

# **Racial Disparities in Medicare: A Case Study of North Carolina with a Focus on Diabetes**

## **Introduction**

The elderly population in the United States are the most vulnerable population in health care, most of which are covered by the Medicare program. Minority racial groups are also some of the most vulnerable groups in health care. My goal in combing through this data was to bring the racial disparities in, specifically, North Carolina's elderly Medicare population to light. My findings clearly show that Diabetes is much more prevalent in black and brown communities than it is in white communities. They also show that black communities on average pay more (in Medicare claims) than white communities, while Native communities are paying significantly more than any other racial group.

## **Background and Data Source**

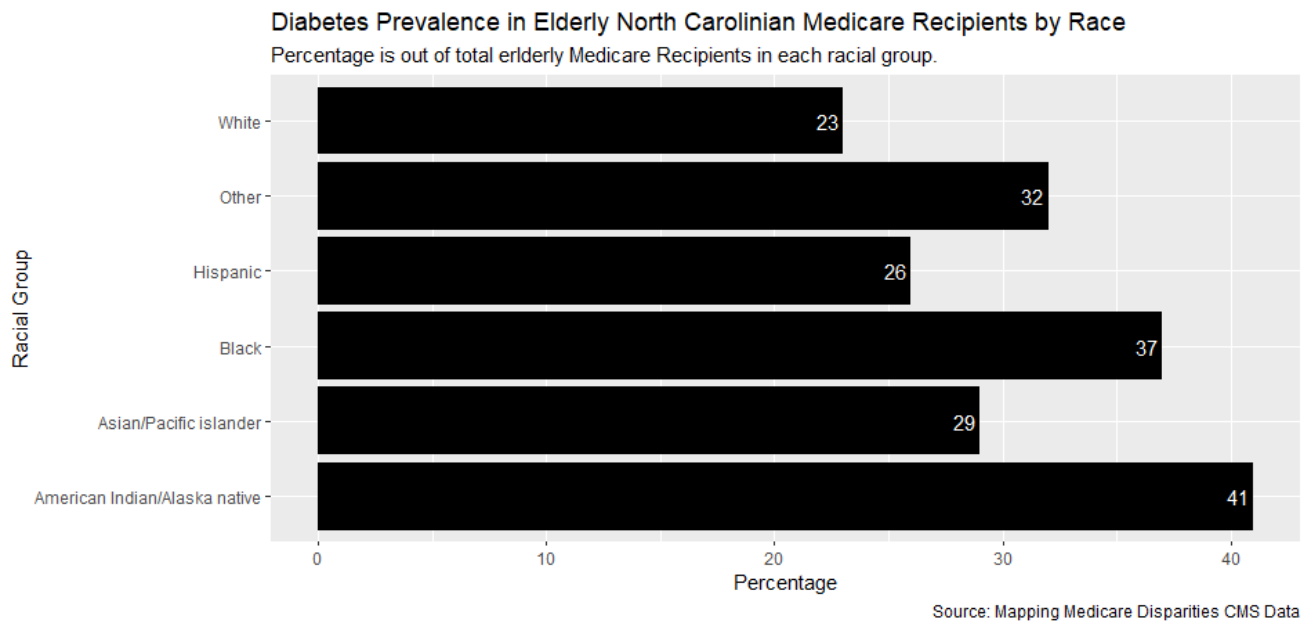
Racial disparities and discrimination in health are nothing new. Most of us familiar with the subject have heard of the Tuskegee experiment, which turned out to be a nightmare that disproportionately affected black men. However, the COVID-19 pandemic brought racial disparities in health to the forefront of the mainstream media.

There are so many elderly Medicare recipients that have trouble controlling their diabetes due to many reasons. Some even have trouble affording insulin because of Medicare deductibles, copays, and lack of coinsurance. My goal with this dataset was to visually show the outrageous costs associated with diabetes, as well as the racial disparities in the prevalence and cost of the disease in North Carolina.

Medicare data is mainly collected through the Center for Medicaid and Medicare Services, an agency that presides under the Department of Health and Human Services. Medicare data from CMS is very extensive and thorough. The data I used in my research is called Mapping Medicare Disparities and has a vast and rich collection of variables. In this dataset, I focused on diabetes prevalence and average total cost in old-age, North Carolinian Medicare recipients. Prevalence refers to the percentage of elderly, diabetic Medicare recipients out of the total amount of Medicare recipients in the county/state. Average total cost refers to cost per Medicare recipient in 2019. Cost data is determined based on Medicare claims data collected by CMS. All costs are related to the disease/condition that is written on the Medicare claim.

## **Findings**

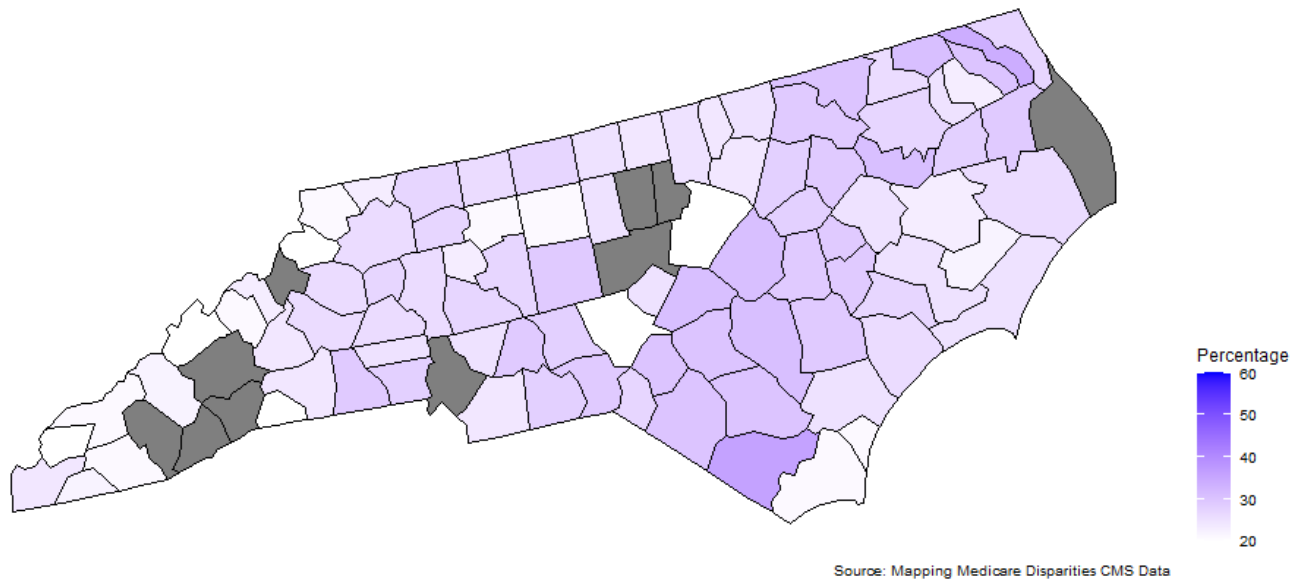
As I expected, the racial disparities among North Carolinian, elderly Medicare Recipients disproportionately affected black and brown communities. The largest percentage among elderly Medicare recipients was in the Native American population. The lowest percentage was in the white population, with black and brown populations as the highest percentage of elderly, Diabetic Medicare recipients.



In the two maps of North Carolina below, you can see how much more prevalent diabetes is in the elderly, black population than it is in the elderly, white population.

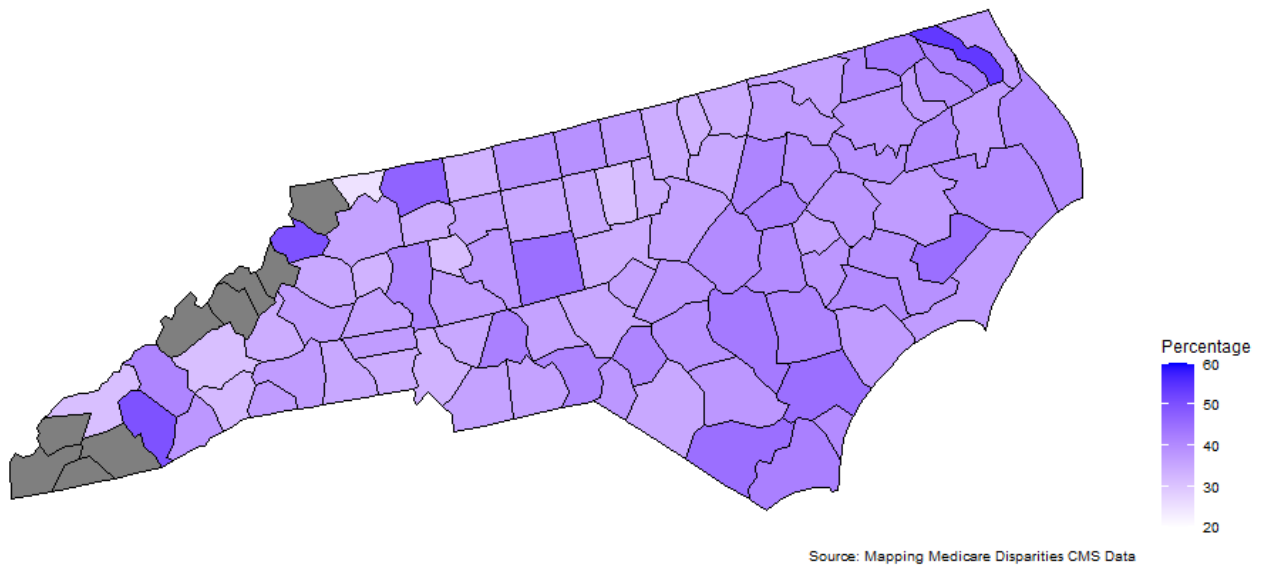
#### Percentage of White Diabetic Medicare Recipients by County

Percentage is out of total Medicare recipients in each county. Data not available in gray areas.



#### Percentage of Black Diabetic Medicare Recipients by County

Percentage is out of total Medicare recipients in each county. Data not available in gray areas.



Comparing the prevalence data to the average total cost data, the amount spent per beneficiary in the Native American Medicare recipient population is significantly more than the prevalence of

diabetes in this same racial group, even considering the fact that Natives had the highest percentage of Diabetes prevalence. You can see the large disparity in costs in the figure below. There are a few plausible explanations as to why Native Americans on average spend more in Medicare claims than other races listed in the data:

1. They have the highest diabetes prevalence compared to other racial groups and are more likely to be admitted to a hospital and stay overnight than their white counterparts.

Firstly, hospital stays are known to be outrageously expensive. Secondly, the Native American elderly, diabetic Medicare population is the highest as a percentage of the total elderly Medicare population in North Carolina. Knowing these facts, it isn't a huge surprise that they would spend more per person on diabetes-related Medicare claims.

2. Native Americans in the U.S. have an extra layer of health insurance under Medicare, called the Indian Health Service (IHS).

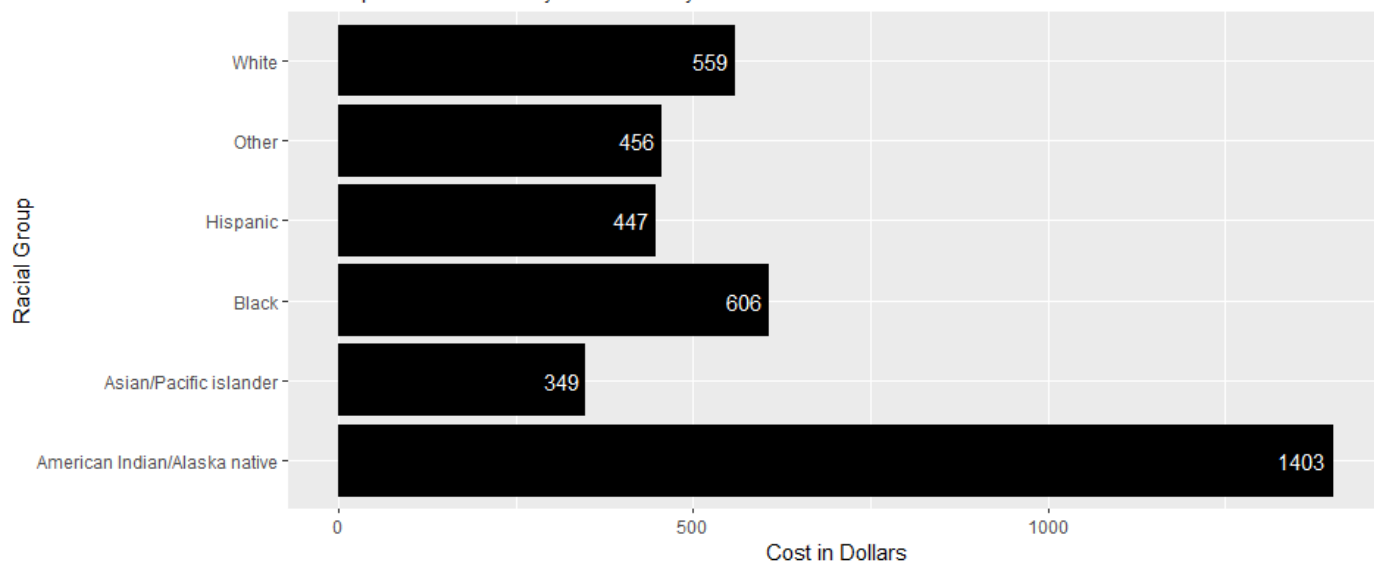
Under the IHS, Native Americans have a form of Medicare that does not include deductibles, copays, and coinsurance. Medicare for all other racial groups in the U.S. can include deductibles, copays, and coinsurance. For this reason, more of the cost burden may fall on the HIS and Medicare.

3. Native tribes tend to politically fight for (and win) more and better social safety net programs, like housing, healthcare, etc., than other populations because of the history of cruel treatment they received from the U.S. Government.

Over the past eighty years or so, Congress has passed several sweeping bills to improve the lives of Native Americans, most of whom live on Indian reservations and tribal jurisdictions. In 1976, Congress passed the Indian Health Care Improvement Act, which expanded and directed specific funding for health programs. In the years since the passage of the Indian Health Care Improvement Act, the federal government has made several amendments to further expand funding and support for specific medical services for Natives. This additional funding could give providers an incentive to charge more for their services on top of the IHS footing 100 percent of the patient's medical bill. This is a huge contrast to the Medicare program for non-Native Americans, as it only foots 80 percent of the bill. The other 20 percent is the patient's responsibility through deductibles, copays, and coinsurance. It is entirely possible that because of this extra funding, targeted specifically at Native populations, providers may charge more and in turn, Medicare and the HIS pays out more on behalf of Native patients.

### Average Cost of Diabetes-related Medicare Claims in North Carolina by Race

Cost is per each beneficiary for the entirety of 2019.



Source: Mapping Medicare Disparities CMS Data

### Conclusion

Prior to digging into the data, I was confident that it would show minority racial groups to be at more of a disadvantage than the white Medicare population in North Carolina. This came to be true with the prevalence of diabetes in the elderly Medicare population, as the Black and Native American populations were the highest percentages. I had no guess as to what the average total cost would show by racial group, but the Natives were, on average per recipient, paying much more than all other racial groups. There are a few plausible explanations for this, which probably all simultaneously play a role in the high-cost outcome. It is rare that a complicated issue and outcome are explained by solely one explanation.