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VIEWPOINT

The Urgent and Ongoing Need for Diversity, Inclusion, and Equity in the Cardiology Workforce in the United States

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To support our contention that diversity in medicine and cardiology will enhance quality care for all patients, we present evidence that: (1) diversity improves outcomes in clinical care and research; (2) minority patients may be more likely to comply with recommendations and receive evidence-based care when cared for by race-concordant physicians; (3) Hispanic, Black, and American Indian physicians play an outsized role in caring for the nation's most vulnerable patient populations; and (4) selection processes that place as much emphasis on personal attributes, such as commitment to disadvantaged communities, as on standardized test scores have proven effective in selecting successful, humanistic physicians.

RACIAL DIVERSITY ENHANCES QUALITY OF CLINICAL CARE AND RESEARCH

In a systematic review of 16 studies from the healthcare and business sectors, authors revealed that diversity (including race, sex, and age) improved clinical outcomes, innovation, and financial returns.[1] More specifically, racial diversity improves healthcare quality. Upon reviewing multiple studies on the topic, Leveist and Pierre[2] concluded in a 2014 review article that enhanced diversity improves overall quality of care through: (1) higher levels of patient satisfaction and trust; (2) enhanced cultural competency in patient-provider relationships; (3) expanding minority patients' access to and utilization of health services; (4) increasing access to care for geographically underserved minority and White communities; and (5) enhancing the breadth and scope of research with a broader range of racial/ethnic perspectives.

While efforts at diversity enhancement in medicine might be expected to benefit minority physicians and patients, White physicians appear to benefit as well. In 2008, Saha and colleagues[3] found that White physicians who attended medical schools with diverse student bodies rate themselves as more comfortable treating diverse patient populations.

More diverse physicians entering medicine and cardiology will lead to more diversity among research teams, which encourages new approaches to framing questions.[4] Diversity among principal investigators also fosters community engagement and involvement of underserved populations in research planning.[5,6] Regarding the number of citations, scholarly publications with diverse authorship have a higher impact.[7]

Several studies indicate that the oft-documented finding that minority patients rate their interactions with minority physicians as more patient-centered and culturally sensitive may translate into measurable indicators of quality care. A recent paper[8] provides insight into the potential consequences when communications are less patient-centered between physicians and patients from different cultural backgrounds. Comparing the progress notes written by White, Asian, and Black physicians after interacting with Black men, the authors found that White and Asian physicians wrote notes that were short,

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reflective only of the physician's recommendation, and did not seem to appreciate the importance of the patient's milieu. "Weight loss" and "Anxiety" are examples of entire progress notes written by White and Asian physicians. By contrast, the Black physicians appeared to incorporate an awareness of the impact of the social determinants of health and the patient's mindset into their notes and recommendations: "Needs food, clothing, shelter, and a job," and "'Flu shot makes you sick,' but he got one anyway" are examples. Perhaps as a result, the Black patients cared for by the Black versus White or Asian physicians were more likely to comply with recommendations to receive vaccinations and finger-stick measurements of cholesterol and glucose. In a separate study, Black patients were more likely to consent to open heart surgery if recommended by Black as opposed to White physicians.[9]

It is possible that racial discordance between physician and patient can put minority patients at a disadvantage at times when they are most vulnerable. In a simulation of end-of-life discussions with Black and White standardized patients playing the role of terminally ill individuals, a group of neutral observers rated the interactions of White physicians with Black patients as less patient-centered. Specifically, when the White physicians interacted with Black as opposed to White patients, they were less likely to stand close to the patient, hold the patient's hand, or look the patient in the eyes.[10]

Findings that White physicians as a group are more likely than other physicians to hold negative unconscious racial biases concerning Black people[11] and that this is associated with a tendency to verbally dominate conversations with Black patients and cut their interactions short[12] raises concerns that important treatment plans may be omitted. In an analysis of >21 000 patients hospitalized with heart failure and severely reduced left ventricular ejection fraction, Black and Hispanic patients were less likely than White patients to receive counseling about and referral for implantation of automatic implantable cardioverter-defibrillators for primary prevention of sudden cardiac death.[13] These studies suggest that strained communication between White physicians and severely ill Black patients, based on cultural differences and unconscious biases, can have dire consequences for patients.

On balance, the available data indicate that more minority physicians could lead to more minority patients receiving vaccines, important health screenings, open heart surgery, guideline-directed care for severe heart failure, and compassionate end-of-life care. Furthermore, more diverse physician-scientists could improve the recruitment of diverse patients into clinical trials and boost the overall impact of research. These findings argue that a diverse cardiovascular workforce is highly desirable and urgently needed.

BLACK, HISPANIC, AND OTHER UNDERREPRESENTED PHYSICIANS ARE MORE LIKELY TO SERVE UNDERSERVED COMMUNITIES

More than 4 decades of data indicate that Black, Hispanic, and other physicians from underrepresented groups play a disproportionate role in serving underserved communities.[14–18] In fact, they enter medical school with this goal[19] and, when undecided, are more likely to come to that decision by graduation. In a 2010 analysis of 80,463 medical school graduates, Black and Hispanic students were more likely than their White and Asian classmates to enter medical school with an intent to serve the underserved. By graduation, Asian and White students who were initially undecided were more likely to answer "No" to the question "Do you plan to locate your practice in an underserved area?" while Black and Hispanic students who were initially undecided were more likely to respond "Yes" to the same question.[20] In fact, the legacy of Black and Hispanic physicians choosing to serve underserved populations is so consistent that after analyzing practice trends among nearly 5000 generalist physicians, Rabinowitz and colleagues[21] suggested that "underrepresented minority" status should be included in a model to accurately predict which medical school applicants would be more likely to ultimately serve underserved populations. While we are compelled to point out that diversity in medicine will bring value to all patient populations and specialties and advocate that underrepresented minority students and physicians pursue the practice setting that brings them the most fulfillment, the facts are immutable: physicians from underserved and underrepresented backgrounds are unique in their passion and commitment to serve the underserved. If producing physicians who have a desire to care for the nation's disadvantaged populations is a goal of academic health centers, then recruitment of Black and Hispanic students into medicine and cardiology should be a priority.

STANDARDIZED TEST SCORES, HOLISTIC REVIEW, DIVERSITY, AND "QUALITY" IN MEDICINE AND CARDIOLOGY

Traditionally, medical school applicants were considered "qualified" based solely or largely on standardized test scores. Many current leaders in medical education believe that the average differences between students from underrepresented groups and White and Asian students on standardized tests are influenced by structural racism and unequal

educational opportunities in the United States, including unequal opportunities to hone test-taking skills.[22] For this reason, medical school selection committees have long criticized the overreliance on grade point average and Medical College Admissions Test (MCAT) scores as the primary criteria for acceptance into medical school, noting the importance of other applicant characteristics such as diversity in background and philosophy, community service, and leadership roles. Hence, many medical schools have moved to a "holistic review" of applicants, balancing emphasis on the candidate's standardized test scores, personal attributes, and life experiences.[23,24]

A 2014 report by Urban Universities for Health found holistic review to be an effective strategy to improve access to higher education while maintaining overall student success, noting that 89% of the schools using holistic review reported unchanged or increased standardized test scores and 96% reported unchanged or increased graduation rates.[25] Furthermore, it has been shown that implementing interventions to enhance academic success during medical school can lead to scores on the US Medical Licensing Examination Step 1 that exceed those expected based on initial MCAT scores.[26] This not only highlights the benefit of a supportive learning environment, but also the advantage of using holistic review in the selection process. While standardized tests are important in the assessment of physicians, the range of MCAT scores associated with success in medical school is known to be wide.'[27] Not only are there are no data supporting the notion that diversity enhancement in medicine or cardiology lowers the "quality" of trainees, but available evidence suggests that medical school and residency/fellowship selection committees should embrace holistic review strategies to enhance the quality and diversity of training programs.

STRATEGIES TO ENHANCE DIVERSITY IN CARDIOLOGY: THE ACC DIVERSITY AND INCLUSION TASK FORCE

Cognizant of the persistent racial cardiovascular healthcare disparities in this country, the critical lack of diversity in the cardiology profession, and the positive impact of diversity on healthcare outcomes, the American College of Cardiology (ACC) Board of Trustees created a Task Force on Diversity and Inclusion in 2017. The ACC Board of Trustees approved the Diversity and Inclusion Strategic Plan in January 2018, with the following goals[28]:

1. To ensure that cardiovascular medicine in general, and the ACC in particular, benefit from a diversity of backgrounds, experiences and perspectives in leadership, cardiovascular healthcare delivery, business, education and science.
2. To ensure that cardiovascular medicine in general, and the ACC in particular, attract and provide rewarding careers and leadership opportunities for the full range of talented individuals.
3. To ensure that the diverse health needs of cardiovascular patients and populations are met by cardiovascular clinicians sensitive to and prepared to meet the unique needs of their gender, cultural, racial and ethnic and other dimensions of diversity.

Additionally, several aspects of the Diversity and Inclusion Initiative have been incorporated into the ACC 2019–2023 Strategic Plan, including metrics for increasing diversity in leadership among Black, Hispanic, Asian, and women cardiologists; creation of educational modules; and others.[29] While the ACC seeks to increase the proportions of women and racial and ethnic minorities in cardiology and in leadership positions, it does so by emphasizing inclusion, equity, and excellence. As a measure of its effectiveness in analyzing the current status of diversity within cardiology,[30] recommending changes in the process of recruiting cardiology trainees,[31] and producing policy statements on workforce compensation equity,[32] the Task Force will be transitioning to a standing committee in March 2021.

EFFECTIVENESS OF CURRENT STRATEGIES TO ENHANCE DIVERSITY IN MEDICINE AND CARDIOLOGY

The total number of cardiology trainees self-reporting their race/ethnicity as Black, Hispanic, American Indian, Native Alaskan, and Native Pacific Islander increased modestly from 206 of 2142 fellows (9.6%) in 2009 to 316 of 2731 (11.6%) in 2018—an absolute increase of 110 fellows.[33] While modest in number, this increase shows some effectiveness of increased attention to diversity as a desirable characteristic in training programs. One program, recognizing the positive impact of diversity on clinical care, educational programs, and the cultural competence of all trainees, prioritized diversity as an excellence initiative and achieved an increase in its Black cardiology trainees from zero to 25%. Notably, the average standardized test scores of the Black trainees did not differ from the majority race fellows in the program, confirming that diversity enhancement is not synonymous with a drop in test scores.[34] Specific strategies to enhance diversity in cardiology have been discussed in recent publications and include exposing minority children

and college and medical students to cardiology as a profession early, ensuring uniform mentorship opportunities of all medical students and internal medicine trainees, adopting holistic review of cardiology fellowship applicants, actively recruiting for diversity, and bias mitigation training of "gatekeepers" (college and medical school admissions officers, and internal medicine and cardiology fellowship selection committee members).[32] Ultimately, diversifying the medical profession and cardiology will require dismantling social, economic, and geographic barriers that limit educational opportunities for minority and disadvantaged students. Yet, an important rate-limiting step will be adoption of the belief that diversity in medicine enhances quality. In a recent survey, cardiology fellowship program directors were asked whether they believed that "diversity in medicine enhances quality." Thirty percent of respondents selected "No" or "Maybe" and a majority could not cite 1 or 2 sources to support the statement.[35] We are hopeful that with promoting evidence such as that discussed in this and other articles and the creation of new data, diversity enhancement in medicine and cardiology will be recognized as a strategy to improve care for all and mitigate racial inequities in care.

CONCLUSIONS

We have reviewed data indicating that increasing the number of Black, Hispanic, American Indian, and other underrepresented groups in medicine and cardiology will enhance the cultural competence of majority race physicians, improve the care received by minority patients attributable in part to enhanced communication and trust, ensure that underserved and disadvantaged communities have a steady supply of physicians dedicated to their care, and enhance the inclusivity and impact of medical research resulting in improved care for all patients. The United States is at a critical crossroads regarding race relations. Medicine and cardiology can heed the global call to dismantle structural racism in all aspects of American life by diversifying their ranks and eliminating racial disparities in care.

ARTICLE INFORMATION

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