

Building a Diverse Workforce in Pulmonary, Critical Care, and Sleep Medicine

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Respiratory health disparities are significant differences in respiratory health that are tied to racial ancestry, social, economic, or environmental differences (1). As such, they adversely affect groups of people who have experienced greater obstacles to health based on characteristics historically linked to discrimination or exclusion, including but not limited to race, ethnicity, sex, country of origin, sexual orientation, and socioeconomic status. Respiratory health disparities are commonly encountered by practitioners of pediatric and adult pulmonary, critical care, and sleep medicine (2), as recently illustrated by profound racial and ethnic disparities in the prevalence, morbidity, and mortality of coronavirus disease (COVID-19) in the United States (3). Eliminating respiratory health disparities is not only a matter of social justice but an attainable long-term goal that would yield substantial economic, societal, and health benefits to both minority and nonminority populations (2). Racial and ethnic disparities in respiratory health largely result from unequal

exposure to major environmental risk factors for respiratory diseases, including tobacco use, air pollution, obesity, and occupational hazards. In turn, such disparities in environmental exposures are caused by structural (e.g., systemic racism and health policies) and social (e.g., socioeconomic status, housing conditions, education, and occupation) determinants of health. After exposure, disease may be more severe in minorities owing to limited access to high-quality health care. Moreover, lack of research in minority populations may impede development of new approaches to the prevention, diagnosis, and management of conditions that disproportionately affect these groups (e.g., sickle cell disease in African Americans, severe asthma and sarcoidosis in Puerto Ricans and African Americans, and tuberculosis in Native Hawaiians and Pacific Islanders) (4). Workforce diversity enhances productivity and creativity, likely improving the research and healthcare enterprises (5). Moreover, physicians and scientists who

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belong to groups underrepresented in medicine (UIM, including African Americans, Latinx, American Indians and Alaska Natives, and Native Hawaiians and Pacific Islanders) are more likely to conduct research studies and serve as healthcare providers in underserved communities by virtue of their sociocultural backgrounds (4, 6). Not surprisingly, workforce diversity has been recognized as a critical component of multipronged efforts to reduce and eventually eliminate respiratory health disparities (1, 2).

Despite longstanding efforts by the American Thoracic Society (ATS), the U.S. National Heart, Lung, and Blood Institute, academic institutions, and other organizations, the proportion of UIM fellows in pulmonary and critical care medicine remained low and essentially unchanged between 2006 (10.5%) and 2018 (10.3%) (7). Upstream disparities in educational attainment and access affect the proportion of UIM students in college, medical school, and residency, thus limiting the diversity of the pool of applicants to pulmonary and critical care medicine fellowship. However, such upstream disparities fail to account for the limited diversity in our field, relative to fellowships in other specialties (7).

In a special collection of *ATS Scholar*, several articles outline feasible approaches to increase workforce diversity and address systemic racism in our field. For example, Capers proposes a practical approach for clinicians and educators to mitigate implicit bias in clinical decision-making and candidate selection at various career stages, including fellowship (8). Such an approach includes removing photographs and academic metrics from applications before selecting candidates for interviews, having members of selection panels take implicit association tests and

participate in case-based implicit bias reduction workshops before any interviews, and asking panel members to review implicit bias reduction techniques. The latter can be summarized in an Implicit Bias Reduction Cheat Sheet and include common identity formation, perspective taking, considering the opposite conclusion, and identifying counterstereotypes (8).

The physician-scientist, defined as an individual with clinical training who is predominantly engaged in independent biomedical research, has been labeled an “endangered species” (9). Concerns about shortage of physician-scientists in pulmonary, critical care, and sleep medicine are accentuated for women, members of UIM groups, basic researchers, and pediatric pulmonologists (10, 11). These concerns have been aggravated by the challenges posed by the COVID-19 pandemic, including reduced time for research due to increased clinical demands and the extra time needed to care for children and other family members. In a special collection of *ATS Scholar*, Suber and colleagues identify opportunities to enhance sustainability and diversity of the physician-scientist workforce, emphasizing the key complementary supporting roles of the U.S. National Institutes of Health (NIH), the ATS, and academic institutions (10). Such opportunities include 1) NIH funding for research exposure during residency training, while also expanding the NIH Loan Repayment Program and mid-career awards for physician-scientists devoted to mentoring to encompass basic research; 2) ATS’s continued support of new and ongoing programs such as the Minority Trainee Development Scholarship, the Women’s Forum and the Diversity Forum, grants on health

disparities and diversity grants, and mentoring and apprenticeship programs; and 3) divisional and institutional commitment to the career development of physician-scientists in vulnerable groups, including training mentors and mentoring teams, bridge funding, promotion and appointments of female and UIM faculty to leadership positions, reducing the “minority tax,” and implementing physician wellness programs to emphasize work–life balance (10). Other strategies that have been previously proposed include training NIH study sections, fellowship selection committees, and promotion committees to recognize and address implicit bias, with the intent to reward those engaged in research in minority populations (4).

Medical students, trainees, and faculty who belong to UIM groups face unique barriers to career growth and advancement, including implicit and explicit racial discrimination, inadequate mentorship, professional isolation, and the administrative burdens posed by the “minority tax.” To help address these issues, Avakame and colleagues propose a deliberate and consistent antiracist approach at all stages of academic medicine, including antiracism in formal curricula (e.g., incorporating issues of racism in medicine in didactic exercises), hidden curricula (e.g., calling attention to racist interactions as part of team discussions), and faculty advancement (e.g., mentoring and sponsoring UIM faculty) (12). Indeed, divisions and departments within academic institutions can adopt a proactive role in addressing social justice and combating racism. Chesley and colleagues report on their division’s grassroots commitment to equity and antiracism, which is anchored by four pillars: education (e.g., on antiracism and

implicit bias), community outreach (e.g., interacting with high school students and caring for incarcerated persons), patient care improvement (e.g., task forces for quality improvement and financial incentives for reducing health disparities), and workplace improvement (e.g., enhanced recruitment of UIM fellows, and mentoring structures for UIM leaders) (13). Such an undertaking requires and is deserving of commitment at the individual and leadership levels, as well as financial and institutional support.

Eliminating respiratory health disparities needs the concerted and relentless efforts of multiple stakeholders, including the ATS, the NIH, governmental and nongovernmental organizations, and academic institutions. The ATS approaches this challenging but noble task through advocacy (for “environmental justice” and universal healthcare, and against structural racism) at the local, state, and federal levels; shaping a strategic national research agenda on health disparities; and fostering workforce diversity. Since 2013, the ATS has more actively promoted diversity, inclusion, and representation in the society’s leadership through its Health Equality and Diversity Committee. Such efforts are starting to pay off, as the proportions of women and UIM members in the ATS’s Board of Directors are currently 66% and 14%, respectively. The journey to equity, diversity, inclusion, and representation follows a challenging but rewarding path that should be pursued by the ATS and the broad community in our field. This special collection of *ATS Scholar* reports on practical approaches to make our specialty more representative of U.S. society. Although no proposed approach is perfect, all are complementary and adaptable to local contexts. Thus, there is no excuse for

inaction. In the words of Dr. Martin Luther King, Jr., “the time is always right to do what is right.”

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