


**EDITORIAL**

# Racial Disparity in the Treatment of Aortic Stenosis

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In this issue of Journal of the American Heart Association (JAHA), Czarny and colleagues compare the incidence of aortic stenosis (AS) in Black, Hispanic, and White patients admitted to a hospital in Maryland using the Maryland Health Services Cost Review Commission administrative database.<sup>1</sup> Despite that Black patients had a higher incidence of acute hospitalizations and rate of inpatient echocardiography, they were half as likely to have any diagnosis of AS compared with White patients. Black patients were younger and had a greater burden of comorbidities and lower median income than White and Hispanic patients. In the cohort of patients with any AS diagnosis, Black patients were less likely to undergo treatment with either surgical or transcatheter aortic valve replacement (TAVR) than White patients. Of the cohort with any diagnosis of mitral regurgitation, Black patients were less likely to undergo surgical or transcatheter mitral valve replacement than White patients. Interestingly, in the 2537 patients admitted with a primary diagnosis of AS, 13.2% were Black (29.1% of the overall Maryland population  $\geq 50$  years is Black), but race no longer predicted likelihood of treatment with surgical aortic valve replacement or TAVR. The authors conclude that racial inequity exists in the rates of surgical aortic valve replacement or TAVR because of numerous complex and multifactorial mechanisms.

Racial inequality in the diagnosis, treatment, and outcomes of cardiovascular disease has been well documented. We agree with Czarny and his esteemed colleagues that the cause of racial disparity in the management of AS is complex and multifactorial. Potential targets to correct inequality require increased understanding of the true prevalence of AS among different races, improved access to health care, and an improvement in the relationship and trust between the healthcare system and people from diverse racial and ethnic groups.

The incidence of AS has been debated and may be lower in Black than in White patients; however, Black patients suffer the risk factors for AS at a greater frequency than White patients.<sup>2</sup> Age is a major risk factor for AS, and it is possible that Black patients become more unwell with other illnesses before their AS becomes severe enough to require treatment. AS is most commonly a disease managed as an outpatient, with referral for treatment on an elective basis. Barriers of access to primary health care reduce the opportunity for patients have valvular disease diagnosed before the development of heart failure. Those who present to hospital with their first presentation of AS are more likely to be suffering end-stage disease. In the study by Czarny and colleagues, Black patients presented to the hospital for acute admissions more frequently than White patients.<sup>1</sup>

Black patients are underrepresented in TAVR. In the recently published STS-ACC TVT (Society of Thoracic Surgeons, American College of Cardiology Transcatheter

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**See Article by Czarny et al.**

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Valve Therapies) Registry for all commercial TAVR performed in the United States, only 3.98% were performed in Black patients.<sup>3</sup> This increased slightly from the period before 2013 (3.67%) to 2019 (4.04%). Hispanic patients represented 5.2% of all TAVR recipients. In US Census data, people of Black and Hispanic race/ethnicity represent 8% and 9% of the population >65 years of age, respectively.<sup>4</sup> An analysis of STS-ACC TVT Registry data from 2011 to 2016 reported TAVR mortality outcomes that were no different between White, Black, and Hispanic patients, but repeat hospitalizations at 1 year were higher in Black patients.<sup>4</sup>

Unfortunately, Black patients and other ethnic minorities are underrepresented in studies for new technology in the treatment of AS. Of the major TAVR trials, only PARTNER 3 reported the rate of non-White patients: 7.7% for TAVR and 9.9% for surgical aortic valve replacement.<sup>5</sup> The reason for underrepresentation of ethnic groups in trials is not clear; investigator bias, which is less likely, and the presence of comorbidities occurring at higher rates in Black patients that may exclude them from participation or refusal to consent are some viable possibilities. A mistrust of health care and research by minorities groups likely persists because of a history of unethical studies in the United States.<sup>6</sup>

The study by Czarny is limited by the use of an administrative database, which without clinical data (such as the results of echocardiography) lacks the granularity required to assess true differences in prevalence and treatment of AS among racial groups. It nonetheless supports the growing weight of evidence that racial bias exists in the treatment of AS and adds to the growing interest in the amelioration of this divide. The TVT Steering committee has commenced a task force to investigate the cause of racial disparity in the treatment of AS and to suggest strategies to address it. A better understanding of the true prevalence of AS

in people from diverse racial and ethnic groups will assist in better public health strategies for screening. Measures to address access to health care must go beyond purely funding and address underlying mistrust, socioeconomic disparity, and systemic racism.

## ARTICLE INFORMATION

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### Disclosures

Dr Thourani has served as a researcher or advisor for Abbott Vascular, Boston Scientific, Cryolife, Edwards Lifesciences, Gore Vascular, Jenavalve, and Shockwave. Dr Edelman has no disclosures.

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