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RACISM, EQUITY AND DISPARITIES IN TRAUMA (S ROGERS AND T ZAKRISON, SECTION EDITORS)

Diversifying Medical School and Residency Programs: a Practical Guide for Gatekeepers

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Abstract

Purpose of Review The physician workforce in the USA does not reflect the diversity of the nation's population, and this lack of diversity contributes to current healthcare disparities. We provide a brief review of strategies that may help medical educators enhance the diversity of their medical schools or residency programs.

Recent Findings Crafting a mission statement, active recruiting, expanding the application screening process, extending the concept of "merit," and mitigating implicit biases are reviewed as strategies to enhance diversity in medicine.

Summary Diversity drives excellent outcomes in clinical medicine and research. It is imperative that residency program directors and admissions committee leaders be familiar with practical tools to help enhance diversity in their programs.

Keywords Diversity · Bias · Screening · MCAT · Step 1 · Race · Black · Underrepresented minority

Introduction

The case for increasing diversity in medicine is easy to make. Numerous studies indicate that a more diverse physician work force will improve equitable care for all patients: White physicians who train in diverse environments rate themselves as more comfortable treating minority patients [1]; physicians from underrepresented or disadvantaged backgrounds play an outsized role in serving the nation's medically underserved communities [2]; minority patients are more likely to comply with recommendations of physicians who share their background [3, 4], and physician-patient racial concordance has been associated with improved patient outcomes in a variety of specialties [5, 6]. With regard to biomedical research, racial and ethnic diversity on research teams enhances the impact of the research [7], and diversity among principal investigators may facilitate recruiting diverse patients into experimental studies, a critical step to close existing knowledge gaps about beneficial or adverse treatment effects in different populations.

Becoming a physician requires the successful completion of multiple, sequential steps and at each step, individuals decide which physician-hopefuls will continue or be turned away. Medical school admissions committees and residency/fellowship selection committee members and leaders are "gatekeepers" to our profession. While many of them see the value of enhanced diversity in medicine, they may benefit from a review of practical strategies to improve diversity. Here we attempt to provide some strategies to diversify medical school and residency/fellowship programs based on both the published literature and our own experience. Table 1 summarizes these strategies.

Craft a Mission Statement that Explicitly States a Commitment to Training Diverse Individuals

Creating and publicly posting a strong, inclusive mission statement can achieve two goals. The visible statement can be a strong tool for recruiting diverse applicants and it can guide the culture of every step of the selection process. Institutions that post a mission statement with an explicit commitment to minority representation in medicine successfully

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Table 1 Recommended steps to improve diversity in undergraduate and graduate medical education

Craft a mission statement	*How to get started* • Evaluate the aim and impact of the current mission statement • Adapt to include the goal of increasing diversity • Get buy in from leaders, trainees, alumni, and patients	*Intended impact* Increased signal to external applicants and provides guidance to internal decision making
Expand screeners	*How to get started* • Increase the number of applicant screeners and hold annual training in bias mitigation and following the program/school mission statement • If standardized test score cutoffs used, ensure that they are "evidence-based • Adopt a holistic review process for initial application screening	*Intended impact* More trained screeners provide more time for careful, holistic review of applications, more "eyes" on the applicants dilutes impact of biases
Rethink concept of "merit"	*How to get started* • Consider what factors (other than academic performance) are valued in your mission statement and in your program. Example: "collegiality", "stated desire/experience serving underserved populations" • Create interview/screening scoring sheets that mathematically rate the desired factors • Create global merit score that includes all factors.	*Intended impact* Improve ability to achieve social mission of program/medical school
Recruit actively/engage the deep pipeline	*How to get started* • Attend the *AAMC Minority Student Medical Career Fair* • Attend career fairs hosted by *HBCUs* and *HSIs* • Identify community partners to build community programs to promote careers in the medical field • Attend residency fairs coordinated by the *SNMA* and *LMSA* • Host your own Diversity Recruitment Fairs or "Diversity 2nd Look" programs • Sponsor URM Visiting Clerkship Programs	*Intended impact* Mitigate barriers to admission/program selection; supply accurate information about pursuing medicine and your program specialty; encourage application to your institution
Mitigate implicit bias in selection process	*How to get started* • Host annual implicit bias mitigation workshops for selection committees • Have selection/admissions committee members take Implicit Association Tests prior to the bias mitigation exercises • Add annual readings or online learning modules on mitigating implicit bias	*Intended impact* Mitigate unconscious race, gender, religion, sexuality, etc. biases that impact selection processes

recruit and graduate more underrepresented minority (URM; Hispanic, Black, Native American, Native Hawaiian, Alaskan, and Pacific Islanders) students [8]. Leaders of the selection committees must reinforce the mission statement at the beginning of each application review cycle and several times throughout. We have found it useful to have the mission statement posted on a placard and present in the room where deliberations take place. The mission statement should be reflected in criteria used to screen applications, in the standardized questions asked of interviewees, and in the priorities followed when ranking applicants. If the mission statement does not influence these three processes, then it will simply be a collection of lofty words.

Expand the Team of Individuals Screening Applications

Medical schools and residency programs are unable to accept all qualified applicants. A critical review of applicant's credentials compared to the school/program's mission statement is perhaps the most critical part of the selection process. This is a time-intensive process, too often entrusted to a very small number of individuals or staff members. We have found that medical school faculty are eager to participate in this process, and if asked (and offered the appropriate training) many would volunteer to do so. Increasing the number of screeners and training them in holistic review, implicit bias mitigation, and in applying the school or program's mission statement were important steps in diversifying the student body at our previous institution where we increased the number of individuals involved in screening medical school applications from two to eighty just by asking for faculty volunteers [9].

Expand the Concept of "Merit"

Historically, deciding which applicants were deserving of the opportunity to continue pursuing their medical training was based solely or largely on academic performance in the classroom and on standardized tests. Medical College Admissions Test (MCAT) and US Medical Licensing Examination Step 1 scores are among the few standardized tools at the disposal of review committees to compare students across multiple academic institutions and medical schools and are thought to offer the best chance to objectively level the playing field. However, this must be balanced by the fact that individuals with higher scores do not necessarily outperform those with lower scores in terms of clinical excellence. A study from Northwestern medical center analyzed test scores of internal medicine residents chosen to be the administrative chief resident, an honor generally bestowed on the highest performing and most capable resident(s) in their class. The authors found no significant differences between the mean Step 1 scores of those invited to be chief resident and those who were not [10].

When medical school admissions committees and residency selection committees arbitrarily set MCAT and Step 1 score "cutoffs" for application review it tends to exclude URM applicants and those from disadvantaged backgrounds and perpetuates the effects of systemic racism in the US educational system [11]. Obviously, the scientific rigors and requirements for critical thinking in the medical profession mandate that we select candidates with a strong aptitude in science and problem solving. We are not arguing against the use of the MCAT and Step 1 scores as measures of these traits; rather, we suggest that they be used in conjunction with other characteristics. For instance, all medical schools, regardless of whether they have a primary focus on primary care, tertiary care, or research excellence, would be proud of their alumni who spend considerable time serving underserved and disadvantaged populations. Students from Black, Hispanic and other underrepresented groups are more likely than White or Asian students to enter and graduate from medical school with an intent to serve the underserved. In a recent analysis of more than 80,000 medical school graduates 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 answer "Yes" to the same question [12]. We recently described our experience of how using a tool to score and assign a high priority to an applicant's experience and desire to serve disadvantaged communities contributed to the diversity of a training program [13].

Thus, we propose that medical schools and programs should not consider academic performance to be the sole indicator of an individual's "merit" to study medicine, but rather, should consider a combination of academic performance and characteristics such as the likelihood and stated desire to serve those who are less fortunate.

Recruit Actively

Many medical schools and residency programs rely on name recognition of their institution and guidance that applicants receive from mentors and peers to sustain and enrich their applicant pool. In a recent survey of cardiology fellowship program directors, 82% of respondents indicated that they participate in recruitment activities for their fellowship program. To the follow-up question about what recruitment activities they used, 72% of respondents reported that "keeping the website current" was the sole method of recruitment [14]. This passive approach likely contributes to the lack of

diversity in the applicant pool to many medical schools and residency programs. While active recruitment can involve "keeping the website current," including posting a statement that explicitly states that the program/school seeks to train diverse individuals and displaying photographs of diverse faculty and trainees, the website is but one recruitment tool. Additional tools should include advertising the program and mission statement on social media, participation of leaders in in-person or virtual minority recruitment fairs such as annual events hosted at the Association of American Medical Colleges or by the Student National Medical Association or Latino Medical Student Association, and hosting school or program-specific recruitment fairs or diversity "Second Look" programs. Many graduate medical education programs offer visiting clerkships for URM medical students to recruit talent and to develop a reputation as a program that actively promotes diversity and inclusion.

Active recruitment should not exclusively target college and medical students in the near pipeline. Deep pipeline activities that expose children in grade schools and high schools to medicine, such as inviting local classrooms to participate in proctored, hands-on educational sessions in clinical simulation laboratories once a year have the potential to keep young aspiring physicians inspired for the long road ahead. We recommend that all medical schools or teaching hospitals "adopt" a local elementary or high school and engage in this important community service at regular intervals. These endeavors require human and financial resources which programs and institutions must commit if they truly value diversity as a component of institutional excellence.

Mitigate Implicit Bias in the Screening, Interviewing, and Ranking Processes

Like the lay public, physicians hold negative or positive implicit racial biases that may impact clinical decision making and interpersonal communication [15–17]. Physicians involved in candidate selection may make decisions that are influenced by these unconscious biases [18]. A recent report showed that while faculty on a large medical school admissions committee exhibited implicit negative attitudes toward Blacks, awareness of these biases and subsequent bias mitigation training resulted in an increased diversity in the next matriculating class and subsequent classes [19]. Fortunately, several studies have shown that educational interventions can be successful at increasing awareness of and reducing biases and promoting more equitable outcomes [20–22].

Medical school admissions committees and residency/fellowship can experience implicit bias mitigation workshops as a team. We prefer a group discussion with vignettes in which cases are presented and discussed and workshop participants intentionally list items that could trigger biases (race, skin tone, gender, perceived religion, obesity, etc.) and then verbally "rehearse" research-proven bias mitigation strategies [23]. These discussions should be led by an experienced bias mitigation workshop leader.

Conclusion

The lack of diversity in medicine deprives many patients of culturally competent healthcare, exacerbates healthcare disparities and limits the impact and inclusivity of biomedical research. This problem deserves to be elevated to a level of national concern with all academic health centers innovating local and national strategies to enhance diversity in medicine. Ultimately, dismantling structural racism in the US educational system and social structures will be required to ensure an equal opportunity for all children to pursue careers in medicine. However, we cannot wait until this has been achieved. It is our hope that admissions committee members and residency program directors who share a sense of urgency to diversify our profession will find some of these strategies useful.

Declarations

Conflict of Interest The authors have no conflicts to disclose

Human and Animal Rights This article does not contain any studies with human or animal subjects performed by any of the authors.

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