



Understanding and Addressing Disparities and Discrimination in Education and in the Physician Workforce

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A Position Paper of the
American College of Physicians

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Abstract

Racial and ethnic minority populations in the U.S. experience disparities in their health and health care that arise from a combination of interacting factors, including racism and discrimination, social drivers of health, health care access and quality, individual behavior, and biology. To ameliorate these disparities, the American College of Physicians (ACP) proposes a comprehensive policy framework that recognizes and confronts the many elements of U.S. society, some of which are intertwined and compounding, that contribute to poorer health outcomes. Ensuring a diverse health care workforce that is representative of the patients it serves is crucial in building trust and understanding between patients and health care professionals of different backgrounds. However, to enhance the physician pathway and also equip patients with the knowledge and skills necessary for living healthy lives, barriers and inequities in education at all levels must be eliminated. To achieve these goals, this ACP position paper makes recommendations for safe, inclusive, and supportive educational and workplace environments; diverse medical school bodies and workforces; and supporting, funding, and strengthening education at all levels.

Introduction

In this position paper, the American College of Physicians (ACP) proposes recommendations for addressing disparities and discrimination based on race, ethnicity, religion, and cultural characteristics and identities in the context of education and the physician workforce. These recommendations are made as part of ACP's comprehensive, interconnected, and evidence-based policy framework to address racial and ethnic health disparities. This framework, which is outlined in an accompanying proposal (1), includes 17 recommendations, four of which are expanded upon and discussed in more detail in this paper. The two other companion papers address specific issues affecting the health and health care of those populations most at risk (2) as well as discrimination and disparities in criminal justice and law enforcement and their impact on health (3). Together, these four papers provide a comprehensive and interconnected policy approach to addressing important issues cutting across clinics, hospitals, schools, universities, prisons, and various other elements of society to achieve ACP's holistic vision to eliminating health disparities.

Disparities exist in all levels of education. At the primary and secondary education levels, disparities in resources can impact quality, opportunities, and outcomes, particularly for persons most affected because of their race, ethnicity, and cultural characteristics and identities. Education is an important social determinant of health as it can determine access to safer neighborhoods, financial resources, employment opportunities (and in turn insurance coverage), and the skills and reasoning necessary for producing health (4,5). More education has been associated with longer life expectancy (6,7), lower mortality rates (8), and lower rates of risk factors (7). The effect of these primary and secondary education disparities can appear in medical school, where only 6.2% of students are Black, 5.3% Hispanic or Latino, 0.2% American Indian or Alaska Native, and 0.1% Native Hawaiian or Pacific Islander (9).

These disparities can further in part translate to disparities in the physician workforce: 5.8% of physicians are Hispanic, 5% Black, 0.3% American Indian or Alaska Native, and 0.1% Native Hawaiian or Pacific Islander (10). Physicians from underrepresented backgrounds can face numerous barriers, discrimination (11,12), a lack of career advancement and mentors (13), and the burden of extra responsibilities for diversity activities and services (14,15). Several studies have found that racial and ethnic minority patients with racially concordant physicians have experienced improvements in outcomes (16) and rates of preventive services (17), which demonstrates the importance of recruitment and retention of physicians of underrepresented backgrounds. In addition, physicians from underrepresented backgrounds are more likely to see racial and ethnic

minority patients, Medicaid patients, and uninsured patients (18). Because of this, ACP contends that policy recommendations to address disparities and discrimination in education and the physician workforce are a key component to a comprehensive and overarching approach to eliminating disparities in health and health care.

Methods

This position paper was drafted by ACP's Health and Public Policy Committee, which is charged with addressing issues that affect the health care of the U.S. public and the practice of internal medicine and its subspecialties. The authors reviewed available studies, reports, and surveys related to health, education, and criminal justice disparities from PubMed and Google Scholar between 1990 and 2020 and relevant news articles, policy documents, Web sites, and other sources. Recommendations were based on reviewed literature and input from ACP's Board of Regents; Diversity, Equity, and Inclusion Committee (DEI); Education Committee (EC); Ethics, Professionalism and Human Rights Committee (EPHRC); and other external experts. The position paper and related recommendations were reviewed and approved by the ACP Board of Regents on 7 November 2020. Financial support for the development of this position paper came exclusively from the ACP operating budget.

Recommendations

- 1. ACP believes that public policy must support efforts to acknowledge, address, and manage preconceived perceptions and implicit biases by physicians and other clinicians.**
- 2. ACP believes that health care facilities and medical schools and their clinicians and students should be incentivized to use patient-centered and culturally appropriate approaches to create a trusted health care system free of unjust and discriminatory practices.**
- 3. ACP believes that a diverse, equitable, and inclusive physician workforce is crucial to promote equity and understanding among clinicians and patients and to facilitate quality care, and it supports actions to achieve such diversity, equity, and inclusion. ACP recommends that the following actions be taken by health institutions and medical schools to achieve such diversity:**
 - a. Implement policies and practices to eliminate racism and discrimination experienced by health care professionals, especially medical students, residents, and faculty. Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other persons affected by discrimination must be treated with respect and dignity; have opportunities for leadership, mentorship, and advancement; be empowered to report harassment, abuse, and other transgressions; and be ensured action is taken to support them and prevent future abuse.**
 - b. Be transparent in the policies taken to achieve these goals and be held accountable for failing to create a safe, inclusive, and supportive environment. Federal and state funding should be withheld from those institutions that fail to meet these goals and engage in or permit acts of discrimination. Health care professionals who engage in overt racist and discriminatory behavior must be subject to appropriate professional discipline.**

- c. Medical and other health professional schools should revitalize and bolster efforts to improve matriculation and graduation rates of racial and ethnic minority students. Institutions of higher education should appropriately consider a person's race and ethnicity as one factor in determining admission in order to counter the impact of current discriminatory practices and the legacy of past discrimination practices and better reflect the current composition of the population. Programs that provide outreach to encourage racial and ethnic minority enrollment in medical and other health professional schools should be maintained, reinstated, and expanded, including diversity/minority affairs offices, scholarships, and other financial aid programs.**
- d. All arenas of the health care workforce should be incentivized to implement evidence-based best practices in the recruitment, retention, and advancement of health professionals of Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other persons affected by discrimination. Institutions should be transparent in their hiring and retention practices and be held accountable for ensuring a culture of nondiscrimination and the elimination of discriminatory practices. Federal and state funding should positively support and incentivize such efforts while holding institutions accountable for failing to make progress in achieving greater diversity, equity and inclusion. Actions to further these goals include:**
 - i. Developing a hiring diversity strategy to recruit racial and ethnic minority candidates by drafting open job descriptions, broadly advertising open positions outside of traditional venues, better understanding the pathway of diverse talent, and conducting outreach to develop more relationships with diverse candidates.**
 - ii. Implementing health care career pathway programs to engage and connect Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other students affected by discrimination and expose them to and advance their readiness for careers in medicine.**
 - iii. Supporting full compliance with Liaison Committee on Medical Education accreditation standards around student and faculty diversity.**
 - iv. Encouraging mentorship and sponsorship and providing training for faculty on how to be effective mentors and sponsors.**
 - v. Offering career coaching and leadership development programs for those underrepresented in medicine.**
 - vi. Requiring the inclusion of Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other physicians affected by discrimination as job candidates and members of search committees when possible. Members of search committees should receive training and educational resources on implicit biases.**
 - vii. Ensuring diversity on all committees, councils, and boards to achieve inclusion, comprehensiveness, and mechanisms for accountability.**

- 4. ACP believes that policymakers must strengthen U.S. education at all levels to improve health, health literacy, and diversity in medical education and in the physician workforce and must prioritize policies to address the disproportionate adverse effect of discrimination and inequitable financing in education on specific communities based on their personal characteristics. While education reform is a broad and complex issue requiring a multifaceted approach, the American College of Physicians affirms that:**
- a. Schools should be sufficiently funded, particularly those serving low-income communities, and be prioritized to support evidence-based practices shown to be effective in strengthening educational quality and results for all students.**
 - b. Biased and inequitable funding mechanisms built upon underlying structural factors like segregation and racial wealth gaps, which result in discriminatory education resource disparities associated with the racial, ethnic, and cultural identity and characteristics of the communities being served, should be replaced by equitable alternatives.**
 - c. All students should have equitable access to experienced and qualified teachers, a rigorous evidence-based curriculum, extracurricular activities, and educational materials and opportunities. Instruction should be culturally and linguistically competent for the population served.**

Conclusion

Eliminating racial, ethnic, religious, and cultural disparities and discrimination in education and in the medical workplace—both in regard to discrimination faced by medical professionals as well as patients—is integral to eliminating racial and ethnic disparities in health and health care. At the primary, secondary, and postsecondary education levels, education quality and access must be equitable for those of all backgrounds to ensure a diverse medical professional pathway and the necessary knowledge and skills to navigate the health system and live healthy lives. To further nurture and grow a diverse physician pathway, medical schools must undertake efforts to eliminate the barriers that prevent underrepresented students from attending and completing medical school. Health care institutions, too, must foster a safe, inclusive, and equitable workplace environment that attracts, supports, and retains physicians of underrepresented backgrounds. A diverse physician workforce is beneficial for both physicians and patients. Enhancing education and workforce policies to improve the health literacy and socioeconomic well-being of patients and bring about a physician workforce that is representative of the patients it serves is essential to a comprehensive and interconnected approach to reducing racial and ethnic disparities in health and health care.

Background and Rationale

1. ACP believes that public policy must support efforts to acknowledge, address, and manage preconceived perceptions and implicit biases by physicians and other clinicians.

Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other persons affected by discrimination because of their race or ethnicity continue to face discrimination and adverse outcomes throughout all aspects of society despite historical changes in racial attitudes. Social scientists have attributed the persistence of inequalities to racial bias and prejudice (19). A majority of the population holds implicit anti-Black bias and as the literature demonstrates, the field of medicine is not immune from racial bias (20). Roughly 32% of Black persons, 23% of Native Americans persons 20% of Latinx persons, and 13% of Asian American persons have reported experiencing racial discrimination in a health care setting (21). Studies have identified anti-Black and anti-Latinx bias, as well as bias against darker skinned individuals among health care professionals (22). Black patients were more likely to be associated with negative words than White patients and were more likely to be considered less cooperative, compliant, and responsible in a medical context. Latinx patients experience implicit bias at a level comparable to Black patients and are similarly associated with noncompliance, risky behavior, and other negative stereotypes.

Racial bias in medicine can be both explicit and implicit. In one study, a sample of students considered mock medical cases of a Black and a White patient to make pain ratings and medication recommendations, as well as rate the extent to which they believed various biological differences between Black and White individuals were true. This study found that half of White medical students held false beliefs about biological differences; those who held false beliefs rated Black patients' pain lower than White patients, and made less accurate treatment recommendations (23). Another study found physicians' self-reported and implicit attitudes toward race were associated with treatment recommendations and that as one's pro-White bias increased, prescribing of pain medications following surgery decreased for Black children while remaining the same for White children (24). An additional vignette study of two patient record notes for an identical sickle cell disease patient found that patient record notes using biased or stigmatizing language resulted in more negative attitudes toward the patient and differences in treating pain by those physicians-in-training who subsequently read the note (25).

2. ACP believes that health care facilities and medical schools and their clinicians and students should be incentivized to use patient-centered and culturally appropriate approaches to create a trusted health care system free of unjust and discriminatory practices.

Experiences of bias and discrimination while navigating the health care system can impact how Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other persons affected by discrimination because of their race, ethnicity, or cultural identity engage with their health and physicians. Both Black and Hispanic patients report higher levels of physician distrust than White patients (26). Higher physician implicit bias was associated with shorter visits, less patient-centered care and collaborative visits, feelings of disrespect, verbal dominance by the physician, and lower levels of satisfaction (22,27). When patients feel disrespected, they may not want to or fear disclosing personal health information necessary for treatment recommendations (28). There is some evidence that racial bias contributes to poorer health for minority patients through the physical and psychological toll of experiencing discrimination, disparities in medical treatments as a result of physician racial bias, and the negative impact of racial bias on communication and the patient-physician relationship (27). Furthermore, 22% of Black persons, 17% of Latinx

persons, and 15% of Native American persons reported that they have avoided seeking medical care for themselves or a member of their family out of concern that they would be discriminated against or treated poorly because of their race, compared to 9% of Asian American persons and only 3% of White persons who report this behavior (21). ACP strongly believes that “by history, tradition, and professional oath, physicians have a moral obligation provide care for ill persons” regardless of their class or category and that not doing so “violates the principles of professionalism and of the College” (29).

Culturally competent care incorporates values, beliefs, and behaviors that are informed by one’s racial, ethnic, origin, linguistic, or religious background into the health care delivery system. Cultural competency in care is a component in improving trust and offering high-quality care to minority patients. However, roughly 45% of fourth-year medical students felt unprepared to provide care for those with different cultural backgrounds and 27% felt unprepared to care for racial and ethnic minorities. Additionally, 69% felt there was a lack of practical experience caring for diverse patient populations and 66% felt there was inadequate cross-cultural training (30). Among internal medicine residency programs, 30% of program directors reported not being able to adequately evaluate residents on the provision of culturally competent care and only 24% reported having faculty development related to cultural competency and health disparities (31).

Strategies to improve cultural competence include interpreter services, employing staff representative of the patient population, cultural awareness and knowledge trainings, and incorporation of culture-specific attitudes in targeted health promotion (32). Interventions that incorporated cultural, linguistic, and religious elements targeted toward ethnic minorities have been found to have a positive impact on patient outcomes (33). In addition, a review of the literature finds that cultural competence training for health care professionals is associated with increased patient satisfaction, improved patient-provider communication, and more patient-centered care (34,35). There are two common approaches to cultural competence training: programs that improve group-specific knowledge and programs that teach universal knowledge. There are limited data on the effectiveness of specific models and existing literature does not offer a consensus on the best approach (36). However, there are concerns that group-specific approaches can contribute to stereotyping and the generalization of diverse groups (37).

Inclusivity is not something that can be mastered with training or a set of strategies but is rather a lifelong learning journey that requires constant reflection and evolution. Beyond cultural competency, physicians and other health professionals must embrace cultural humility in their medical practice (38,39,40). Cultural humility involves the self-reflection and self-critique of one’s own beliefs, values, biases, and cultures in an effort to increase awareness for others and emphasizes openness and readiness to learn as opposed to expertise in caring for patients of different backgrounds (41). ACP ethics policy establishes the need for physicians to provide culturally sensitive care and that efficacy in this domain is enhanced by cultural humility (29). Some have argued that cultural competence and cultural humility can be complementary and embracing both is essential to working toward racial, social, and health equity (42).

In addition to cultural competency and cultural humility, there is a growing awareness around the importance of structural humility, which is “the trained ability to discern how a host of issues defined clinically as symptoms, attitudes, or diseases (e.g., depression, hypertension, obesity, smoking, medication, non-compliance, trauma, psychosis) also represent the downstream implications of a number of upstream decisions about such matters as health care and food delivery systems, zoning laws, urban and rural infrastructures, medicalization, or even about the very definitions of illness and health” (43). By looking beyond the individual, structural humility can provide a mechanism to analyze factors that cause disparities and identify interventions to help patients (44).

There is mixed evidence over the effectiveness of interventions that aim to address implicit bias. Implicit bias has proven difficult to unlearn, and education and awareness of unfair treatment in medicine can motivate one to reduce personal biases (45). Workshops and trainings that facilitate learning and discussion on racism, bias, privilege, and intersectional identities resulted in participants reporting enhanced knowledge, attitudes, and skills in dealing with racism in their institution (46,47). Actively individuating patients, or focusing on their unique humanity as opposed to representing a group, through patient-centered communication can reduce stereotyping (48). Reframing the patient-physician relationship as a partnership with a shared goal and engaging in relational communication can help build trust (27). Practicing empathy through perspective taking and increased interaction with those from different backgrounds have also been offered as strategies for reducing individual bias (49,50). While physician-focused approaches are important at the individual level, their impact is limited on creating cultural change without strong institutional support (51).

Some have raised concerns over the ability to accurately measure implicit bias and the extent to which it plays a role in racial disparities (52). A meta-analysis of the literature on interventions to change implicit measures found that while implicit measures can be changed, the effects are often weak and do not necessarily result in changes to explicit behavior (53). One study of psychiatric health professionals who had taken an implicit bias association test found limited receptiveness among participants: test takers were critical and skeptical of the credibility of the intervention, and most ended up justifying their implicit biases that were identified (54). Despite the potentially limited effectiveness of implicit bias recognition and management, there may still be value in it as a modality to bring individual implicit biases to the forefront and facilitate identifying, reflecting on, and addressing them.

3. ACP believes that a diverse, equitable, and inclusive physician workforce is crucial to promote equity and understanding among clinicians and patients and to facilitate quality care, and it supports actions to achieve such diversity, equity, and inclusion. ACP recommends that the following actions be taken by health institutions and medical schools to achieve such diversity:

- a. Implement policies and practices to eliminate racism and discrimination experienced by health care professionals, especially medical students, residents, and faculty. Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other persons affected by discrimination must be treated with respect and dignity; have opportunities for leadership, mentorship, and advancement; be empowered to report harassment, abuse, and other transgressions; and be ensured action is taken to support them and prevent future abuse.**
- b. Be transparent in the policies taken to achieve these goals and be held accountable for failing to create a safe, inclusive, and supportive environment. Federal and state funding should be withheld from those institutions that fail to meet these goals and engage in or permit acts of discrimination. Health care professionals who engage in overt racist and discriminatory behavior must be subject to appropriate professional discipline.**
- c. Medical and other health professional schools should revitalize and bolster efforts to improve matriculation and graduation rates of racial and ethnic minority students. Institutions of higher education should appropriately consider a person's race and ethnicity as one factor in determining admission in order to counter the impact of**

- current discriminatory practices and the legacy of past discrimination practices and better reflect the current composition of the population. Programs that provide outreach to encourage racial and ethnic minority enrollment in medical and other health professional schools should be maintained, reinstated, and expanded, including diversity/minority affairs offices, scholarships, and other financial aid programs.**
- d. All arenas of the health care workforce should be incentivized to implement evidence-based best practices in the recruitment, retention, and advancement of health professionals of Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other persons affected by discrimination. Institutions should be transparent in their hiring and retention practices and be held accountable for ensuring a culture of nondiscrimination and the elimination of discriminatory practices. Federal and state funding should positively support and incentivize such efforts while holding institutions accountable for failing to make progress in achieving greater diversity, equity and inclusion. Actions to further these goals include:**
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 - i. Ensuring diversity on all committees, councils, and boards to achieve inclusion, comprehensiveness, and mechanisms for accountability.**

Workforce

In 2018, over half (56.2%) of practicing physicians identified as White, 17.1% as Asian American, 5.8% as Hispanic, and 5.0% as Black or African American, and 13.7% were unknown. Only 0.3% identified as American Indian or Alaska Native and 0.1% (941 physicians) as Native Hawaiian or Pacific Islander (10). When comparing the racial breakdown of active physicians to U.S. Census

projections, there is a clear gap between the ratio of Black or African American, Hispanic or Latino, and American Indian or Alaska Native physicians to their respective racial/ethnic group's population percentage. These gaps identify Black or African American, Hispanic or Latino, and American Indian or Alaska Native physicians as underrepresented minorities (URM) in the U.S. health care workforce. U.S. Census population estimates from 2019 identify 76.5% of the population as being White, 18.3% as Hispanic or Latino, 13.4% as Black or African American, 5.9% as Asian American, 2.7% as two or more races, 1.3% as American Indian and Alaska Native, and 0.2% as Native Hawaiian and Pacific Islander (55).

A number of studies have shown URM physicians are more likely than White physicians to see patients in underserved communities, provide care to low-income patients and to those on Medicaid, and treat more racial and ethnic minority patients. Additionally, racial and ethnic minority patients report higher-quality care and higher care satisfaction when treated by a physician of the same racial or ethnic background. One study found that Black men who saw Black male doctors were more likely to opt for preventive screening tests, particularly those more invasive, and were more likely to discuss other health problems than those with White male doctors (17). Another study found that newborn-physician racial concordance was associated with improvements in mortality for Black newborns (16).

Increased diversity in the health care workforce not only benefits minority patients but improves care for all patients. Evidence has shown diverse populations in educational and medical training settings improves learning outcomes by increasing active thinking and intellectual engagement skills and increases understanding of and empathy for diverse cultures (56). Improving these learning outcomes is critical as a 2020 survey analysis showed third-year medical students reported moderate comfort while navigating complex clinical scenarios, which found the lowest scores in scenarios about race/ethnicity (57). Diversity in training situations and in the workforce would increase knowledge of diverse cultures and would allow physicians and patients comfort during complex clinical scenarios as patients would feel heard, respected, and secure with their physician understanding their situation.

Many barriers exist that make working in medicine a difficult—and sometimes threatening—environment for Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other persons affected by discrimination because of their race, ethnicity, religion, or cultural identity and characteristics. As many as 35% of physicians in one survey reported being discriminated against in the workplace on the basis of race, culture, or gender (11). Numerous reports have brought to light the harassment and bigotry physicians have endured by patients and colleagues for being Black; Muslim; and other racial, cultural, or religious minorities (12). Workplace discrimination can have negative mental health implications for health care professionals (58). While practices and institutions can and should have strong antiharassment policies that condemn and deter instances of racism among staff, handling racism propagated by patients is more legally, clinically, and ethically unclear and needs to be further addressed by professional ethics and workplace policies.

Medical Education

Since 2009, there has been a modest increase in the number of URM students enrolling in medical schools across the U.S.; although after an initial increase in URM applicants and medical school students, the numbers have slowed and in some cases have become stagnant (59,60). Data show during the 2018-2019 school year, over half (54.6%) of medical school graduates identified as White, almost one quarter (21.6%) identified as Asian American, and 8.0% identified as multiple race/ethnicity. Only 6.2% identified as Black or African American; compared to 5.3% as Hispanic, Latino, or of Spanish origin; 0.2% identified as American Indian or Alaska Native; and only nine graduates (0.1%) identified as Native Hawaiian or Pacific Islander (7). While the number of URM medical

students has increased over the years, their numbers have been relatively flat compared to the overall population growth for these communities. An analysis of medical school applicants and matriculants between 2002 and 2017 found that Black, Hispanic, and American Indian/Alaska Native were underrepresented, with a significant downward trend for Black female applicants (60). Another study found the proportion of Black graduates has actually decreased since 1997 (61).

In its 2019 report, White Coats for Black Lives—a student-led organization dedicated to eliminating racism in medicine—made numerous recommendations to address racial disparities in medical school enrollment, including the creation of pathway programs to support URM students in the local community, additional financial aid, guaranteed admission mechanisms for local URM students, increased recruitment efforts at historically black colleges and universities, and additional support and resources for URM students on campus (62). Some have suggested the need for school admission committees to move beyond improving minority representation and focus efforts on dismantling the structural barriers faced by Black, Indigenous, Latinx, and other students affected by discrimination because of their race or ethnicity, as well as consider and contextualize the genealogical heritage of URM students in a holistic review of applicants (63).

Implicit bias in test questions and racial disparities in evaluative metrics can pose barriers to Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other students affected by discrimination because of their race, ethnicity, religion, or cultural characteristics and identities achieving success in school and their careers. There is much evidence describing racial disparities in medical school evaluations of students. An analysis of clerkship evaluations for third-year medical students found that White students were more frequently evaluated as knowledgeable than racial and ethnic minority students (64). Racial and ethnic minority students received lower final written clerkship grades than White students even after factoring age, location, gender, and United States Medical Licensing Examination (USMLE) Step 1 scores (65). White students are more likely to be described as “exceptional,” “best,” and “outstanding” than Black, Hispanic, and Asian American students in clinical evaluations, and Black persons and Hispanic persons had lower rates of positive connotation when being described as “competent” (66). After accounting for USMLE step 1 scores, research productivity, community service, leadership activity, and Gold Humanism membership, Black and Asian American students were less likely to be members of the Alpha Omega Alpha medical honor society than White students (67). Faculty and students should be trained to recognize and be aware of which words may convey bias in evaluations.

In 2009, the Liaison Committee on Medical Education (LCME) implemented two new standards known as Element 3.3 to address concerns of diversity in medical schools. As standards necessary to achieve LCME accreditation, IS-16 requires that “Each medical school must have policies and practices to achieve appropriate diversity among its students, faculty, staff, and other members of its academic community, and must engage in ongoing, systematic, and focused efforts to attract and retain students, faculty, staff, and others from demographically diverse backgrounds,” while MS-8 requires “Each medical school must develop programs or partnerships aimed at broadening diversity among qualified applicants for medical school admission” (68). Some evidence suggests that implementation of the LCME diversity standards has been associated with increased percentages of Black and Hispanic medical students (69). Other research acknowledges the potential impact these standards have but identifies the need for better education on the application and importance of the standards (70). However, as the Association of American Medical Colleges points out, these standards have had only a marginal impact on diversity efforts and that not all racial and ethnic groups have benefited (71). One researcher noted, “there’s a difference between meeting the standards and developing long-lasting programs that help minority students feel welcome in medical school” (72). Along with stricter enforcement of the LCME standards,

widespread efforts are needed to root out forms of structural racism and foster environments to attract and support racial and ethnic minority medical students.

Racism and bias in medical schools must be addressed to create a learning environment welcoming and supportive of minority students. Racial and ethnic minority students are more likely to report adverse medical school experiences as a result of their race due to discrimination, prejudice, feelings of isolation, and different cultural experiences and these students were more likely to report burnout, depressive symptoms, and low mental quality of life (73). One study found 38% of URM medical students reported mistreatment while in school compared to only 24% of White students. Researchers noted the potential impact of racism in medical education on the low numbers of racial and ethnic minorities who enter and complete medical school. Discriminatory comments have lasting effects on the targets and bystanders who may feel uncomfortable or unwanted in medicine by certain comments (74). Additionally, some research suggests that medical school admissions committees display unconscious White preference (75), creating additional institutional barriers for Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other students affected by discrimination because of their race or ethnicity.

There has also been a call to improve race-based training and curriculum in medical schools, citing oversimplifications of the presentation of race and disease and use of race-based heuristics. Historical understandings of race have persisted and permeated throughout medical education, using race—which is social rather than biological—as an inadequate proxy for genotype and ancestry. To address this, some have recommended gauging awareness of race, health, and disease as part of the application process and including discussions of race and genetics and addressing racism in medical school curriculum (76).

There are numerous benefits associated with a diverse student body. One study comparing ideas generated by an all-White group of students and diverse group found that the ideas produced by the diverse group were evaluated to be higher quality, more feasible, and more effective (77). A survey of medical students found that a large majority of students believe diversity enhanced their educational experiences, including improved classroom discussion and understanding of medical conditions and treatments (78). The unique experiences, perspectives, and contributions of students from disadvantaged backgrounds can be utilized to provide better care for all patients. When adding new and contrasting experiences and opinions to a group of learners, students are able to think more critically and act more thoughtfully to better support patients. However, disadvantaged students can face many economic and social barriers when considering, applying to, and attending medical school (79). These barriers must be identified and directly combated to ensure an equal opportunity for all applicants and increase the diversity of student bodies and the future health care workforce.

Faculty

In addition to the modest increases in the diversity of medical school student bodies, there has also been a small increase in the diversity of medical school faculty. Between 1966 and 2015, the proportion of URM in assistance professorships, associate professorships, and professorships doubled, with more diversity for lower- than higher-ranked faculty. However, this increase is not keeping pace with U.S. population diversification nor with medical school student body diversification (80,81). The strongest modifiable factor associated with faculty diversity was shown to be medical student diversity (82). Higher rates of racial and ethnic minority faculty have been linked to improved cultural competence in graduates, more inclusive campus environments, more comprehensive research agendas, and improved patient care and can be an institutional driver of excellence (80). Minority faculty also serve an important role as mentors and role models for URM medical students (83).

The hiring of diverse faculty is important and should begin with an intentional process and strategy. There is extensive literature providing approaches to

improve diversity in faculty hiring. Practices like assembling diverse hiring committees, providing implicit bias workshops for hiring committees, drafting broad job descriptions that include cues of belonging, targeted outreach and advertisement of job postings, relationship building with targeted communities, and incorporation of diversity statements in the assessment process have been found to increase diversity in faculty hires (84,85,86,87). Hiring committees should avoid relying on flawed proxies for quality that may be subject to bias, such as where a candidate has trained or been published (84). Pathway programs can help identify, foster, and attract faculty candidates of diverse backgrounds to an institution (88). One such example is the Chicago Cancer Health Equity Collaborative Research Fellows Program, which provides exposure to local students through opportunities to network with health care professionals in the community, lab experiences, research rotations, professional skill development, and community immersion visits in an effort to attract those with underrepresented backgrounds into medical careers (89).

After hiring, retaining minority faculty is equally as important. Racial and ethnic minority faculty have lower rates of promotion than their white counterparts, higher rates of turnover, lower career satisfaction, and are more likely to report hostile work environments (80,90). Some have attributed this to the “minority tax,” where the disadvantages experienced by URM faculty are exacerbated by the burden of extra responsibilities related to leading diversity activities and services, which takes away from their capacity to complete academic work (14,15). These faculty often lack an established network to assist in navigating the cultural mores of academia. Mentorships and pathway programs for racial and ethnic minority junior faculty in academic medicine can increase retention productivity and appropriate promotion for underrepresented minority faculty (13). Some institutions have established minority faculty development programs in attempts to support their minority staff. While the mere presence of these programs was not associated with an increase in faculty diversity nor higher rates of promotion for racial and ethnic minority faculty, the intensity of the programs was positively associated with increases in underrepresented minority faculty (80). Additionally, given evidence of bias in teaching evaluations, disparities in the publishing of papers, and disparities in the awarding of federal funding, the differing experiences of minority faculty members should be taken into consideration and the promotion criteria and process be transparent (84).

4.ACP believes that policymakers must strengthen U.S. education at all levels to improve health, health literacy, and diversity in medical education and in the physician workforce and must prioritize policies to address the disproportionate adverse effect of discrimination and inequitable financing in education on specific communities based on their personal characteristics. While education reform is a broad and complex issue requiring a multifaceted approach, the American College of Physicians affirms that:

- a. Schools should be sufficiently funded, particularly those serving low-income communities, and be prioritized to support evidence-based practices shown to be effective in strengthening educational quality and results for all students.**
- b. Biased and inequitable funding mechanisms built upon underlying structural factors like segregation and racial wealth gaps, which result in discriminatory education resource disparities associated with the racial, ethnic, and cultural identity and characteristics of the communities being served, should be replaced by equitable alternatives.**
- c. All students should have equitable access to experienced and qualified teachers, a rigorous evidence-based curriculum, extracurricular activities, and educational materials and opportunities. Instruction should be culturally and linguistically competent for the population served.**

Educational attainment is often linked to health status and the role of education as a social determinant of health is established throughout the literature (91). An analysis of deaths in the U.S. between 2010 and 2017 found that average life expectancy increased for those with a college degree, whereas it decreased for those without (6). The life expectancy gap between the most and least educated has grown from 13 years for men and 8 years for women in 1990 to 14 years and 10 years in 2008, respectively, a trend that has widened since the 1960s (7). Overall mortality rates are roughly four times higher for those without a high school degree compared to those with more than 16 years of education (8). An analysis of patients with coronary artery disease found that those with lower educational attainment had higher risks of mortality and educational attainment was a predictor of adverse outcomes (92). Increased rates of cardiovascular disease were found for those with lower educational attainment even after accounting for other risk factors (93), whereas those age 60 without a high school degree were more than twice as likely to die than high school graduates (94). Similar trends are observed for diabetes and health risk factors, such as smoking and obesity (7). Addressing educational achievement and outcome gaps and ensuring quality education for all regardless of socioeconomic status is an important mechanism to promote health equity and reduce racial health disparities.

Education can indirectly impact health by determining access to safer neighborhoods, financial resources, and the reasoning and skills needed to produce health (4,5). Those with more education can often find themselves with better and lower-risk employment that provides health insurance and paid leave, reduced stress as a result of increased income, and additional knowledge that translates to better health literacy. Research suggests that the development of these forms of human capital that positively impact social drivers of health begin as soon as early childhood. One randomized study of Black children living in public housing in Ypsilanti, Michigan, found that at age 40, those who completed an early childhood educational program had higher incomes, had higher rates of high school completion and college graduation, committed lower rates of crime, had higher rates of health insurance coverage and homeownership, had better overall health, and had lower rates of risky behavior compared to the control group. Another similar program found that by age 21, those who participated in an early childhood program showed lower rates of depression, lower marijuana use, more active lifestyle, and more educational advantages compared to the control group. By their mid-30s, those in the early childhood program also had lower levels of risk factors for cardiovascular and metabolic disease (95).

Early childhood and preschool programs prepare children to learn and can reduce school-readiness gaps. While Black children are more likely to attend preschool than White children, they experience lower-quality programs. Both Hispanic children and Black children are more likely than White children to attend publicly funded programs like Head Start (96). Hispanic children enrolled in early childhood education at rates lower than other groups (97).

The American education system is rife with other racial disparities ranging from opportunities and access to discipline and outcomes. Black students are overrepresented among suspended public school students, comprising 39% of suspensions despite making up only 15.5% of students (98). Black and Hispanic boys are transferred to alternative public schools for disciplinary reasons at rates higher than any other racial group comprise a larger proportion at alternative schools than regular public schools (99). Non-Black teachers have been found to have lower educational expectations than Black teachers for the same exact Black students (100). Similar trends have been found in other studies, with non-Black teachers having more negative views of Black students than Black teachers (101).

Fewer educational opportunities are available for some Black, Indigenous, Latinx, Asian American, Native Hawaiian, Pacific Islander, and other students affected by discrimination because of their race or ethnicity. Schools in high-

poverty areas, which are 80% Black or Hispanic, offered less access to college-prep courses and fewer math and science courses expected by colleges (102). Fewer Black students were found to take advanced courses and dual-credit programs or have access to advanced tracked programs compared to White, and in some cases Asian American students (102). Hispanic, Black, and American Indian and Alaska Native students had lower high school graduation rates as well as 6-year college graduation rates compared to White students (103,104). In 2017, the White-Black achievement gap was 26 points for reading and 25 points for mathematics, while the Hispanic-White gaps were 23 points and 19 points at grade 4. By grade 8, the overall White-Black achievement gap was 32 points and White-Hispanic achievement gap 24 points (97).

Additionally, racial and ethnic minority students are often concentrated in the same schools: 60% of Hispanic students, 58% of Black students, and 53% of Pacific Islander students attend schools with a combined minority enrollment of at least 75%—much higher than White students at 5% (97). Schools with higher percentages of racial and ethnic minority students are more likely to hire less experienced teachers and less likely to hire teachers with higher test scores and degrees from more prestigious universities (105). One study looking at differences in school quality in segregated southern states found that degree of segregation was negatively associated with racial gaps in disability (106).

Education funding in the U.S. comes from a combination of federal, state, and local sources. Federal spending accounts for about 10% of all education funding, with state and local governments nearly equally providing the remaining funds. At the local level, this is primarily through property taxes (107,108). Slavery and its aftermath, as well as discrimination and racist policies like redlining, have resulted in high degrees of racial segregation throughout the country and racial economic disparities. At their intersection, racial and ethnic minority communities have less wealth in their neighborhoods and a smaller tax base to draw from in funding local schools. Local property taxes are a biased funding mechanism that systematically perpetuate inequities.

An analysis of school funding data between 1999 and 2013 found that racial and ethnic segregation within a state was associated with racial and ethnic disparities in education spending after accounting for poverty disparities (109). In 2016, non-White school districts took in \$54 billion in local taxes, or \$4,500 per student, compared to \$77 billion for White school districts, or \$7,000 per student. While slightly more funding per student was provided to non-White districts at the state level, a gap of \$2,000 per student remained (110). Nationwide, \$334 more is spent on each White student and predominantly White schools spend \$733 more per student than non-White students and schools; each 10% increase in minority students at a school is associated with a decrease in spending of \$75 per student (111). Most states have attempted to address local disparities in tax bases through formulas and other initiatives to redistribute funding at the state level. However, one analysis of Pennsylvania's funding process found systematic racial biases that resulted in more White school districts receiving more per-student funding than expected under the formula compared to less White districts (112). Local and state governments must implement new and innovative funding mechanisms to address biases in resource allocation that contribute to education disparities.

ACP asserts that improving education at all levels; understanding and addressing discrimination and inequities in school funding and structural contributors to such inequities; promoting and committing to diversity, equity, and inclusion in medical education and the physician workforce; and taking the specific actions recommended in this paper, will help ensure that no person is discriminated against and denied equal opportunity based on their race, ethnicity, religious, and cultural identity and characteristics, resulting in better health outcomes.

Appendix: Glossary

Black: The term *Black* is used rather than *African American* to capture the shared and distinct experiences of both those who are descended from enslaved Africans brought to North America who have a long history in the United States as well as others who have more recently immigrated from African, Caribbean, and other countries and who may not as strongly identify with the American identity.

Latinx: Gender-neutral term to refer to those living in the United States who are of Latin American descent, rather than *Hispanic*, which refers to those who share Spanish as a common language. While respecting the views of those who do not prefer to be called Latinx, we conclude that *Latinx* captures power and privilege dynamics in the United States better than *Hispanic*, which would include those of Spanish descent who would identify as White but would exclude those of Brazilian descent and other non-Spanish-speaking Latin American countries. When referencing other sources, we use the descriptors the authors used. We recognize the controversy over the use of *Latinx*: Some argue that the term imposes American and Anglocentric ideals, encompasses a broad and diverse group, is incomprehensible to native Spanish speakers without any fluency in English—some of the very people the term is meant to serve—and is not a term that most persons of Latin American descent identify with. Although an imperfect solution, we choose to use the gender-neutral *Latinx* over *Latino* (in Spanish, many nouns and adjectives are gendered, with nouns ending in -o typically using masculine pronouns) in an effort to be as inclusive as possible.

Social drivers of health: The terms *social drivers of health* and *social determinants of health* are used interchangeably. When discussing the social and economic factors that contribute to health, we prefer to use the term *social drivers of health* to emphasize that these factors are changeable drivers that can be influenced rather than fixed determinants that are immutable. However, given the predominant use of the term *social determinants of health* in the literature, we use that term in this article when referencing other sources that used the term.

Cultural Humility: Self-reflection and self-critique of one's own beliefs, values, biases, and cultures in an effort to increase awareness for others, with an emphasis on openness and readiness to learn.

Racism: Prejudice, discrimination, hate, or bias toward a person or group on the basis of their actual or perceived race/ethnicity. Racism can exist at various levels, from the individual, to the interpersonal, to the institutional, to the structural. It can also manifest in both overt/explicit and covert/implicit manners.

Individual Racism: Privately held biases, beliefs, and actions that perpetuate racism and are often informed by culture.

Interpersonal Racism: Public expressions of racism that arise when interacting with others.

Institutional Racism: Policies and practices within institutions (for example, education or criminal justice system) that, regardless of intent, result in different outcomes for different racial or ethnic groups.

Structural Racism: "Macrolevel systems, social forces, institutions, ideologies, and processes...[that] interact with one another to generate and reinforce inequities among racial and ethnic groups" that can persist even in the absence of interpersonal discrimination and without regard to individual action or intent (23, 24). In this article, *structural racism* and *systemic racism* are used interchangeably.

Anti-Racism: The intentional and conscious effort to take action to oppose racism and racial inequities in all realms of society.

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