REPORT OF THE BOARD OF TRUSTEES

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Subject: Racial Essentialism in Medical Education

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INTRODUCTION

This informational report submitted to the House of Delegates summarizes American Medical Association (AMA) activities in combatting racial essentialism in medical education and is written in response to AMA Policy D-350.981, "Racial Essentialism in Medicine."

RACIAL ESSENTIALISM IN MEDICAL EDUCATION

"Racial essentialism" is defined as the belief in a genetic or biological essence that defines all members of a racial category.[1,2] However, this theory is grounded in fallacy, as science has proven that race is a social construct based on a human-invented classification system to define physical differences among people.[3] There is ample evidence that race is a poor proxy for genetic differences and "phenotypic" features commonly referenced in discussions of race fail to correspond to discrete categories or underlying physiology.[4] Additionally, the categorizations of race have led physicians and medical students alike to draw conclusions about the hierarchical organization of humans, which connect an individual to a larger preconceived geographically circumscribed or socially constructed group. This belief contributes to the cultivation of structural racism, which refers to the totality of ways in which societies foster racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice. These patterns and practices in turn reinforce discriminatory beliefs, values, and distribution of resources.[5]

Current Manifestations of Racial Essentialism in Medical Education

Racial essentialism has been preserved in medicine and medical education in multiple ways.

Foundational scientific content and clinical teaching is based upon research that commonly lacks diverse representation among subjects. This can lead to teaching of outdated or ill-informed practices, such as race-based calculation of estimated glomerular filtration rate (eGFR). Renal function estimated glomerular filtration rate (eGFR) calculations have historically been adjusted up for Black/African American race to account for "increased muscle mass," though no robust scientific evidence exists to support this claim, and patients have been categorized as "Black" and "non-Black." This practice minimizes the severity of illness in Black patients, has led to the overestimation of kidney function among Black patients, and has translated to devastating consequences such as delayed referrals for treatment, disqualification for transplants, and misguided treatment and counseling. It also creates a blind spot for the treatment of others who may be inaccurately aggregated under one homogeneous "non-Black" label regardless of their genetics or biological ancestry, health profile, or social circumstances. In 2020-2021, following a review of the practice and mirroring the precedent set by Beth Israel Deaconess Medical Center, Mass General Brigham and New York City Health + Hospitals eliminated the use of race as a

factor when calculating kidney function and implemented that renal function eGFR calculations would be solely based on creatinine levels, age, and sex for all patients.[6] Additionally, the National Kidney Foundation (NKF) and the American Society of Nephrology (ASN) established the NKF-ASN Task Force on Reassessing the Inclusion of Race in Diagnosing Kidney Disease, a joint task force to examine the inclusion of race in the estimation of GFR and its implications for the diagnosis and subsequent management of patients with, or at risk for, kidney diseases. The task force released an interim report entitled "Reassessing the Inclusion of Race in Diagnosing Kidney Diseases: An Interim Report from the NKF-ASN Task Force" which detailed the process, initial assessment of evidence, and values defined regarding the use of race to estimate GFR in June 2021.[7]

Lack of diverse representation in educational practices is another challenge. There is a paucity of educational materials on non-white skin tones and the lack of curriculum devoted to the care of diverse skin and hair textures of patients demonstrates the lack of inclusion in training materials for medical students.[8,9] A recent study of race and skin tone depicted in images in textbooks assigned at top medical schools found that while the textbooks did approximate the racial distribution of the U.S. population—62.5% white, 20.4% Black, and 17.0% Person of Color—the skin tones in the illustrations—74.5% light, 21% medium, and 4.5% dark—overrepresent light skin tone and underrepresent dark skin tone. There is also an absence of skin tone diversity at the chapter and topic level.[10] The lack of training on diverse skin tones extends into patient care, and patients have expressed frustration with dermatologists who lack experience and knowledge in the care of disorders of diverse skin tones and hair textures. Fortunately, dermatology residency programs are making efforts to incorporate training on treatment of skin of color into their curriculum.[11] Similarly, simulations and clinical skills frequently lack diverse representation.

Perpetuation of stereotypes in the learning environment include naming of implicit bias and social elements included in clinical case vignettes and examination items. These stereotypes lead to incomplete framing of social determinants of health and presenting social determinants of health as a matter of personal choice or unfortunate personal circumstances rather than acknowledging systemic and structural drivers of those social factors. Stereotyping is a cognitive process in which individuals use a social category to acquire, process, and recall information about people. Stereotyping can both lead to and stem from unconscious bias. These processing patterns unconsciously help individuals organize complex information. The conscious effort to reduce automatic stereotyping requires considerable cognitive resources and, under heavy cognitive load—including during clinical training and decision-making—individuals rely more heavily on stereotyping to process information. Indeed, while structured clinical vignettes have long been utilized as a resource to illustrate or highlight some aspect of medicine that the clinician can use to improve one's knowledge and clinical skills, clinical vignettes are not immune from stereotypes. Evidence of unconscious bias was found in a study of emergency department physicians' treatment of pain using clinical vignettes and found that socially desirable information increased the prescribing rates by a small but statistically significant percentage.[12] Additionally, a 2019 meta-analysis of studies conducted from 1990 to 2018 found that Black patients were 40% less likely and Hispanic patients were 25% less likely to receive medication to ease acute pain compared to white patients.[13] Equally concerning are patients' interpersonal experiences of unfair treatment while seeking care due to their race ethnicity, gender identity, sexual orientation. These experiences can lead people to delay or forgo care, and to experience adverse health consequences.[14]

Clinical reasoning strategies and algorithms that support clinical decision making frequently lack diverse representation. Many data repositories collect race and ethnicity data on thousands if not millions of Americans, and it is not uncommon for multivariate analyses to test whether certain

patient characteristics, such as gender, age, co-morbidities, race and ethnicity contribute significantly to the predictive accuracy of estimates of risks and benefits of the various preventative and therapeutic options. With race now understood as a social, not biological construct, and as proxies for non-biological factors including social determinants of health and structural racism, considerable scholarship has been focused on determining whether race and ethnicity should continue to be included in clinical algorithms and in teaching of clinical reasoning.

EFFORTS TO ADDRESS RACIAL ESSENTIALISM IN MEDICAL EDUCATION

There have been efforts to examine practices of racial essentialism in medical education at an institutional level. These efforts include review and modernization of outdated material such as slides and clinical case vignettes to mitigate bias, explicit training in health system science, structural competency, structural drivers of social determinants of health and structural racism as well as training in metacognition, implicit bias and common forms of error in clinical reasoning. Institutions are also seeking diverse representation in clinical skills training and simulation (e.g., ophthalmologic examinations). In addition, institutional efforts have strived to actively foster diversity in classroom and clinical learning environments, explicitly consider perspectives missing from any given environment and improve the diversity of the profession by promoting holistic selection into medical school and residency by providing implicit bias training to gatekeepers and supporting pathway programs.

The AMA's Accelerating Change in Medical Education initiative has led to the development and scaling of innovations influencing the full continuum of medical training. The core initiative objectives focus on competency-based approaches to medical education and individualized pathways for students; training in health systems science; and enhancing the learning environment. This initiative has been successful in stimulating change at the consortium schools and propagating those innovations broadly, with outputs involving medical students, faculty, medical schools, affiliated health systems, and the broader educational landscape.

In 2020, this initiative conducted a 4-week series entitled "Combatting structural racism in UME and GME," which featured interactive sessions addressing the structural racism embedded in medical educational programs. Each session was convened for 2 hours and approximately 50 medical educational programs were represented. Structural racism in both undergraduate and graduate medical education was addressed and topics of focus included "The Educational Milieu," "Appraising Programmatic Outcomes," and "Microaggressions."

During the series, member schools of the Accelerating Change in Medical Education Consortium explored the AMA curricular diversity and inclusion self-study process at a high level, with each institution to develop its own plan to follow up. The outline for self-study and action plans can be found at: https://www.ama-assn.org/system/files/2020-07/curricular-diversity-inclusion-self-study.pdf. In addition, the series highlighted a session on "Structural racism embedded in educational materials and approaches," which included the naming of implicit bias in training examples, incomplete framing of equity issues, biologic versus sociologic construct of race, and bias in historical clinical protocols taught in basic science and clinical training. During this series, medical schools such as the Warren Alpert Medical School of Brown University and the George Washington University School of Medicine and Health Sciences shared their struggles and strategies for shifting the curriculum from race-based medicine to race-conscious medicine as an alternative to improve health outcomes for all.

Since 2020, the AMA has also conducted the following webinars on the topic of structural racism in medical education:

- Applying systems thinking to address structural racism in health professions education
- Combating racism in med ed to address health care disparities
- Uprooting structural racism in medical education

The AMA has also hosted *Prioritizing Equity* episodes devoted to this topic, including:

- Examining race-based medicine
- Getting to justice in education
- Moving Upstream
- The Root Cause & Considerations for Health Care Professionals

These (and other) *Prioritizing Equity* episodes will be featured in the Health Equity Education Center, a new part of the AMA Ed Hub launched by the Center for Health Equity. These videos will be further supported by new educational modules developed in partnership with COVID Black, an organization that helps healthcare systems, academic institutions, non-profit organizations, and companies solve problems around racism and health by developing custom e-learning content based on modern instructional design and visual design principles to create an impactful learning experiences about race, health disparities, health equity, and medicine. The first module serves as an introduction to racism in medicine, with substantial analysis and exploration of the history of racial essentialism and the social construction of race. Modules in development for publication later in 2021 will further examine racism in other aspects of health care, from COVID vaccination inequities to maternal and child health to health communications to public health data.

CONCLUSION

The AMA remains committed to pushing for a shift in thinking from race as a biological risk factor to a deeper understanding of racism as a social determinant of health.

APPENDIX - Relevant AMA Policy

H-65.953, "Elimination of Race as a Proxy for Ancestry, Genetics, and Biology in Medical Education, Research and Clinical Practice,"
1. Our AMA recognizes that race is a social construct and is distinct from ethnicity, genetic ancestry, or biology. 2. Our AMA supports ending the practice of using race as a proxy for biology or genetics in medical education, research, and clinical practice. 3. Our AMA encourages undergraduate medical education, graduate medical education, and continuing medical education programs to recognize the harmful effects of presenting race as biology in medical education and that they work to mitigate these effects through curriculum change that: (a) demonstrates how the category "race" can influence health outcomes; (b) that supports race as a social construct and not a biological determinant and (c) presents race within a socio-ecological model of individual, community and society to explain how racism and systemic oppression result in racial health disparities. 4. Our AMA recommends that clinicians and researchers focus on genetics and biology, the experience of racism, and social determinants of health, and not race, when describing risk factors for disease.

D-350.981, Racial Essentialism in Medicine
1. Our AMA recognizes that the false conflation of race with inherent biological or genetic traits leads to inadequate examination of true underlying disease risk factors, which exacerbates existing health inequities. 2. Our AMA encourages characterizing race as a social construct, rather than an inherent biological trait, and recognizes that when race is described as a risk factor, it is more likely to be a proxy for influences including structural racism than a proxy for genetics. 3. Our AMA will collaborate with the AAMC, AACOM, NBME, NBOME, ACGME and other appropriate stakeholders, including minority physician organizations and content experts, to identify and address aspects of medical education and board examinations which may perpetuate teachings, assessments, and practices that reinforce institutional and structural racism. 4. Our AMA will collaborate with appropriate stakeholders and content experts to develop recommendations on how to interpret or improve clinical algorithms that currently include race-based correction factors. 5. Our AMA will support research that promotes antiracist strategies to mitigate algorithmic bias in medicine.

H-65.952, Racism as a Public Health Threat
1. Our AMA acknowledges that, although the primary drivers of racial health inequity are systemic and structural racism, racism and unconscious bias within medical research and health care delivery have caused and continue to cause harm to marginalized communities and society as a whole. 2. Our AMA recognizes racism, in its systemic, cultural, interpersonal, and other forms, as a serious threat to public health, to the advancement of health equity, and a barrier to appropriate medical care. 3. Our AMA will identify a set of current, best practices for healthcare institutions, physician practices, and academic medical centers to recognize, address, and mitigate the effects of racism on patients, providers, international medical graduates, and populations. 4. Our AMA encourages the development, implementation, and evaluation of undergraduate, graduate, and continuing medical education programs and curricula that engender greater understanding of: (a) the causes, influences, and effects of systemic, cultural, institutional, and interpersonal racism; and (b) how to prevent and ameliorate the health effects of racism. 5. Our AMA: (a) supports the development of policy to combat racism and its effects; and (b) encourages governmental agencies and nongovernmental organizations to increase funding for research into the epidemiology of risks and damages related to racism and how to prevent or repair them. 6. Our AMA will work to prevent and combat the influences of racism and bias in innovative health technologies.

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