



Short Communication

# Racial/Ethnic Disparities in Cardiovascular Disease Outcomes: Using a Social Determinants of Health Framework to Identify Inequities in Healthcare Access and Treatment

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## Abstract

An overwhelming amount of empirical literature exists that proves structural bias and racism in health care access and treatment in minorities, specifically Black people and people of color who suffer from cardiovascular disease. Cardiovascular disease is the leading cause of morbidity and mortality among black people in the United States (U.S.). The disparities in health care access and treatment are well documented; however, the application of a framework to get upstream of the social determinants that impact this group has not been fully examined. In this communication, the Social Determinants of Health framework (SDOH) will be applied to understand better how structural bias based on race and ethnicity exists and exacerbates cardiovascular disease outcomes. Using the SDOH, five determinants will be analyzed and explored: food insecurity, the built environment, social support, health care policy, and the health care system. To improve health equity, recommendations will be made based on the framework to drive health care policy decisions and health care system reform.

**Keywords:** Social Determinants of Health; Health Disparities; Health Inequities; Cardiovascular Disease; Racism; Ethnicity

## Introduction

Heart disease or cardiovascular disease is related to various heart conditions [1]. Cardiovascular disease has been the leading cause of death in the U.S. for the past 100 years [2]. In 2021 alone, over 695,000 people, or 1 in 5 people, succumbed to heart disease [3]. Racism comes in many forms and is not easily recognizable. Racism can be classified into four categories: internal, institutional, individual, and structural. Minority groups face a higher burden of structural racism and bias due to policy restrictions and lack of access to quality healthcare. Minorities have worse cardiovascular disease outcomes relating to racism at the institutional and individual levels.

Cardiovascular management has improved over the last decade; however, racial and ethnic minority groups continue to experience an unequivocal improvement in outcomes. For example, congestive heart failure hospitalization rates have been studied extensively and, over time, have shown a steady decline in recent years. The decrease in the overall rate of hospitalization for congestive heart failure has been lower in Black people compared to other races and ethnicities. Furthermore, the morbidity and mortality rate related to stroke continues to be elevated in Black people. The increased prevalence of cardiovascular disease risk factors can be attributed to diabetes, obesity, hypertension, genetic predisposition, socioeconomic factors, the built environment, education, income, language proficiency and barriers, bias in physician attitudes, and racism [4].

This paper introduces the social determinants of health to compare and highlight determinants and their contribution to health inequities relating to cardiovascular health outcomes. Each determinant will be analyzed individually to demonstrate how these factors influence discriminatory practices toward Black people and minorities. Addressing the social determinants of health through a framework is necessary to improve health and reduce inequities in cardiovascular health outcomes.

### Social Determinants of Health Framework

The social determinants of health are defined as the conditions in the environment in which people live, work, and play that impact health and quality of life [5]. As shown in Figure 1, the social determinants of health are grouped into five domains: economic stability, education access and quality, health care access and quality, neighbourhood-built environment, and social community context [5].



**Figure 1:** Social Determinants of Health Domains.

**Note:** This model summarizes the social determinants of health five domains. Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved [1 June 2024], from <https://health.gov/healthy-people/objectives-and-data/social-determinants-health>. [6]. Copyright 2024 by Office of Disease Prevention and Health Promotion.

The SDOH is structured around Healthy People 2030 and examines how race and ethnicity are interconnected. The framework will shape how social constructs, including access to healthy food, geography, social support, health care access, and policy, directly contribute to cardiovascular disease disparities. As shown in Figure 2, the framework outlines the factors that specifically contribute to health inequities among Blacks who are diagnosed with cardiovascular disease.

### Food Insecurity

Food security is the ability for all people to have the same access to healthy and nourishing food simultaneously, contributing to a healthy lifestyle. Food insecurity and the inability to access healthy food are linked to an increase in comorbidities such as diabetes, obesity, hypertension, hypercholesterolemia, and cardiovascular disease. Studies have shown that minorities and those of lower socioeconomic status are most likely to experience increased rates of food insecurity and poor access to healthy foods. Additional research has shown a positive correlation between the neighbourhood environment and the density of food stores [7]. This correlation suggests that people who live in neighbourhoods located near fast food restaurants and lack transportation to acquire healthier

food options have an increased risk of risk factors associated with cardiovascular disease, including hypertension, obesity, diabetes, and hypercholesterolemia.

Social Determinants of Health				
Food Insecurity	Built Environment	Social	Health Care Access	Health Care Policy
<b>Contributing Factors</b>				
<ul style="list-style-type: none"> <li>• Food deserts</li> <li>• Lack of food access</li> <li>• Low-income wages</li> <li>• Lack of transportation</li> </ul>	<ul style="list-style-type: none"> <li>• Dilapidated structures</li> <li>• Disinvestment in properties</li> <li>• Lack of green space</li> <li>• Housing insecurity</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of family support</li> <li>• Lack of community support</li> <li>• Poor health literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Biases in health care delivery</li> <li>• Physician bias</li> <li>• Racism</li> <li>• Discrimination</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of prevention vs treatment</li> <li>• Usage of specialty care vs primary care</li> <li>• Lack of diversified workforce</li> </ul>
<b>Health Impacts</b>				
Hypercholesterolemia	Obesity	Hypertension	Diabetes	Cardiovascular Disease

**Figure 2:** Social Determinants of Health Framework.

**Note:** This framework outlines the social determinants of health and contributing factors, which lead to health impacts resulting in cardiovascular disease.

### Built Environment

A growing body of research shows a link between locality and disease risk. Redlining began in the 1930s and included the practice of color-coding areas that were considered an investment risk for minorities [8]. The population that is vastly impacted by housing insecurity and homelessness the most are those who are considered underserved and vulnerable. Minorities, especially those who are Black, are at a higher risk of poor quality and unsafe living conditions. Housing, being a social determinant of cardiovascular health, illuminates the barriers that limit access to affordable housing and should be considered when determining prevention strategies to reduce racial and ethnic disparities.

### Social Support

Social support can be identified as emotional and informational support. Research supports the claim that people in the population with low social support have a higher increase in developing cardiovascular disease. The impact of positive social support correlates with reduced hospital stays and a decrease in the risk of mortality [9]. Healthcare professionals must integrate a screening tool to assess social support to predict the risk of developing cardiovascular disease. Increased social support can serve as a protective factor against cardiovascular disease health and risk.

### Health Care Policy

The disparities that Black people face in America are due signifi-

cantly in part to past and current policies that do not serve to benefit those who are underrepresented. Understanding how past policies help shape and guide the development of future policies to combat disparities may mitigate healthcare disparities and improve overall health and well-being. An overhaul of legislation is needed to improve access to health care, increase diversity among healthcare professionals, and specifically address disparities in chronic disease that racial and ethnic minorities face. A renewed and comprehensive focus is needed to increase physician engagement, cultural competency, and greater awareness of health inequality that exists during diagnosis [10].

### Health Care System

Differential access to equal cardiovascular treatment outcomes and modalities varies among racial and ethnic groups. The subtle bias that occurs is well documented in the literature. The extent of health inequities amplifies challenges in the healthcare system. Race continues to play an integral role in how treatment and clinical decisions are made among minority groups. Additionally, race factors into clinical decision-making and is based on provider attitudes relating to disease stereotyping and treatment guidelines. As a nation, we lead the field in cutting-edge technology, state-of-the-art healthcare facilities, and access to pharmacotherapeutics that are envied across the world but not readily available or accessible to all [11]. Inadequate and inaccessible healthcare treatment for minorities further exasperates the poor quality of care experienced by disparate groups.

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## Recommendations

The strategies needed to assess disease risk include surveillance of pre-existing data on income, neighbourhood characteristics, social support networks, and access to healthcare. Integrating an SDOH framework coupled with a cardiovascular disease risk model will expose health outcomes and how risk factors influence these health outcomes. Research is needed to understand the psychological stressors based on discrimination related to CVD outcomes. Additionally, skills are needed and should be taught in medical programs to educate physicians on the interpersonal and social skills required to communicate, diagnose, treat, and gain the trust of marginalized patients. These skills will facilitate engagement with agencies, organizations, and community groups to develop strategies to eliminate health disparities.

## Conclusion

As with previous literature, the author demonstrates the presence of racial disparities in access to cardiovascular treatment outcomes based on an SDOH framework. Black patients are less likely to be admitted to hospitals with positive cardiovascular disease outcomes than would be expected based on their proximity to healthcare facilities, access to multidisciplinary treatment teams, social network cohesion, socioeconomic challenges, and access to prevention services. To achieve health equity and eliminate health disparities, there is much to accomplish to assure optimal health for underserved members of the population.

## Disclosure

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**Conflicts of Interest:** None.

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