# Project Summary: Medicare Specialty Drug Cost Analysis

Team: Data Navigators  
Members: Edara Ajay Reddy, Amrutha Varshini Kesavarapu, Bharath Kumar Konakanchi, Lavanya Malakalapalli

## 1. Objective

The primary goal of this project is to analyze the rising costs of specialty drugs under Medicare Advantage plans. We aim to understand whether increased spending is due to a rise in per-unit drug prices or an increase in prescription volume. Our analysis is focused on Medicare data alone, using Medicaid only as a reference in earlier stages for benchmarking.

## 2. Work Completed So Far

• Downloaded and processed Medicare Part D Drug Spending data (2022).  
• Identified the top 50 specialty drugs based on total spending.  
• Verified that each drug is classified as a specialty drug using sources like CVS Specialty Pharmacy and FDA.  
• Cleaned the dataset using fuzzy matching and removed over 200 duplicate entries.  
• Created a cleaned and verified dataset with 45 unique specialty drugs.  
• Compared Medicare and Medicaid drug prices to identify overpayment trends (initial approach).  
• Pivoted analysis to focus strictly on Medicare and transitioned from total spending to per-unit cost evaluation.  
• Loaded the final dataset and analyzed available columns including:  
 - Total Spending per year  
 - Total Dosage Units  
 - Claims and Beneficiaries  
 - Average Spending per Unit  
• Developed a framework to explain cost increases using percentage changes in unit cost and volume.

## 3. Upcoming Steps

• Identify the top 10 specialty drugs by Medicare spending in 2022.  
• For each drug, calculate changes in total spending, per-unit cost, and dosage units from 2018 to 2022.  
• Determine whether price hikes or increased utilization are driving the cost increases.  
• Visualize findings through line and bar charts.  
• Prepare the final report and presentation focused solely on Medicare-based policy recommendations.