COMPARISON OF GENERIC AGAINST NAME BRAND PHARMACEUTICAL COSTS FOR MEDICARE PATIENTS

# Team Members

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# Description of the Project

Healthcare costs within the United States are often opaque and handed off to either the patient or the insurance provider as a number that exists outside of the sum of its parts. This isn’t reflective of how each of the parts that make up the costs of healthcare can vary based on techniques, utilities, and decisions made by the practicing physician.

One example where we can see this is within the prescribing of medications. When a patient is prescribed a medication, the physician is often given the choice of many different chemically identical options that will vary in price. This study does not seek to understand how the doctor makes this decision or why they may often side with the more expensive prescription, but instead calculate an amount that a certain population within the United States is spending that would be offset if a cheaper medication was instead prescribed.

This is important as healthcare spending per capita within the United States is significantly higher than any other nation in the world ([Health Spending In The United States And The Rest Of The Industrialized World | Health Affairs](https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.24.4.903)) with many in the country forgoing medical care due to the cost ([Debt and Foregone Medical Care (sagepub.com)](https://journals.sagepub.com/doi/pdf/10.1177/0022146513483772)). Along with that, insurance premiums and deductibles are dictated strongly by the overall cost to care for a population, so saving money on prescriptions could have the effect of decreasing the cost overall of insurance.

Every physician who prescribes medication for a patient who is on the governmental Medicare program has to register with the government what medications were prescribed and the amount of that medication. We can use this data in order to analyze the cost variance between name brand and generic medicines. This dataset is by no means comprehensive of the entire United States as it only covers Medicare patients, who are required to be over 65 to qualify, but it does allow us to get an idea of the level of cost inefficiencies within the way that prescriptions are created. If time permits, we would also like to take a look at whether there are location correlations between areas that prescribe more expensive medications.

# Dataset

The largest and most important dataset that we will utilize is the Medicare Part D Prescribers - by Provider and Drug dataset that is provided by the Centers for Medicare & Medicaid Services ([Medicare Part D Prescribers - by Provider and Drug - Centers for Medicare & Medicaid Services Data (cms.gov)](https://data.cms.gov/provider-summary-by-type-of-service/medicare-part-d-prescribers/medicare-part-d-prescribers-by-provider-and-drug/data)). This is a large file that contains over 25,000,000 records of physicians, the medications they prescribed, and the amount of that medication that they prescribed within the year 2020. A similar dataset is available going back each year to 2013, so if time permits we would like to analyze those as well.

If we reach the portion of the project where we would want to look into correlations between location and cost of drugs prescribed, we would also be able to utilize the NPI registry from the Centers for Medicare & Medicaid Services as well ([NPPES NPI Registry (hhs.gov)](https://npiregistry.cms.hhs.gov/search)).

# Implementation Plan

The data collection phase won’t take long, as the main datasets that we plan to use are already available to us. We plan to have completed the bulk of the work of analyzing and interpreting the first dataset from 2020 by the progress report deadline of March 24th. After that, we will look towards other trends within previous years of the data and if time permits tie that data to the locations of providers.

# role of Members

Trenton Peters - Proposed project, contributor

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