Bridging Gaps: Investigating COVID-19's Influence on Health Disparities in Connecticut

Delia Lin
Department of Statistics
University of Connecticut

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Abstract

Social determinants of health (SDOH) are the conditions in which people are born, grow, live, work, and age, which significantly influence their overall health and well-being. These determinants include factors such as socioeconomic status, education, access to healthcare, and the physical environment. Understanding the interactions of these elements will be essential for addressing health disparities and developing more effective public health policies and interventions.

1 Introduction

Current research focuses on how social determinants of health (SDoH) plays a massive impact on one's health; it is estimated that 80 percent of a population's health outcomes are dictated by SDoH (Hood et al., 2016). Often, SDoH, when referring to an individual, can result in racial disparities in care when looking at a population(Monroe et al., 2023). It has been shown that major inefficiencies in the health system are attributed to overlooked prevention opportunities and unequal access to care.(Allin et al., 2014)

Housing: Access to stable and safe housing is a crucial social determinant of health. During the COVID-19 pandemic, housing disparities have become more pronounced. Low-income communities, often comprising a disproportionate number of people of color, face challenges in maintaining secure housing due to job losses and financial strain caused by the pandemic.

Income and Poverty: Income and poverty levels significantly impact health outcomes. People with lower incomes often have limited access to healthcare, proper nutrition, and education. COVID-19 has exacerbated these disparities, especially among communities of color. Many individuals in low-income jobs, particularly those in service industries, have been unable to work remotely, increasing their exposure to the virus. Additionally, the economic downturn induced by the pandemic has led to increased poverty rates, deepening existing health inequalities.

Insurance: Health insurance plays a crucial role in determining access to healthcare services. Individuals without insurance or with limited coverage face barriers in receiving

timely and adequate medical care, especially during a health crisis like COVID-19. Racial minorities are disproportionately represented among the uninsured population, amplifying the disparities in healthcare access. The pandemic has highlighted the necessity of comprehensive healthcare coverage for all, emphasizing the need to address racial disparities in insurance coverage to ensure health equity.

Education: Education is a crucial social determinant of health, shaping individuals' knowledge, behaviors, and opportunities. Higher educational attainment is linked to better health outcomes, as educated individuals are more likely to adopt healthier lifestyles, access healthcare services, and make informed decisions about their well-being. Unfortunately, there exists a significant racial disparity in educational opportunities and outcomes. Historically marginalized communities, particularly people of color, often face challenges such as underfunded schools, limited access to quality education, and higher dropout rates. These disparities not only affect economic opportunities but also impact overall health. Limited access to education hampers health literacy, making it harder for individuals to understand health information and navigate the healthcare system effectively. Additionally, it perpetuates cycles of poverty and limited access to healthcare among racial minorities, leading to poorer health outcomes.

Rehospitalization Rate: The rehospitalization rate is a critical indicator of the effectiveness of healthcare services and the overall health of a community. Racial disparities in healthcare access and quality contribute to differences in rehospitalization rates. During the COVID-19 pandemic, inadequate access to healthcare services, underlying health conditions, and social determinants such as housing instability have contributed to higher rehospitalization rates among racial minorities. Addressing these disparities requires targeted interventions to improve healthcare access, quality, and social support systems for marginalized communities.

The rest of the paper is organized as follows.

The data will be presented in Section3

The methods are described in Section2

The results are reported in Section4

A discussion concludes in Section5

2 Data

In this study, descriptive statistics is utilized to outline the total population, racial composition, education levels, and average rehospitalization rate across the 8 counties in Connecticut. ANOVA tests were conducted to assess the significance of the difference of the variables of median income, poverty level, health insurance, utilities access, and electronics access between counties and across the four years(2017, 2018, 2019, 2020). Additional Tukey's HSD tests were conducted to determine the specific counties and years that have had significant differences within each of the variables for each county.

3 Data

Data was collected from The Agency for Healthcare Research and Quality(AHRQ).The dataset comprises 7 variables spanning a period of 4 years (2017-2020) with observations across the 8 counties in Connecticut. These variables encompass a total of 56 observations. The variables questions include housing, education level, income, insurance, rehospitalization rates, food stamps usage, and population racial characteristics. The dataset includes a range of calculated percentages, median values, and raw observations, providing a holistic view of various factors affecting the communities in these counties.

4 Results

Table**??** summarizes some example draws from some distributions. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Figure**??** shows the distance against the speed from this dataset.

5 Discussion

What are the main contributions again?

What are the limitations of this study?

What are worth pursuing further in the future?

References

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Hood, C. M., K. P. Gennuso, G. R. Swain, and B. B. Catlin (2016). County health rankings: Relationships between determinant factors and health outcomes. *American Journal of Preventive Medicine 50*(2), 129–135.

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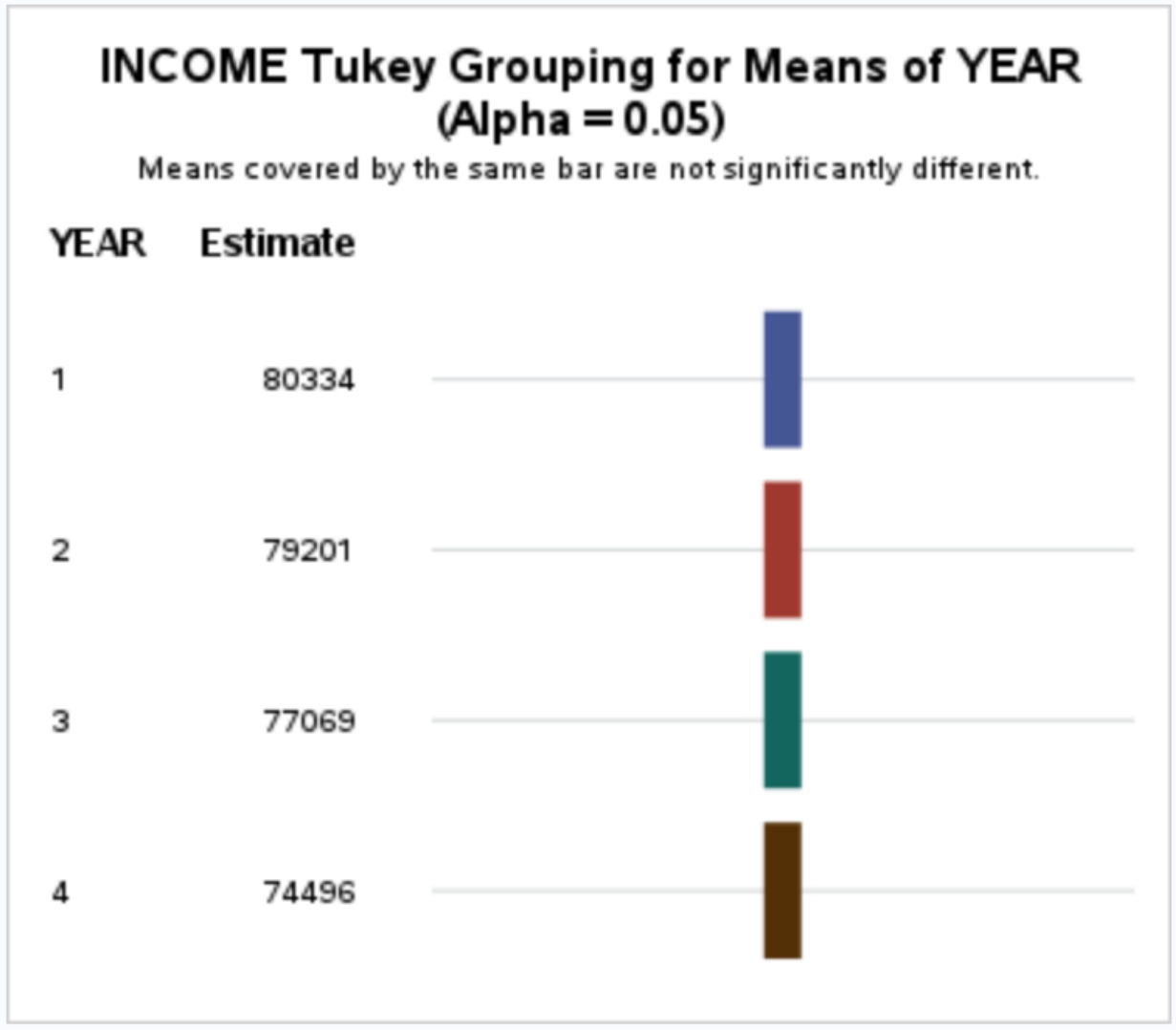

Figure 1: This is my first figure.

Table 1: Population, Race, Ethnicity, Rehospitalization Rates, and Education in Connecticut Counties

CATEGORY	**Fairfield County**	**Hartford County**	**Litchfield C**
Total Population	944977	894465.25	182657
RACE			
American Indian and Alaska Native race alone	0.24	0.3075	0.2025
Asian	5.2925	5.2925	1.9
Black or African American	11.405	13.7025	1.83
Native Hawaiian and Pacific Islander	0.055	0.035	0
White	72.6325	70.67	92.602
Ethnicity			
Hispanic	19.53	17.8275	6.15
Average rehospitalization rate in the county		0.1575	0.14
Education			
Associates	20.74	25	27.922
Bachelor	26.53	21.4575	20.635
Graduate Degree	21.14	16.475	14.697
HS Graduate	21.4725	26.7175	29.587
Less than High School	10.12	10.3525	7.1575