing in key areas such as preventive care, chronic disease management, and member satisfaction. There is clear evidence of improvement in some areas, but gaps remain in others. Moving forward, the focus will be on refining the analysis, enhancing the visualizations, and creating an interactive dashboard to present the findings. This will help identify opportunities for improving healthcare services and achieving better patient outcomes.